MFC 5th ANTHOLOGY; Health in the 1980's - Issues and Perspectives

APRIL - 1984 - DECEMBER 1988.

1. A decade of MFC - Some Reflections

i) Ten years with MFC	Ashvin Patel (100-1)
ii) Looking ahead	Anant Phadke (100-1)
iii) At the hundreth bulletin on mfc review	Ravi & Thelma Narayan (100-1)
iv) The Patiala Discussion on mfc role	(Compilation from background paper, reports & letters) also 119, January - March 1986
v) A letter to mfc	Keith & Coroline Walter

2. TB & Society

i) Why discuss TB control	Anant Phadke (108)
ii) National TB Programme - some problems and issues	Binayak Sen (105/118) (dialogue)
iii) TB and Society	Report of the Jan'85 meeting (111/125)
iv) The Consensus on TB Control	(A note prepared by Anant & Binayak)
v) Confusion-A way to knowledge	Ulhas Jaju (125) (Also Anil Patel's Commission iv)

3. Bhopal and the aftermath

i) The Bhopal Disaster	Editorial (109)
ii) Learning from the Relief work	Abhay Bang (109)
iii) Medical Research in Bhopal- are we forgetting the people	MFC Bangalore team (112)
iv) The challenge of Bhopal	Editorial (114)
v) Persistence oftoxins in the bodies of Bhopal Gas Victims	Anil Sadgopal & Surjit KDas (137)
vi) Lessons from Bhopal as reflee- tion.	(mfc Bangalore team)
vii) Strategies for environmental health action	Dhruv Manked (118)

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4. Family Planning controception and Women's Health Issues

i) Family Planning in India: Theoretical assumptions, implementation and alternatives	(MFC Annual meet report mfcb131) Leela Visaria
ii) Editorial	Sathyamala (129)
iii) Two decades of sterilization, Modernization and Population growth in a rural context	Stanley A freed(129) and Ruth S freed
iv) A femanist understanding of contraception	Manisha Gupte (121)
v) Injectable contraceptives	Padma Prakash (113)
vi) The E.P. Case	Mira Shiva (143-144)
vii) Use and abuse of Bio-Medical Technology	Amar Jesani (124)
viii) Sex determination and female foeticide	Garbha Parikshan Virodhi Manch (146)
ix) Dialogue Abortion	Arun Gadra (146)
Victim blaming is not the solution	Amar Jesani (146)
One Daughter Family: Fact or Fancy	Ulhas Jujoo/S.P. Kalantri (146)

5. Child Health Issues:

i) Child health in India - what is our commitment.	Ravi Narayan (106)
ii) Child health in India	Editorial (133-134)
iii) Child health in India	Report of XIV Annual Meet (138)
iv) Paralytic Poliomgetitis - A tragedy on the rise	Gloria Burrett (130)
v) Universal child immunization and child survival: A positive view.	Ashok Bhargava (133-134) Anil Patel
vi) Sex differentials in Nutritional status in Rural Area of Gujarat State - An Interim Report.	Leela Visaria
vii) Child care and the prosperity of Punjab - A reflection.	Sameer Chaduhuri (106)
viii) Blened are the small in size- if they are Indians.	Kamala S. Jaya Rao (115)

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6. Rational Drug Policy Issues:

i) Doctors role in the RDP Movement	Editorial(103)
ii) A letter to the Drug Controller	Anant Phadke (107)
iii) Drug awareness and Action	Editorial (107)
iv) Fighting for a peoples Drug Policy - the KSSP experience	B Ekhal (Dec 85)
v) Scientific medicine	(112)

7. Technology and Health Care.

i) Medical Technology:neither glitter/ nor gold.	Ulhas Jajoo/S.P.Kalantri (145)
ii) Emerging Medical Culture	Ulhas Jajoo (115)
iii) Clinical perspective: Chest Radiography	S.P. Kalantri (145)
iv) Beware of X rays	S.G. Kabra (145)
v) Transtechugue aspects of Disease & Death	M.L. Kothari & Lopa A. Mehta.

8. Primary Health care issues:

i) Towards an appropriate strategy	Ulhas Jajoo (102)
ii) Food in the Hands of Big Industry	Kamala S. Jayaroa (114)
iii) Logistic support and facilities for primary health care	Ashish Bose (137)
iv) Pricing the medical care in Government hospitals-problem and alternative solution	Abhay & Rani Bang (39)
v) The Indo V vaccine Action Programme - A recipe for Disaster	Proful Bidwan (148)
vi) Choloroquin, Cholera and mfc	Editorial (148)
vii) Media as a tool in Health Action	Vimal Balasubramanian (127)

9. Politics of Medical Work

i) Conventional medical work	Anant R.S. (141)
ii) Radical Medical work	Anant R.S. (142-143)
iii) Myths perpetucted by the Voluntary Health Sector	Sathyamala (142-143)

9. iv. Narmada Project and Retribals — ARCH, Mangral (104)

v. The MARD Strike - A view Point — Sanjay Nagral (108)

10. When Rome is Burning: A Dialogue — Arun Gadre & Jyothi Gadre (124)
Dileep Mavalankar (126)
Kamala S. Jaya Rao (126)
Mukund Uplekar (126)
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POTENTIAL ARTICLES FOR 5th ANTHOLOGY

mfc bulletin No.	Subject	Author
121	A Feminist Understanding of Contraception	Manisha Gupte
124	Use and Abuse of Bio-Medical Technology (Amniocentesis - A Case Study)	Amar Jesani
124	When Rome Is Burning	Arun & Jyothi Gadre
125	Confusion - A Way to Knowledge	U.N. Jajoo
125	Tuberculosis and Paramedical Workers	Marie D'Souza
126	When Rome is Burning (response)	Dileep Mavalankar
127	Media as a Tool in Health Action	Vimal Balasubrahmany[redacted]
127	When Rome is Burning [redacted]responses)	Kamala Jaya Rao Mukund Uplekar
128	Integration of Medical Systems (A theoretical Perspective and Practical Blue Print)	S.K. Kelkar
128	When Rome is Burning (response)	Sujit K. Das
129	When Rome is Burning (response)	Marie D'Souza
130	When Rome is Burning (responses)	Rita Priya Dhruv Mankad
131	Family Planning in India : Theoretical Assumptions, Implementations and Alternatives (XIII mfc Annual Meet, Kaya)	Leela Visaria
131	Integration of Medical Systems (response)	B.K. Sinha
131	A Letter to mfc	Keith and Caroline Walker

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mfc bulletin No.	Subject	Author
132	The Epidemiological Approach : Its Elements and its Scope	Ritu Priya
132	Injury Prevention and Basic Preventive Strategies	Dinesh Mohan
133 & 134	Universal Child Immunization and Child Survival : A Positive View	Ashok Bhargava & Anil Patel
133 & 134	The New Drug Price Control Order - A mockery of rational planning	Anant R.S.
135	Persistence of Toxins in the Bodies of Bhopal Gas Victims	Anil Sadgopal & Sujit K. Das
136	Sex Differentials in Nutritional Status in a Rural Area of Gujarat State : An Interim Report - Part - I	Leela Visaria
137	Sex Differentials in Nutritional Status in a Rural Area of Gujarat State - Part II	Leela Visaria
137	Logistic Support and Facilities for Primary Health Care (Crucial Role of Physical Accessibility)	Ashish Bose
138	Child Health (XIV Annual Meet of mfc, Jaipur)	Sathyamala
139	Pricing the Medical Care in Government Hospitals : Problem and Alternative Solution	Abhay and Rani Bang
141	Politics of Medical Work Part I : Conventional Medical Work	Anant R.S
142 143	Politics of Medical Work Part II : Radical Medical Work	Anant R.S.
142 143	Politics of Medical Work - III Myths Perpetuated by the Voluntary Health Sector	Sathyamala
142	Issues for Debate on Peoples Science in Health Care	C.R. Bijoy

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mfc bulletin No.	Subject	Author
143 144	The E.P. Case	Mira Shiva
145	The Trans-Technique Aspects of Disease and Death	M.L. Kothari and Lopa A. Mehta
145	Beware of X-Rays	S.G. Kabra
145	Clinical Perspective : Chest Radiography	S.P. Kalantri
145	Medical Technology : neither glitter, nor gold	U.N. Jajoo & S.P. Kalantri
146	Patient's Right	Anil Pilgaonkar
146	Sex Determination and Female Foeticide in Baroda	Garbha Parikshan Virodhi Manch
146	Victim Blamin Is Not The Solution	Amar Jesani
146	Dialogue : Abortion	Arun Gadre
146	One Daughter Family : Fact or Fancy?	U.N. Jajoo & S.P. Kalantri

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I Block, Koramangala,
Bangalore - 560 034.

PHONE : 53 15 18

3rd August 1992

Dear Friends,

Greetings from Community Health Forum!

We had a very interesting meeting on 11th July 1992, when the CHC Team presented an report of its activities and concerns mostly through visuals and we got an enthusiastic and stimulating response from 48 of our Forum members and associates. Many ideas and suggestions were shared and CHC got a lot of stimulus to work upon in the months ahead. A detailed proceeding of the meeting will be sent to all of you, shortly. A short summary is given overleaf for the benefit of those who could not attend.

This is just to keep you informed that the next two Community Health Forum Meetings have been arranged.

1. Date : **14th August 1992 (Friday)**

   Time : 2.30 p.m. - 4.30 p.m.

   Venue : Ashirvad,
   30, St.Mark's Road,
   Bangalore 560 001. (Phone : 21 01 54)

   Dr. Vanaja Ramprasad will report on the RIO Conference - issues and concerns that should be of relevance to us as Community Health action initiators.

2. Date : **5th September 1992 (Saturday)**

   Time : 10.30 a.m. - 12.30 p.m.

   Venue : Ashirvad,
   30, St. Mark's Road,
   Bangalore - 560 001 (Phone: 21 01 54)

   Prof. Ravi Kapur, Deputy Director, National Institute of Advanced Studies (better known to all of us as one of the key pioneers of the Community Mental Health work of NIMHANS) will share his perspectives on"Yoga and Mental Health" deriving inspiration from his own experiments in this area.

Shirdi Prasad, the facilitater of our Forum has gone to Sri Lanka on a special assignment to review Community Health needs of refugees from the troubled zone. He will give us an additional first hand report on one of these occasions, depending on when he returns.

We look forward to your participation with the same enthusiasm and numbers witnessed on 11th July 1992.

A pamphlet and newsletter released on 11th July 92 is enclosed for all those who could not make it to that meeting.

With best wishes from the CHC Team.

See you on 14th August and 5th September.

Yours sincerely,

18 percent response. The latter was prompted by a crisis situation which arose when the then editor perceived a lack of participation and support and serious discussion regarding continuation of the bulletin ensued. The survey showed an overall support for the bulletin, which then got a fresh lease.

Readership surveys

1978 **Critique :**
Abstract analysis
Too much criticism
Too little constructive suggestions
Increasing formality
Suggestions :
— More experience reports
— Recent advances and appropriate health care techniques
— More editorials
— More organisational news
— More variety in authors

1979 **Responder characteristics :**
Medicos — 68%
Non-medicos — 32%
Members — 65%
Field Workers — 10%
Medical College teachers — 35%
Response :
Most popular — title articles and materials
Bulletin useful — 90%
Existing system irrelevant — 90%
Alternative possible — 90%.

Some problems

A bulletin with this perspective and supported by subscriptions and donations only, is bound to have many problems. The three most important often reported in the bulletin were :

(a) **Focus :** With the diversity of readership and their expectations 'selection on material for the bulletin is a gymnastic more difficult than walking on a tight rope'. (31).

(b) **Availability of articles :** Though the Bulletin appears to have appeared regularly, editors have had their range of reading and article extracting ability stretched to the extreme, resulting in frequent crisis. Typically in 1980, there was an appeal in June as follows : "If this state continues the last issue will appear in July". The crisis was most often got over by reprint of suitable articles from other sources. Many were very good and added an important dimension to the bulletin. However. lack of original articles can be not only a health hazard to the editor, but it also question the creativity and dynamism of our membership !

(c) **Finances :** This has been a chronic problem throughout, but the remarkable ability of consequent publishers to continue against all odds deserve real kudos. MFC has fiercely guarded its independence by committing itself to a policy of financial support by subscriptions and personal donations only. It was felt that external project funding would result in some inevitable institutionalisation, possible loss of independence and very likely decrease in the personal support of committed members. The increasing deficit has constantly challenged this stand and the discussion in 1983 finally resulted in a more open policy of funding with certain restrictions to maintain our value stand (87).

(d) **Printers' devil :** This has not been as much of a problem as it could have been in a small bulletin of this nature because of a series of meticulous proof readers. On occasion, however, it has caused some degree of embarrassment and often comic relief. Recently, in the front page of the bulletin, 'health' our main preoccupation was wrongly spelt and 'mgc' not 'mfc' was committed to achieving it by 200 A.D.

The future

With the increasing diversity in membership, MFC may have to consider producing bulletins/ newsletters directed to stimulating 'thought currents' at different levels.

The 'demystification of medicine' and 'the evolution of a style within reach of the common man' are two important but neglected dimensions in the bulletin. The fact that many of our member writers also write for the popular press in the regional language is some cause for satisfaction though this needs to be promoted much more through MFC in the future.

In **conclusion** the hundredth milestone of our bulletin has been reached through an exciting and exacting collective endeavour. What has been the contribution of this effort to health related thinking in India in the last decade only the future will tell. Ivan Illich, when interviewed in 1978 is reported to have said that "the bulletin was the best periodical in the third world which analyses health structure and its problems". Two readers in the 1979 survey on the other interestingly felt that the the health care system in India was relevant and that the bulletin had been responsible for their opinion! Only our readers can decide where we stand between these two extremes.

1 (iii)

MFC Bulletin NO 100-101, April-may 1984

prescribing. Certain unusual problems like Lathyrism, discrimination against women in health, disaster medicine etc., have also been presented. By and large, however, tne range has been within the traditional boundaries of medicine — both clinical and community with a strong preoccupation with nutrition, health service policy and drug issues.

Non-medical issues which are vital to health care have been covered peripherally with stray articles on green revolution, dairying, soya bean and low energy economics.

Three areas stressed in the MFC manifesto have been particularly neglected. These being demystification and popularisation of medical science, humanisation of medical/health practice and the open-minded enquiry into non-allopathic systems of medicine and non-drug therapies. Does this reflect the existing professional/medical bias of the group?

Even within the traditional boundaries of medicine certain issues like ecology and environmental health, health problems of tribal regions and urban slums, workers health, the clinical investigation, business, unnecessary surgery, malpraxis, the nuclear epidemic and the relevance of existing research in the country have hardly been considered. Emerging issues important in a wider context but relevant to the health movement like pedagogy, communications, participatory management and humanistic psychology among others need also to be included.

Features

The format of the bulletin has shown much variation but certain basic features have remained constant.

(a) **Lead articles :** These have been the key feature of the bulletin. They have included original articles written by members and contacts as well as reprints from other journals and sources. These articles have been very responsible for the reputation of the bulletin. The selection has been surprisingly consistent in terms of relevance and analysis in spite of the fact that there has never been a very clear cut editorial policy — our manifesto reworded from time to time being the only guiding principle. Of late the articles have moved from a more abstract analysis of issues like health policy to more concrete like drug misuse, community health worker and health education. This concretisation may be representative of the fact that many of the analysts of yester years are deeply immersed in action today. In turn these realistic issues may be instrumental in stimulating further activism in MFC circles. Here again we are vulnerable to the criticism that the emphasis on drug issues represents medical bias but this is inevitable in our present doctor oriented predicament.

Vocal Figures

Feature	Phase of bulletin 1-25	26-50	51-75	76-100
1. **Articles**				
a. original	32	26	32	24
b. reprints	10	19	26	17
2. **Letters to Editors/readers dialogue**	49	64	14	13
3. Book reviews	8	—	1	8
4. **Activity reports**				
a. mfc groups	8	8	2	4
b. health projects	1	2	8	2

(b) **Discussions/dialogue :** The thought current nature of MFC should have made these a distinctive feature of the bulletin. The experience has been different. The first phase saw a very active response from members. Even though these were often the same inveterate discussants, they set a healthy precedent. The second phase saw a very active response from members. The second phase saw an increase in this phenomena with a much wider cross section of readers participating in columns such as Hyde Park/Dialogue and contributing letters to the editor. In the last four years this phenomena has begun to wane and should be a cause of concern. Are bulletin readers so busy with their own local preoccupations that they do not find time to participate in discussion or is the Bulletin not adequately thought provoking? Are there many other factors? Only a readership survey could probably throw light on this.

(c) **Activity/Project reports :** Reports by small groups all over India with an MFC perspective have been featured on and off. Reports on projects like Jamkhed, Gonoshasthaya Kendra and CINI have also appeared. Considering the wealth of field experience gained in India in the last decade this is an area

Research Project : Strategies for Social Relevance and Community Orientation in Medical Education : Building on the Indian Experience

A PROCESS REPORT

Community Health Cell, Bangalore*

June 1992

Sponsored by : Christian Medical Association of India (CMAI). Catholic Hospital Association of India (CHAI), Christian Medical College, Ludhiana (CMC-L).

*Society for Community Health Awareness, Research and Action
No. 326, V Main, I Block, Koramangala, Bangalore - 560 034.

needing much more attention. Reports of well-known projects are not as important as sharing by friends of the little lessons in their field experience, the new perspectives gained and the small but appropriate innovations made. The Sevagram group has been particularly remarkable in such little inputs.

MFC organisational reports have been a consistent and welcome feature. The informal nature of these reports have been typical of MFC. Reports of the lively group discussions at the meets have helped those who cannot attend the meet to get a feel of the frank and open style of MFC group work.

(d) **Surprisingly** in a hundred issues less than twenty books have been reviewed. These have included the classics by Illich, Maurice King, Mendelsohn and Morley and the ICMR and WHO compilations of alternative approaches. In the light of the recent explosion in health care literature this is a serious lacunae in our efforts. Not that all the material available is necessarily relevant to the MFC search but there is an urgent need to keep members and readers upto date and well informed, if this quest for an alternative people oriented health system is to be built on a scientific base.

(e) **Government policy documents :** In recent years there has been a significant output of government policy documents and related reports taking a new look at the Indian situation and supporting/professing alternative approaches. By and large the MFC bulletin has carried active response to each of these — the Srivastava Report, the Janata Health Policy, the Medical Education Policy and the Health for all Report. The lack of response to the new Health Policy of 1983 is a serious omisssion. This active analysis and feedback is particularly crucial because the reports of late feature very radical statements and programmes that create myths and some confusion. These reports seldom mention the process by which these radical changes can be actually introduced into the existing exploitative and irrelevant systems. MFC members have a definite role to bring out these contradictions and also apply themselves to issues of process ignored by these reports. At the same time we need to emphasise those elements which are helpful to the evalction of a more humane and just system.

(f) **Information :** Most bulletins have featured snippets of information on recent events and literature in health, job opportunities and other available resources. In 1978-79, a column of news clippings to keep readers informed about issues raised in the popular press was attempted. In the absence of a documentation centre to back the efforts of the editors, this has been a low key feature.

(g) **Editorials :** Like the lead articles these have been a distinctive feature of the bulletin though the style has varied greatly. The first phaes saw annual editorials setting measurable objectives for the bulletin but remaining a silent catalyst in between. The second phase saw a more regular feature which not only galvanised the group work but also put the contents of the bulletin in the MFC perspective. The last four years has seen the evolution of a more analytical and technical editorship which has put the bulletin on very scholarly foundations.

(h) **Miscellany :** Bulletins 1-29 had the Chinese slogan "Go to the people, live among them....." at the bottom of every page expressing the beginnings of the MFC quest. Bulletin 30-35 saw the introduction of five additional features — these being Hindi articles, health related poetry, cartoons and line drawings, a contents list and provocative gimmickry to enhance readers participation.

JP was the only personality to be honoured in the front page being a sort of chief inspirator of the group (46). He displaced the red disc from top right to right down. Incidentally the red disc was not selected to depict the rising sun of revolution but was a practical attempt to balance the numbers and break the printed monotony of the first page. Coincidentally this gave the bulletin its popular and recognisable symbol.

Anthologies

Twice in recent years, anthologies of the best original articals were published by MFC. The first (In Search of a Diagnosis) covering issues 1-24 and the second (Health Care — Which Way to Go) covering issues 25-50, have both seen a phenomenal popularity. The first one is now out of print while the second one is on its way out. The third anthology is a scheduled to be released later this year.

Readership surveys

To enable mid-course corrections and get a feel for the readers views, readership surveys have been undertaken. Twice, these have been reported in the bulletin. The 1978 survey elicited only a nine percent response while the 1979 survey an

MFC 100-1, April - May 1984

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AT THE HUNDREDTH MILESTONE

Ravi and Thelma Narayan

mfc is as of today, mainly a thought current and the monthly medico friend circle bulletin..... is the medium through which members communicate their ideas and experiences to each other. Running the bulletin in our chief common activity.....

MFC manifesto 1983

In this centenary issue, as we reflect on the past, consider the present and look into the future, we review the preceding ninty-nine issues of the bulletin, to discover the strengths and weaknesses, the opportunities and threats that have been part of its eight years history.

The Beginnings

The MFC bulletin began as a cyclostyled note that was circulated regularly to members of the initial nucleus group, many of whom had links with the Tarun Shanti Sena in 1974-75. Our records show that there were atleast fifteen such notes. The style was informal — a sort of 'dear friends' newsletter keeping members about meettings and discussions, field opportunities and thought provoking articles on various relevant health issues. Founder members will probably recall with nostalgia the series on the present health system, 'alternative approaches' and 'radical medicine', the column entitled 'vocal figures' presenting telling statistics of the health situation in India and the proclamation of Maurice King's book as the "bible for every doctor"! The characteristic feature of this embryonic phase of the bulletin was its youthful idealism and infective enthusiasm. Rallying slogans such as "If China can do it why can't we?" and 'let's coordinate our efforts to fight the situation instead of blaming western culture and criticising brain drain' were typical examples.

The MFC bulletin as we know it today took shape at the second annual meet at Sevagram in December 1975. The first editorial committee was formed and a plan of issues outlined for the whole of 1976. The first bulletin was printed in January-February 1976. Since then the bulletin has travelled a long way — 93 months of regular printing, seven double issues, three editors and seven printing press — to reach this hundredth milestone.

Objectives

Though the initial objectives were outlined in the first issue — as many things in MFC, these have evolved as time went by — being modified, re-emphasised and added unto (see Index). Against the background of these wide objectives the evolution and performance of the bulletin has shown an interesting variety and a rich diversity. Atleast once during this eight year period a situation of crisis (45) called into serious question continuation of the bulletin but the heated discussion threw up three reasons of organisational significance which made the bulletin necessary in addition to its wider relevance. These being that the bulletin was the only means — to be heard at national/international forums; to involve the new members; and to prevent degeneration into a federation of local scattered groups. All these objectives taken together gave the bulletin a new lease of life at every crisis.

Outreach

The bulletin subscription has ranged from 250-700 over the years. Presently it is a little over 400. The readership includes rural health project workers, medical students, medical college teachers, academicians, research workers and non-medicos interested in health. These are spread out all over the country but more particularly in the Western region — Gujarat and Maharashtra — the traditional home of MFC. A detailed break up of the subscription list is not yet ready but a curscry perusal indicates that the readership among medical students and non-medicos is still far from significant.

Scope

The articles featured in the bulletin have represented a very varied range of topics related to medicine and health. An index of the hundred issues which is featured as a supplement to this bulletin shows twenty eight sections in the classification. These include health services, medical education, maternal and child health, population control, communicable diseases, environmental sanitation, mental health, drug policy and drug

M.B.C.B. August-87

A letter to MFC-Bulletin

1 (v)

For the last eight years, we have been involved in health and development work in villages. We feel it was very fortunate that one of the first books we read on arrival was 'In Search of Diagnosis': it helped orient us along the right lines and led us to become members of mfc, which has always seemed like a lone voice of sanity crying in the wilderness of India's health care scene. Now, as we prepare to leave India, we want to offer our congratulations for keeping up the critical analysis, and our gratitude for all we have learned from you over the years. Reading through the latest anthology reminds us that it was on your advice that we threw out the Terramycin 2cc injections, the Novalgin, the tonics and all other rubbish, and promoted ORS in the clinic; and after the TB meet in Bangalore, our TB programme was revised and improved.

7

The dreadful state of health care in India is well known to readers of mfc bulletin. The background papers of the Family Planning Meet make particularly saddening and infuriating reading. We used to look on this work as a challenge: but after eight years of close contact with the health problems of the rural poor, we have to say that we feel sickened and depressed by the amount of ignorance, greed and exploitation which permeates every level of what passes for 'medical care' for the majority, of people. Our solution has to be that there can be no solutions without political solutions; and that in that movement, we as foreigners, have little role to play. It has to be upto you all then in what looks like a long hard and bitter struggle.

Keith and Caroline Walker, Valiparai

100-1

medico friend circle bulletin

APRIL-MAY 1984

TEN YEARS WITH MFC : MY PERSONAL VIEW

ASHVIN J. PATEL

When I was told to give my reflections upon ten years of MFC, I accepted it reluctantly. Firstly, because I did not have many things to say and secondly it was not spontaneous for me. However, I give some stray thoughts that occurred to me.

An Overview

Many of the readers may not know that MFC was not a planned efforts but a spontaneous one. It orginated from a socio-political movement Tarun Shanti Sena which was inspired and ignited by zeal for total revolution. Naturally MFC carried legacy and hang-over of this perspective, values, culture etc. Many of the founder members were considered radical and unorthodox Gandhians.

Within a year it could attract friends who ranged from academicians to field activists; not suprisingly it also included various shades of opinions from right to left. I do remember that some friends clearly denied then, that the doctor has any other responsible role than treating patients coming to the dispensary. While others, on the other hand, felt that health services are just an entry point into the community. Real health work is to struggle for socio-economic-political revolution. This latter viewpoint was shared by both, the Gandhians and the Marxists alike.

MFC criticised the present health system and its approach so eloquently and vociferously that it could attract attention of many young doctors and non-doctors. The "prophetic vision" and enthusiasm of old members proved to be too much for some. A few resented the indoctrination and the aggressive way of discussion. A proportion of them felt that MFC could not give a relevant programme according to their aptitude and abilities. There was a feeling that MFC wanted everybody to agree with its analysis, and then left them alone to face the frustrating situation.

In the first four years, study-cum-work camps were organised for medical students and others which generated lots of enthusiasm. Some medical colleges could evolve health care programmes for slums and nearby villages. Many of them are still continuing. But perhaps, except for a few, there is no continuous follow-up and dialogue. They have become just like any philanthropic dispensary without having a wider perspective of community health and development.

How would one measure the progress of such an organisation? By the number of its members? It's impact on society? The growth of its members as a collective to understand, analyse and respond to a situation?

As experience showed the annual meets of MFC served a purpose as a major point of contact. However, new participants felt isolated, the target of indoctrination and threatened by the level and nature of discussions. The objective of increasing the number was not to be realised effectively. Old members felt that the preoccupation with new members kept the level of discussion at a preliminary level. There was no scope for learning and mutual growth. Robust, impersonal and objective arguments were appreciated and welcomed by old members, while many of the new members perceived in the same exchange of views, aggressiveness that tended to be personal. I feel that in the ten years, MFC members have shown a lot of maturity to take the arguments and criticism as that of the thought and not of person. No one ever doubted another's genuineness, honesty of purpose and concern for the poor. Even after a session of hot

and involved exchanges there has been no trace of bitterness and the feeling of friendship and solidarity has always grown. To an onlooker sometime it may seem that we are simply splitting hairs and are involved in mere polemics. But this seeming polemics represents deeply held differing view points, perspectives, social & political ideologies and backgrounds.

In the first few years, the number of MFC contacts increased very fast. It might have been due to the long felt need for such a forum, the unconventional and critical views appearing in MFC bulletins, the annual meet deliberations or the regional camps. Then its growth in number rached a plateau. Not only the numbers stagnated, but also the core group, which evolved spontaneously due to continuous interaction and concern for the MFC organisation, developed a kind of disinterest in the organisation. What was the origin of this disinterest?

Various Trends

There were three discernable trends within MFC. First trend wanted MFC to be a body to provide deeper analysis of the health situation and its relation to socio-economic-political factors. Second one wanted it to experiment in alternative health approaches at micro level informed with critical analysis of present health system. Third trend wanted it to promote philanthropic health services. The last trend got disillusioned immediately. They thought MFC with such a thorough critique of present health affair would now come out with new sets of concrete alternative programmes. This was not to be. Although attempts were made, through regional camps and some health care programmes involving a few medical colleges, to introduce this analytical process to new comers; a number of constraints prevailed. A questioning process could be initiated, but the view-point that not only socio-economic changes were precondition for improvement of health, but also that "real activity" to be taken up had to logically aimed at socio-economic change, had a paralysing effect on many.

Not surprisingly, the second trend also considered a socio-economic change to be precondition and also aim of their health activities. They could go upto a point in analysing alternative health approaches in India and elsewhere. They agreed, in their eagereness for action, ot "certain interventions, concepts, values and models like bare foot doctors — C.H.W.; underfive clinic; campaigns against bottle feeding, commercial foods and irrational therepeutics, attacking drug industry, alternative simplistic curriculum for medical schools; people's participation; demystification and de-institutionalisation of health care; self-sufficient health care programmes; self help; promotion of other sysetms of health care: etc., etc.," (to be referred hereafter for sake of brevity as 'health care mix'). And even proponents of the first trend, though grudgingly endorsed this 'health care mix' without providing overall framework or model linking it with the process of socio-economic change. This led to a lot of confusion in some and smugness in others.

An interesting current was emerging intertwined with the other trends, now and then. How as a group were we going to evolve methods and a process of self learning conducive to personal as well as collective growth? This perceived need was not adequately responded to, which led some to discontinue their interaction with MFC in despair. However, a sizeable number of members continued tenaciously to struggle to find the way out. This struggle was not born out of merely emotional attachment to the organisation, but because the needs and tasks were demanding so. Moreover, MFC may be small in terms of resources, infrastructure and manpower, but perhaps it is the only organisation struggling collectively to search for a socially meaningful and durable alternative. It has evolved and practised certain norms in public life consistent with its objectives and concern for the poor.

A lone but emphatic voice was raised which was appreciated by many about a rush for alternative and much ado about 'health care mix'. No efforts were put beyond refuting certain historical events and pointing out some limitations and deficiencies in various work. A point of saturation of thinking and imagination seemed to have arrived. I remember how one strong protagonist of community health got alarmed when government agreed to implement CHW scheme at national level. His instant reaction was, "Now government has agreed to implement CHW scheme, what role and functions are left for us!" This was an indication of poverty of understanding and arrest of growth at a given time point. But experiences in the field had shown that the 'health care mix' was

far from adequate. It was misleading and tended to breed rituals; it gave a false sense of achievement and even complacency that one was doing everything one had to do in community health. Wide gaps in knowledge, information and strategies were there waiting to be discovered. These were the growth points one had to look for very carefully. This realisation underlines the need to develop experiences, in sights and knowledge which is relevant and pertinent to Indian situation. Both social sciences as they relate to health problems and natural sciences have to develop further so that community health ceases to be underdeveloped and primitive. More painful and frustrating is that even some proponents of the second trend are also equally unattentive to this perception.

Possible Tasks

MFC has realised the simplistic nature and sloganism of various technological and social interventions in vogue. It is not only not enough to speak about shift from individual to community diagnosis, but to understand and decipher intricate webwork of the individual as a member of a family, of much larger social groups to which he belongs through kinship, residence, occupation, religion, beliefs, etc. and conditions of his life, his work, his economic and social placement and culture, his physical and biological environment. Furthermore refinement and differentiation in relation to each disease process. Thus the real problem does not lie in actual activities but lies in the theoretical understanding of the complexiy of the disease process in the community that inform these activities. It is through continuing analysis and actions of various groups on at least some of these problems in similar perspective that relevant, durable and realistic pieces of knowledge are going to be built.

Is there a critical mass of socially concerned physicians today who are competent enough to build up this knowledge: Does the 'health care mix' aped by voluntary groups have rigour and strength to stand the "scientific scrutiny"? Can voluntary groups face, with their own observation and evidences, a tough and thorough-going "objective" criticism made by sympathetic academicians? Could our priority be to evolve a collective voice known not only for its honesty and commitment to tre cause of the poor; but also respected for its ability and scientific rigour; not only among like-minded people but also among the professional world. If yes, how can we go about it? It may need broadening of our focus to include those from academic institutions who have knowledge, competence and aptitude to contribute to such efforts. Simultaneously, we have to learn and develop our abilities to understand not only social sciences but natural sciences too. We may have to work out overall plans of action informed with this perspective and persuade ourselves and other groups to take up some of these commonly agreed upon activities over a period of time so as to improve our insight as a collective.

The wateright compartmentalisation into political activists and health activists can no longer help. Competence in health sciences is essential, but assimilation of egalitarian values and understanding of political reality are crucial to undertake such "field research" conducive for the health of the masses. Most of the MFC members have internalised the latter; question is to fill up the deficiency in the former one. But MFC members are small in number. Most of them are already engaged in traditional project work, political activities, campaigns for educating masses, teaching and research in established institutions, etc. according to their aptitudes and priorities. Would such a shift impinge upon personal freedom and preferences?

We have been busy struggling with ourselves and for various other factors, we could not interact with medical students, socially concerned non-medical friends and consumers of health care adequately. If we refer to the deliberations of the second annual meet at Hoshangabad it dileneated guidelines for action programmes quite well. Why could we not persue it? Can we learn from positive experiences from KSSP and negative experiences of other organizations? Is it just a lack of infrastructure and full time worker or adhocism responsible for our failures?

Conclusion

I have not tried to reflect on all the aspects of MFC. Many things have been left out like its commendable achievements, its democratic and egalitarian ways of working, place and role of MFC bullentin, interaction with various groups and individuals, details of various projects, campaign and workshops, managing on low budgets function-

(Continued on page 10)

Looking Ahead...

Anant Phadke

If we are to find out how MFC can develop further in the future, we should try to understand the factors that affect the growth and development of MFC. These factors lie both within MFC and outside it. Let us start with the social factors outside MFC.

The socio-economic condition in India is turning from bad to worse. The plight of the ordinary people is increasing, so is their opposition to their oppressors. A section of the white collar intellectuals, students, are bound to be affected by this and some of them are bound to seek alternatives. This sensitive, humanitarian, democratic layer from within the intelligentsia constitutes a potential for MFC. All of us continue to meet many sensitive, socially-conscious medicos for whom a group like MFC offers a platform which they are happy to know about and which they would like to join. MFC would grow if it can approach such individuals. If there is a social movement amongst the intelligentsia on any issue concerning human values, justice, we can even hope to get a large influx of newcomers. The original group of MFC was a product of the Jay Prakashwadi movement. There is no such movement on the horizon now, but to be sure it is bound to emerge, perhaps in a different form. The social conditions that gave rise to it still continue to dominate our lives. Today the intelligentsia seems to have resigned to whatever is happening. This cynical aloofness is a counteracting force which affects the growth of groups like MFC. Nevertheless, on the whole, the situation contains a lot of potential for the growth of groups like MFC. But along with the growth of general dissatisfaction amongst the people, the challenges in front of a group like MFC have also grown. What are these challenges?

The publication of the report — "Health for All : An alternative strategy" has posed a concrete problem. After the publication of this prestigious report (prepared by the collaboration of ICMR — ICSSR with the help of a number of renowned persons in the field of health-care) groups like MFC have to take a concrete position about what is in our view, wrong with the existing system of medical care and what is the alternative. Is our analysis and solution any different from what has been described in this report? If yes, in what way and why? One of the criticisms of this report would be — it does not show the process through which the solution it offers can be brought into practice. MFC can claim that it can show the process of change which MFC wants to bring about and that MFC itself constitutes a part of the process. Whatever may be our position, we can't ignore this report. To be sure, there are many aspects of this report with which MFC agrees. This report has thus raised the level of debate, and has set a reference point for discussion and action. It is no more sufficient for groups like MFC to discuss and act at the same level as was done before the publication of this strategic report.

In the non-Government sector, the achievements of some of the pathbreaking voluntary Health Projects are now well known. What do groups like MFC have to say about these projects, their achievements and limitation, their relationship with the goal that we want to achieve? A number of international agencies are fostering the methodology as being attempted by these projects and this adds to their importance.

Thirdly within the medical field, a number of oppositional movements have grown in last 10 years of Junior Doctors, paramedics and Govt. Medical Officers for better pay and better working conditions; of consumers against misuse of drugs ..... How groups like MFC should relate to these movements

Groups like MFC cannot grow and develop to any substantial extent unless such new developments are analysed properly and a standpoint taken in theory and in practice. Does Medico Friend Circle have the resources-theoretical and practical — to successfully deal with the new challenges and hence grow into a trend which can make a dent on the national scene? To answer this question, let us locate the strengths and weaknesses of MFC. MFC has been able to survive and grow against all odds. (Compare MFC with similar groups.) MFC has not survived by degenerating into a lifeless institution. (Such institutions continue only because some funding source is ready to "keep" them.) MFC has also not degenerated into a political sect with no basis in social movements. To survive as a lively group is an achievement for group of medicos which is fundamentally opposed to the existing medical profession and the existing system of medical care. Secondly MFC is unique in that though most of

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(Continued from page 3)

ing without paid full time personnel, etc. Inspite of all its limitations and failures, MFC has created a lot of hopes and expectations from varied quarters. Pertinent question is whether MFC can collectively show resilience and tenacity to meet the challenge of examining the process and progress of its functioning continuously in the light of fresh experiences and knowledge without slipping into high profile global fashions, slogans and cliches.

MFC could show a change in emphasis after a long debate on 'MFC which way to go' from achieving socio-economic change to evloving a pattern of medical education and methodology of health care relevant to Indian needs and conditions as a part of broader efforts to improve all aspecst of society for a better life, more humane and just in contents and purposes. MFC bulletin could also show a shift from merely paralysing critique of micro level issues to examination of various micro level alternatives and interventions. Annual meets also tried to respond to issues like women and health, medical education, etc. MFC also responded to live and emergent issues like reservation for seats in medical colleges for the scheduled tribes and castes. These experiences make one feel confident that MFC has the potential to respond to relevant issues in a mature and courageous way.

COMMUNITY HEALTH FORUM

No. 367, 'Srinivasa Nilaya', Jakkasandra, I Main Road,
I Block, Koramangala, Bangalore - 560 034.

30th June, 1992.

Dear

Greetings from Community Health Forum !

This is to inform you of the next C.H. Forum meeting :

Date : **11th July 1992 (Saturday)**

Time : **2.00 p.m. to 4.30 p.m.**

Venue : **Ashirvad,**
30, St. Mark's Road,
Bangalore - 560 001.
(Phone - Ashirvad - 210154
C.H.Forum - 531518)

Topic : **"COMMUNITY HEALTH CELL"**

You are aware that it is a year since the C.H.C. has registered as **"Society for Community Health Awareness, Research and Action".**

Members of C.H.C. will be briefly reviewing the past activities, sharing with you its concerns and initiatives, while putting up plans for the future.

As members of the C.H. Forum and friends of C.H.C. we **EARNESTLY** request your participation, ideas and viewpoints to enable a common initiative towards Community Health.

Do mark this date/time in your schedules and looking forward to our meeting,

With regards and Best Wishes,

Yours sincerely,
for COMMUNITY HEALTH FORUM,

SHIRDI PRASAD TEKUR.

MFC 100-1

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Looking Ahead...

Anant Phadke

If we are to find out how MFC can develop further in the future, we should try to understand the factors that affect the growth and development of MFC. These factors lie both within MFC and outside it. Let us start with the social factors outside MFC.

The socio-economic condition in India is turning from bad to worse. The plight of the ordinary people is increasing, so is their opposition to their oppressors. A section of the white collar intellectuals, students, are bound to be affected by this and some of them are bound to seek alternatives. This sensitive, humanitarian, democratic layer from within the intelligentsia constitutes a potential for MFC. All of us continue to meet many sensitive, socially-conscious medicos for whom a group like MFC offers a platform which they are happy to know about and which they would like to join. MFC would grow if it can approach such individuals. If there is a social movement amongst the intelligentsia on any issue concerning human values, justice, we can even hope to get a large influx of newcomers. The original group of MFC was a product of the Jay Prakashwadi movement. There is no such movement on the horizon now, but to be sure it is bound to emerge, perhaps in a different form. The social conditions that gave rise to it still continue to dominate our lives. Today the intelligentsia seems to have resigned to whatever is happening. This cynical aloofness is a counteracting force which affects the growth of groups like MFC. Nevertheless, on the whole, the situation contains a lot of potential for the growth of groups like MFC. But along with the growth of general dissatisfaction amongst the people, the challenges in front of a group like MFC have also grown. What are these challenges?

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the leading members of MFC are politically conscious, they have enough of healthy, non-sectarian, democratic approach to allow medicos from different political leanings to come together, debate, criticise each other, learn from each other and develop into a tolerant, mature group. It must, however, be noted that the "friendly" atmosphere in MFC is partly because there is not much at stake. If MFC squarely faces the problems mentioned above, starts growing as a formidable current on the national plane, the friendly atmosphere is bound to be affected atleast to a certain extent. But the tradition, we have set up will help us in challenging times. The tradition of respecting other's viewpoint, of mutual trust, open-mindedness has been our asset. To be sure some sectarian mistakes have been made of because of which some people got alienated. But many have come back and on the whole very few have dropped out with sharp discontent. (The core-group of MFC sometimes gives an impression of an arrogant, radical, intellectual clique involved within itself. But this is only a cursory impression — even that should changes and it is not at all the true nature of this group.)

The third positive asset of MFC is the tendency in MFC to examine things in a critical theoretical perspective, on a principled basis yet in a way that would be relevant to the problems in the actual field. Since most of the leading members are actually working at the grass-root level, this critical questioning outlook acquires a special down-to-earth practical connotation. This has earned MFC some good name (as well as bad name amongst those who don't like such questioning.)

But the theoretical development in MFC has been quite slow. It is only recently that things have really begun to move. The tendency in MFC to be self-complacent and self-congratulating has more or less been replaced by a serious concern to study, work upon and develop our understanding. But still it would take a lot more effort to systematically develop position on the problems mentioned earlier. There does not seem to be adequate realisation in most of us that MFC must answer these and such problems if it has to make a dent on the national level. A sense of urgency, required in view of MFC's lagging ebhind as of today, is by and large absent. There is a concern for developing our understanding; but not in relation to the challenge posed by the events happening around but as a general concern for theoretical development.

Things are bad when we come to the question of making a co-ordinated effort to make an impact on a national level by forging, propagating an alternative viewpoint. Most leading members of MFC are quite involved in their local work. Most of us have not been able to devote much time and energy for MFC's organizational work. Unless the leading members of MFC replan their local work in such a way that they spend much more time for MFC's organizational work, unless more fresh blood comes in, MFC will not be able to face at all the challenge posed to her by the developments in last few years. Unfortunately not many MFC members see this. Some are even content with the running of the Bulletin and the Annual Meet. We must realize that even mere continuation at the existing level is financially becoming more and more difficult due to price-rise. The financial deficit is increasing very fast. Unless we have atleast 1,000 subscribers (compared to about 400 to-day) the deficit would become unmanageable next year (even this year.) There are more than 2 lacs MBBS doctors in India. (to take **one** yardstick of assessing the potential for MFC to grow) and even one per cent of this becomes more than two thousand. MFC is unknown to many of those who would readily become its members. We should have reached at least this section. But that involves a change in the attitude of many leading MFC members towards MFC and hence a re-planning of their priorities in practice. Are we really serious about forging an alternative, making a dent on current opinion in India about medical care? Shall we **critically study**, try to develop and practice community medicine much more seriously? Shall we study and understand in a much more concerned manner the history, development of social movements, social changes in India and abroad? In one word, shall we get rid of **amateurism** in us? The answer to these questions will decide whether MFC can play its role in the "fundamental socio-economic change" that MFC wants to align with.

□ □

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DECEMBER 1984 2(i)

Discussing Tuberculosis Control – Why?

— Anant Phadke, Pune

(In the coming XIth Annual Meet of the Medico Friend Circle at Bangalore, we would be discussing various issues concerning tuberculosis control in India. The question is so vast that it is impossible to have any useful discussion unless we define the focus of the discussion. In my view, the purpose of discussing any issue in mfc needs to be clearly thought of and agreed upon. In this note, I would argue what in my view would be the appropriate purpose of the discussion at the mfc annual meet. This note would inevitably involve a discussion on the role of mfc.)

Role of discussion at the annual meet

Let me first quickly put forth a consensus that we had reached about the general role of the discussion at the annual meet. It was thought that there is a definite section within medicos and non-medicos in India who already have a perspective similar to that of mfc or who could come to mfc, if there is adequate contact and dialogue. Different individuals in this section are more interested in specific aspects of the health system in India. If mfc takes up various issues in different meetings, then those individuals with specific interests in these subjects would come closer to mfc and may join us. Secondly such discussions would help us, the mfc members, to enrich our knowledge and perspective of the health problems in India through well planned discussions with the help of resource persons outside mfc; and mfc in turn would hopefully make some impact on the new participants during the course of these discussions. Fine enought But all this does not specify what specific kind of knowledge we want to gain and generate through these discussions; whether and in what way would the discussions be different from the discussions in the academic or established circles of community health.

Specificity of mfc

To answer this question, let us go back to the origins of mfc, the kind of discussions we have had so far and the debate on 'mfc — which way to go' carried through the pages of the bulletin and reprinted in our anthology — HEALTH CARE WHICH WAY TO GO? I would also like to remind readers of the Centenary issue of the mfc bulletin No. 100-101 (May-June 1984) where the contributors had taken a somewhat critical overview of what the mfc has achieved, not achieved and what challenges we face today. It is not possible to go through the history of mfc in this note. I would only point out two specific characteristics of mfc which are reflected in all these writings. One, its concern for Social Revolution. At least the core members of mfc have been very concerned about this and hence the articles in mfc bulletin have been quite critical about the existing health system and the debate 'mfc which way to go?" was centered around how mfc could contribute to fundamental socio-economic-political (S-E-P as Abhay Bang had put it then) change. The second characteristic has been the critical and questioning attitude of mfc members:

— critical of new 'solutions'/strategies put forward by the establishment and the community health enthusiasts (this critical outlook partly reflects the grass root village level at which many mfc members work)

— critical (admittedly to a lesser extent) about mfc's achievement and

— of late, critical about the existing prescriptions of community medicine.

False and genuine limitations

My plea is, let us be more conscious about our specific character and shape our discussions in the coming annual meet accordingly. What does this mean concretely? For example, let us look critically at the argument that 'since India is a poor country Inj. streptomycin should be reserved only for sputum positive cases and only the two drug regimen of Isonex plus thiacetazone be given to sputrum negative cases.' We should question this argument and ask 'Is Indian economy so backward today that it cannot really afford to give streptomycin to all the cases of tuberculosis?' Today, the existing system squanders resources on useless activities and keeps a smaller share than what is possible and necessary for health work. Even within health, resource utilisation is in favour of the medical establishment and the well-to-do. In the case of drug production, for example, out of a total of about Rs. 1200 crores of drugs used annually in India, it is estimated that only about Rs. 350 crores of drugs are essential and rational. The rest, though they yield higher profits for drug companies, are useless and irrational. If these resources are utilised properly why can't all those who need antitubercular treatment get proper treatment? Is Indian economy really so backward that radiographic facilities cannot be extended more to help the diagnosis of tuberculosis and other conditions? Why should mfc accept the false limitations imposed by the existing system and try to work out solutions within these false limitations?

We all know very well that India is both economically and socially backward and even after a social revolution resources are not going to develop at such a rate as to make all desirable facilities available in the immediate future. We would, therefore, have to work out solutions within the constraints of limited resources. But over and above these real constraints, the existing system has imposed its own constraints like — malutilisation of resources for the benefit of a few; bureaucratic callousness of doctors and other health personnel; curative oriented training; corruption and commercialization in medical practice; political interference by vested interests etc., etc. All these together make it almost impossible for a scientific strategy to be successfully implemented. In these circumstances should we try to suggest methods of improving the existing state of affairs a little more by accepting all the false limitations of this system?

Towards a better medical and social system

Instead of falling into their trap under the name of 'Practical difficulties', and suggesting improvements to those who are neither particularly willing nor capable of improving the existing state of affairs (remember what happened to the reports of numerous expert committees) why not expose them? Why not concentrate on evolving a people oriented scientific strategy in our own projects and other activities? Such an approach would reject false limitations and try to work within genuine limitations. Firstly which are false limitations and which are genuine ones is something that needs to be worked out concretely and is in a way a matter of judgement also, but to be sure, there is such a difference. Secondly the established value system does not completely disappear in such project work and the problem of poverty, social and educational backwardness, bureaucracy etc., etc., would continue to affect health work in such a project, though in a mitigated and different form. But the direction of where we want to go would be clear.

A question may be posed: What is the point in trying to create ideal islands of project work when tney are going to remain islands, when the strategy is not going to be generalized?' Firstly I am not talking about 'ideal' situations which have no basis in today's reality. One is talking about rejecting only false limitations. Now it is true that even this cannot be generalised within this system (obviously!) and our alternative can only flower in a different, better social system. That is why mfc members should work within the context of and with the cooperation of social movements; forces which are really aiming at a different and better society. This is how we as medicos can help the social revolution which was the original and is the specific inspiration of mfc. Instead of working within the existing system and hence helping it, legitimising it, why not work outside or on the system and help those social movements which are aiming at changing the system itself?

There is a practical advantage in working with such social movements. If a project work is undertaken in an area where such a broad movement towards fundamental social change is taking place. people's participation, one of the most important requirements of good community health work (and which is generally lacking in many projects run mainly on the basis of funds) can become a reality and the entire atmosphere is quite different from the usual one of apathy, lack of faith, lack of commitment and too much bureaucracy. In such places, one can concentrate on the real problems of health work and also obtain people's cooperation and participation, required to solve them. I have deliberately used the general terms social revolution and social movements, because concretely which are such movements is something which individual members have to decide on their own. Ideologically and politically mfc is not very homogenous and different individuals have different opinions. But one thing is certain, all of us want a fundamental socio-economic change even if the exact character of this change is a matter of debate. My plea is that when we discuss the problem of tuberculosis or any other problem, let us discuss it with a view to the social revolution that alone would be able to create conditions for a healthy society and a healthy medical system.

Tall talk?

It may be thought all this is high flown, tall talk' there is no point in planning for a future society today when we do not know when and whether it would come about.' Yes, in a way, it is tall talk. Was not

aiming at freedom from British rule tall talk in the 1930's? Were not Mao and his comrades utopian when they were aiming at a new society in the 1930's? The Freedom Movement in India was aiming at total political independence on the one hand but at the same time demanded certain reforms within the system. Likewise we can and should ask for certain changes in the existing medical system to partly alleviate the sufferings of the people. Our discussion should also be geared to find out such points of action. This is quite different from allowing our discussions to be limited by the framework/problems created by the existing system.

Innovations, ideas, created, practised by such radical health work may also be used in a diluted, distorted form by the existing system (for example, the concept of community health worker). But it is a different matter to aim at, limit oneself (consciously or otherwise), to changes in the existing system. If somebody says that you are evolving strategies which cannot be generalised and hence your work is useless, we should stand up boldly and say that yes, our work, ideas are useless for the existing system but as the movement for social revolution grows the success and influence of our ideas would also grow.

There may be an objection that 'all this tall talk leaves no scope for those who cannot devote themselves to such project work'. There is a misunderstanding involved in this argument about project work. Project work does not necessarily mean village level project work. Alternatives are to be planned and tried out at all levels, wherever possible. A movement geared to analyse and expose the existing medical system, alternative experiments in production and distribution of rational, low cost drugs, in medical/health education . . . etc., are all project work in this sense. Concretely, in the case of tuberculosis control, it is not necessary that everybody from the group has to devote themselves to a rural project in order for the group to analyse the existing strategy of the tuberculosis control programme and to try to evolve an alternative. There are a number of other small and big tasks involved in this work: for example, gathering information, analysing it, disseminating information, organization . . . etc., in which different individuals can contribute differently. Independence was not won by full time political activists alone, it was the product of the collective efforts of millions of ordinary people contributing their individual, small mite.

"We already possess all the necessary weapons to wipe out TB. All we need to defeat the disease, now and forever, are the financial resources and the political will."

World Health — 1982

The coming annual meet

Concretely speaking, in the discussion on tuberculosis during the coming annual meet, my suggestion is that we should concentrate on: (a) *forging an outline of a fundamental critique of the existing state of affairs in tuberculosis control in India;* (b) *identifying measures which should be demanded from the government to alleviate some acute problems;* (c) *evolving an outline of an alternative strategy of tuberculosis control.* This would involve:

1. Understanding the theoretical basis and the evolution of the National Tuberculosis Programme. Finding out whether the strategy has accepted and internalised the false limitations imposed by the system;
2. Sharing our knowledge and experience of how this programme works in the field and why;
3. Identifying and analysing the genuine technical and social problems involved in the control of tuberculosis in a backward country like India;
4. Learning from the experiences of other countries and formulating an outline of an alternative and the role of mfc in it.

(We are awaiting comments before we finalise the session by session plan of the meet. These must reach us by the 31st of December. The final plan will appear is January 1985 issue — Editor/convenor).

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SEPTEMBER 1984

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NATIONAL TUBERCULOSIS PROGRAMME

: some problems and issues : *

Binayak Sen**

"Why is it that even though the felt-need oriented National Tuberculosis Programme is in operation in the country for over two decades, more than 80 percent of infectious tuberculosis patients are still being turned back at various health institutions with nothing more than a bottle of cough mixture?"

— D. Banerji, EPW, 22 Jan. 1983

1. Conceptual Problems

In their seminal 1962 paper on symptom awareness in tuberculosis, Banerjee and Anderson, re-emphasized the problem of tuberculosis as a problem of human suffering, and outlined a strategy for tuberculosis control based on this concept. This strategy, abjured a policy of active case finding. Instead, it concentrated its attention on greater diagnostic sensitivity towards and adequate treatment for those people suffering from *symptoms suggestive of tuberculosis* who presented themselves at the existing hospitals and clinics. Together with the Madras Chemotherapy Centre study on domiciliary treatment, it forms the theoretical basis of our present day tuberculosis programmes.

The credibility of this system rests on the adequacy with which the entire range of presenting symptoms is handled. The logical corrolary of the adoption of this approach would, therefore, be the development of an integrated and well-defined system for tackling the entire range of tuberculosis symptomatology.

Instead, the National Tuberculosis Programme has set its sights on *a Mirage — the interruption of bacterial transmission*. To this end, it defines a 'case' of tuberculosis as a person excreting tubercle bacilli in his sputum. This approach is unscientific because it is only at a much later stage along the exponential curve of falling prevalence that the interruption of transmission becomes even a remote possibility. It also ignores the fact that never in the history of human tuberculosis has a reduction in transmission been brought about by a specifically medical intervention.

As a result of my four years experience of working in voluntary institutions participating in district tuberculosis control programmes — in Hoshangabad and in Durg — I am familiar with the way in which this approach works in practice. A person who presents himself at a Public Health Institution with symptoms suggestive of tuberculosis is not regarded as a person suffering from disability and consequently in need of help, but simply as an entity to be categorised, i.e., TB or not TB. After a cursory physical examination he is sent for a sputum test. If he obliges by producing a positive sputum, that is the end of the matter. He can then be placed on a standard treatment regime (generally INH and Thiacetazone daily) and forgotten about. Once in a way his sputum may be checked but the treatment regime is not affected thereby. I have documented evidence of patients, sputum positive after a year's treatment with INH and thiacetazone, being continued on the same drug. When challenged, the government doctor has explained, "that is the only regime available". In point of fact, in practice this is often true.

But, we will come to problems of chemotherapy later. The point I am trying to make is, that from

the point of view of a desperately sick man, frightened by a dreaded diagnosis, it is cold comfort to be given 30 tablets and told to come back again after a month's treatment, and assured that he will get well in 18 months time. This is particularly so since there are doctors at every street corner assuring patients (with considerable honesty) that they will get well with some private treatment in six months or less.

Let us now come to the case of those who were sputum negative. The cost of a 'free MMR X-ray from Durg to a person in Rajhara, is well over Rs. 50.00. The cost of a local private X-rav is Rs. 35.00. Which should the patient choose?

It should be noted that I have been talking all along of the ideal case. We have not taken any account of the government doctor nudging the patient towards his private clinic; the laboratory technician asking for his 'fee'; the X-ray technician's rudeness, or the irregularity in drug supply.

The patient of tuberculosis is basically a suffering person. It is the least of his concern that he is excreting M tuberculosis in his sputum. What he is much more worried about is the fact that he has cough, chest pain, fever, body ache and nausea. He cannot work. He feels weak. He loses his sexual potency. His children starve and often fall ill in their turn. A physically distant and emotionally remote health centre can offer him nothing. It is well to remember that the Madras Chemotherapy Centre study on domiciliary treatment had weekly home visits as part of their protocol. It is a great pity that this investigation has formed the basis for a programme that thinks it sufficient to throw some tablets once a month at a desperately sick man.

2. Primary TB and Extra-pulmonary TB

Treating the problem of tuberculosis as a problem of suffering people, rather than as a problem of successfully eliminated parasitic myco-bacteria, brings us to two sets of illnesses often neglected in the current programmes, viz.

a. Primary Tuberculosis

Between 10 & 20 percent of Indian children are tuberculin sensitive by the time they are five years old, though some surveys (Raj Narayan) yield a lower estimate. The popular (medical) conception of primary tuberculosis is of a mild intercurrent illness that is only incidentally detected in a chest X-ray and attains clinical significance only in the 'progressive' form. This is not true In malnourished children not only is infection itself accompanied by significant morbidity, but it is the 'interaction' between infection and nutrition — that is the factor that needs to be considered. When we consider that, according to ICMR, 65% of Indian children are malnourished, the dimension of the problem becomes a little more plain.

It is a common misconception (even, as I have discovered, among TB 'Specialists'), that clinically apparent primary tuberculosis can safely be treated by a short course of INH alone. This is a notion that goes against all bacteriological logic. One only creates a population of INH resistant bacteria, strategically situated to subsequently produce reactivation disease.

b. Extra Pulmonary Tuberculosis

The chapter on Epidemiology in the Text Book of Tuberculosis (by the Tuberculosis Association of India) has nothing to say about extra pulmonary disease. In my experience this forms a significant proportion of cases of tuberculosis. In particular, 'scrofula' (burnt out tuberculous cervical lymphadenitis) is still a common finding in backward areas of the country.

3. Staff Problems

Cases of ignorance among people working in the field of tuberculosis are not rare. This is because almost the entire field level medical staff of the tuberculosis programme are 'dead-beats' — people who have been promoted to an administrative position because their seniority has become an administrative embrassment.

In a Government District Hospital, despite all the other problems, one can atleast meet doctors who are interested in their work in the medical, surgical, gynaecological and other specialist departments. Not so in tuberculosis. The department which should, by all epidemiological logic, claim the most brilliant and dedicated of our technical manpower, is invariably academically dead. In Hoshangabad, the District Tuberculosis Officer was simply absent for a long period of time.

The para-medical staff, on the other hand, are often exceptionally dedicated and able. They often run the programme practically independently. However, they have to pay the price for their competence. In Durg, the statistical assistant — a key person, and in this case extremely competent and dedicated — has been on full time deputation to the Civil Surgeon's office, helping to administer the hospital.

4. Chemotherapy

a. Existing patterns

In theory, the National Tuberculosis programme provides a wide choice among several alternative regimes. These include, daily INH and thiacetazone with or without an initial period of intensive treatment with daily streptomycin and/or PAS. The bi-weekly supervised regimes consisting of INH/SM and INH/PAS, have been designed specially to ensure patient compliance.

Even according to the treatment manual supplied to the district Tuberculosis Officers, only sputum positive patients are eligible for all these regimes. X-ray positive, sputum negative patients often just

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as sick as their 'positive' brethren and about 5 times an numerous, are eligible only for the daily, self-administered INH/TH regime. Presumably compliance is not a consideration where they are concerned.

In actual practice, the only regime available with any regularity is daily INH/TH. (Incidentally, pyridoxine tablets necessary to counteract INH induced pyridoxin deficiency are practically unheard of. Patients are told to eat lots of peanuts!) PAS I have not seen in the past one year. Streptomycin is constantly in short supply, so that patients are often randomly shunted back and forth between regimes containing SM and those without. The effect of such regime changes in 'midstream', on treatment effectivity, bacteria sensitivity, and patient compliance remains, as they say, a subject for research.

Coming to the INH/TH regime, TH is by no means an uncontroversial drug. Its use is banned in some countries-but let that pass. The incidence of *'major'* toxicity in a study in Madras showed the following incidence of side effects:

Cutaneous hypersensitivity reactions — 7%:
Jaundice — 3%;
Intractable vomiting — 3%

Apart from these, there are minor side effects such as anorexia, nausea, vomiting and head ache. Weight gain and rise in haemoglobin level are less in patients on TH as compared with those on PAS. The effect of such minor side effects on patient compliance, especially in the absence of adequate medical supervision and reassurance, can only be imagined.

We will consider possible alternative regimes in the next section. For the moment let us stick to the first line/second line chemotherapy model. We have already noted, some of the problems with the bi-weekly INH/SM regime not available for sputum negative patients, and limited and irregular supply of SM. In addition, there is a rule that SM injections can only be given at the PHC level. In other words, this regime is effectively available only to those who live within about 5 kms of a PHC.

b. Drug resistance

Coming now to the problem of resistant tuberculosis, there are a number of problems in the existing framework.

(1) Drug resistance in tuberculosis is not a rare phenomenon. Existing studies show that the prevalence of *primary* drug resistance to both INH and SM in India are (individually) of the order of 5 to 10 percent. The prevalence of *acquired* drug resistance is not known to me. But the success rate of the standard first line treatment regime is of the order of 80 to 85 percent, under ideal conditions.

(2) There is evidence to show that pre-treatment drug sensitivity tests do not affect the outcome of treatment, *provided* standard two phase regimes are used, with an initial intensive phase using three drugs. However in my experience, such regimes are available only to a very small proportion of patients even in the district centres, and to practically none in the peripheral centres. Most patients go on a standard two drug regime (generally INH-TH).

(3) When a patient fails to respond clinically to a particular regime, there are no facilities for drug sensitivity testing even in these selected cases. Theoretically, in the existing model, they can be referred to Tuberculosis Sanatoria for treatment with 2nd line drugs. In practice, however, (a) practically none of these patients do get referred to Sanatoria; and (b) even among those who are started on second line drugs at such centres, there are no facilities to *continue* drugs after the patient is discharged.

The lone patient I managed to get referred to a Sanatorium in Bhopal emerged after two months looking much better and clutching a prescription for rifampicin and ethambutol.

c. Possible Alternatives

It is well known that there now exists a wide variety of alternative drug regimes for the treatment of tuberculosis, many of which result in cure of a higher proportion of patients in a much shorter period of time than existing standard regimes. The conventional wisdom is that these alternative regimes comprise a 'second line' of treatment for patients resistant to the standard regimes.

The fact that the government itself does not take this argument seriously is shown by the free availability of the so called 'second line' drugs in the open market. Of course, the price is far beyond the reach of the ordinary tuberculosis patient. As a result, we have in India the ironic situation, where the District Tuberculosis Officer and the PHC Medical Officers are the only medical practitioners who (in their official capacity) have no access to the newer drugs for the treatment of tuberculosis.

In effect there are today, in tuberculosis, as in every other field of medical and indeed of public life, two sets of policies in operation — one for the poor and one set for those who can (even if only with difficulty) pay.

The argument against the newer regimes can now be seen plainly for what it is — a question of cost. It is worth going into this question in some details.

5. The question of cost

a. How much?

The cost of a complete course of treatment with the newer drugs at current market prices is of the

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order of Rs. 500.00 to Rs. 1000.00. Regimes containing Streptomycin are liable to cost more, because of the administrative cost of giving the injection.

We are not talking of enormous sums of money. The cost of bi-weekly INH/SM with an initial intensive phase is not much less. Neither is the cost of INH/PAS regimes. The logic of the exclusive dependence on INH/TH now becomes clear.

Put another way, the cost of treating a case of tuberculosis with the newer drugs and the cost of treating a case of intestinal obstruction or pyogenic meningitis is about the same. The cost of treating a case of ischaemic heart disease or lung cancer or brain tumor or diabetes mellitus or chronic renal failure is several times higher. The comparison becomes ridiculous when one carries the contrast to fields outside medicine — say, to defence or CHOGM.

b. Cost to whom ?

The second aspect of the cost equation — what is the 'cost' of a twenty percent relapse rate which is the best result obtainable with the standard 'first line' regime? What is the 'cost' of a case of thiacetazone induced agranulocytosis or Stevens-Johnson Syndome? What is the 'cost' of travelling up and down from village to PHC, village to District centre, village to wherever, for 18 months as against the six months with newer regimes? What is the 'cost' in bus fare? What is the 'cost' in lost income? What is the 'cost in the suffering of a poor man? This is a question which the policy makers of tuberculosis must answer.

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TB AND SOCIETY

Preamble

It is the first time in the last eleven years since our inception that mfc has taken up a single disease entity for discussion at the annual meet. The disease selected—Tuberculosis—was particularly relevant because of many reasons:

i. To begin with there is greater understanding today of the multifactorial aetiology of the disease where social factors more than biological are known to have a significant impact on incidence, prevalence, spread, diagnosis, management and control;

ii. Secondly unlike most of the national programmes in India the NTP has developed on crucial sociological perspectives derived from relevant field studies;

iii. In its approach in terms of integration with general health services, choice of appropriate investigative technology, alternatives in chemotherapy and other aspects it has shown a greater people/patient sensitivity than most other programmes and a significant shift from the dependence on the industrial aspects of medical care;

iv. Inspite of these salient features the case finding and case holding performance is far from satisfactory and these have become a matter of great concern for TB programme organisers and decision makers;

v. The ICMR/ICSSR Report while analysing the drug situation in the country has highlighted the shocking state of availability of anti-tuberculosis drugs ('one third of minimal requirement') when vitamins, tonics, health restoratives and digestives are being produced in "wasteful abundance";

vi. By its inclusion in the 20 point programme the government has endorsed its relative importance in the health scene of the country though whether this step is part of a 'populist rhetoric' or a national commitment towards control of the problem, only time will tell.

It is in this context that the mfc decision to relook at the whole situation of the TB problem and its control in India as an exercise for 1984-85 is significant.

Scope and Focus

The meet of over 110 friends from various diverse backgrounds (ref mfcb 110 Feb 1985) with its intensive small and large group discussions highlighted that the subject was too large and too important to be tackled in 16 hours of discussion and that rather than expecting a meaningful critique of NTP to emerge from so diverse a group — what would really be more realistic would be to accept the annual meet discussions as the initiating of a process of critical analysis. This would be followed up by further study, small group work and field evaluation through 1985 from which would hopefully emerge an mfc perspective on the problem. This sense of realism was forced on the group after the first session on "Expectations of the Meet" in which participants were asked to raise issues and questions for discussion.

Expectations of the Meet

The exercise identified a phenomenal range of problems far beyond the scope of the meet:

1. Need to understand the organisational structure and implementation of NTP and the deviations from ideal in the actual field situations.

2. Need to identify issues on which we should put pressure on policy makers.

3. Need to discuss the range of non-pulmonary tuberculosis and how it is viewed by the NTP.

4. Need to discuss childhood TB and how it is viewed by NTP.

5. Need to study how NTP actually operates at the PHC level and what are the components of the services actually available at the community (village) level.

6. How do non-allopathic systems view TB as a problem?

7. How far can TB be considered an occupational health problem because greater susceptibility to it after certain types of occupational exposure are well known?

8. Knowledge of cost factors in the range of alternative regimens of chemotherapy.

9. Data on drug production, distribution and availability in relation to total estimate of patients and in the context of recommended drug regimes.

10. Identify genuine constraints in NTP and false limitations accepted by programme planners.

11. Identify genuine constraints and false limitations in TB programmes of voluntary agencies.

12. How far is TB actually integrated with general health services? Is there need for greater integration or greater identity?

13. To develop guidelines for patients who have already received treatment before — be it inadequate or inefficient.

14. Role of voluntary agencies in NTP.

15. Role of private practitioners in NTP. Why are they excluded from the plan?

16. Understanding of the social stigma associated with the disease and its effect on case finding or holding and the measures to combat it.

17. The effects of the over emphasis and pressures of the family planning programme on PHC functioning as well as NTP at PHC level.

18. What is the 7th plan policy decisions on TB programme?

19. TB and its relation to other respiratory diseases occuring in certain occupational environment.

20. How can NGOs support/complement/supplement NTP of government?

21. What is the method of collection, analysis, feed back of statistics of NTP from field level? What is the method of feed back from the centralising agency to the peripheral delivery system?

22. Role of para medicals and community health workers in NTP.

23. What are the legal rights of industrial workers vis a vis TB?

24. What are the differences between NTP performance in different states and regions and the causes for such difference?

25. What are the present efforts in public awareness building? What are the available media? In what way can this be further promoted?

26. What is happening about drug resistance in NTP?

27. In spite of the more holistic epidemiological understanding accepted today, why is NTPs perspective severely clinical and curative?

28. Why/how can TB be seen as a social problem to be tackled by society not as a medical problem to be tackled by the health services only?

29. Why has NTP in its planning not cared to involve other non health sectors like the education department etc.?

30. Why is awareness building given such low priority? Why is there no definite, researched and evaluated communication strategy integrated into NTP?

During the discussions at the meet some of the above expectations were debated in greater detail and some were not, either due to inadequacy of information or time constraint. We report some of the key areas of discussion. Decisions for follow up study or action are given at the relevant places in brackets. Wherever participants have committed themselves to specific action this is indicated. Where it is not indicated it means that volunteers from members/subscribers/readers are welcome to get involved. We also welcome any information, perspectives, opinions on any of the questions listed (get in touch with mfc office immediately).

TB—a socio-economic-political strategy

From the discussions, it evolved that TB control must be discussed in the context of a radical reorganisation of society towards a more equitable and just system where the smallest and most vulnerable person is central and only this can secure some stability to the health and welfare of the people.

In the strategy to achieve this society, all interventions particularly those at the grass roots must be through people's movements and organisations so that demands and decisions are the people's free choice. In this strategy the process of reflection and conscious action (ie., education) is on all fronts: social, economic, political, cultural, health and countering myths and superstitions; and seeks to make the person/group/society self reliant and confident.

Micro level action is primary but also sharply limited. It must be linked to the wider reality. Critical collaboration is necessary with people's movements and wider political action. However, there needs to be a high critical awareness of the danger of 'over politicisation' and a danger of the sabotage of the people's freedom by political conflicts.

Within the context of the above perspective we as a group endorse the following thought currents, action and demands on the SEP front

1. A demand for the reallocation of resources in the Union Budget. There should be more money allocated for health and within the health sector, the rural-urban bias should be eliminated (There is need to study the funding of NTP, the cost allocation, for detection, drugs and personnel as well as the rural—urban bias.)

2. Each block and PHC should make it public to the people as to what are the available and allocated resources for that area. All these resources should be channelised for the benefit of all people in a just manner.

3. Occupational (farming, wood gathering, wage labour) and seasonal constraints do not allow the patient (most often an adult in the working age

group) to go long distances for treatment regularly. This reduces access to and availability of TB treatment. Health services especially those for the detection and treatment of TB should be handled by para medicals and should reach the villages if not the door steps of the people.

4. There should be the least dependence on International agencies for funding and powerful individuals in the first world who influence developing countries— India is strongly so influenced.

5. Multinational corporations symbolise the most centralised economic power and therefore they should not be encouraged particularly in the drug industry. However the local government interests are always linked with that of the MNCs and therefore just removal of MNCs will not eradicate inequalities.

6. The profit motives of the drug industry should be strictly monitored and kept in check by a relevant drug pricing policy.

7. Doctors should correct their own misconceptions about TB. They should realise that the germ theory is inadequate to eradicate TB. They should also get rid of the stigma that they harbour about TB itself. When doctors harbour such stigma they perpetuate and legitimise it. The stigma that the doctor harbours reflects the value system that most of us inculcate during our education which has a certain bias. This stigma is particularly common in our attitudes to the poor, caste problem, leprosy and TB and we need to fight against it.

8. Health problems cannot be solved by doctors or government health departments. They can be solved only by creating people's organisations. Health is an indicator of the quality of life and TB should be seen in this perspective. Enhancement of health would therefore be much more guaranteed if health issues are taken up as a part of wider people's movements, ie., trade unions, rural organisations of the oppressed, feminist groups etc

9. Health education should be aimed at informing people on their right to be healthy and their right to prompt, effective, inexpensive and safe treatment when ill. Health education should also highlight myths related to TB or illness in general and show how many of them are used by the elite classes to perpetuate ignorance.

10. A conscious effort at the grass roots level is necessary to build decentralised people's organisations. People should be the axis when considering the TB problem. There should not be an undue emphasis on extraneous agencies such as doctors or policy makers. Experts should be made answerable to the people and crucial decisions should be made by people. Conscious peoples organisations would lead to socio-economic changes without which general health status or even TB situation would not improve.

11. mfc members have to emphasise that the socio economic factor is the most important aspect in TB and for that matter in other communicable diseases as well. As an organization we should work to explode the fallacies accompanying the concept of TB eg. TB Association of India pamphlet on 'What should you know about Tuberculosis' lists poverty, over crowding, unhygienic living conditions as legends about TB). mfc members who are already involved in organising people should develop a network for communication.

12. Nutrition, housing, environment at the working place and amount of leisure determine resistance or susceptibility to TB. This means that only a fundamental change in the socio economic structure of society will help in the control of TB.

13. Whilst demanding a basic structural change, we should also demand that existing peripheral services are more effective. Voluntary agencies should as far as possible not duplicate the effort of the government.

In fact the government should be made responsible for delivering basic public health services Whilst doing reformist work at grass roots we should work towards basic change and contribute towards this change ideologically and organisationally. Alternatives such as low cost drug production should also be a simultaneous activity.

14. Land reforms, the minimum wages act and the right to work should be implemented strictly. In Kerala these measures have greatly helped to reduce incidence of TB

15. To bring about the above mentioned socio economic changes, a political change aimed towards socialist society is inevitable.

Marie Tobin, Jansaut
Manisha Gupte, Bombay

Towards a relevant TB Control Programme

Many of our members are involved at field level in community health projects organised by various non-governmental agencies in which TB control is an itegral part. Based on their own field experiences and the discussion on the wider social issues highlighted in the earlier report certain guidelines were drawn up at the meet for all who are so involved. These would help to ensure that their involvement in the field of TB control would be based on a clearer focus of the social reality in which the problem exists. It is also an attempt to internalise the ideas and positive experiences from various case studies and projects discussed at the meet.

1. Broadly speaking TB control programmes should ensure the following three crucial features:

(a) A link with socio-economic and developmental activity

(b) A stress on health education and awareness building at all levels

(c) A commitment to community participation in the decision making process and project evaluation.

It was felt that many of us who are working in the field have already a sufficient rapport with the community and the above could be integrated primarily by sensitising ourselves to these issues.

Ensuring the above principles, certain specific recommendations were made for practical implementation during: A. Case Finding/Case Holding; B. Drug Regimes; C. Training of Workers.

A. Case Finding/Case Holding

1. There is need to have a rough estimate of how many TB patients ought to be in the area and work towards identifying at least that number.

2. Involve health personnel at all levels in the programme and also all the cadres of the governmental health service be they MPWs, CHWs and Dais. Local indigenous practitioners and traditional healers should also be involved.

3. School health check ups could be done as an additional focus for case finding as in leprosy. School teachers and high school students should be involved in general awareness building.

4. People's organisations like organisations of the rural poor, workers, trade unions and other formal and informal groups in the community should be sensitised to the problem and involved.

5. Malnutrition surveys and mantoux testing could be adjuncts to case finding specially for childhood. TB.

6. Patients who are on regular treatment or have been cured should be actively involved.

7. The family of patients should be involved in a positive way in the programe. Once they are sensitised to the problem in a positive way (rather than feeling a fear or social stigma) they can be helpful in making the community aware and also bringing patients from other neighbouring families for treatment.

8. The socio economic difficulties of patients should be assessed and transportation fare and other small compensation for wage loss etc., should be provided.

B. Drug Regimes

There are several regimes which have been recommended and are available in the existing literature and also promoted by the NTI. Certain basic principles to be followed before selecting the appropriate regimen are:

1. Technical — an intensive phase of two bacteriocidal drugs and one bacteriostatic drug followed by a maintenance phase of a bacteriocidal and a bacteriostatic drug.

2. The time period of each phase and the spacing of the drugs depend on factors such as — a. accessibility to clinic and health centre;

b. infrastructure available; c. cost; d. availability of drugs; e. stage of disease—serious and non-serious patients; and f. knowledge of patient compliance.

Many regimes taking these factors into account are already recommended from which a selection can be made.

3. While the regime is being dispensed it is essential to ensure: a. psychological reassurance of the patient; b. maintenance of a satisfactory doctor-patient relationship; and c. tactful information to the patient to increase his ability to identify toxic effects.

4. The use of supportive therapy such as cough mixtures etc., should be done in a rational way taking care not to overuse/misuse supplementary medication.

C. Training of Workers

1. First the present knowledge/myths/perceptions existing in the particular area should be studied;

2. The people should be taken into confidence about the programme envisaged by the team and their participation in decision making ensured.

3. Grass-root workers at village level to be involved in the programme should be selected by the community. The selection should be based among other things on personal motivation and stamina.

4. The training of grass root workers or CHVs should be undertaken in appropriate size of the group (10-15).

5. The content of the training should include cause of disease; symptoms; case holding; side effects of drugs and their management; and motivation of patients.

6. The training should be theoretical along with practical field training. The methodology should include.

a. use of available aids, modifying them to make them more relevant and meaningful to the local area; b. involve the patient and get him to talk about his symptoms/difficulties etc., c. reinforce the learning by continous on-the-job training; d. older CHVs to be involved in training newer ones; e. use simple laymen language and avoid technical jargon; f. concentrate on training to communicate effectively with patients and the community.

7. Periodic evaluations of the training programme should be undertaken eliciting feedback from the CHVs.

8. Similarly an effective supportive supervision plan and a system of continuing education in which problems faced in the field are constantly identified and discussed, should be included.

9. The CHVs should be trained to increase community awareness of the existing NTP and the availability of effective treatment as a right so that

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demands for more regular drug supply and more effective government health centre services can be generated. In the absence of such a commitment the programme of NGOs will become ends by themselves duplicating the efforts of government and supporting their inefficiency. In the long run since voluntary agencies cannot build up parallel structures to government health services, the catalyst nature and the 'awareness of rights' generation nature of non-governmental voluntary effort should be promoted.

Mona Daswani, Bombay

Sub-group Report

Para-professional training and community awareness in TB

1. The objectives of health education of the community should be to promote an understanding of the medico-technological aspects of TB, the socio-economic-political aspects, the rights and responsibilities of the patients and people, the common beliefs and superstitions and demystification of all aspects of the TB control programme.

2. The responsibility of providing this education and awareness is the joint responsibility of government and non-governmental agencies. However, it seems that one of the main reasons why health education has not been given top priority in the NTP is because of the field reality that the existing services (even if they are geared up) cannot cope with the increased demands of TB patients, if awareness becomes widespread. There seems to be no other reason why even after decades of NTP, there is still no rationally formulated and researched communication strategy. TB Associations have played their role but their efforts seem to lack continuity, technical competence or creativity and are predominantly urban based.

3. Health education efforts should creatively and competently involve all sections of the community not only as recipients of awareness building efforts but also as promotors of further awareness. While focussing on all sections particular interest should be taken of policy makers, politicians and community leaders including the functionaries of the gram panchayat.

4. Improving the communication skills of all categories of health workers from doctors all the way to the community health workers should be an important part of the strategy. At present this is one of the most neglected areas in the existing curricula.

5. The science syllabus of schools does not equip children with practical knowledge of common diseases in India or for that matter for healthy living. There is considerable scope for incorporating knowledge about TB in the science teaching of schools. Schools could also become a focus of creative involvement of school teachers and children in health promotion.

6. There are a sizeable section of private practitioners of non-allopathic systems who should be involved in awareness building. They should be involved not only in management of TB as a clinical problem but as effective educators of their patients in the preventive/promotive aspects of TB.

CHW training: There was a general feeling that the existing governmental CHW training programmes gave low priority and emphasis to TB control. The lesson plans were limited and not integrated with the rest of the training but given separately at DTCs and PHCs.

From the experience of participants who were involved in health projects in which training of CHWs was being undertaken there emerged the need to include certain innovative methods of training to make the CHWs more effective in the field: These included:— (i) participation of senior CHWs in training; (ii) learning through doing; (iii) decentralised and localised training; (iv) participatory methods; (v) use of locally developed or regionally adapted AV aids and so on.

The group suggested that we in the mfc should undertake to:

A. Review all available educational materials and AV aids on Tuberculosis available from governmental and non-governmental sources and check whether the points included in (1) above are present and whether the social focus as identified in discussions exist.

(Anant Phadke agreed to study the TB Association Pamphlets for a start).

B. Review all available training manuals of health workers (CHWs, MPWs, HAs) for the importance given, content, and focus of teaching of tuberculosis.

(Marie D'Souza and Minaxi Shukla agreed to undertake this exercise).

Based on the above two studies recommendations can be made to policy makers, programme organisers and health educationists in the country.

Narendra Gupta,
Prayas.

Sub-group Report

Tuberculosis in Medical Education

The group focussed upon the problem of producing a socially useful doctor in connection with tuberculosis, and the hurdles in the present medical education system that have to be overcome in this direction. The group itself was a small one and represented five medical colleges only.

Preamble

1. The basic structure of present day medical colleges and medical curriculum, propagates a certain value system, which is predominantly exploitatory in nature;

2. We believe that propagating the attitudes currently plaguing the medical system is a general process, which involves the attitudes and practices of faculty members, the expectations of our families and society, and the 'traditional' role of a doctor

3. That medical education is incomplete in itself, unless the social dimension of disease is stres-

ased upon. It is for this reason, that many of our senior colleagues (even those from NTI) believe in purely technical or medical intervention for TB control.

4. Priority of medical education as it stands today, is directed towards the question of where is the lesion? or what is the lesion? rather than how was it caused and why? Our medical education does not stimulate an average student to ask and seek answers to social questions.

5. That trying to produce primary care doctors in tertiary care centres is a major drawback in itself.

Specific issues

1. We felt that the topic of TB as a disease is dealt with in a fragmented way, and is dealt with by several departments in a medical college. It is for this reason that the dynamic nature of TB as a disease is ill understood, and problems in TB control not even perceived. Some of us even passed MBBS with the notion that TB meningitis is a different disease from pulmonary TB and so on.

2. Specialised departments involved in TB education cater to their own fields (perhaps a part of the bigger problem of medical education in a large set up). Attitudes of the faculty members are built along the same plane. It is for this reason, that physicians in the medicine departments absolve themselves of the responsibility to teach about the social aspects of TB.

3. Clinical medicine is glorified, while preventive aspects are looked down upon. Our system is disease oriented and not health oriented. We look at cavities and not at patients!

4. "Germ theory" of causation of disease is propagated and medical intervention only is stressed during undergraduate teaching. Even PSM departments which undertake instructions in sociological aspects of disease, have a narrow view of the disease process. Most recommend medical interventions as a solution quite like their own colleagues in clinical departments. Those that go a step further, preach 'better housing, more ventilation and more food' without understanding the deeper social aspect of TB.

Social action is almost never undertaken. Even development projects which encourage income generation schemes and other such social schemes suppress a more basic question of unemployment in society and so on.

5. Clinical teaching overemphasises that tuberculosis is a common problem and only classical cases are shown to an undergraduate. This propagates the myth that being a common disease, it is easy to diagnose and manage TB. Realities of TB control are never dealt with or discussed so that an average medical student at the end of his final year never recognizes any problems concerning tuberculosis.

6. There are dictums laid down by clinicians who teach that investigations are essential to make a diagnosis. While this is largely true in places where facilities are available, it introduces a value system into the teaching that unless one's clinical judgement is backed up by labs, one is practising 'poor medicine'.

In fact, making a confident clinical diagnosis with limited facilities available, is 'good medicine'.

7. Emphasis is once again laid out on one therapeutic regimen (ie., SM/INH/TA) for all TB patients. The concept of suiting TB treatment to a particular patient's background is not even touched upon. eg., A labourer who can attend a TB clinic twice a week may be offered a different treatment regimen compared to another who can attend daily for SM injections. It is surprising that in spite of the fact that much of the research work on alternative regimens of chemotherapy emanate from India most of these well accepted findings hardly find a place in medical education in the country.

Limitations of the discussion

We in our group were not able to touch upon the following topics as regards medical education in tuberculosis.

1. Research in tuberculosis and research priority identification. Whether research and intervention of a purely technological nature as is currently practised by the NTI should be pursued or other issues regarding socio-economic-political factors be raised as well. Lack of research in communication and education strategies which is a major lacunae, also could not be discussed.

2. Continuing education of doctors about tuberculosis; whose responsibility it is; and the form of the continuing education programme. The group suggest that in light of the discussion a comprehensive integrated model of teaching of tuberculosis should be drawn up which can be tried out within the existing constraints of the medical curriculum in India. As a preliminary process to this effort a much wider feed back from members in or of different medical colleges should be obtained on their own experiences of TB training in their education. This exercise would establish a continuing link with the annual meet theme of 1984 and probably could also be featured in the Anthology of medical education under preparation.

(Ravi Narayan, Vineet Nayyar, and Srinivas Kashalikar agreed to follow up on this along with other members).

Vineet Nayyar,
Vellore

MFC Bulletin No 118 Oct 1985

National Tuberculosis Programme — A dialogue. . . .

It is not possible to discuss the entire article, published in mfc bulletin No. 105, as it would mean discussing rationale of the programme in great detail. However, we would like to point out a few inconsistencies. The rationale of the programme is already adequately documented and for additional reading the author may resort to K. Toman's book "Tuberculosis Case finding and Chemotherapy; Questions & Answers" — a WHO Publication.

1. a) Intercepting Transmission is not a mirage

The only sure diagnostic tool for tuberculosis is bacteriological examination, which has high degree of sensitivity and specificity. Other tools like x-ray or tuberculin are less specific and variable from place to place depending on the users experience and training. It is generally known and adequately documented that about 50% to 60% of the x-ray positive bacteriologically negative patients are not having active TB. It is, therefore' unethical to close the diagnostic process on the basis of x-ray reading and treat a patient as TB when he could be suffering from a serious non-TB condition. As regards use of tuberculin testing as a diagnostic tool, we may not need to comment much.

Thus it could be seen that when one wants to treat 'Tuberculosis,' he has to be reasonably certain of the diagnosis which the doctor can only be with the help of bacteriology. So we feel the best services to the chest symptomatics, that has been provided to these people is the extension of sputum diagnostic services throughout the length and breadth of this country. To us it appears almost revolutionary extension of scientific finding.

The quote of the article picked up from Dr. D. Banerji's article does not find any place in the article but rather contradicts his statement. What is ailing the programme is the fact that even today 80% of felt need patients are turned away without subjecting to the most scientific way of case-finding. Indeed it is tuberculosis patients who themselves showed the way to integration of services to General Health Services. There is, in addition, sound administrative justification for dealing with all the health problems of a community as an integrated whole, demanding an integrated approach. Even as early as 1960' it was foreseen that extension of TB services to the community will be furthered with development of infrastructure of general health services eg. through multipurpose worker or community health guide. So today atleast fortnightly or monthly visit to the patient's home can be made through this extension.

1. b) "Never in the history of human TB, a reduction in transmission has been brought by a specific medical intervention."

Medical literature is full of instances where it has been achieved by medical intervention. For author's information I am quoting only one example of Eskimo population around the Arctic circle in whom the annual rate of infection was 25% (highest ever known) but after the introduction of a very intensive programme of diagnosis and treatment among the Eskimos, the rate of new cases diminished to the levels observed in some European countries eg. France. Thus the rate of incidence of disease and the risk of infection decreased by 20% per year. Mass BCG campaigns were not used (Rouillon et al Tubercle (1976), 57, 275-299).

2 Author's personal experience

While we do not disagree with the author that his experiences in two DTCs must have been unfortunate, we feel that if he keeps the overall perspective of the health programmes in view, he will choose to change his opinion even with the same experiences on DTP. The solutions thus does not lie in attempting to remove inadequacies in NTP alone but rather in the entire health services system.

3. Chemotherapy

The author wants costly effective drug regimens to be made available in the DTP. There is no disagreement on this. But the system which delivers these regimens must be adequately strong for the regimens to be effective and regimens must have higher acceptability. Researches are still being carried out to find out what could be the problems of delivery to be encountered. However, an operational study conducted by Dr. Baily showed that Isoniazid + Thioacetazone regimen (82% Trial efficacy) achieved 60% sputum conversion by 56% drug regularity while Biweekly Streptomycin + Isoniazid (94% Trial efficacy) achieved 68% sputum conversion due to poor regularity of 31%. Short-course Chemotherapy regimens with 100% trial efficacy have an intensive phase of 2 months with 4 drugs to be given preferably under supervision. So acceptability of short course drug regimen is a big question mark. Besides this, the author must remember that under a "vertical malaria programme" even a five days radical treatment cannot be effectively delivered to the population. A six or a nine monthly regimen is a very different matter altogether. The point is — do the people conform more with a six monthly regimen compared to a 12 monthly or 18 monthly regimen. This is a crucial question, cost comes later. There are other questions as well eg. availability of drugs, adverse reactions due to drugs, their management. Hence before unleashing this treatment measure on a wide scale over the entire country, it requires to be studied. On a pilot basis the new Short-course drug regimens are being tried. We hope our problems are solved soon and we are able to extend the benefit of our findings for general use.

In Dr. Sen's presentation, cost has been made out to be the only reason. But the reason is something else. It is the ability to deliver the measure which requires more emphasis.

Dr. (Mrs) P. Jagota Senior Medical Officer
NTI, Bangalore - 3.

The reply

Dr. Jagota's reply to my article is a disappointment. I do not claim to be an expert on tuberculosis and I would have been happy to have been proved wrong in the points I had made, through scientific reasoning. However, her whole accent is on defending the system at all costs.

To take her points one by one:

1. a. Relative merits of sputum smear and X-ray as diagnostic tools: It has never been our contention that patients should indiscriminately be started on tuberculosis treatment on the basis of an X-ray shadow alone. The contradiction exists within the NTP. Examination of the records of any District Tuberculosis Centre (DTC) will show that a large proportion of cases under treatment are 'sputum negative X-ray positive' and their entire treatment consists simply in a monthly doling out of INH/TH. Does the NTP seriously believe that these patients have tuberculosis or does it not? If it does, then they should receive safer and more effective treatment. If it does not, then these patients should come off treatment.

If fact no physicians of any integrity would treat patients on the basis of X-ray findings alone Sputum negative X-ray positive patients are (properly) diagnosed to have tuberculosis on the basis of a series of clinical observations and therapeutic trials to exclude non-tuberculosis disease. Perhaps it is only a vertically oriented Government programme like the NTP that can afford to be so careless with its clients.

Incidentally, it is interesting to find Dr. Jagota talking about horizontal integration. She could not have read the second paragraph of the article too closely. However, as long as integration remains merely an administrative concept, devoid of social and political content, it will be ineffective.

1.b) Dr. Jagota claims that medical literature is full of instances where reduction in transmission has been achieved by medical intervention. This is a revolutionary claim, and will interest well known epidemiologists like Mckeown and Navarro greatly. However, to back it up, she should try to produce some-what more solid evidence than her example about 'Eskimos around the arctic circle'. It is perhaps a measure of the futility of the NTI that they should think that this kind of an example could be extrapolated to the Indian situation.

Coming now to 'author's personal experience' we agree whole heartedly that the solution does not lie in attempting to remove inadequacies in the NTP alone. However, it is only by analysing the short comings of the NTP that we can move forward towards a more rational and humane policy for tuberculosis. And certainly the present lamentable condition of the DTC's is not accidental, but a product of the entire strategy for tuberculosis, which is in turn part of our health policy.

3. With regard to the question of chemotherapy, we can deal with the question of efficacy and compliance later. Before that, we must answer two questions.

a) To the safety of thiacetazone adequately demonstrated, expecially considering that other alternatives are available.

Please refer to Toman—page 103.

"Thiacetazone in doses of 150 mg. daily given in a single dose has about the same toxicity as PAS (other drugs have less-B.S) its side effects including rashes, jaundice and bone-marrow depression. Gastrointestinal upsets seem to be somewhat more frequent with thiacetazone, especially in Asians. Moreover, cutaneous reactions appear to be more serious than with other drugs. Thus exfoliative dermatitis or Stevens—Johnson syndrome may occur if the drug is not stopped."

See also Toman page 120, where a detailed study on thiacetazone toxicity is reported. "The investigation suggested that thiacetazone might be too toxic for large scale use in the population of Singapore, whether Chinese, Malay, or Indian".

May we know what the NTI has done to monitor drug toxicity in the field?

b) Why has the Government released second—line TB drugs in the open market and at the same time prohibited their use in the NTP (upto district level)?

Although these questions have been raised in the article Dr. Jagota does not address them.

As for the problem of acceptability of regimes, it is my view that all questions of patient compliance are answerable in terms of the effort that has been made to fit programme design and implementation to the social milieu in which the programmes are executed. In other words, the customer is always right. Today 'patient compliance' views the patient as a passive consumer and measures the extent to which he is able to adopt the norms of an extraneous system. A truer view of patient compliance would look at the dynamic interaction that takes place at field level between the patient and the treatment system. To say that a programme has 'low acceptability' is simply to beg the question.

Dr. Jagota says that 'researches are still being carried out to find out what could be the problem of delivery to be encountered'. The efficiency of ethambutol against human tuberculosis has been known since 1961, of rifampicin since 1968. What has been done all these years?

Binayak Sen, Dalli Rajhara

DRUG ACTION FORUM-KARNATAKA

Kittur 591 115
Bailhongal Taluk
Belgaum District

18 January 1989

Dear

Greetings from Kittur!

You may remember my mentioning to some of you earlier of the need for drug issue to be taken up at the grass root level as an awareness building process as part of the community health and development programme being undertaken by you and your team.

In this connection, I, on behalf of DAF-K, had a discussion with the Community Health Cell team (CHC team) in Bangalore, and I am happy to inform you that they have agreed to give us the necessary technical support to hold a Workshop on Drug Issues in the month of April 1989 in Bangalore.

The CHC team are of the opinion that an effective awareness building process can be initiated only if all those involved are themselves well informed about all aspects of Drugs and Drug Policy Issues and are in touch with the ongoing efforts all over the country. They are willing to put together all the information/resources and facilitate the workshop. However, the CHC team has indicated that it wishes to plan this workshop on a participatory basis and, therefore, we would request you to start the process by filling in the enclosed form. The filled in form may please be sent to:

The Co-ordinator
Drug Workshop
Community Health Cell
No 47/1, St Mark's Road
Bangalore 560 001.

by 5th February 1989.

The venue, duration and the dates of the workshop will be fixed on hearing from you.

With best wishes to you and to your team,

Yours sincerely,
for DAF-Karnataka,

Gopal Dabade

To

is of course asking for too much. Nowhere is an *understanding* of the medico-technological aspects of TB attempted with any grade of health workers. 'Theirs is not to reason why.....' seems to be the general attitude. In their training, viewing the bacillus under a microscope is not even suggested.

The 'Manual for Health Workers' is available only in English, at least in Maharashtra. An enterprising Health Instructor in Dhule District translated it into Marathi and got it cyclostyled. HWs in training eagerly bought copies.....and it is now out of stock. The manual does have several lessons on tuberculosis (3). However in the training programme for Health Assistants and Health Workers lasting 6 weeks, (6-day weeks), 26 hours are for Family Planning, while only 4 hours are for TB (7). This is of course somewhat better than that allotted for CHVs.

The HWs are expected to carry out the preventive measures for TB control i.e., case-holding, BCG vaccination, and health education. The storage preparation, administration and the results of BCG vaccination is explained in great detail (2). As regards to health education, except for a film on TB no aids are available. But the Health Assistants are asked to check on the educational programmes on TB organized by the HWs..... whether talks, group meetings, exhibitions etc. And in their training, while the HWs have guidelines in plenty for educating the community on Family Planning, there are none on TB (7).

The focus of all the teaching and instructions on TB in the Health Manuals is the services offered to the community in the line of diagnosis, treatment, and prevention through BCG. As mentioned earlier, no stress is laid on health education of the community, for which purpose the CHVs should be trained and aids provided. In the preparation of aids it will be useful to keep in mind what is mentioned in their own manuals (5). Aids should be simple with emphasis on one idea. Therefore, EITHER treatment is free OR treatment must be taken for 18 to 24 months OR the result of indiscriminate spitting etc., must form the single messages. The health education material available so far have either too many messages incorporated into one presentation (eg. film by the TB Association, the slide show by Janseva Mandal), or only one message prepared by different organizations—"TB is curable" (eg, CMC, VHAI, CHETNA). VHAI does have two other sets on 'childhood TB' and 'BCG vaccination' which I have not been able to review.

In the Health Manuals, the following are some of the lacunae which needs to be filled in while preparing health education aids.

1. Relatives of TB patients to be checked for TB.
2. Patient to cover the mouth while coughing and to spit into a receptacle; sputum to be later disposed off.
3. Study made of local diet habits in order to suggest improvements on what foods the patient should take more of. (The Manuals only say there is no need for expensive or extra nutritious food.)
4. The bacilli find fertile soil in a malnourished individual.
5. Taking irregular and haphazard treatment builds resistant strains of bacilli with the resultant resistance to drugs.
6. As a result, responsibility of the community to see to that the patients avail of the treatment available at the Govt. health institutions.
7. This requires awareness on the part of the community about the TB Control programme, the funds available for TB Control in the District and the drugs available at the PHC so that if drugs run short.....as often happens with streptomycin injections.....demands be made for allocation of the required amount of drugs.

Lately, in Nandurbar Taluka of Dhule District, people diagnosed as having TB, receive their tablets at home, every month, delivered to them by the HW. Presumably this is one activity now included in the NTP all over India. Surely case-holding will have improved since previously patients had to cover long distances to reach their PHCs losing their wages etc.

Hopefully the NTI, who had decided at their Silver Jublee Proceedings that one of their future efforts will be health education, will take note of the above recommendations.

Materials reviewed:

1. Manual for Community Health Workers.
2. Manual for Health Worker (Female), Vol. I.
3. Manual for Health Worker (Male), Vol. II.
4. Manual for Health Assistants (Male and Female).
5. Primary Health Centre Training Guide, Part I, Training Methodology.
6. Primary Health Centre Training Guide, Part II, Training of Community Health Volunteers.
7. Primary Health Centre Training Guide Part IV, Training of Health Assistants (Male and Female) and Health Workers (Male and Female).

(All are published by the Ministry of Health and Family Welfare, GOI).

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for DAF-Karnataka,

Gopal Dabade

To

MFC-B 125 February 1987

Tuberculosis and Paramedical Workers
(Review of Training Manuals of Health Workers)

—Marie D'souza.

From the review of the training manuals prepared by the Ministry of Health and Family Welfare listed at the end of the article certain facts emerge clearly. (I was not able to get hold of the 'Manual for Health Workers, Female, Vol. II' and the 'Manual for Health Workers, Male Vol. I).

Family Planning is *the* programme to work for. Tuberculosis is not given any extra attention as compared to other diseases, though malaria holds precedence over tuberculosis in importance.

In a suggested schedule for a training programme for Community Health Volunteers (CHV) lasting ten weeks (4-day weeks), the time table is detailed. Family Planning is allotted 9 hours, malaria 7 hours, smallpox 5 hours, while tuberculosis is not even mentioned. I suppose it is included in the one hour allotted for immunization (6) (Why 5 hours for smallpox?) However, the 'Manual for Community Health Workers does have a chapter on tuberculosis from which it can be concluded that the CHVs are expected to know at least the minimum possible about TB. They are taught—that it is caused by germs, affects the lungs, is diagnosed by sputum examination and x-ray, is curable, treatment should last for at least 12 months and that the diagnostic and treatment facilities can be obtained free from the government health institutions. CHVs are advised to refer persons with cough and fever of more than 15 days, and are informed that infants are to be vaccinated with BCG.

The CHVs who are closest to the people..... infact one of the community, are not taught, much less motivated towards the preventive aspects of TB. Nor are they expected to give any health education to the people. Common beliefs and superstitions regarding TB are not discussed with the CHVs. Their tasks seem to be to report suspect cases to the Health Worker (HW) and advise patients to continue treatment.

All the training manuals emphasise only the germ theory of tuberculosis. HWs are informed that crowded and dirty living conditions help spread the disease (3). That the germ finds fertile soil in undernourished individuals is not even mentioned. To expect that the manuals will discuss causes of undernutrition (poverty, unemployment, unjust society)

109 medico friend circle bulletin

JANUARY 1985

Editorial

The Bhopal Disaster

We live in a world in which violence, waste and manipulation have not only become central elements in our lives but which have become profitable for the merchants of death, the rapists of the earth and those who manipulate our behaviour, our fears and desires.

—Anwar Fazal
International Organisation of Consumer Unions

The world's worst ever man made industrial and ecological tragedy took pace on the 3rd of December 1984 at Bhopal. 30 tonnes of stored methyl iso cyanate escaped into the atmosphere killing over three thousand people and over 3000 cattle and affecting over a lakh people (official estimates!). Even these shocking statistics hide the actual enormity of the human tragedy — of the lives lost, the families affected, the people blinded and ill and the thousands impoverished.

Public and government reaction to this catastrophe had resulted in relief efforts. Wide media publicity has led to the spontaneous formation of citizens groups and collectives to look into not only the deeper issues of this event but also to prevent such events in the future. Zahreeli Gas Kand Sangarsh Samiti (Bhopal), PARISARA — Movement for Environmental Protection (Bangalore), Movement for a Safe Environment (Bombay) and Movement for Environmental Protection (Madras) are some examples of this upsurge.

Notwithstanding the phenomenal human tragedy and suffering caused by this event which need relief, rehabilitation and compensation efforts, all concerned citizens should not miss the opportunity to analyse/understand the deeper socio-political and technological crisis of which this disaster is only a symptom.

This is the time to question —

- the role of multinational corporations and the double standards in their functioning in the developing world;
- the governments role and complicity in improper siting, continued licensing, improper monitoring of dangerous industries and in the continued flouting of its own rules and regulations;
- the national industrial and development policy in the light of people's health and ecological issues;
- the political exploitation of the poor especially the slum dwellers and workers;
- the lack of awareness among people, citizens groups, consumer groups, workers unions, voluntary organisations and action groups on health, safety and environment issues;
- the whole question of the right to information at all levels and the existing control/monopoly of information at multinational and government and professional levels;
- the basic question of the relevance of pesticides to our agricultural economy in the light of available scientific and social knowledge regarding the disruption of eco-systems and the long term effects on land and agriculture

This bulletin issue is a start in that direction and includes a memorandum from Bombay of which mfc was a signatory, first hand report from one of our members of the dynamics of relief work in Bhopal, and an overview of the efforts of unions and workers in occupational health action in the U.S.

MFC 109 January 1985

A report From Bhopal

Learning from the Relief Work

3(ii)

abhay bang*

An article in mfc bulletin on the Bhopal disaster is expected, by tradition, to focus on the political and economic reasons behind the tragedy. For such analysis the readers are recommended to read two excellent papers by Barry Castleman**. I shall also not attempt to investigate and describe the chronology of events. Newspapers have published a lot of information on that and I am no wiser than the journalists. As the title suggests I shall restrict myself to the relief aspect, that too mostly in relation to public health, for there were ample things to learn from that alone.

When the Gas Struck

When the gas struck at about 1.00 a.m. on 3rd December, people woke up with a severe sense of suffocation, cough and irritation in the eyes. Most of the deaths were instant due to suffocation or pulmonary edema. The worst hit were children, many of whom died in bed. The result of this cruel preference of the gas was that very few children remained orphan, because usually children died before their parents.

It is almost a universal law that the poorest live in dangerous areas. When a flood strikes, the people who live on low land and are the most affected are always the poor. Bhopal was no exception. People living in the immediate vicinity of this chemical volcano, were mostly slum dwellers. But besides this fact, two other disturbing pieces of information explain the very striking class distribution of the victims.

The residents of Jayaprakash Nagar slum which is the closest and the worst affected area, categorically state that at about 12 O'Clock midnight, all the workers in the union Carbide plant fled away in the factory buses but no siren was blown. It means factory staff came to know about the impending danger at 12 and safely escaped without warning people or the police. This may explain the strange fact that only one worker of the factory was injured by the gas when hundreds were working in the night shift.

Similarly, it is alleged that on coming to know of the danger, most of the police and other government officers and the ministers escaped out of Bhopal by the government vehicles at their disposal, instead of trying to warn or help the people. Rich also fled in their private vehicles. Those who did not have any vehicles, obviously the poor, had to face the gas.

The immediate effect of the gas on the survivors was irritation of the mucus membranes of eyes and the respiratory tract, leading to severe and widespread conjunctivitis, sometimes keratitis, and a large number of people with respiratory symptoms. Many also had vomiting. The medical personnel were in the dark about the harmful effects of methyl iso cyanate (MIC). They were not even certain whether it was MIC or phosgene gas: so the fear of the coming unknown effects was looming on everybody. 19 cases of CNS involvement were reported in the Hamidiya Hospital. This gives credit to the rumour that on autospy, cerebral oedema and haemorrhage were often found.

The Ongoing Relief and its Criticism

When we reached Bhopal on the morning of 5th December, the administration had overcome the initial shock and relief operations had begun. Hospital staff, interns, and medical students; various social and religious organisations had responded quickly. Food and blankets were being distributed freely. Dead bodies were being removed.

The first instinct of the medical profession naturally was to offer symptomatic relief to the sufferers. As the hospital was full with the dead or very serious, most of the relief work was done from temporary tents. About 100 such medical relief clinics were opened in the premises of the hospital or on the roads near the affected areas. Doctors were treating long queues of patients. The method was typically uniform everywhere, with some obvious shortcomings.

No case papers were made. Hence the identity of the patients, physical signs and the treatment given — nothing was being recorded. The reason offered was that the doctors were too busy treating people and records were not the priority in such a situation. The result of course was that medicines were distributed like toffees. One of us saw a child taking an injection and then running to his friends to boast that it was his sixth shot that day.

People were the first to recognise this deficiency and started losing faith in such totally adhoc and symptomatic treatment.

Interns and doctors running these clinics were not given any guidelines for treatment by the senior doctors. Hence they were using medicines in the most bizarre way.

No attempt was made to train or involve non-medical volunteers or family members. Thus for conjunctivitis, even eye drops were put in the eyes by the doctors alone. This resulted in an unending burden on the doctors; and the patients were able to

* Gopuri post, wardha dist Maharashtra-442112

** International Journal of Health Services Vol. 9, No 4 (1979) and Vol. 13, No 1 (1983)

get eye drops in their eyes once a day whenever they could reach the doctor through the long queue.

No certificates of death or disease were being issued. There did not even exist a reliable method of recording and counting deaths, which resulted in widely varying estimates of death from 2000 to 6000. This neglect may become a tremendous handicap to the poor to get compensation whenever that comes.

Besides the sheer magnitude of the problem, another reason for such erratic medical relief was that it was put in the hands of clinicians. When 200,000 people were affected, it was absurd to control the medical relief operation from the hospital by the medical superintendent. Though a very decent man, he thought that respirators were the most important need of the hour. The whole operation was carried out from the clinician's point of view. This resulted in such decisions as offering treatment in clinics expecting victims to come there. Clinicians can only see those who come to them and never know about those who don't come. This deprives them of the total view of the situation. We found that a large number of victims were not going to the clinics due to reasons like despondency, inability to walk because of severe eye problem or loss of faith in the quality of the relief offered.

This also meant that the real number of the people affected would never be known. The estimates of the number of patients treated varied from 65000 to 1,50,000 and each estimate may have counted the same patient many times and totally missed those who did not attend the clinics.

A quick and crude survey of the remaining residents of JP colony showed us that about 50% had eye problems and about 25% had respiratory symptoms. Surprisingly a large number of people, even those with minimum respiratory symptoms, had rhonchi and coarse crepitations in the chest. It seems that the irritation by the gas had produced chemical bronchitis and bronchopneumonia on a large scale. As many of such 'mild cases' were not being examined, clinicians in the OPD could fail to appreciate the widespread nature of the respiratory involvement. Unfortunately all these facts were not documented and hence, it seems, the real epidemiology of morbidity may never be known.

Alternative Plan

We planned a relief program to be run by SEWA, a local Women's organisation for a small but defined population. The main features were:

(A) Female social workers from SEWA visiting all the houses in a slum of 1000 families for

1. population enumeration
2. identifying dead, lost or moved out persons for compensation and economic rehabilitation of the family
3. screening of all persons for the presence of symptoms which started with the gas exposure and recording these
4. uncomplicated conjunctivitis and gastritis to be treated by the social workers, involving and training the family members in eye care and handing over a tube of eye ointment to them
5. identifying patients with suspected keratitis and patients with respiratory symptoms to be examined by doctor

(B) Doctor visiting all the houses, examining those with respiratory symptoms and suspected keratitis (identified by social worker), recording physical signs and treatment given. We thought that all the persons with rhonchi and/or crepitations should be given an antibiotic cover (preferably inj. benzathene penicillin) as they carried a great risk of catching secondary infection, similar to one after an attack of measles or influenza.

We thought that the treatment should be provided at home so that all the population will be identified, examined and treated, which can not happen in an OPD set up. This was specially important for the documentation of morbidity as many victims did not go to OPD.

(C) All the population to be followed up for coming few weeks to provide continuous care and recording complete impact of the tragedy.

Two doctors, three interns, four nurses and about ten female social workers could be mobilized and were explained the deficiencies of the ongoing relief operations; and the concepts and methods involved in the one planned by us. Forms for population enumeration and case records, and guidelines for survey and treatment were prepared and explained. Unfortunately I could not stay longer but felt that the plan was well explained and agreed upon by the team.

The experience

The experience of the next 10 days work, as reported by the social worker in charge of the operation was as follows:

— On the first day when the team went to the slum and started home visiting, doctors protested that it was not their job and they set up an OPD. At least half of the doctors could be pursued to continue home visiting
— Doctors could not accept the idea of social workers treating conjunctivitis and kept all the clinical work to themselves
— The doctors in OPD refused to write physical signs and diagnosis in the case papers on the ground that it would take time and the fact that the diagnosis could be guessed from their treatment
— The typical treatment given was:

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: eye drops put once in a day by doctor or nurse;
: cap tetracycline one TDS for one day;
: tab B Complex;
: tab multivitamin;
: corticosteroid injection

— All the time saving devices in the plan like training and delegating easy tasks to social workers; using eye ointment which has longer duration of action than eye drops; using benzathene penicillin to ensure week long antibiotic cover, were stubbornly refused by the doctors. It was not possible for the social worker to over rule the medical supremacy.

The physical signs recorded by the doctors by home visiting were usually of poor quality. Some examples are:

— chest clear, crepts present

— mild crepts found (there is nothing like 'mild crepts')

— slight coarse crepts + ve

Each doctor used his pet expression and the recorded signs were monotonously the same in all the patients examined by the same doctor. Obviously the doctors did not examine sincerely or they were not at all sure of their findings of physical examination.

In spite of these short comings, this relief approach gained instant popularity mainly because it was the only place in Bhopal where case papers were being prepared and records maintained. People quickly realized its importance and even asked for records to be given to them. The relief authorities in the city brought foreigners to proudly show this operation.

Surprisingly and fortunately the tide of secondary infection did not occur anywhere and hence the death toll did not continue to rise after the first 3-4 days. The reasons for this reluctance on the part of micro organisms to invade damaged respiratory tracts are not understood. Antibiotic cover was either not given or was very inadequate for most of the affected persons; and hence, cannot explain the phenomenon.

After 10 days of working when the operation neutralization of the stored MIC started most of the relief work was wound up as the people fled away. At that time, eye problems had considerably reduced but the respiratory ones had continued, though at a reduced level.

I recently learnt that the ICMR has declared a decision to develop a plan of long term surveillance to find out the effects of gas exposure. That would be a stupendous but very valuable task, specially because industrial toxicologists in the West are predicting that 5 to 10 percent of the affected will have chronic respiratory diseases.

The compensation for death and disease may not be fully available to all due to lack of records or evidence.

Lessons

1. Organising mass medical relief in a disaster situation should be done not with a clinical approach but a population/community approach;
2. Persons in responsible positions should be trained for disaster management in anticipation;
3. There should be continuity in the planning and implementation of any program, the lack of which was responsible for improper implementation of our plan;
4. Record keeping and documentation is vital in all such operations;
5. Besides their well known bias against delegation, even the clinical performance of the doctors was a sad commentary on the outcome of medical education and the standard of the profession. One tends to question the right of objection by the medical profession to the use of auxiliaries or village health workers on the ground of the lack of professional training to them.
6. The Bhopal tragedy acts as a warning signal to all socially conscious persons that industrial hazards and pollution are no longer a remote problem restricted to the developed countries. As Barry Castleman points out in his earlier mentioned papers, developed countries are rapidly exporting their technology, production processes and products to the third world without proper safety measures or information and education to the people.
7. The Bhopal tragedy can be a powerful tool in the hands of environmentalists and consumer and citizens rights groups. A careful documentation of the ill effects — medical, social, economic and ecological — will go a long way to support the efforts of such groups.

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APRIL 1985

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Medical Research in Bhopal

—Are we forgetting the people?

Concern for man himself and his safety must always form the chief interest of all technical endeavours. Never forget this in the midst of your diagrams and equations.

—Albert Einstein

Preamble

In a tribute to the medical relief workers involved in service to the Bhopal disaster victims the ICMR has noted (1) that a disaster of such magnitude, of such suddenness and caused by the release of a highly toxic chemical methyl isocyanate (MIC) into a densely populated habitat is unparallelled in human history. The doctors, medical students, civil servants, governmental, public sector and voluntary bodies and the people themselves rose to the occasion in a human gesture equally unparallelled'. . .

In the absence of authoritative information on the released gas; the unwillingness of the company to part with authentic information; the unpreparedness of the local bodies and the government health authorities to understand the consequences of the disaster; and the absence of technical or toxicological expertise on MIC among our scientific community, it was imperative that a national body like the Indian Council of Medical Research through its own initiative would have to harness the scientific medical expertise in the country including the local medical college community to meet this challenge. Considering that the affected population was over 2 lakhs and that the dead were over 6000 (though official estimates are 2000!) this research initiative had to be equally unparallelled in meeting the phenomenal challenges of the world's worst recorded ecological disaster. Do the records of events in the past four months since the disaster bear this out?

The Plan

A report on the first nine days of the Bhopal disaster identified (1) three objectives for the ICMR's research programme:

1. To establish a clinical and patho-physiological profile of the hazard which would also provide clues for improved patient management and clinical outcome
2. To study the long term sequelae of toxin exposure to lung, tissues, foetus, genes and cancer induction
3. To obtain a basic understanding of the biological alterations associated with MIC exposure.

Strangely enough there is no mention in this report of a strategy by which conclusive research data as and when available would be transmitted to the relief and rehabilitation effort in Bhopal, ie., to the treating doctors and through a health education effort to the affected public.

A report of projectization of ICMR supported research effort (2) lists out 17 study projects which covers acute and long term health effects, lung functions, follow up of children aged 5-15 years, ocular changes, pulmonary and neurological changes, growth and development of new borns, clinical and forensic toxicological studies, pathological and microbiological investigations, radiological studies, biochemical and immunological studies, carcinogenicity, mutagenicity, teratogenicity and chromosomal changes, data management information system, hospital based cancer register, cytofluorometric

studies and blood gas analysis. The studies ranging from a time span of 6 months to 5 years would incur a total financial outlay of 1.07 crore rupees.

Some surprising omissions in the list were the assessment of psychological stress and its manifestations in the affected families, studies on health of women (not obstetrical outcome but gynaecological effects) and the assessment of medico social effects like reduced earning capacity and functional disability which would affect rehabilitation efforts. Though there were references to an epidemiological and community based outlook the research endeavour atleast as on paper did not seem to be a coordinated holistic effort in understanding the total problem but basically a series of vertical research programmes initiated and funded according to the interests of the professors involved in the exercise.

Results

It is four months since the tragedy and about three months since many of the research programmes got underway.

As far as a communication strategy goes three press releases and two lectures by the director generals and a minutes of the meeting on the thiosulphate controversy are the only freely available literature on the research (3-8) efforts. From these all that any member of the scientific community or the general public can gather are:–

i. that there is no evidence of irreversible eye damage or blindness

ii. that the autopsy findings are indicative of severe respiratory damage caused by pulmonary odema and asphyxia

iii. that studies of exposed persons with lung symptoms/signs have shown obstructive and or restrictive abnormalities

iv that a double blind clinical study undertaken using sodium thiosulphate and a placebo has established that sodium thiosulphate administration results in symptomatic improvement and in increased excretion of thiocyanates in the urine. On the basis of clear cut results, the State government has been advised to administer sodium thiosulphate to the exposed population and detailed guidelines have been drawn up and circulated.

v. that two visiting psychiatrists have found that 10—12% of the affected individuals attending the medical clinics in Bhopal are presenting with psychiatric manifestations — symptoms of anxiety and depression are foremost.

Why this secrecy? or is it administrative over caution?

A more updated report prepared in mid March collating all data as of that date has again become a casualty in the commitment to secrecy (caution!) and no press release has followed.

Issues of concern

An mfc fact finding team which visited Bhopal in mid February at the request of various non governmental agencies and action groups published a report on the realities of medical research and relief which has been widely circulated and is now well known(9). In mid March an mfc team of 16 members camped in Bhopal and undertook an epidemiological survey which included detailed history taking, physical examination, lung function tests, haemoglobin estimation of a 10 percent sample of a severely affected area and a control area(10).

The team also met decision makers, relief and service providers, medical teams of voluntary agencies and others, apart from undertaking a survey of the people's perceptions of relief services and an overview of the services itself. The findings of the team are being analysed and will be reported shortly (a press release is published in this issue) but the experience of the third week of March in Bhopal strengthened the findings of the earlier fact finding team and identified a whole series of issues of concern in the ways in which research efforts were becoming exploitation of peoples' suffering rather than expressions of support to programmes of human welfare.

1. Lack of dissemination of technical guidelines

The medical relief services continue to be starved of authentic and authoritative scientific medical information to support clinical judgment and patient management. In the absence of clear cut guidelines from the seniors in the profession treatment continues to be adhoc, symptomatic and unstandardised. Findings of autopsies, lab investigations and x-rays and other tests are not available to the treating doctors. Doctors have not been alerted to the fact that a wide range of symptomatology like fatigability, weakness, memory problems are all part of the MIC syndrome. In the absence of such information peoples' sufferings have often been passed off as malingering or compensation neurosis.

2. Pill distribution

The treatment basically consists of a whole series of pills which are efficiently and actively prescribed to the people in a sort of conditioned reflex. In the absence of proper record linkages each patient is collecting large amounts of pills and not feeling the better for it, apart from the dangers of over drugging. Other forms of care, counselling and non-drug therapies have not been thought of.

3. The Thiosulphate controversy:

Even after the ICMR studies establishing the validity of thiosulphate administration and the preparation of clear cut guidelines for its administration, (6,8) this specific antidote is not being used as effectively as it should be. It has become a casualty in a medical controversy between cyanogen and carbon monoxide lobbies and the victims rather than being informed and helped are being confused and neglected.

COMMUNITY HEALTH FORUM
No. 367, 'Srinivasa Nilaya', Jakkasandra, I Main Road,
I Block, Koramangala, Bangalore - 560 034.

30th June, 1992.

Dear

Greetings from Community Health Forum !

This is to inform you of the next C.H. Forum meeting :

Date : **11th July 1992 (Saturday)**

Time : **2.00 p.m. to 4.30 p.m.**

Venue : **Ashirvad,**
30, St. Mark's Road,
Bangalore - 560 001.
(Phone - Ashirvad - 210154
C.H.Forum - 531518)

Topic : **"COMMUNITY HEALTH CELL"**

You are aware that it is a year since the C.H.C. has registered as **"Society for Community Health Awareness, Research and Action".**

Members of C.H.C. will be briefly reviewing the past activities, sharing with you its concerns and initiatives, while putting up plans for the future.

As members of the C.H. Forum and friends of C.H.C. we **EARNESTLY** request your participation, ideas and viewpoints to enable a common initiative towards Community Health.

Do mark this date/time in your schedules and looking forward to our meeting,

With regards and Best Wishes,

Yours sincerely,
for COMMUNITY HEALTH FORUM,

SHIRDI PRASAD TEKUR.

4. Women's health

The mfc fact finding team had highlighted the problems of women who have suffered abortions, still births, diminished foetal movements, suppression of lactation, abnormal vaginal discharges and menstrual disturbances. The studies undertaken by two doctors of mfc reported in this bulletin (11) establish the magnitude and severity of the problem. It, however, continues to be neglected by the concerned authorities.

5. Absence of Health Education efforts

Whatever the other validity of the research efforts, in the ultimate analysis it should get translated into a strategy of health education and awareness building of the affected people. As of date there are no official guidelines or efforts in this direction. The range of areas is phenomenal—advice to mothers of the risk to the foetus and preparation for consequences including options for MTP, advice to couples on contraception till detoxification is over, breathing exercises and antismoking advice to those with fibrosis of lungs, avoidance of overdrugging of pregnant mothers, advice to mothers regarding feeding of infants/children as lactation suppression has taken place, availability of thiosulphate and other medical relief measures. None of this has even been recognised as being necessary.

6. Poor epidemiological and medico social orientation of problem assessment

The general impression is that research and relief efforts are suffering from an acute clinical and institution based orientation rather than a community based epidemiological orientation.

Only if all data is field based and is related to known available morbidity patterns (or comparison with controls) can early problems and special trends be identified and urgently acted upon. The danger of getting into the pursuit of a very neat and fool proof epidemiological planning exercise can be equally counter productive.

7. Lack of informed consent

The people are not being informed about the tests being done. Nor is consent being taken for being included in the studies or for procedures to which many of them are being subjected to. This is a minimum medical ethic.

8. Lack of coordination

This is a universal problem and the ultimate sufferer's are the disaster victims themselves. This incoordination is occuring between goverment services and research efforts in the medical college, between the different research workers themselves, between government and non-government relief efforts, between voluntary agencies involved in action, relief, rehabilitation and of all these groups with the disaster victims themselves.

While a more detailed report is awaited, we in the mfc appeal to government decision makers in Bhopal, medical college professors, ICMR scientists, IMA, voluntary agencies, action groups that there are urgent needs to be actively met :

* Need to evolve a bold, imaginative and open communication strategy to all the doctors and health workers (treating the disaster victims) who are presently starved of authentic technical/medical information hampering clinical judgment.

* Need to evolve a creative, relevant health education and awareness building public education strategy to meet the expectations of the disaster victims and to help and reassure them through the crisis and prepare them for the eventualities.

* Need to ensure that research efforts are geared to supporting relief and rehabilitation efforts and not become esoteric exercises for institutional development and career advancement.

* Need to make the commitment to patient care and human welfare primary and to ensure that it does not get bogged down by professional rivalries, inter departmental incoordination, procedural constraints and administrative protocols.

* Need for closer coordination between voluntary agencies, action groups, citizen committees, medical and health workers and the people oriented and socially sensitive sections of the medical profession and government authorities to ensure that the peoples' suffering are not exploited and made pawns in the games played by politicians, multinational companies, and misinformed professionals—all symptomatic of an exploitative social system.

An authoritative Lancet editorial (12) had mentioned that 'In a year's time we will have learned a lot more about methylisocyanate at an appalling price'. With the prevalent medical anarchy in Bhopal in relief and research, this price may be immeasurable.

—mfc team, Bangalore

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EDITORIAL

THE CHALLENGE OF BHOPAL

"The growing multinational culture must be destroyed because it leads to economic chaos, increased social disparities, mass poverty and filthy affluence in coexistence, environmental degradation, and ultimately civil strife and war.

To get a balanced, rational development and to preserve the environment, a new development process is needed. The biggest intellectual and political challenge of our times is to articulate and demonstrate this new kind of development."

— A statement of shared concern
Citizens report on state of India's Environment, 1982.

Its six months since the worst industrial and environmental disaster in recorded history. Bhopal has not only been a nightmare for those who were there on the night of 2/3 December, 1984. It is also a portent of events to come.

World Environment Day (5th June) has come and gone. There have been the usual meetings. seminars and lectures, the usual lip-service to ecological sensitivity, the usual narrations of the health and social hazards of environmental pollution and the usual pious recommendations of what can and should be done.

How many more Bhopals will we need in this country before we are shaken from our apathy?

—from our callousness to our disadvantaged and exploited fellow human beings who are always the worst hit in such disasters.

—from our insensitivity to nature, our forests, our rivers and our land.

—from our insensate rush for chemicalising and technologising our lifestyles.

—from our race for profits even at the cost of the health of our workers, our people.

The medical community in India will be increasingly called upon to respond to the medical and health problems caused by more ecological disasters. What will our response be?

Will we see every disaster as a chance to refine our clinical skills, satisfy our charity and welfare urges, exploit the research potential for career development and use the opportunity to ask for more and more sophisticated gadgetry for our institutions?

Or will we be challenged by these disasters to raise our voice collectively to oppose the unhealthy trends in our society to use our knowledge and social potential to support the growing awareness for a healthier and more egalitarian social system; to use our research skills to strengthen and concientise our fellow human beings to an increasing health and ecological awareness.

The dilemma of a man who enters a room to find a tap running and a wash basin overflowing, faces us today. Will we choose to be floor moppers or tap turners off?

Overpowered, compromised and hypnotised by the products and high pressure sales tactics of the multinational pharmaceutical industry, our sensitivities have been so dullened that we are quite content to be merely 'floor moppers'. Can we ever be tap-turners off? The International movement of physicians for prevention of Nuclear war is a thought provoking example showing that if we want to, we can.

Bhopal too is a challenge? So are many other more insidous developments in our country. The growing investment in nuclear — energy now discredited as an energy resource in the West, or the gradual take over of the cottage industry in food by big business, — each of this though different from the other has a growing similarity representing either a subservience to the profit motive or an insensitivity to health hazards or both. We feature some of these aspects in this bulletin. We also feature investigations in Bhopal which raise some of these issues for our readership.

Minimata, Seveso, Long island were too distant to make any impact. Amlai, Chembur, Handigodu, Harihar, Zuari, Nagda, Mavoor, Silent vally, Thal vaishet hare not stimulated us either. Will Bhopal do so?

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OCTOBER 1985

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STRATEGIES FOR ENVIRONMENTAL HEALTH ACTION

Dhruv Mankad*

A) INTRODUCTION

The term environmental health has a wide scope, encompassing the relationship between health and habitat, air, water, work place and so on.

Although the theme has been discussed since long, the Bhopal tragedy has brought it into sharp focus. Milder versions of Bhopal have been occuring frequently but the actions taken have been in the form of spontaneous protests by local people in the affected area. Many times, investigative journalists have brought such issues to light e.g. plight of villagers around the ACC cement factory at Sevaliya in Gujarat or the Grasim episode. Later, after some local action, interest has died down. It is only after Bhopal that planned action at an all India level is taking place.

There was a time when capitalistic industrial development encroached upon the lives of the workers only — both at the workplace and in the homes which were not very far away from the factories. But the ever expanding, blind industrial development process during the present phase of capitalism, has spread its tentacles over the lives of all but the highly privileged few, both in urban as well as rural areas. Thus Occupational Health has been subsumed by Environmental Health and the effects of the nature of industrial development on health is no longer a concern of the workers only. Though, the analysis of the problem and the solutions offered, would differ from class to class. But, any such movement would certainly pose certain basic questions regarding the rate and the nature of present industrial growth.

B) STRATEGIES ADOPTED BY THE PEOPLE

People have always reacted spontaneously against encroachments by alien elements on their ways of life. A brief overview of strategies used may help in formulating future strategies.

1) The working class, looked upon as merely a tool in the production process, has always been the first one to bear the brunt of the effects of a new technology.

i) One of the most successful health movements of workers was the Black Lung Movement of coal miners of the USA. Loy Rego, writing in The Socialist Health Review 1:3 puts down the reasons for its success as—

a) the workers strength vis-a-vis the mine owners, for coal is a key item.

b) public sympathy.

c) capacity of the workers to shut down mines.

All this was possible because of the mass nature of the movement as reflected by the fact that many folk songs were written on the work lines.

ii) Even when the position of the working class was weak, partially successful actions have been initiated. For instance, a newspaper report in a local daily in Gujarat regarding the plight of workers in the slate-pencil industry, spurred a social worker to file a writ petition in the Gujarat High Court. The report filed by the Committee appointed by the HC forced the State Labour Department to make surprise checks which controlled some of the problems of lime dust.

* A note for discussion at the MFC-annual Meet, Patiala 25-29 July 1985.

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2) Growth of industries in the rural areas under the guise of decentralization has meant a direct threat to the rural people as well as to agriculture. Farmers too, have successfully fought this encroachment.

i) In Sevaliya in Gujarat, around 14,000 farmers were affected by cement dust from the ACC cement factory. After several years of memoranda-giving and lobbying, they adopted a strategy of no-tax campaign and gheraoed the management of the factory. As a result, a precipitator was immediately installed. The workers of the factory were sympathetic to the farmer's demands but were afraid that they would lose their jobs if they joined the struggle and therefore kept out of it.

ii) The famous case of the Chipko movement of Garhwal is well known. The women of Chamoli and other villagers in Garhwal, in a unique fashion, protested against the senseless destruction of forests by contractors by embracing the trees. In lesser known incidents, women have adopted novel ways to protest against cutting of trees. In 1978, women of Bhuyander villages in the Chamoli region, stole the axes of men from nearby villages who had come to cut the trees and refused to return them till they agreed to go back.

3) As pointed out earlier, the anarchic capitalist development of industries now threaten to destroy the lives of ordinary citizens mainly of those living in and around cities.

Citizens too, have adopted various strategies to combat this menace:

i) A Citizens Anti Pollution Committee was formed in 1975 in Goa against the air and water pollution by the Zuari Agro Chemical Industries. It took out a morcha in protest, but to no avail. Later, three political parties supported the Committee and a threat was given by the All India Port and Dock Workers' Federation to boycott unloading of raw materials for the Birla factories at various ports. The company had to bow down and it paid compensation to farmers and provided clean drinking water facilities to the affected villages. A water treatment plant was also installed.

ii) At Mavoor in Kerala, Gwalior Rayon discharged effluents into the once clear Chaliyar River, beginning from 1948. Fish died, skin infections spread. In 1963 people protested but promises given were forgotten. The protests persisted during 1965, 1967, 1968, and 1973. Finally in 1978-79, Kerala Shastriya Sahitya Parishad brought out a report which concluded that the problem persisted because of the callousness of the factory management to employ the available know how of effluent treatment. In 1979, in a massive agitation, people broke down a company erected bund to protect its own water intake. Thus, it was forced to lay a pipe line to dump the effluent in a far away brackish water-stretch.

iii) Citizens of Ward 12 in Ratlam had moved a local trial court to direct the Municipal Council to construct proper drainage for the locality. The State High Court affirmed the trial court's order. The Municipal Council approached the Supreme Court, who turned down the plea and directed the Council to carry out the work. In his judgement, Justice V. R. Krishna Iyer observed that the citizens could "use the law and call the bluff of the municipal body's bovine indifference to its basic obligations."

C) ALL THESE INSTANCES SHOW CERTAIN COMMON PATTERNS :

1) Mass actions are almost always successful, even when only partially. They also have the advantage of the heightened environmental health concern being passed down the generations and across geographical areas as evinced by the Black Lung Movement and the Chipko Movement.

2) Actions against industries by the citizens are more likely to succeed if the workers of the industry concerned as well as other allied industries are directly involved. This is shown in the case of Zuari Agro Chemicals. On the other hand, workers are more likely to succeed in their struggle for better work environment if they acquire the sympathetic participation of all the affected people as is seen in the Black Lung Movement.

3) While dealing with Government bureaucracy and Industry executives, mere rhetoric and agitation is not adequate. Sometimes information made public wields power. For this it becomes important that scientists are involved.

4) An educated population having the support of scientific information might be able to carry out a sustained struggle for better environment as is seen in the case of Gwalior Rayon, Mavoor. In contrast to this in another Birla owned factory at Amlai the movement of local villagers only petered out after the management gave some flimsy promises. In the former case, the people admit that support of KSSP was vital for the movement.

5) Women have a direct stake in the protection of forests. They are more easily mobilised for such actions than men, who sometimes are in favour of contractors in order to protect their jobs. Chipko and other movements in the Chamoli region point to such a situation.

D) STRATEGIES FOR ACTION

From the on going account, it is clear that it is possible to select one or more from several strategies used, to make Environmental Health Action sustainable and successful.

1) Information Gathering and Disseminating :

Done in a planned, conscious manner or in an unplanned, unconscious and experiential manner, this is the first and vital step in the right

direction. It helps to make people concerned conscious of the problem and breaks the ice for the people to speak out.

2) Lobbying etc : First, lobbying could also serve the above purpose. The existing democratic institutions should be utilised for this. Lobbying among legislators and political parties is a useful strategy for gaining support from 'within'. Although there is always the possibility of opportunist politics entering the movement in this way, if one guards against it consciously and if the decision making is democratic enough, it could be combated.

3) Publicity and public opinion building :

Due to widespread experience of environmental piracy by various industries, people are becoming sensitive to environmental issues as also are the government bodies, bureaucracy and the executive. Wide publicity in the existing media-newspapers and magazines has its impact. With the tradition of public interest litigation picking up in our judicial process, even newspaper reports are now being converted into writ petitions by various High Courts and the Supreme Court.

4) Legal Action: Action can be initiated against environmental offenders under the Prevention of Pollution Acts, Factories Acts and other Acts governing the worker management relationships, Municipalities Acts (as in the Ratlam case) and finally as writ petitions in the State High Courts and the Supreme Court invoking the Fundamental Rights and the Directive Principles enshrined in our Constitution. Though the efficacy of such actions is limited if nothing else, they serve the purpose of highlighting the issue. This strategy is particularly useful for citizen's actions and the unorganised section of workers who have little strength vis-a-vis the industry and the state.

5) Direct Actions: Whether the aggrieved are workers, farmers or ordinary citizens, men or women, this form of protest works best if properly organised and properly carried out. The success depends upon the strength and ability of the aggrieved to be able to hit the concerned at the place where it hurts most. It could take the form of a strike action in a key industry (as in the Black Lung Movement), prevention of movement of key raw materials and finished products (as in the Gwalior Rayon Case), no tax campaigns (as in ACC Sevaliya case), or simply creating a bad image of the offending industry's high selling product.

6) Certain problem areas : While surveying environmental 'ill health' and actions against it, one comes up against certain tangles defying pat solutions:

1) It is commonly observed that if agerieved citizens plan action against an offending industry, the workers and their Trade Unions are either disinterested or actively against such movements for the fear of losing jobs, in case the industry is forced to close down.

In such a case, it is imperative on the part of the aggrieved party to explain to the workers their problems and also to include in their demands, the demands of compensation and alternative employment for the workers in case the industry is closed down partially or wholly. This may ensure also the involvement of workers.

2) It is a common belief that lack of safety measures, non-implementation of safety rules and compensation laws in case of accidents or occupational health hazards are highly prevalent in the unorganised industries. Under the guise of decentralization this sector has mushroomed during the past few years.

But, given its nature, the workers have little strength to fight it. They can do so only at the risk of unemployment or even losing their lives. While the stronger, more organised workers enjoy a better work environment.

i) First, one needs to examine this belief.

a) Mine workers would be considered as organised workers. A survey of 11 coal mines totalling 9643 workers showed the prevalence rate of all categories of pneumoconiosis as 10.8%. A survey of 7,653 underground miners with 5 or more years of service in the Kolar Gold fields revealed the incidence of silicosis to be as high as 43.8%.

b) The accident rate in coal mines during 1977 was 0.47 fatal accidents and 4.33 seriously injured persons per 1000 persons employed. Textile workers are also an organised section of the working class. Injuries reported for 1978 in textile factories were 54.32% of total reported injuries in the industries during the year. While it employs on an average 26.62% of total number of workers employed.

This shows that the quality of work environment for the organised working class is also not good. That for the unorganised working class would certainly be deplorable.

ii) Even then, it is true that unorganised workers have very low strength vis-a-vis their managements and the State. Therefore, they are unable to initiate actions on their own. They need greater outside support and help than does the organised working class.

iii) Now, the question arises, as to whether in the existing situation in India where the environmental health movement is in its infancy, it is better to support a stronger section where chances of success are high or to take up the cause of those

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workers whose needs are greater but chances of total success are low.

The answer could be in affirmative to both in part. It would be prudent to aim for total success by supporting the organised and enlightened sections of workers possessing some leverage. On the other hand low key actions like publicity, lobbying and legal actions would ensure partial successes for the weaker unorganised section of the working class.

F) ROLE OF GROUPS LIKE MFC : Being what it is, MFC can be looked upon chiefly as a resource group. It could provide technical help on its own or by referring people to experts/resource centres known to it.

1) Carrying out Studies : Any movement strong or weak, spontaneous or planned would need a solid information base if it is to have a lasting impact. MFC could undertake studies in the field of the impact of environmental degradation on health.

2) Publicising the issue : MFC members could write in the popular press, in medical journals etc. about environmental health issues thus publicising it and lending it credibility.

3) Direct medical intervention : As in Bhopal, under extraordinary circumstances in case of an environmental disaster, MFC could intervene medically by providing medical relief and long term rehablitation as a part of an ongoing people's movement.

DRUG ACTION FORUM-KARNATAKA

Kittur 591 115
Bailhongal Taluk
Belgaum District

18 January 1989

Dear

Greetings from Kittur!

You may remember my mentioning to some of you earlier of the need for drug issue to be taken up at the grass root level as an awareness building process as part of the community health and development programme being undertaken by you and your team.

In this connection, I, on behalf of DAF-K, had a discussion with the Community Health Cell team (CHC team) in Bangalore, and I am happy to inform you that they have agreed to give us the necessary technical support to hold a Workshop on Drug Issues in the month of April 1989 in Bangalore.

The CHC team are of the opinion that an effective awareness building process can be initiated only if all those involved are themselves well informed about all aspects of Drugs and Drug Policy Issues and are in touch with the ongoing efforts all over the country. They are willing to put together all the information/resources and facilitate the workshop. However, the CHC team has indicated that it wishes to plan this workshop on a participatory basis and, therefore, we would request you to start the process by filling in the enclosed form. The filled in form may please be sent to:

The Co-ordinator
Drug Workshop
Community Health Cell
No 47/1, St Mark's Road
Bangalore 560 001.

by 5th February 1989.

The venue, duration and the dates of the workshop will be fixed on hearing from you.

With best wishes to you and to your team,

Yours sincerely,
for DAF-Karnataka,

Gopal Dabade

To

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DECEMBER 1987

Persistence of Toxins in the Bodies of Bhopal Gas Victims*

Anil Sadgopal & Sujit K Das

Soon after the gas leak, the Indian Council of Medical Research (ICMR) announced that the gas victims were afflicted with systemic and Persistent cyanide poisoning and recommended detoxification of symptomatic gas-exposed population by sodium thiosulphate. The Government of Madhya Pradesh, however, dragged its feet with respect to this recommendation. The State administration went to the extent of stopping Dr. Nisith Vohra of Jana Swasthya Kendra from pursuing this therapy. In July 1985, two gas victims and their physician Dr. Nisith Vohra approached the Supreme Court claiming the right of the gas victims for detoxification.

In the course of hearings, the Supreme Court appointed a seven-member expert committee on November 4, 1985 with the following terms of reference :

(i) Carrying out fair distribution of sodium thiosulphate;

(ii) Carrying out proper epidemiological survey and also house to house survey of the gas affected victims for the purpose of determining the compensation payable to the gas affected victims and their families; draw up a scheme for carrying out survey;

(iii) Ensuring proper medical facilities to the gas affected victims; give directions from time to time for carrying out survey and providing medical relief;

(iv) Draw up a scheme for provision of medical relief and for monitoring the implementation of the scheme for medical relief;

(v) Give direction to produce the results of the surveys which have already been done.

The Committee, in its last held meeting on December 13-14, 1986 decided to submit two separate interim reports to the Supreme Court—one by the majority constituted by five official members, and the other by the two undersigned non-official members constituting the minority. Besides its lackadaisical functioning, the Committee could take up work only on the first term of reference, i.e. carrying out fair distribution of sodium thiosulphate. Ignoring the proposal submitted by the Minority Members, the Majority Members decided not to take up the remaining tasks specified in the Supreme Court order.

Even on the issue of sodium thiosulphate therapy, the Majority Members declined to pursue or analyse all relevant scientific data. As a consequence of this enigmatic attitude towards the work of the Supreme Court Committee, the Majority Interim Report only perfunctorily went through the motions of recommending sodium thiosulphate therapy to unidentified subjects and failed to come to grips with the central questions viz. persistence of toxins, role of antidotal therapy and magnitude of the task. We, therefore, undertook it upon ourselves to collect and analyse

*Excerpts from a preliminary report submitted to the Supreme Court on October 26, 1987 by the minority group.

all available scientific information in order to fulfil the task entrusted by the Supreme Court.

Our Minority Interim Report is almost ready and will be submitted in about a month's time. Despite refusal by various official research bodies and individual scientists engaged in research on Bhopal victims to provide us with essential information, we have been able to collect significant evidence pointing towards systemic and continuing presence of toxins in the bodies of the gas victims. Yet we were frustrated all along this work because the data on this issue as presented before the Committee as well as those released in ICMR publications could not stand the test of objective scrutiny in scientific forums. It is in this light that the evidence obtained by us in August 1987 and analysed during the past few weeks, assumes special significance.

The Medical Context

At quite an early stage, the Indian investigators detected significant pointers towards the possibility of systemic and persistent toxicity of the poisonous emission. These pointers are briefly enumerated below :

(a) presence of multisystemic ailments in a significant percentage of victims and a high frequency of symptoms relating to non-respiratory systems in patients not reporting respiratory complaints, as revealed by Medico Friend Circle's epdiemological sutdy;

(b) presence of a large percentage of patients who suffered from respiratory symptoms but were free from any evidence of organic damage to lungs, as reported by ICMR;

(c) evidence of significantly increased rate of spontaneous abortion among women who conceived upto 10 months after the toxic exposure, compared to the rate prevailing before the exposure, as reported in Medico Friend Circle's Pregnancy Outcome study;

(d) early reports of the presence of two to three-fold higher levels of thiocyanate in the urine of gas victims than the levels found in un-exposed subjects;

(e) observation of symptomatic relief and further elevation of urine thiocyanate levels on administration of sodium thiosulphate injection, even several months after the toxic exposure;

(f) detection of carbamylated haemoglobin (haemoglobin linked with MIC) in the blood of gas victims;

(g) finding of cherry-red colour of venous blood in the autopsy studies;

(h) evidence for the presence of anti-MIC antibody in blood samples drawn from gas victims;

(i) observation of disturbance in several immune parameters and adverse impact on the responsiveness of lymphocytes; and

(j) evidence of MIC's ability to cross air-blood barrier in animal studies conducted by DRDE, Gwalior.

All the above-mentioned pointers towards systemic and persistent poisoning of gas victims have been discussed in detail in the Minority Interim Report to be submitted later to the Supreme Court. What is of special concern presently is the pointers relating to elevated levels of urine thiocyanate and the ameliorative role of sodium thiosulphate. The early reports of increased excretion of thiocyanate in the urine of gas victims led ICMR to conclude that the gas victims could be suffering from toxic effects of persistent cyanide poisoning. This inference was based on the well-known cellular reaction for transforming cyanide into thiocyanate in the presence of an enzyme called rhodanase. Under normal conditions, the cyanide radicals, entering human body through certain foodstuffs or through consumption of tobacco, get converted into thiocyanate as a result of donation of sulphur by intrinsically present sulphur-containing compounds, constituting the 'sulphane pool'. In the case of acute cyanide poisoning, the victim dies unless a large extraneous source of sulphur is quickly made available. The antidotal role of sodium thiosulphate has its basis in this simple biochemical mechanism. Since there was no known record in medical literature of chronic persistence of cyanide after single exposure, the ICMR found it necessary to invoke the concept of an 'enlarged cyanogen pool' in the bodies of the gas victims, which would become a continuing source of cyanide-like compounds through the chronic phase.

Scientific Evidence

What is being presented here is a part of an ICMR-funded research project (No. 5/7/28E/84-RB) dealing with analysis of urine thiocyanate levels in child (0-15 yrs.) and adult (15 yrs. and above) population

samples collected from control and gas-exposed areas of Bhopal. The study, led by Dr. M.G. Karmarkar of the Department of Endocrinology and Metabolism, All India Institute of Medical Sciences, New Delhi, was undertaken with the objective of finding out "whether thyroid function is affected in population which was exposed to MIC'. The urine thiocyanate level was determined in this study in view of the well-known antithyroid property of this chemical and in the wake of reports from Bhopal that the gas victims were excreting two to three-fold higher levels of this chemical compared to the subjects from Delhi. These investigations were conducted in two distinct phases.

In the first phase, from July to November 1985, urine samples from 326 gas-exposed women admitted in Sultania Zenana Hospital in Bhopal for delivery, were analysed for thiocyanate levels. An estimate of the 'normal range' (baseline) of urine thiocyanate levels was obtained by studying a group of 35 Delhi residents from six different socio-economic categories in order to have a representative sample. Care was taken to ensure that the sample was composed of roughly equal number of individuals with respect to sex and age groups (i.e. children and adults). The report presented to ICMR in December, 1985 reveals that the control sample from Delhi had a sample mean value of 0.399 mg% of urine thiocyanate with a standard deviation of 0.06. Compared to this mean value of the control sample, the group of 326 'exposed mothers' had a sample mean value of 0.45 mg%, with a standard deviation of 0.27. It was found that 88 individuals out of 326 'exposed mothers', i.e. about 27% of the sample, had urine thiocyanate levels which were above 'mean plus 2 standard deviation units' of the control sample, a fact reported to an ICMR Project Advisory Committee meeting held on May 1, 1986. This implied that a significant percentage of women in the sample were excreting a noticeably high level of thiocyanate in urine. The investigators further noted that 40 out of these 88 women had urine thiocyanate values in the 'smokers range' (i.e. 0.55-0.70 mg%)*. It may, therefore, be concluded that about 14.7% of women in this sample could be unambiguously categorised as 'high excretors' of urine thiocyanate.

In the second phase of this study, conducted in collaboration with the Department of Medical Biochemistry, Gandhi Medical College (Bhopal), population-based samples of children and adults were selected from both the control and exposed areas of Bhopal, that were coded by ICMR. The sampling was conducted according to a randomised block design prepared by ICMR's Senior Statistical Officer associated with the Bhopal Gas Disaster Research Centre at Bhopal. The size of each sample was found to be adequate for applying statistical tests of significance for assessing the validity of observed differences, if any, in urine thiocyanate levels of the ssamples being compared. It may be worthwhile to note here that the control areas coded by ICMR may not be taken as equivalent of unexposed areas since Medico Friend Circle's epidemiological study in March, 1985 showed that Anna Nagar, one of ICMR's 'control' areas and also included in the present AIIM Sstudy, was actually a mildly exposed colony, though it was 8 kilometers from the Union Carbide plant.

An important feature of this study was a follow-up 6 months later in March, 1987, of the samples initially investigated in September, 1986. It is reported that the follow-up study investigated the change in urine thiocyanate output of exactly the same individuals who constituted the original sample.

Table I compares the mean urine thiocyanate levels of children and adults from control and exposed areas in both September, 1986 and March, 1987. These data were subjected to a detailed statistical analysis by applying the Test Statistic, standard normal deviate, for testing the statistical significance of observed differences.** This exercise revealed that the differences observed in the mean urine thiocyanate values of exposed and control samples are statistically significant, and not due to chance fluctuations. In other words, it means that the toxic exposure is most likely responsible for an increase in the excretion of thiocyanate in the urine of gas victims *on a population basis*. It is further evident that the raised levels of urine thiocyanate persisted in the gas-exposed population until at least March, 1987.

The data shows that the gas-exposed samples, irrespective of the age group and time of testing, have a larger proportion of high-excretors than the control samples. These observed differences in the proportions of high-excretors of urine thiocyanate in various samples were subjected to a rigorous statistical analysis. It turns out that the above-mentioned differences between various exposed

*Consumption of tobacco, whether through chewing or smoking, is reported to approximately double the output of urine thiocyanate.

**The statistical analysis, referred to in Table I, was conducted by Shri Subhash Ganguly, a professional statistician and an activist of Calcutta's Scientific Workers Forum, at the request of the authors of this report.

and control samples being compared are statistically significant, implying thereby that the toxic exposure could reasonably be taken as the cause of the observed increase in the proportion of high excretors of thiocyanate.

Analysis and Interference

The results presented above have established beyond doubt that exposure to toxic emission from the Union Carbide plant led to an increase in excretion of urine thiocyanate in gas victims and this increase persisted until at least March, 1987, if not even later. This indicates the possibility of a systemic and continuing presence of certain toxic chemicals in the bodies of the gas victims, which are biochemically transformed into thiocyanate. This finding obviously cannot be attributed to earlier reports of a rise in thiocyanate content of the water of Bhopal lakes because (a) the increased rise was temporary and the elevated levels returned to normal by August, 1985, and (b) intake of thiocyanate from water would have equally affected populations amples from control and exposed areas.

Elevated urine thiocyanate levels do not necessarily imply cyanide poisoning alone, as has been assumed so far because of the well-known enzyme-catalysed transformation of cyanide into thiocyanate. The Minority Interim Report to be submitted later, would present evidence pointing towards the possiblity of MIC itself being the cause of systemic and persistent toxicity in gas victims. Attention has been drawn to animal studies conducted by DRDE (Gwalior) showing that sodium thiosulphate may have antidotal role in animals exposed to pure MIC. In light of this, it would be pertinent to explore hitherto unknown biochemical basis of persistence of MIC or its metabolites and pathways for their removal (ie. detoxification) from human body. In this context, antidotes other than sodium thiosulphate may also need to be investigated.

The systemic and continuing presence of toxins, be they cyanide or MIC or any other chemical, in the bodies of the gas victims points towards the possible long-term risks to themselves and to their progeny, as indicated earlier. This clearly calls for much larger allocations for medical relief, rehabilitation, surveys, monitoring and research, covering the entire gas-exposed population for much longer duration than what have been so far anticipated on the basis of information furnished by Union Carbide.

There is a visible declining trend in the urine thiocyanate levels from September 1986 to March 1987 in both children and adults alike (see Table 1). However, the statistical significance of this observation cannot be ascertained on the basis of comparison of mean values alone. For this, it would be necessary to compare individual thiocyanate values at both points of time, which unfortunately was not possible because the original data, lying in possession of the Head, Department of Medical Biochemistry, Gandhi Medical College, Bhopal, were not accessible to us. The importance of stdying the declining trend may not be overemphasized, since it is only through its detailed analysis that meaningful predictions can be made about the duration for which the toxis would persist. This information is required for making a reliable assessment of the current and future toxicological risks faced by the gas victims. Clearly, no detoxification programme can be planned wihout such an assessment.

An assessment of the current toxicological status of the gas victims would have been possible even without statistical analysis of the declining trend suggested above, had the direct monitoring of urine thiocyanate levles been continued beyond March, 1987. This, however, did not happen since ICMR, for inexplicable reasons, could not see the significance of the findings by the AIIMS team and decided to terminate the project. It is peculiar that ICMR has not even thought it fit to list this research project in its list of studies on Bhopal, published in ICMR research update of December, 1985. The ICMR research update of December, 1986 makes a mere four-line reference to this study, without even mentioning its findings concerning urine thiocyanate levels.

The above-mentioned decision of ICMR to terminate the project is baffling, to say the least. This study, when compared to the pioneering and much bigger study conducted by the Medico-Legal Institute, Bhopal, is distinguished by its scientific approach which involved the following features :—

(i) use of a more reliable and specific method of estimation of urine thiocyanate,

(ii) use of a statistically valid method of sampling population; in contrast, the Medico-Legal Institute's study had investigated only hospital-bound patients, that too without taking a random sample, and thus it has never been able to present a representative picture of the toxicological status of Bhopal's gas-exposed population.

(iii) use of comparable controls whose only limitation was due to ambiguity in ICMR's coding of areas with respect to degree of exposure.

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(iv) taking into account the effect of tobacco consumption on the output of urine thiocyanate by (a) random sampling which ensured that probability of including or excluding a tobacco-consumer in the selected sample was equal for both control and exposed areas, and (b) including a sample of children in the study who for all practical purposes can be considered as non-consumers of tobacco,

(v) doing a follow-up analyisis six months later on the same individuals, which makes it the only study on Bhopal victims known to us that has yielded information on the trend of toxicological status as a function of time.

Another distinguishing characteristic of the AIIMS team of investigators engaged in this study has been its willingness to share and subject its data to open scientific scrutiny.

Table I

MEAN URINE THIOCYANATE LEVELS OF CONTROL AND GAS-EXPOSED POPULATION SAMPLES FROM BHOPAL*

Age Group	Time of Testing	Status of Exposure	Size of Sample*	Mean Urine Thiocyanate level (in mg %)	Whether Mean (exposed) turns out to be significantly greater than Mean (Control) on the basis of statistical test ?**
Children	Sept. 1986	Exposed	67	0.52±0.145	Yes
(0-15 yrs.)		Control	113	0.41±0.109	
	March 1987	Exposed	67	0.44±0.134	Yes
		Control	113	0.37±0.105	
Adults	Sept. 1986	Exposed	83	0.54±0.159	Yes
(15 yrs & above)		Control	111	0.41±0.135	
	March 1987	Exposed	83	0.48±0.154	Yes
		Control	112	0.37±0.113	

* Basic data taken from the report of ICMR Research Project No. 5/7/28E/84-RB (see Annexure 6).

* Indicates the number of individuals tested in each sample. The sampling was done on the basis of a randomised block design from gas-exposed and control areas as coded by ICMR. The size of each sample was determined on the basis of statistical principles and found to be adequate for applying statistical tests significance.

** The Test Statistic, standard normal deviate, was used for testing the statistical signfiicance of observed differences in the mean urine thiocyanate levels (see Annexure 8 for details). The statistical analysis was conducted by Shri Subhash Ganguly, a stastician and an activist of Calcutta's Scientific Workers Forum, at the request of the authors of this report.

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FEBRUARY 1987

Confusion—A Way to Knowledge

U.N. Jajoo

The Annual MFC meet at Bangalore on tuberculosis (1985) has provoked much critical thinking to the extent that a consensus on the crtique of NTP is yet to emerge. Anant and Binayak tried to prepare a note which Anil Patel found uncompromising. I add to the confusion here by placing some facts and figures with the hope that it will pave the way to knowledge.

Question I: What is the fate of radiologically positive and sputum AFB negative patients, if untreated?

Let me quote an editorial from the *Indian Journal of Tuberculosis* (1). "For many years there has been an increasing awareness of a need to study the fate of sputum negative patients who seek treatment at various centres for symptoms suggestive of chest diseases. Some workers have recommended that such patients should be kept under observation while many clinicians prefer to put them on prolonged intensive anti TB drug therapy. In July 1974, this problem was discussed in the pages of this journal. The National Conference at Hyderabad in 1975 devoted a full session to this important problem. A study based on a long term follow-up by the New Delhi TB Centre showed most of such patient to be definitely active and tuberculous.

A study carried out in Hong Kong recently with the collaboration of the British Medical Research Council has shown that 34% of the patients whose five sputum specimens were negative by direct smear became sputum positive during the course of one year when left untreated.

A controlled study of such patients was undertaken recently by the National TB Institute, Bangalore also. The patients included in this study were freshly detected, previously untreated residents of Bangalore City, judged as active by two miniature X-ray film readers. Half of these were randomly allocated to treatment regimen of INH and TCZ and the other half were on placebo. 31% of those who were initially sputum negative by one smear examination were found to be sputum positive on second examination. 10.7% by smear and 20.8% by culture alone. Even those patients who were not read as active by any of the two readers, 2.8% proved to be sputum positive on second examination. A few more became sputum positive or showed radiological progress of the disease during the course of follow-up with no treatment. Thus about 40% out of initially sputum negative continued to be sputum negative, while 60% of them proved definitely to be active tuberculous at some stage or the other, more often within first four months following detection. Among sputum negative treated group, regression of lesions was more frequent than in the untreated.

In rural areas where follow-up for observation is not easily possible and is hardly ever done, patients with highly suspicious X-ray shadows should be offered anti TB drug therapy if clinical picture is also suggestive since tuberculosis continues to be the most common pathology. Mistakes in diagnosis though few, will continue to occur even in the best of hands, the question is which is less risky and likely to be more profitable generally—to treat or not to treat."

The conclusions drawn are;

—The radiological reading of active tuberculosis in suspect cases must be considered fairly sensitive (more/than 2/3 at least) and if coupled with clinical judgement should be regarded as reliable tool.

6. What do you expect will emerge from such a Workshop?

7. Any other relevant/related issues?

Please fill in this form and return it to

The Co-ordinator
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47/1 St Mark's Road
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by 5th February 1989.

—The epidemiological surveys done till date are based on the evidence of 'active pulmonary TB lesion' in X-ray, and therefore stand as fairly reliable evidence of quantum of pulmonary tuberculosis in the community.

—In a clinic situation (PHC or DTC), it is fairly logical to treat suspect cases i.e., radiologically positive but smear negative.

Under NTP, a person with tuberculosis who matters is one who brings out AFB in sputum smear. The efficacy of case detection by microscopy in the present situation is as follows: (2,3)

—Total number of sputum positive cases in average district (infectious cases only) = 5,000

—Potential of case detection by meticulous sputum examination (passive case detection in clinic setting) = 2,000 (40%)

—Number of cases detected in actual field situations =776*

Thus, those who do not bring out AFB in sputum smear (thanks to our inefficiency), are very graciously shown the way to DTC for MMR which in practice is out of the reach of the majority. It has been found that only 20% report to DTC (4) and much less turn up to collect the report, since patients are not prepared to travel more than 5 kms (5) unless symptoms are very pressing. The wage loss implicit in such action is never taken care of. In reality what it boils down to is, if you have faith enough to take pains to reach the peripheral microscopy centre, and bring out AFB in smear detectable by our microscopists, only then you matter us enough for inclusion under NTP. We (the NTP) full of sympathy for your sufferings, will send you back with tonics and cough mixtures and will consider it your fault if you fail to turn up again for unrelenting symptoms. *NTP merely looks at the impact of the strategy on the prevalence of TB and forgets the agony of the sufferers.*

The reliance of microscopic examination alone for the diagnosis of TB must be weighed against the following considerations, (i) microscopic detection of AFB is a tool which requires sincerity of human element involved—something which cannot be legislated in our setting. (ii) There is a phenomena of 'intermittent positivity' (6) which further reduces the reliability of one sputum examination, a general practice in PHCs.

NTP banks on those patients who themselves report to medical opinion for relief of sufferings and presupposes that all who take action will come to these centres for their expertise. The credibility 'enjoyed' by these centres is obvious from the fact that, "out of those registered at the DTC, only 27% have not received treatment earlier" (7). It is not only the distance of the diagnostic centre but the behaviour, the care, the concern shown towards human sufferings that attracts the poor ill person, the absence of which is obvious from the figure that only 23% seek relief from the nearest health centre. The inefficiency of case detection, the non-availability of drugs/detectors erode the credibility of these peripheral units. It is this faith in the healer that matters for the patient and not merely a free technical expertise. At the time NTP was conceptualised this important sociological dimension of patient care was forgotten.

Question 2: Isn't it true that Indian and WHO documents say that MMR does not help in detecting more cases than is possible by microscopy alone?

Let us not confuse between active case finding and passive case detection in a clinic situation. The above statement is true only for active case finding. To quote verbatim, "For sputum positive cases, large majority of patients could not be found even if services were provided close to their villages. The number of patients found under such conditions was considerably short of estimated total prevalence. It was not possible to diagnose even about 50% of the existing cases in the community i.e. number that was already reporting to the PHC for examination because of their chest symptoms by any of the currently available methods (community development approach—active detection of symptomatics and referral to microscopy centres or mass campaign with X-ray available at few miles distance) (9).

However a situation in an accessible clinic where static MMR facility is available will be entirely different. The purpose of installing an MMR machine in these peripheral clinics is not to mop up the 'non-action' taking cases of the community but to detect precisely the action taking group (52% smear positive). The moot question is whether we expect bonus of this radiological support or not. It is a known fact that 70% of the registered cases every year are AFB negative (radiologically diagnosed) in DTC. This is a clear indication that the concept of case detection by microscopy has not even been conceived by the district centre and that radiological support

* 20 to 30% of expected potential or 15% of the total infectious pool.

6. What do you expect will emerge from such a Workshop?

7. Any other relevant/related issues?

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has considerable potential of dividends to be paid in our existing inefficency.

Question 3: The radiological facility at PHC (accessible clinic) is a costly proposition and should its appropriateness not be judged before it is pleaded for?

The logic that recurring cost of MMR static unit will be too much is negated by the following observations: (10)

The cost in US$ of diagnosing one case by different methods

Examination	Approximate cost per examination	Approximate cost of diagnosing a case
Direct microscopy	0.21	3.4
Culture exam	0.49	12.1
70 mm x-ray film (static unit) passive detection	0.26	3.5
70mm x-ray film (mobile unit) active detection)	0.50	73.0

The radiological facility at the PHC has an added spin-off benefit in the early diagnosis of bronchopneumonia in children—the number one killer in under fives. While limitations of financial stringency towards non-recurring cost is put, at least principally a need of radiological back-up support must be accepted and its feasability must be tested in field situations.

I suggest the strategy given below.

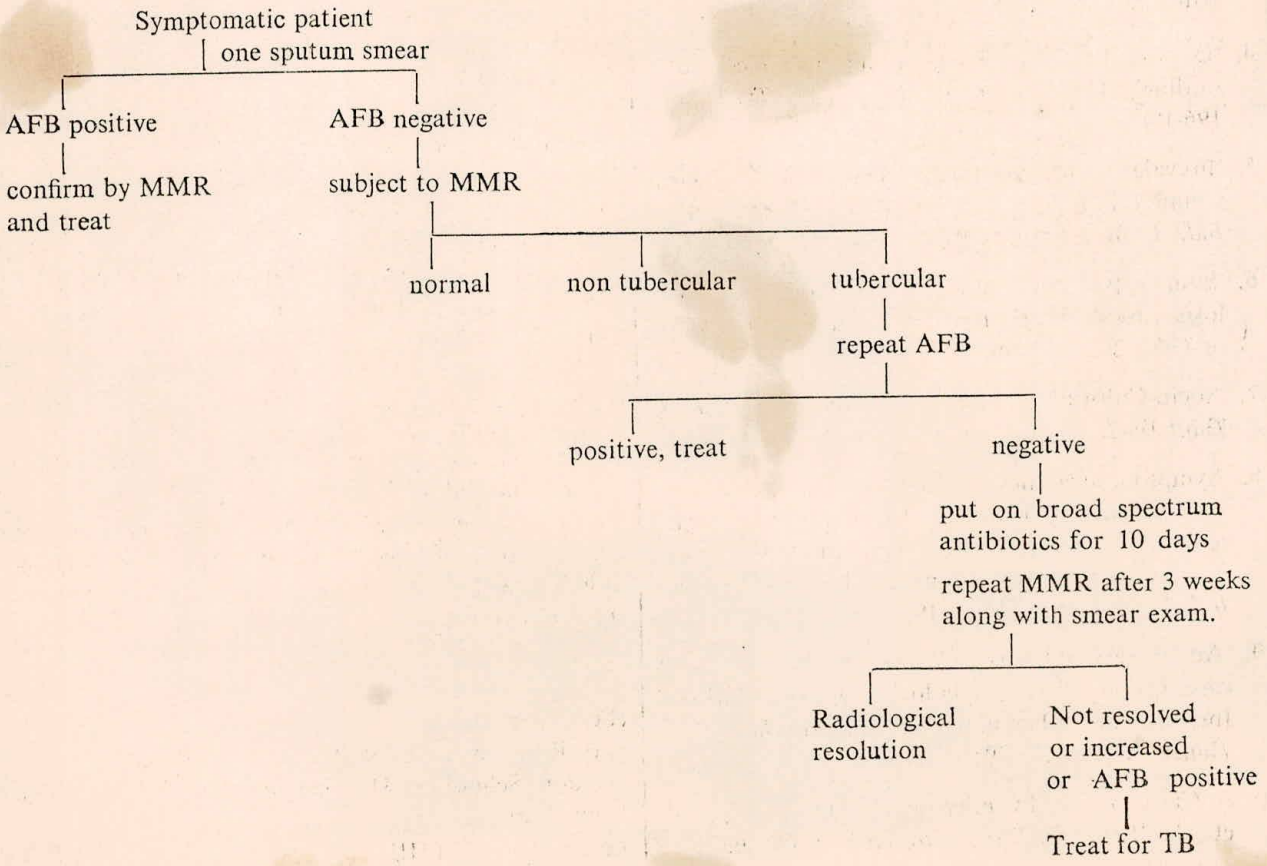
Question 4: Can culture facility at PHC add significantly to case detection at PHC?

Not much really, due to the following reasons—

(i) Out of 20 cases/1000 population, 2.5/1000 are smear positive and 1.6/1000 are only culture positive. In passive case detection at PHC where around 52% of infectious pool is expected to turn up, the bonus of 'only culture positive' will be reduced further.

(ii) Culture report takes at least 6 weeks—a time lag which will shift the ailing patient elsewhere in pursuit of relief.

(iii) The cost involved in detecting a case is 4 times higher than that by smear examination or static MMR (10).



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Question 5: Can tuberculosis prevalence be brought down by medical intervention? Should the aim of NTP be only alleviation of human suffering?

Socio-economic factors being important in causation of tuberculosis, we are tempted to argue that any amount of medical intervention alone cannot reduce the prevalence of tuberculosis. However, the figures drawn up after careful analysis do not favour this hypothesis. If the full potential of microscopic detection is tapped and all geographical area is covered by NTP, estimated probable reduction in prevalence of TB is 6.4% per year. With the present case detection rate (30% of the expected), 4.8% reduction can still be achieved (3). NTP is epidemiologically a sound proposition but has failed to make a dent due to operational failure in case detection/case holding.

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November 1988

The Trans-Technique Aspects of Disease and Death

M. L. KOTHARI AND LOPA A. MEHTA

The technological triumphs of this century outweigh and outclass the aggregate achievements of the entire human past; yet modern man has been denied the elixir of cure for his disease and death. A logical survey of medicine's failures reveals that it is not that the technology *per se* is ineffective but that what technology has solved is trivial, and what it just can't touch is crucial, being beyond any techniqe. Most of human disease and death is trans-technique. Technique in medicine is *whatever* a diagnostician, therapist or researcher does to a patient. Trans-technique aspects of disease and death are those innate, ordinary, day-to-day features of human living and dying that *le technique* can in no way modify to a patient's advantage.

Seemingly, technology has reached its apogee, its Ultima Thule; the march is unimpeded, for the would-be-obsolete CT scan is likely to be replaced by the could-be-obsolete NMR imaging. However, a dispassionate, epistemologic evaluation of medicine's gains reveals them to be *imagery*, *accessive*, *analytic associatiue*, and *amplificatory*. The more the physicistic science and the physicianly art interact, the greater is the variety in which medical imagery can be obtained. Yet, to take but an example. roentgenography, xerography, CT scan, ultrasonography and NMR imaging have left a cancer where it was—diagnosed always a little too late. The ability to cannulate the pancreatic duct/artery towards the diagnosis/treatment of pancreatic cancer is an *access-ive* advance that leaves the cancer's autonomy untouched. Increasingly refined biochemical techniques allow many a substance to be measured with *pico-* precision, thus *analytically* telling us a lot about heart attack diabetes mellitus or rheumatoid arthritis, but without the liberty to predictably/ and /or favourable alter the course of the disease. Epidemiology connects the husband's cigar to the wife's cancer, coffee to cardiovascular disease, and HLA-antigen to a host of maladies —an *associative* exercise that makes more anxiety than sense. The E/M amplifies the size of a T-lymphocyte n-*tuple* times only to amplify our ignorance on the cell to the same magnitude. In the modern medical setting, technology glitters, but is, often not gold.

A quartet of diverse medical men, (10, 17, 19, 27) in its recent generalization, is not far from the truth that 90% of the *bad* things that happen to man are beyond the ken of modern medicine. Armed with technical might, the doctor can, with *vis medicatrix naturae* providentially at the patient's beck and call, revert to *eu*-states acute physiologic crises, set fractures, fix retinae, deliver babies facing dystocia, remove lumps and cataracts, replace a valve or a joint, correct mechanical defects such as cleft lip or hernia, all this comprising the 10 per cent of man's maladies that

medicine *can* manage, The rest is trans-technique. Let us see how, and why.

Four biomedical factors account for the trans-technique scenario that we are witnessing. These are *Cellularity, Systemicity, Uniqueness* and *Herdity*. An integrated appreciation of these factors will help us understand medicine's limits, no matter what its technical might.

Cellularity : Celldom Unconquered

There are features of a mammalian cell that make disease and death trans-technique in more ways than one. It is a fitting paradox that what advanced cytologic techniques have revealed about the cell has snowballed to drive home the truth that a cell's behavior, in health or disease, can hardly be trifled with.

The microsize of a cell accounts for the fact that before a scan discovers a cancerous lump measuring one cubic mm and weighing one mg.,—the smallest tumor mass that one could ever hope to detect clinically—the cancer is already a million cells strong and several years old; early diagnosis of cancer is only a myth. (13) The same considerations apply to an atheromatous plaque, held by some as mitotic in origin. 21 Even if we end up with a scanner that can spot a single wayward cell, the latter could mislead by exhibiting the Shakespearean repertoire of looking benign despite malignant intentions and *vice versa*. Any attempt at flooding the body with antiabnormal-cell-agents (radiation, chemicals) fails because of the selfsameness of all body cells, rendering selective destruction of undesired cells impossible, Supposing that a highly specific drug is developed and administered, the target cell can recall its microbial past to readjust its genetic machinery—mutate—to KO the drug, the mutative repertoire of a human cell bordering close to 256 followed by 2.4 billion zeros. Transplanted, the guest cells refuse to merge their identity, their unique self-ishness as much as the host cells, and all hell is let loose. Each of our body cells carries in its bosom *a decision in advance of performance*. (6) The thousand inner shocks that the flesh is heir to are indelibly programmed into it *ab initio;* all that we see is an unfolding of a built-in story with the flow of time.

Systemicity

The human body is a holon that starts as a single cell, and *sui generis*, builds up a cytogalaxy that behaves as a single, concerted unit whose seemingly disparate parts form, grow, and decay in unison.

Acknowledgedly, cancer is *a disease of the whole organismm.*(*22*) In the brain, where-from cancers usually do not spread, it is a disease of the whole brain. A cancer thus does not lend itself to complete destruction by surgery, radiation, chemotherapy or immunotherapy. Even if we were to nab *the last cancer cell*, (*26*) the next normal cell would foil the attempts by turning cancerous, through a process named neocanceration or recruitment. (*13*) The sole curative triumph against gestational choriocarcinoma is due entirely to the fact that such an eventuality of neocanceration is ruled out by the absence of the normal progenitor cells that comprise the discarded fetal part of the placenta. The appellation, *a disease of the whole organism,* is no less applicable to any form of blood vessel disease, be it the coronaries or the cerebrals. A bypass takes care of the block that the operator seess or has access to, but what of the vessels beyond, or before, or elsewhere. This explains why a patient of angina shows normal coronary arteriogram and the patient having normal coronary arteriogram can die a sudden coronary death. (*23*) As for diabetes, euglycemic agents touch the proverbial tip of the metabolic iceberg, affecting in no way the generalized, accelerated vaso-occlusion that is now an accepted part of the diabetic process.

Uniqueness

Variability, it's said, is the only invariable law of biology, a natural propensity that unfailingly varies one cancer from another, one heart attack from the next. If the uniqueness of every individual is an unsolved problem of biology, (20) than uniqueness of every disease is *the* unsolved/unsolvable problem of medicine: "There are," Carrel axiomatized "as many different diseases as patients." (2) The presumed identicality of the genotype in homozygous twins is unable to circumvent the Carrelian code, a nosologic non-concordance that is well-known but as yet poorly accounted for.

Cancer, indisputably traceable to precisely pinpointable/culturable culprit cancer cells, provides a remarkable example of what Dubos (5) would call the unprecedented, unparalleled, and unrepeatable nature of a disease. Writing on the 'Uniquenes of malignant tumours,' Spriggs and co-workers (25) concluded that naturally occurring cancers are extremely diverse even when they carry the same diagnostic label. No two cases of coronary artery disease/stroke/diabetes/arthritis/autoimmune disease are identical either in their presentation or in their progress. The behavioral uniqueness of a disease, with its unpredictability, forms the basis of unexpected successes and the equally unexpected failures, given the same treatment. Cancers have been classified into *good* and *bad*, the good ones curable by any treatment, the bad ones by none—a retroactive judgment (13) applicable to any other disease and fully justifying the Chinese proverb that a therapy works in a patient destined to survive.

Vis-a-vis the celebrated and honored practice of prognosing, what the doctors know are group statistics but when it comes to a disease in an individual, the physician has to contend with unknowns stacked upon unknowns, a situation that merits the title of a book by Francisco Sanchez, published in 1581 : *Quod Nihit Scitur—Nothing Can Be Known.* In a recent study, in Bombay, of 535 sudden coronary deaths, 66% of the cases did not show coronary occlusion and 78% failed to show any myocardial infarct; in many of these, the heart was too good to die. (23) And what of diabetes with the SMA-12 at the behest of the clinician ! It is true in diabetes mellitus as in other chronic diseases that the prognosis for the patient is extraordinarily individual. (15)

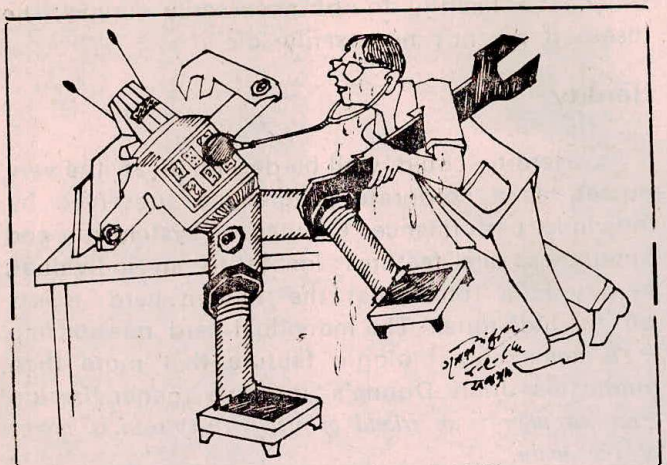
The *unique* reality of medical practice is that be it Paul Dudley White and his patient Chales Thierry, on James Herriot and the dog Jock, it is a one-to-one encounter where the uniqueness of the individual, his disease, his very biologic trajectory is unpredictable, unalterable, and overwhelmingly important. For modern medicine, the most chastizing part of an individual's biologic trajectory is its refusal to provide any quantitative correlationship between the earliness/lateness of a dlsease on the one hand, and the probability of the disease/death it may beget, on the other. The healthy do not necessarily survive; the diseased do not necessarily die.

Herdity

Herdity could well be described, at the very outset, as a corporate programme subserved by individual performance. Cellularity, systemicity and uniqueness are features innate to an individual; herdity is a force that the human herd exerts on the individual. The individual-herd relationship is a remarkable biologic feature that more than vindicates John Donne's intuitive generalization that *no man is an island of itself; every man is a part of the main.*

As Dobzhansky (4) put it, mankind was and is, a single inclusive Mendelian population and is endowed with a single corporate genotype, a single gene pool. Apposite to this is Carrel's description (2) of an individual as one who extends, in time as in space, beyond the frontiers of his body, and who is linked to the past and to the future, regardless of the ephemerality of his present. Add to this, the conceptual framework of quantum physics that reveals a basic oneness of the universe wherein at a deep and fundamental level, the seemingly separate parts of the universe are connected in an intimate and immediate way, in a complicated web of relations between the various parts of the whole. (1, 28) We are now poised to view an individual's body, his disease, his cancer—each unfailingly unique—as a spatiotemporal manifestation of a cosmic order. I am what I am, and allowed to be so, for I know who all others were, are, and will be so as not to duplicate them, and they in turn know of me so as not to make a duplicate of me or of my disease at any time.

Climbing down from cosmic considerations to clinical reality allows us to appreciate the role herdity plays in the *distribution* of disease in any given group. As the general statistics go, the incidence of, say, acute lymphatic leukemia is 1 in 33,000, of cleft palate/neural tube defect is 1 in less than 1,000, of cancer 1 in 5, of blood vessel disease 1 in 2, at random, country after country, year after year. "Anybody who spends a little time brooding over the statistics of cancer must be struck by their unexpected constancy. From year to year the figures for each



AN ILLUSION

form of cancer show remarkably little variation." Having so generalized, Glemser (8) cites figures: "Here there are 5,355 cases of cancer of the pancreas one year, 5,427 cases of the cancer of the pancreas two years later—almost the same number. Or in another country, there are 218 cases of cancer of pancreas one year, 221 cases of pancreas the following year." These regional constancies and interregional variations merge into a constant, global, human character when it is realized that although the anatomic distribution of cancer in different parts of the world is extremely varied, the overall death-rate from cancers at all sites is remarkably constant for humans the world over. (24) The age-specific mortality rates from cerebrovascular disease, year after year, decade after decade, and country after country "fit quite closely the same line (10)" There is something fundamentally human in the global impartiality with which disease and death treat mankind. The prevalence of diabetes mellitus (18) is more or less constant for all countries. Cancer, stroke, diabetes, hypertension, heart attack and so on are an integral part of humanity, of human herdity. This remarkable herd-certainty and individual-probability of pathologic events is a function of a corporate herd programme that finds expression at the level of an individual who has crossed a critical genetic threshold. (3) Herdity, thus, is a reciprocal relationship between an individual and his herd, what geneticists have been describing as polygenic inheritance.

The evolution of the concept of polygenic inheritance has brought a shift in genetic thinking, from heredity to herdity, for polygenic inheritance is necessarily a statistical concept that concerns not the individual but Mendelien populations or population aggregates. (4, 7) Polygenic inheritance has been invokd to explain a wide variety of diseases, ranging from congenital malformations to cancer, porphyria to peptic ulcer. This means that most diseases do not have a *cause*. Causeless diseases cannot be prevented; they are an integral part of man'a growing; cause-wise and course-wise they are transtechnique. Herdity is trans-technique.

The noumenon of herdity governs all the phenomena in relation to disease and death in a herd. The herd determines who will get what and when, in whom the disease will be slow, in whom fast, and so on. This would explain why the commonness of prostatic cancer beyond the age of 50 is paradoxically matched by the uncommonness of its malignant behaviour and how persons with bad coronary angiograms outlive those with good ones.

The most compelling evidence in favour of herdity is, in general, the programmed herd mortality that, as a physiologic function, (14) is seen in man, in animals, in drosophila. Gompertz (9) saw this as a constant increment in mortality beyond the fifth quinquennium of human life, doubling every 8 years, a phenomenon no medical advance has been able to stem. John Knowles, as President of The Rockefeller Foundation, wrote in 1977 on "The responsibility of an individual" (12) charging the latter's "personal misbehaviour and environmental conditions" for over 99% of illnesses. Knowles' faith in reasoned behavior did not prevent the pancreatic cancer that killed him in 1979. He was but one of the 19,000 that develop pancreatic cancer and die from it in USA, every year. Knowles died at 52, some do at an earlier age, others at a later age, all a part of herd distribution, of herdity. That human herdity has been exercising such influences from times immemorial may be realized from the fact that King Herod of Judea, died of pancreatic cancer, in 73 B. C., at the age of 69. Cancer as a trans-technique problem has been curing itself of research and researchers, and may one day eliminate them altogether.

MFC-Bulletin No. 145, November 1988
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Conclusions

Systemicity, Uniqueness, Cellularity and Herdity of diseasing and dying can be read as the latter's SUCH-ness, a Kantian ding-an-sich or as the Zennist Alan Wats summed up, This is it. The evolution of the trans-technique concept, based on SUCH-ness, explains technology's failures and limits, exercises restraints on this age of inflated expectations, encourages us to be radical enough to abjure straight-line solutions and many a technologic trap—to wit, the tyranny of mass-screening, debilitating therapies, or killjoy preventionism. Jacob-Bigelow lamented, in the last century, that most men have an exaggerated opinion of the powers of medicine.

A recent editorial (11) title "The toss-up" bears eloquent testimony to the rationale of the foregoing. It is common experience that, on a given case, the proposed diagnostic/therapeutic thrust ranges from medical conservatism to surgical ultraradicalism. After attributing such divergence in medical thinking to the idiosyncracies of the physicians, the authors propose: "Perhaps all these factors are involved in clinical controversies, but we propose that one explanation has not been sufficiently recognized; that it simply makes no difference which choice is made. We suggest that some dramatic controversies represent 'toss-ups'—clinical situations in which the consequences of divergent choices are, on the average, virtually identical." The identicality of the consequences, *no matter what the investigations and the therapy*, is a function of the basic fact that the problem being tackled is beyond the limits of technology.

Scientia est potentia: knowledge is power. The knowledge that a lot in medical practice is beyond medical technique can, as a concept, propel us towards *not doing* in medicine. Munsif, an eminent Bombay surgeon, was fond of aphorizing that *a good surgeon is one who knows when not to operate.* What a medical man needs to learn, in today's technicalized scene is *when not to act*, an intellectual and a therapeutic revolution that can safely rest on the concept of trans-technique.

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TOWARDS AN APPROPRIATE STRATEGY

Ulhas Jaju, Sewagram

However much one may speak of an egalitarian society, there will always exist stratification and the differences between strata can at the most be minimised. Those who are better placed are in the minority and utilise the available health services to the maximum, while the vast majority who are poor crave for them. If the health services are to be utilised equally by all, the system should be so moulded that it remains accessible equally to both groups of the population.

How can one achieve this goal? The proper distribution of available resources calls for restraining those who over-utilise them and facilitating the use by others who under-utilise the health services. The distinction becomes very difficult when a sick person (whether rich or poor) comes to the hospital. Human considerations justify all earnest attempts to save one life, whatever it may cost. On the other hand, with limited resources at our disposal, cost benefit rationale demands sacrificing one life for the sake of saving a hundred others.

The lack of this logic in the administrative set up of almost all medical institutions is responsible for the diversion of 80% of the health budget to few urban hospitals which have intensive coronary care units, dialysis centres, sophisticated cardiac surgery units, cancer institutes and so many other facilities while the majority of the population lives without even primary health care.

Even if one agrees in principle to use this logic in health service administration, suitable alternative approaches need to be tried in the field. Many philanthropic institutions, out of compassion towards suffering humanity, have extended their services to the 'Have Nots' These are charitable hospitals or dispensaries which provide free services to the needy. However, charity corrupts people and makes them dependent on welfare services. The health needs of this group of population is so enormous, that these institutions perpetually depend heavily on outside finances.

A few institutions have tried to raise resources locally. Some such attempts have been made in the organised labour sector also. In the unorganised sector, no attempt has been made till now. The description which follows discusses in detail how a health insurance scheme was evolved for the villagers near Sevagram Medical College, over the last five years.

When the search began :

It started with village Nagapur. A decision to start a weekly OPD was taken in a village meeting. The school building was offered to us for running the dispensary. An initial contribution of Rs. 4-00 per family was collected by the village leaders towards the drug bank. Commonly needed drugs were purchased on our advice. A village health worker was selected who was assigned the job of drug purchase, drug dispensing and record keeping. The drugs were dispensed at cost price.

One day a mother carried her sick child to the dispensary. The child had bronchopneumonia. The total cost of drugs prescribed, including anti-biotics was around Rs. 15-00. The mother had no money. She requested drugs on loan and promised to pay the bill the next week. Human considerations prevailed. The next week never came in spite of repeated reminders. The story was repeated for many others. Our drug bank went bankrupt. A meeting was held with the villagers and it was unanimously decided that drugs will not be issued to the defaulters in future until the old loan was paid.

Although the decision sounded fair, we could envisage a sick child in a poor family, lying at home

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with high fever but the mother not coming to us as she fears we would demand clearance of the old debt. Analysis of a year's OPD data revealed that the village dispensary was utilised preferentially by the rich section of the community.

It was time for us to evaluate. Why do we go all the way to a village to run a dispensary? Is it to treat minor illnesses of those who can afford to visit Sevagram hospital 5 kilometers away or to provide medical help to a needy child from a poor family.

We again sat with the villagers. The conclusions emerged that for the health facility to be accessible to the needy, it must be provided free at least for acute unforeseen illnesses; and to help those who cannot afford the cost of the medical treatment, a village fund should be collected every year when the jowar crop is harvested. Villagers found it easier to contribute in kind. The sense of brotherhood still prevailed in our village community and the idea of contributing according to capacity and services being given according to need was accepted. Contributions were decided on the basis of land-ownership. A wage earner's family would contribute 4 Payali of jowar while a farmer would contribute 2 Payali per acre of land holding. Where there is additional source of income, the family should contribute 4 Payali more. As a code of discipline, non-contributors would not be offered benefits of the dispensary.

We went from house to house to collect jowar. To our surprise, active enthusiastic village leaders were conspicuous by their absence. When their turn came, they evaded us under some excuse or other. After four visits to the village for collection we had to digest the hard fact that the rich section had preferred to keep away from the scheme. The calculation of cost-benefit revealed to them that even though their contribution would be more, the services offered to them would be on par with others.

The total contribution collected fell short of our drug bank's demand. We had to depend on free drug samples to run the OPD, for the next one year. At the end of the year, analysis of illness treated in the village dispensary revealed that 95% were common, self-limiting diseases (upper respiratory infection, viral fever, gastrointestinal infections etc.) which a village health worker could treat. Other patients needed costly drugs (mostly anti-biotics) which put a heavy burden on the drug bank and invariably these patients needed hospitalization.

It was at this juncture that we learnt that health services among the poor cannot be totally self-reliant. We also realised the need for a central hospital to cater for acute illnesses and emergencies.

From the third year on, the village dispensary was linked with the Sevagram hospital for referral and for admission of the sick. We learnt new lessons! A pregnant lady was admitted a month before the due date on the pretext of getting recurrent abdominal pain and her husband expected us to keep up our promise of treating and feeding her free in the hospital till she delivered. Another wanted hospital admission to by-pass court summons. A paraplegic was dumped by the relatives in the hospital.

Since then we had to modify our criteria for free indoor service. For all acute and emergency patients, hospital services were offered free while for chronic illnesses like cataract, hydrocele, hernia, old polio etc. and normal delivery the patient was charged 25% of the hospital bill.

The village dispensary is now run by the village health worker, who is provided with a drug kit. An arrangement is made to ensure proper referral to the hospital. A mobile health team consisting of a doctor and an ANM visits once a month when maternal and

TABLE

COST ANALYSIS YEAR 1982

Population covered: 3973 Village: 4

INCOME	Rs.	EXPENDITURE	Rs.
Contribution toward health insurance	4,959.50	VHW Honorarium at the rate of Rs. 35.00 per month x 4	1,680.00
Recovery from indoor admissions —		Village drug kit at the rate of Rs. 15.00 per month x 4	720.00
non-insured bill	5,490.00	Fuel charges for monthly visit at the rate of Re. 1.00 per km for an average of	
— with 25% hospital bill	630.00	15 km run per visit per village	720.00
	11,079.50	Salary of ANM at the rate of Rs. 700.00 per month for coverage of 12 villages	2,800.00
Balance with the hospital	5,159.50		5,920.00

Rs. 16.67 per indoor admission (total 307 admissions)

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child health care is provided. Mass vaccination programmes are undertaken. The under five children are regularly weighed. The health insurance scheme has been extended to eight villages.

Evaluation

We evaluated accessibility of medical services to the poor from the percentage of coverage of health insurance scheme among labourers and marginal farmers. It rose from 46.5% to 71.5% in 3 years in the total population and from 36% to 78% in labourers and marginal farmers. That the village folk took some years to trust us, is obvious from the rising figures in successive years.

The total number of hospital admissions increased over successive years in parallel to increasing health insurance coverage, a sign that the hospital is utilised more and more by the people if it is within their reach. There was one hospital admission for every 13 people and this figure has remained constant over the successive three years. Average hospial stay was 5 days.

Cost Analysis

It is difficult to calculate the money the hospital spends on admissions. The existing hospital charges are not worked out in accordance with what the hospital spends on a particular item. Sevagram hospital being attached to a medical college, the manpower employed is disproportionately high in comparison to what a service oriented hospital would have. Being a post-graduate teaching hospital and research oriented institute, it is not possible to restrict admissions to emergencies and common medical problems. Several specialities exist and thus lead to extra-expenditure than what one would expect from a hospital equipped only to deal with common emergency situations.

The cost analysis tor the year 1982 reveals that 83.7% of the money spent on the village health worker's remuneration, his drug kit, travelling charges and salary of ANM could be recovered from the village contribution. If income of the hospital from indoor patients of the covered villages is taken into account, the hospital could get Rs. 16.75 per hospital admission. Obviously hospital had to spend much more on indoor admissions (see Table).

Hospital indoor expenditure apart, we spent Rs. 1.50 per capita over peripheral health service. The State gives Rs. 8.85 per capita health budget in Maharashtra, which includes all services. It is our belief that even with existing resources, proper distribution of available funds can provide qualitatively much better services if an appropriate strategy is employed.

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Dear Friend...

Annual Meet 1985 — Some reflections

1. This was the first mfc meet I attended. I am very happy to have come. I am impressed and encouraged to meet such a variety of people who are committed to people especially the oppressed and who are concerned about a change in values — a change of society.
The meet was interesting, but a little too packed; there was not enough time to meet people individually (But in only 2 days it is almost impossible)

Hilda Sina, Vagamon, Kerala.

2. First let us say that the qualities, backgrounds, achievements, activities, and aspirations of the group in general were varied and exciting. It is good that such different people can come together with some hopes and interests in common, and share and develop their ideas. The 'old' group did not dominate the 'new' nor did they show impatience nor intolerance with the 'new'. Even the long term mfc members did not criticise each other in harsh terms and showed mutual respect even in disagreement. This is amazing and highly commendable.

Everyone seemed welcome to attend and participate. The attitude seemed to be that we could all learn from each other.
Small group discussion followed by plenary sessions were very good. A little more time for informal meetings would have been nice.
It would have been nice to have all the background papers before the meet because reading time was short once we arrived..
The meet served its main purpose for us in meeting like minded medicos and non-medicos alike from various parts of India.

Penny Dawson, Jamie Uhrig,
Mitraniketan, Kerala.

3. I got to know quite a number of people with whom I would never have come in contact otherwise. It was quite informative except where people were getting into unavoidable technicalities, which of course were difficult to follow.

The time limitation was an inhibiting factor. We had to skip quite a lot of things.

I was in the group discussing how to raise public awareness about TB. The ways that were discussed were the ones that we had already discussed in our SPACE meetings. Participants were trying to express with their experiences why they came to such conclusions. They were not allowed to tell their experiences but what they had inferred from it— of course due to lack of time.

Then some participants had a set of opinions formed and they refused to come out their circle. This led to heated arguments now and then.

On the whole it was nice.

—Malarvizhi, Madras.

Drug Action Focus

4. Instead of choosing new topics each time can we have a meet where we reanalyse some past issues and topics. There is a general feeling amongst people that after discussions we do not follow up on the topics anymore. Drugs topic for example.
I think although the Drug Action Network is working full time some of us in mfc feel sidelined now and find little or nothing to contribute. Raising the issue in an annual meet may turn out newer aspects of the problem.
I think that DAN is directing its efforts in the wrong direction. Instead of pressing the drug controller of India for action all of us should conscientize undergraduates and upcoming doctors. Our fight should be at a lower level rather than at the level of government policy.
This is my disillusionment with the DAN and I hope we can correct its course by another discussion on the topic of drugs.

Vineet Nayar, Vellore.

Whither Company Doctor?

5. The purpose of this letter is to motivate a social scientist or a researcher to conduct a study on the interaction between a worker and the so called "company Doctor" I am sure that the findings of such a study will be revealing.
Both public and private sector Industries employ doctors on parttime or full time basis to man their first aid centres, ambulance rooms, dispensaries and hospitals, and these doctors are called "company Doctors".
An observation made by me (over a period of three decades) is that the workers look at the company doctor with askance. He is considered as a "management Agent" having no sympathy for the workers. The workers attribute the following characteristics to the company doctor.
   1) He lacks human touch. He thinks that workers FEIGN sickness.
   2) His medical opinion and diagnosis are dependant on the instruction of the company/management.
   c) At the behest of the management, he goes to the extent of certifying as "medically unfit" even physically fit persons.
   4) He asserts that working environment and sanitation are the best available any where.

In most cases where his opinion is contested and referred to outside doctors and specialists, he is proved wrong. In most of the court cases, he is disbelieved and held to be biased.
I wish that there is a healthy debate and any company doctor comes forward to assuage these feelings of workers. It is observed that public sector employees have better opinion about their company doctors.

Yours

U.S. Venkatraman, Bangalore

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Dear Friend

mfc role

mfc has been trying to define it's role (refer minutes of Patiala meeting mfcb 116-7). The expectation of individual members are so varying that it has been difficult to come to a common conclusion In the process the decision is being kept open.

Most of us wish to see mfc in action, be it drug action forum or Bhopal disaster. In their bubbling enthusiasm (I am all for it), the individual members sometimes try to project their action (action which they feel correct) as mfc's action. All the members might not support the way in which action is taken. In the process, I see some members withdrawing from mfc—a sign that mfc will wither away if the same process continues.

We are so possessed by the obsession that mfc should plunge into collective action, that we have started neglecting the group's linking thread i.e. the friendship. There was a time when we used to come together to share our field experience and our dilemmas in day to day life. We tried to overcome our loneliness by coming to mfc where we found some thing to fall back upon.

Look at the mfc meetirgs in the recent past! We are so "action oriented" that we come together only for a specific business. The agenda is packed and exhausting. The poor convenor is hard pressed in trying to sort out all the matters in a specific time. In the process there is hardly any time to strengthen the bonds of friendship. Infact they often get burnt during heated aggressive discussions—a characteristic of mfc. After all we are all conscientised individuals! We see the need for intellectual, partnership, the tender linkages between hearts in a common search is forgotten. The vociferous few dominate the group meetings and succeed in getting mute consensus. The mute members, do not dare oppose the vociferous few, and in the process prefer to keep away from action and sadly from the medico-friends circle itself.

I am not against action. A committed individual is always involved in action at his own level The real issue is whether mfc as a group is coherent enough to take-up common action.

We come from various backgrounds. We have a common goal... We have commitment. The road that will take us to the desired goal differs considerably depending on which shade of ideology we owe our motivation. Though we do not doubt the bonafides of each other's commitment towards the goal, we agree to disagree on the strategy of action. The means adopted to reach the goal is important to most of us.

What I am trying to drive at is that due to the heterogenous nature of membership in mfc, it is not possible to come to a consensus in our understanding of how to proceed in action — atleast not always. The direction is similar but mode of action will differ according to our perspectives. We have now to choose between two options:—

i) Do we insist on common action and in the process either split up (each group may claim to be mfc) or let the group wither away in what appears to be a natural aging process. OR

ii) We regard each other as important and necessary and express concern towards each other, try to understand how the other person is thinking and acting, try to spell out the direction in which we should progress and leave the action at an individual level.

What I mean is that we be non-possessive for a group-action and be more committed to making friends and understanding each other.

I am trying to limit the role of mfc to a body of friends with a common concern and regard for each other, interested in trying to spell out a common direction. The action is left to the members individually. Which means, there will be nothing like mfc activity but activity performed by the members of mfc. In the process if a group of mfc members find a common action, they can go ahead with it in a group capacity and not in mfc's capacity.

The task ahead is tremendous. Our numbers at present are quite inadequate. In the process of our individual searches our egos are also nurtured making us feel that our way is the only way. Let this 'ego' not clash-I see it happening. In turn let us nurture friendship, a friendship that can appreciate another's views however different from ours. For a group like mfc, to grow in a spirit of dialogue and evolve, however slowly, a common perspective. this attitude must remain primary.

Ulhas Jajoo
MGIMS
Sevagram, Wardha.

AIDAN role

Saw Vineet's note in the mfc bulletin of May 1985 (No. 113) I was quite amazed at his assessment of Drug Action Network's (DAN) direction of efforts.

If there is anything we all feel good about the Network, it's the total liberty of members to choose the level of action and mode of action related to drug issues — as long as they are in keeping with the major objectives.

The Drug Controller of India happens to be merely one person in a massive bureaucracy dealing with Drug Policy issues. With the National Drug Policy in the offing, pressure has to be applied at various levels on various individuals involved in the making of the drug policy from the members of Parliamentary Drug Consultative Committee

to the Department of Chemicals and Fertilizers, Ministry of Health to Social Action groups, faculty members of medical colleges, consumers etc.

The DAN expects pooling in off efforts, so while some networkers contribute by protest marches, signature campaigns, public and consumer education; others contribute by alerting key social action groups and monitoring policy changes. Our contribution depends upon our initiative, our understanding of the problem and our area of functioning. For those based in medical colleges, the expectation is that they contribute in screening medical literature, reaching out to medical graduates and providing back up support.

The entire DAN cannot and should not put its efforts in medical colleges. Why don't we enquire from others in mfc what their experience has been in terms of impact with such efforts? These efforts were not related to the issue of drugs but dealt with the much more fundamental concept of 'health'

You must be aware that the National Drug Policy is coming up in the parliament in the monsoon session and if you have been following up the trends, you would be as distressed as many of us are. The discussion on these matters should not be merely at the consumer and medical graduate level, but also at the level of faculty and top brass of teaching institutions.

You may not be aware that when we were trying to muster support for the courageous Bangladesh Drug Policy, when pressure from vested interests was mounting, the support came much more from IITs (Indian Institute of Technology) than medical colleges.

What can those who want to work primarily with medical students do? Here are some suggetions:

1. Review medical literature regarding fixed dose combinations of steroids and other to prove their irrationailty;

2. Review whatever sources we can about the various drug utilization studies in India and identify areas of interest for conducting special studies on drug utilization patterns, eg TB care or diarrhoea care.

3. Prepare guidelines of what young doctors ought to know about Rational Drug Policy.

4. Follow up Pharmaceutical policy issues in Economic Times, Eastern Pharmacist, Financial Express, Business Week etc., to follow the trends and communicate these to the doctors and undergraduates.

The Bangladesh Policy itself may not be able to survive, if India formulates the kind of drug policy it seems to be formulating. This would put an end not merely to our own efforts towards a Rational drug policy, but also of other third world countries which are struggling to get out of the clutches of the pharmaceutical giants. If a handful of health activists have to intervene, it can only be at the most strategic points. I am afraid, for effectively motivating thousands of undergraduates coming out of the 106 medical colleges, we will have to depend upon the socially conscious members of mfc. DAN has never made any promises of changing the world overnight. It is an emerging force no doubt, depending on long term commitment and contribution of a host of persons like you and me to the drug and health scene of the country. Most of the organizations involved in AIDAN are extremely clear about their choice of their working strategy and details of their action plans. Fighting for a Rational Drug Policy is the priority of the Network, as decided by the Coordinating Committee; it being the need of the hour.

—mira shiva
Coordinator , (AIDAN);
New Delhi

(We request reactions to both these letters so that the dialogue can be continued — Editor.)

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Food in the Hands of Big Industry

Iodine --- deficiency goitre is one of the nutritional prolems that can be very easily controlled and prevented. This has been successfully done in many European countries. In India, the entire Sub-Himalayan belt comprising of Jammu & Kashmir, Punjab, Haryana, H P; northern parts of UP, Bihar and Bengal, the far-eastern States and isolated pockets in Maharashtra and M P. are endemic for goitre. In 1959, the government with UNICEF aid set up 12 iodisation plants to produce iodised salt (Potassium iodate added to common salt). The salt produced was to meet about 50% of the estimated needs and also some of the needs of Nepal. However, and not surprisingly, even this simple programme of manufacture and distribution of the salt, suffered from various defects. These were reviewed by Dr. Gopalan under the title 'The National Goitre Control Programme — A sad story' (NFI Bull. July 1981).

About four years ago, at a seminar at the NIN, we were informed that the government was contemplating handing over the iodisation programme to the Tatas. In this matter, obviously the govt, did not drag its feet and on my recent visit to Delhi, I saw iodised salt in the market. Whether handing over the production to the Tatas will solve the goitre problem, is an entirely different matter. I do not know whether Tatas will also handle the distribution. One of the reasons for the failure of the National Programme was nonavailability of the required number of railway wagons for the transportation of salt, and that the railways did not provide covered wagons during the rains. How will the Tatas solve this problem, and if distribution is still in the hands of the government, then what matters who produces the salt?

The Control Programme involved manufacture and distribution of the iodised salt. Plants for iodisation were set up with UNICEF aid and we had all the technical know-how. Since it was fortified common salt, the house wife would use it in cooking and there was not much nutrition education involved. The salt was to be sold in place of ordinary cooking salt, therefore sale of ordinary salt was to be banned. The extra cost of iodisation was not to be borne by the people but by the govt. There the salt was to be sold at subsidised cost. Perhaps, Tatas are now receiving the subsidy. Whether administrative inefficiency alone was responsible for handing over the production to the Tatas or whether other factors weighed equally or more, one will never know. As Dr. Gopalan said "administrative incompetence, lack of co-ordination between various agencies involved, and **Commercial and vested interests** (emphasis mine) have apparently combined to wreck the Programme." Although termed a National Programme it was naturally restricted to certain contiguous geographical areas. Of couse, in a country of India's dimensions, even this area is sufficiently large. Nevertheless, the Programme was a comparatively simple one. But it failed and that too, in the hands of a government which claims to improve the health and nutrition of millions of children through a nation-wide network of ICDS Programmes.

I do not know whether the Tatas are using the national iodisation plants or whether their salt production is in addition to that produced by the public sector or whether those plants are now let to lie idle. The point is, that a health programme, not dependent on 'drugs', has passed into the private sector.

That, however is not the end of my story. Of the total common salt, or sodium chloride manufactured, only a small amount goes for human consumption. Much of it is used for industrial purposes. The Tata chemicals were perhaps already manufacturing common salt, and production of iodised salt will be a very small part of this venture. However, for producing edible salt for iodisation, they apparantly produce more salt than needed for fortification. The Tatas are therefore now marketing table salt, at least in the cities where table salt (powdered common salt) is mostly used.

Hitherto, table salt was marketed by small entrepreneurs. It was mostly pulverised crude salt. Tatas salt may be more refined. However, the small industries will never be able to compete with a big industrial house. By taking the lead from the Tatas, if other chemical manufacturers also market table salt, the small or cottage industries will have to close their business. A year or two ago, Brooke Bond, the famous Tea and Coffee House started marketing powdered spices like chilli, turmeric, dhania etc. Once again, entry of a big industrial house into the domain of cottage industries. Very recently, in the South, another big company has started marketing vadams (badis) and papads, in fancy shapes and under very fancy names

This then is a slow but steady entry of big industry into that part of the processed food market, which uptil now was entirely under cottage industries. Although such cottage industries were in the hands of middle classes, driving them out of busi-

(Continued from page 7)

ness in this manner, will not help the poor but only expand the ranks of the poor. I am not an economist. I do not understand the full implications and the reasons for big industry entering into the small-chain food market, but to me the consequences appear alarming.

— K. S. Jayarao, Hyderabad

Effects on Mental Health

(Continued from page 5)

supportive follow up for mental health problems in adults, adolescents and children (2).

A team of psychiatrists from NIMHANS, Bangalore have conducted training programmes in mental health for the medical officers of the state health services, posted in the gas affected areas. Tht training provides the necessary skill to diagnose and manage the common mental problems seen in the victims of the gas exposure (2).

A mental health care manual has also been prepared by the Bangalore team (3).

The mental health dimension is a much neglected dimension of health inspite of the much publicised WHO definition of health. Doctors in Bhopal were disregarding or misinterpreting the symptoms of stress and passing it off as malingering or compensation. neurosis. This mis-diagnosis was sadly reflective of our medical training which plays only lip service to mental health inspite of its grave importance in health care and the doctor patient relation-ship.

We salute our community oriented Psychiatric colleagues for bringing to the fore this much neglected dimension through practical interventions in supportive care, communication and training in Bhopal and not exploiting the situation only for its research potential.

1. Kinston, W and Rosser, R. (1974) Disaster: Effects on Mental and Physical state, Journal of Psychosom. Research *18*, 437
2. Directorate of Information and Publicity, M.P. Govt (1985) Review meeting of ICMR Projects at Bhopal, Khabar, 5th May 1985.
3. *Mental Health Care Manual for Medical Officers.* by R. Srinivas Murthy et al., National Institute of Mental Health and Neuro Sciences, P.O. Box. 2900, Bangalore - 560 029. (For copies of the manual write to Dr. R. Srinivas Murthy at the above address)
4. Also available with mfc office a list of references on mental health aspects of disasters.

The Challenge of Bhopal

(Continued from page 1)

ght provoking example showing that if we want to, we can.

Bhopal too is a challenge? So are many other more insidous developments in our country. The growing investment in nuclear — energy now discredited as an energy resource in the West, or the gradual take over of the cottage industry in food by big business, — each of this though different from the other has a growing similarity representing either a subservience to the profit motive or an insensitivity to health hazards or both. We feature some of these aspects in this bulletin. We also feature investigations in Bhopal which raise some of these issues for our readership.

Minimata, Seveso, Long island were too distant to make any impact. Amlai, Chembur, Handigodu, Harihar, Zuari, Nagda, Mavoor, Silent vally, Thal vaishet hare not stimulated us either. Will Bhopal do so?

Nuclear Hazards

(Continued from page 6)

true, is truly shocking.

7) **Functioning of the health physics unit:** The health physics unit that monitors radioactivity and oher environmental pollution in the NFC should be under an independent agency not answerable to NFC or the BARC. The alleged victimisation of a scientist of the health physics unit who did try to raise his voice about some of the environmental issues. (if correct) is a matter of deep concern.

In conclusion we suggest that an independent panel of experts and concerned ctizens be invited to make an indepth, impartial inquiry, and review the situation in its totality (rather than isolated accidents) and suggest immediate remedial measures. In this regard our Forum will be willing to offer Whatever help it can."

(Some action towards improvement has taken place in response to this letter. For instance the Nuclear Fuel Complex has been brought under the Pollution Control Board and they have to obtain consent from the Pollution Control Board before discharge of the effluents. They have built a compound wall to improve security. Their sedimentation ponds have been lined with some kind of plastic material to prevent seepage. Several shortcomings still need to be reexamined.)

Will citizen's groups keep up the pressure please! This is particularly urgent since a recent government decision will promote their installation all over the country in our attempt to prepare our selves for the 'quantum jump' into the 21s Century. The movement against the prevention of Nuclear War is not enough!! (see mfcb 102)

(Continued from page 7)

ness in this manner, will not help the poor but only expand the ranks of the poor. I am not an economist. I do not understand the full implications and the reasons for big industry entering into the small-chain food market, but to me the consequences appear alarming.

— K. S. Jayarao, Hyderabad

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Views and opinions expressed in the bulletin are those of the authors and not necessarily of the organisation.

Annual subscription — Inland Rs. 15-00

Foreign ; Sea Mail — US $ 4 for all countries
Air Mail : Asia — US $ 6; Africa & Europe — US $ 9; Canada & USA — US $ 11

Edited by Ravi Narayan, 326, Vth Main, Ist Block, Koramangala, Bangalore-560 034

Printed by Thelma Narayan at Pauline Printing Press, 44, Ulsoor Road, Bangalore-560 042

Published by Thelma Narayan for medico friend circle, 326, Vth Main, Ist Block, Koramangala, Bangalore-560 034

COMMUNITY HEALTH CELL
47/1, (First Floor) St. Marks Road,
Bangalore - 560 001.

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FEBRUARY 1988

Logistic Support and Facilities for Primary Health Care (Crucial Role of Physical Accessibility)

Ashish Bose

In the rhetorical discussions on the Alma Ata Declaration of *Health For All By* 2000, not enough attention has been paid to the crucial role of physical accessibility. The Alma Ata Declaration (1978) does show awareness of the fact that "the success of primary health care depends on adequate, appropriate and sustained logistic support.." and recommends that "government ensures that efficient administrative delivery and maintenance services be established reaching out to all primary health care activities at the community level.... That the government ensures that transport and physical facilities for primary health care be functionally efficient.."

"The global strategy for health for all by 2000" adopted by the World Health Assembly in 1979 indicates that "the main thrusts of the strategy are the development of the health system infrastructure starting with primary health care for the delivery of country wide programmes that reach the whole population." (WHO, 1981 : 12).

In the international literature much is made of the Kerala model. Several Sophisticated statistical exercises have also been made on the impact of literacy, education, status of women, higher age at marriage and related factors on the fertility pattern. However, there is no evidence that these exercises have taken adequate note of the human settlement pattern and the access to health and education which the state of Kerala has, by virtue of its unique settlement pattern where one can hardly distinguish a rural area from an urban area. This is partly a function of density of population. But a number of historical, geographical, political, economic and other considerations have influenced the settlement pattern of Kerala. For example, according to the 1981 Census, in Kerala, 90.3 per cent of the rural population was enumerated in villages with population of 10,000 and over. The comparable figure for Bihar was 4.2 per cent; Madhya Pradesh 0.1 per cent; Rajasthan 0.9 per cent; and U P 0.7 per cent. In terms of the number of villages (in Kerala), 74.3 per cent of the total number of rural settlements belong to villages with population of 10,000 and over. The comparable figure for Bihar is 0.3 per cent; Madhya Pradesh negligible; Rajasthan 0.1 per cent and U.P. 0.1 per cent. These figures bring out the sharp contrast between Kerala on the one hand and large states like, Bihar, Madhya Pradesh, Rajasthan and U P (which will be referred to subsequently as BIMARU states), on the other.

As is well-known, in our strategy for primary health care, we have more or less adopted a blanket approach throughout the country (though there are some minor modifications in tribal and hill areas) by laying down norms for the establishment of primary health centres, sub-centres, etc.

The computational work in connection with this project was done at the Computer Unit of the Institute of Economic Growth. The author acknowledges the assistance given by K. Lal, Programmer and Jatinder Bajaj, Senior Research Analyst, Population Research Centre.

Inherent in our primary health policy is the weightage given to population. In other words, if the majority of the villages in Kerala have a population of over 5,000, it is obvious that there will be sub-centres located in these villages and the access of the people to primary health care will be greater in Kerala than in U P because of the combined effect of the settlement pattern and the weightage given to population in our health policy. When we consider the physical accessibility on the basis of data on transportation, the contrasts are even sharper. For example, in Kerala, for every 100 sq kms, the length of roads was 275 kms. The comparable figure for Bihar is 48; for Madhya Pradesh 24; for Rajasthan 21; and for UP 52. Another index of road transportation is the length of roads per one lakh population. In Kerala, for every one lakh population, the length of roads is 421 kms. The comparable figure for Bihar is 120; for Madhya Pradesh 204; for Rajasthan 213; and for UP 129.

Another question one may ask in the context of physical accessibility is, how many villages are linked with roads ? the road statistics give such data for only two categories of villages namely (a) villages with population 1000-1500 and (b) villages with population 1500 and above. In Kerala, 100 per cent of villages are linked with roads in category (a). The comparable figure for Bihar is 39 per cent; and for Madhya Pradesh 40 per cent; for Rajasthan 40 per cent; and for UP 25 per cent. For category (b) villages, the figures are as follows : Kerala 100 per cent; Bihar 52 per cent; Madhya Pradesh 65 per cent; Rajasthan 56 per cent and U.P. 52 per cent. Thus, the human settlement pattern, the size fof villages, the distribution of villages, and the road transportation system all favour Kerala in terms of the delivery of health services. What is true of health is also true of education.

According to the 1977 Economic Census, in Kerala 96,3 per cent of the villages had a primary School right in the village. The comparable figure for Bihar was 60.0 per cent; for Madhya Pradesh 65.5 per cent; for Rajasthan 55.8 per cent; and for UP 45.5 per cent.

In the case of middle schools, the position was as follows: in Kerala 92.3 per cent of the villages had a middle school located in the village. The comparable figure for Bihar was 14.5 per cent; for Madhya Pradesh 10.5 per cent; for Rajasthan 14.6 per cent and for UP 9.3 per cent.

Next we come to high /higher secondary schools. In Kerala, the figure was 76.5 per cent while in Bihar it was 4.8 per cent; in Madhya Pradesh 1.8 per cent; in Rajasthan 3.6 per cent and in UP 3.5 per cent.

These figures speak for themselves. Both in terms of health and education, the settlement pattern favours Kerala. If the literacy rate is high for Kerala, one could ask why is it high ? It is obvious that the settlement pattern in Kerala makes access to schools and primary health centres easy, compared to the situation in BIMARU states. Before we look into the so-called cultural and other factors while explaining the diversity in India, we feel that we should have a good look at the human settlement pattern, transport linkages, and the communication network.

The 1981 Census (and also earlier censuses) classified rural settlement into the following seven categories (Table 1).

TABLE-1

Category	Population
I	less than 200
II	200-499
III	500-999
IV	1000-1999
V	2000-4999
VI	5000-9999
VII	10,000 and above

In our statistical exercise, we have worked out the settlement pattern with reference to villages as well as population in all the districts of all the states in India. We have defined a *small village* as a village with population of less than 1000. Our hypothesis is that these small settlements, barring a few exceptions, are by and large, inaccessible. We have calculated two indices : (1 Population Accessibility Index (PAI); (2) Village Accessibility Index (VAI).

If, in a district, the population of villages in categrories I to III (i.e. less than 1000) is more than 50 per cent of the total population of the district, the district will be designated as a *low population accessibility* district. Similarly, if in a district more than 50 per cent of the villages are

in the categories I to III (i.e. less than 1000 population) then the district will be designated as a *low village accessibility* district.

We shall present a few figures here. In India as a whole, our Population accessibility Index (PAI) was 60. In Kerala it was 98; in Bihar 59; in Madhya Pradesh 47; in Rajasthan 55; and in UP 55.

As regards the village accessibility index (VAI), the figure was 38 for India. It was 95 for Kerala, 38 for Bihar, 34 for Madhya Pradesh, 37 for Rajasthan, and 38 for UP.

The average size of a village in India in 1981 was 911. It was 16,967 in Kerala; 966 in Bihar; 583 in Madhya Pradesh, 774 in Rajasthan; and 808 in Uttar Pradesh. In India as a whole, 29.8 per cent of the population was in LAP districts (i.e. low accessibility in terms of population). In Kerala, the figure for LAP districts was 0; in Bihar 19.4; in Madhya Pradesh 80.0; in Rajasthan 23.1; and in UP 16.1.

In terms of the low accessiblity districts in terms of villages, (LAV districts) the overall position was as follows: In India, 75.3 per cent of the districts were LAV districts: The figure for Bihar was 74.2 per cent; for Madhya Pradesh 100 per cent; for Rajasthan 92.3 per cent; and for UP 91.1 per cent. In Kerala, the value was zero.

Before we conclude, we would like to mention that in our initial exercise ,we had assumed that the size of the settlement had a direct relationship with the accessibility to health services. In other words, smaller the village, lower the accessibility and vice-versa. Subsequently, we found enough support for our assumption in the District Census Handbooks. Unfortunately, all the 1981 district census handbooks are yet to published. However, we shall quote the data from the Jhunjhunun District of Rajasthan in support of our contention (census of India 1981, series 18, DCH Jhunjhunun ixiv Table 2).

We hope to do this analysis for all the districts of India, as and when all the district census handbooks are available.

We shall conclude by pointing out that our preliminary analysis shows that our primary health care policy has not taken note of problems of physical accessibility and logistic support which

TABLE 2 : **Jhunjhunun District**

Population range 1981	Percentage of villages with some medical facilities available in the village, 1981
Upto 499	7.5
500-1999	28.8
2000-4999	82.2
5000— and above	90.9
All rural settlements	34.1

are absolutely crucial for any strategy for health for all by the year 2000. We would recommend that the states should be asked to prepare *district health plans* on the basis of available data and each state should have the flexibility to devise alternative strategies to meet the local and sub-regional requirements, keeping in mind physical accessibility as a crucial factor. In fact, our analysis raises serious doubts about the *strategy of multiplying sub-centres* only on the basis of population size, as spelt out in all our five year plans.

(*Contd. on p. 6*)

An Opportunity with a Difference

Low Cost Standard Therapeutics (LOCOST), an organization aimed at encouraging the practice of rational therapeutics among the members of its large drug network requires :

1. A person to meet the drug network members personally and act as a change agent for correct medical and pharmaceutical practices.

2. A person who likes working with school children and is interested in promoting awareness about health practices among children. Communication and writing ability in Gujarati is essential.

You could be a graduate of pharmacy, science, medicine or arts. Those who enjoy travelling will find this work interesting. Write to LOCOST, Premananda Sahitya Sabha (1st Floor), opp. Lakadi Pool, Dandya Bazar, Baroda-390001

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(*Contd. from p. 3*)

It is unlikely that this strategy would succeed in delivering health care services to rural people, particularly in the small villages of the large states of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh. Alternative models based on increasing *mobility* rather than multiplying sub-centres should be seriously considered, along with other criteria for logistic support and facilities for primary health care.

Paradoxically enough, a large population has helped and not hindered *individual* rural settlements in having access to health services because our health policy has an inbuilt bias in favour of population size. Our plea is for the fullest consideration of physical accessibility as an important factor in planning for primary health care. This is an obvious point. Nevertheless, our planners have innocently ignored it.

(The paper was presented at the seminar on "Health for all : concept and reality" in November, 1986 organised by "The Foundation for Research in Community Health, Bombay)

Form IV

(See rule 8)

1.	Place of Publication	New Delhi 110029
2.	Periodicity of its publication	Monthly
3.	Printer's Name (Whether citizen of India?) Address	Sathyamala Yes B-7/88/1, Safdarjung Enclave New Delhi-110029
4.	Publisher's Name (Whether citizen of India?) Address	Sathyamala Yes as above.
5.	Editor's Name (Whether citizen of India?)	Sathyamala Yes as above.
6.	Name and address of individuals who own the newspaper and partners or share holders holding more than one percent of the total capital.	Medico Friend Circle Bulletin Trust 50 LIC Quarters University Road, Pune-411016

- STEP BY STEP -

Towards An Appropriate Medical Education

The CHC/CMAI/CHAI/CMC-L Project on `Strategies for Social Relevance and Community Orientation in Medical Education - Building on the Indian Experience' was based on a long involvement of the primary researchers in exploring how medical education could be made more relevant to the needs of society. These included many initiatives before the formation of CHC, followed by some during CHC's formative years.

This report therefore brings together the key initiatives/reflections of the researchers which preceded the study and helped to give the project greater focus.

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III `PROS' AND `CONS' FOR AN ALTERNATIVE MEDICAL COLLEGE (1989)

IV MFC ANTHOLOGY HANDOUT.

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MFC-B-139 Apr 1988

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Pricing the Medical Care in Government Hospitals: Problem and Alternative Solution

Abhay Bang and Rani Bang

The government of Maharashtra has introduced fee for medical care in all district hospitals and medical colleges hospitals from February '88. The patients have to pay Rs. 2 for outdoor card, Rs. 10 for urine, blood or sputum examination, Rs. 20 for X'ray, Rs. 30 for ECG, Rs. 5 per day as the bed charges for indoor admission and Rs. 150 for a major operation. This is not simple 'fee rise' as stated by the government because earlier there were no charges to most of the patients for any service in these institutions except 10 paise for OPD card. Hence all other charges are a new category of tax and the outdoor card fee is raised by 2000 percent. What is the effect?

As we see from the small district town of Gadchiroli, the patient attendance in the district hospital has suddenly decreased. The middle class is turning to private practitioners while the poor patients are avoiding to go to the hospital or are refusing to get admitted or treated even when they are found to be suffering from serious diseases. "We can't pay for the treatment" is their plea. Government has announced that 40% of the patients shall be treated free, but this is left to the discretion of hospital authorities. Can a Civil Surgeon every day decide who should be treated free from the daily crowd of 300 to 500 patients? The experience of anti-poverty programmes suggests that the benefits selectively meant to be for the poor usually don't reach them. So most of the poor are not likely to receive the benefit of free service.

This decision of the government of Maharashtra in principle means that the State is no longer willing to shoulder the responsibility of free medical care to the needy as public service. If this sets up a trend, people especially the poor, may increasingly lose the benefits of free medical care, education or even police protection as their rights. Our country is committed to 'Health for All by the year 2000.' This is something beyond the ability of the government to deliver because health depends on food, income, education, housing, water supply and health care—basic amenities which the government can not provide to the poor people in the near future. But the government can at least meet the goal of 'Health *care* for all." Maharashtra was nearing this commendable goal when this decision suddenly came from the blue and deprived the State of the honour. The public feeling can be judged from the fact that on our appeal 1500 persons from 70 villages of this tribal district came to sign a memorandum and two MLAs agreed to take this to the state government.

The Prime Minister is repeatedly expressing his expectation that the public sector units should generate profit. Everybody thought that this applied to the public sector companies involved in production or economic endeavours. But the state government seems to be applying this to the public services like health care as well. Is it necessary?

The two arguments often put forward in justifying the introduction of this fee structure are:

— These hospitals are meant to be referral hospitals, but they are unnecessarily crowded by patients with minor problems who come mainly to get injections.

— The cost of medical care is increasing very fast so the government must try to meet the two ends.

While there is some truth in both these points, the solution of charging a fee creates a still bigger problem. By charging the patients, the government has succeeded in reducing the number of patients, but not the 'unnecessary' ones. The poor anyway don't attend the hospital for minor problems because they can't afford to lose the wages. The new criterion of elimination is not the seriousness of need for medical help but ability to pay. This means that now the government medical care is selectively for those who can pay and not for those who are in need. This is essentially same as the private sector medical care. To crown the similarity, the proportion of 40% free service offered by the government is the same as one proposed by the Director of Apollo hospital in his proposal for new commercial hospital in New Delhi.

Let us suggest some ways of meeting the above mentioned problems of unnecessary patients coming for free injections and of increasing costs of medical care.

Gadchiroli has a small Government district hospital of 30 beds. A study of the outdoor patient attendance in the district hospital done by our institution SEARCH, showed that 36% of the outdoor patients were getting one or other injections. Out of these injections, 60% were unnecessary just going by the categories of medicines injected. These werei njections Terramycin, B' complex, B_1 B_6 B_{12} Chloroquin, Wymesone, Diazepam etc. All these medicines are equally well absorbed when given by mouth. Actually Terramycin is difficult to give in therapeutic dose of 250 mg every 6 hourly in OPD. The usual dose of 2 ml (100 mg) once a day is ineffective. Injection B_1 B_6 B_{12} can some times lead to fatal reaction. Thus it is unnecessary and undesirable to give these medicines in injection forms in outdoor. These injections are justified only when the patient is unconscious or too ill that S/he can not take medicines orally—situations when patient should be admitted and not treated in outdoor.

After discussing these findings with the Director of health services, Civil Surgeon, and the doctors in the hospital, it was decided by all that the 8 unnecessary categories of medicines in injection forms will not be kept in outdoor and the doctors shall not prescribe unnecessary injections. These medicines in oral forms and other necessary injections supply was ensured. The effect of these measures was as follows.

	Before	After	Reduction
(1) Daily number of patients in OPD	307	273	11%
(2) Daily number of injections	111	54	51%
(3) Proportion of patients receiving injections	36%	20%	45%
(4) Proportion of unnecessary injections	60%	2%	96%

This one single measure and the self discipline by the doctors had the following results

(1) Saved patients from the side effects of unnecessary medicines

(2) Saved time of the patients, doctors and nurses spent in giving injections

(3) Saved medicines

(4) Reduced outdoor attendance by 11% by eliminating those who were unnecessarily coming to hospital only for injections.

Daily 56 injections meaning 17000 injections in an year could be avoided. If the cost of one injection is considered to be Rs. 3 (medicine, syringes, needles, boiling, doctor's and nurse's time) net 50,000 Rs. could be saved per year in a small 30 beded hospital. Moreover, patients were reduced by 11% which further saved time and money of the hospital and of the patients. Anybody who knows the prescription pattern in the medical colleges or district hospitals elsewhere would agree that this pattern of unnecessary injections is similar everywhere.

Another study done by search showed the following pattern of use of antibiotics and antiparasitic agents in the patients admitted in the wards. Out of all admitted patients 16% were given no antibiotic antiparasitic medicines, 20% were given these medicines for sound reasons and 64% were given these medicines unnecessarily or excessively or wrong, for which many reasons could be found. Urgency of the situation or lack of bacteriology facilities were responsible for such use in some cases but in majority (two third) of such instances the cause was lack of knowledge or wrong prescription habits of doctors. Again let us emphasise that this problem is everywhere and not specific to Gadchiroli.

This suggests that if retraining is provided to doctors to upgrade their knowledge about rational use of antibiotics or change their prescription habits, a tremendous cut can be made in the unnecessary use of costly medicines, besides saving patients from side effects and nurses from work load. Lot of hospital costs can be thus reduced.

The purpose in describing these studies here is to show that some of the factors responsible for increasing cost of medical care in the governments hospitals can be corrected. In order to make two ends meet, the government should introduce retraining of doctors in rational therapy and prescription audit. Charging the patients for medical care and thereby depriving the poor and needy is neither necessary nor desirable.

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The Indo-US Vaccine Action Programme :

A Recipe For Disaster

PRAFUL BIDWAI

Following public criticism, the Government of India has appointed a high-powered committee to scrutinize the trials of vaccines to be produced and imported under the Indo-US Vaccine Action Programme (VAP). Dr. AS Paintal, director-general of the Indian Council of Medical Research, who heads the committee, has meanwhile been quoted as saying that he will not allow any vaccines to be tested in India which have not already undergone trials on human subjects in the United States of America.

It this assurance is rigorously translated in to practice, then the VAP will lose its relevance at least for one of the two parties which signed the agreement, namely the USA. There is little doubt that under the VAP India is to be used as a vast, cheap, and poorly regulated laboratory in which to conduct trials of new vaccines on Indians. It is difficult to imagine that any other considerations, including benevolent charity and philanthropy, which may have guided the American government in sponsoring the VAP will subsist if vaccine trials are indeed tightly regulated in India.

This is exactly as it should be. For, without doubt the VAP is one of the most ill-conceived, potentialiy hazardous and environmentally malign projects ever signed and underwritten by the Government of India.

The VAP agreement is open to question on numerous grounds, including the perverted view it takes of the health priorities of the majority of the Indian population. To put it simply, the VAP emp phasizes vaccines as miraculous substances—, magic wand with which to do away with an amazing range of diseases and ailments, from malaria to dysentery. Vaccines do have a place in any comprehensive health plan. But that place is necessarily limited largely because of problems of distribution-frequent breaks in the cold chain, inadequate coverage of susceptible populations, loss of effectiveness of vaccines against specific pathogens and the adaptability of and mutation among such pathogens leading to resistance.

The only successful example of effective large-scale inoculation that the world, and in particular India, knows of is the smallpox vaccine. Its success is attributed to a number of features that are unique to the disease and its pathogen. The ease with which the disease can be identified by ordinary people, the mode of transmission of the virus (solely through physical contact, as distinct

water or through air), the possibility of sealing off susceptible pockets from the rest of the population, the handsome incentives offered for reporting a smallpox case, and the vigour with which the WHO launched its campaign against the disease, all contributed to the success. It would be pure arrogance to assume that such conditions can be replicated in respect of most other diseases included in the VAP list.

The VAP, then, is part of a search for 'technology fixes' for health problems that are more appropriately tackled through better sanitation, improved nutrition and the supply of clean drinking water. Like all such 'technology fixes' imported from the affluent West, the VAP too will be an artificial transplant that is likely to undermine indigenous efforts at developing solutions to the health problems of the Indian people. Little wonder, then, that the programme has only been supported by those who have a stake in perpetuating a relationship of dependence on the West.

The following are some serious objections that can be levelled against the VAP agreement :

First, the agreement is 'intended to develop vaccines to *expand the range* of diseases that can be prevented by immunization and to develop accurate, inexpensive diagnostic techniques for use in the health care system '. This contradicts the claims of the Department of Biotechnology (DBT) that 'no R and D work would be undertaken on any communicable diseases other than those which are already prevalant in the country as major diseases'. Under the agreement, it would become possible to develop vaccines even for new diseases, for example AIDS.

Secondly, the VAP is an unequal agreement insofar as the effective formulation control and execution of the project is concerned. The USA has pledged dollar 7.6 million dollar 6 million through the Agency for International Development (AID) and the rest through the U. S. public health service. The Government of India is committed to spending dollar 2 million to take care of the domestic costs. The fine-print clauses of the project agreement are riddled with conditions and convenants that favour the USA. For instance, all 'documents, plan specification, contracts, schedules. other arrangements,' 'with any modifications therein' must be approved by AID. (Sec. B. 2 of Annexure 2 to the Project Grant Agreement) And 'goods and services financed under the grant...will not be used to promote or assist a foreign AID project and activity associated with or financed by a country not included in code 935 of the AID geographic code' (B.4).

AID officials will have the right and opportunity to inspect the project and all the books and records pertaining to it (B.5). Further, all goods to be transported to India must be shipped by AID-approved air or ocean carriers to qualify for grant finance; carriers of a country not included in Code 935 are debarred. Besides, at least 50 per cent of all shipments must be carried under the U. S. flag. Many such restrictions occur.

Thirdly, the project provides for a wide range of vaccine trials—'bench, clinical and field research to develop new and improved vaccines' (Annexure 1, P. 2) This makes it explicit that the primary purpose of the project is to allow an extended range of trials on numerous subjects, from laboratory animals to human subjects in the field. Although the priority areas have been identified as 'cholera, typhoid fever, rotavirus, hepatitis, dysentery, rabies, pertussis, pneumonia and malaria,' these 'could change in succeeding years of the project as other areas of research opportunity are identified.'

Fourthly, the project provides for a joint working group and an environmentai review committee consisting of equal numbers of 'experts jointly selected' by the DBT and the U. S. government, through AID and the U. S. public health service. This will look into the environmental impact-potentially risky or dangerous—of particular research proposals. Thus, Indian scientist will not be able to implement research programmes without American approval. The review of research and testing programmes in respect of particular vaccines will also be subject to U. S. approval. Even in case of adverse environmental impact, there is no guaranty that Indian opinion will prevail.

Fifthly, the project agreement emphasizes the involvement of both the public and private sectors in India and the U. S. Given the great disparity between these in the two countries—most biotechnology research and production in the U. S. is in the private corporate sector, while such activity in India is mostly in the public sector – the emphasis opens the way for U. S. private companies' entry into the arena of field trials. This is indeed the critical part of the VAP, as will be detailed below.

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Sixthly, the Memorandum of Understanding (MOU) explicitly states that 'both governments acknowledge the importance of the protection of the human subjects in any medical programme' (Article V) and that 'some of the medical research will involve recombinant DNA technology', i. e. methods of gene-splicing or genetic engineering. The emphasis is thus clearly on developing bioengineered vaccines for human iseases

This is a high-risk area where vaccines may have unpredictably harmful consequences. Indeed, it is precisely because the risk has been acknowledged that many countries in the West, including the USA, have had to evolve regulations on recombinant DNA research through prolonged debates and public hearings lasting years.

Article VII of the MOU states boldly: Both countries have similar regulations governing the conduct of recombinant DNA research', This is simply untrue. The USA does have such regulations. India does not. A DBT official confirms that 'only environmental laws of a general nature exist as of now, although a high-powered committee has been set up to evolve a code'. Thus, the assurance that all genetic engineering research 'will be carried out in accordance with the laws and regulations of the country in which the research is conducted' is meaningless.

And finally, the VAP accomplishes in one full swoop what the pro-Paris Convention lobby has not been able to do to the Indian patent protection system despite years of efforts. Article VII of the MOU says: 'It is recognized that the work carried out under the VAP may produce patentable result and in the publication of the scientific findings. In order to assure that the rights of both countries are protected, an accord on intellectual property, copyrights, and patent provisions will be developed and agreed upon within ninety days of signing of this MOU, and will be appended as Annexure 2.'

What it implies is not only that the protection provided by the Indian Patents Act of 1970 will be destroyed and replaced by a strong U. S. -style system of patent protection which is heavily biased in favour of the developed countries, but also that organisms and life-forms engineered with the use of biotechnology will possibly be allowed to be patented. Incidentally, a recent move in the USA to allow such patenting has opened up a Pandora's box. The ethical problems involved in the patenting of life are too obvious to need comment.

The Indian government's assurance that the Patents Act will not be ettisoned or bypassed is at variance with Article VI of the MOU. This represents a major policy shift in the Government of India's position. The official Indian position has been that only processes and not products should be patented and those too for a limited length of time and conditionally. By allowing patents to be taken out on bio-engineered life-forms, it will make nonsense of the notion of limited protection of intellectual property..

If India signs a special 'accord' under Article VII on patent protection for vaccines or bio-engineered products, its entire opposition to the Paris Convention as an unequal, anachronistic and discriminatory treaty and the very basis of its resistance to Western pressures to accede to it, will be seriously undermined. That this should be a prominent article in the MOU speaks for itself.

The confidence with which the DBT committed itself to such an 'accord' within three months—when the revision and repeal of the old colonial patent law took several years—is equally remarkable. It is far from clear, however, if it had the Union Cabinet's sanction for bringing about a major policy change to the detriment of the country.

Equally significant Article V of the MOU stipulates the appending of 'Annexure 1' containing a joint 'Assurance of Protection of the Rights and Welfare of Human Subjects of Research in the Indo-U. S. Vaccine Action Programme.' This annexure is to be mutually agreed upon within ninety days of the signing of this MOU'. Until it is signed and appended, no research activities involving human subjects can be conducted. As matters stand today, neither annexure has been signed although the deadline is long past.

All this sounds innocuous, as does the assurance that laws and regulations in force in both the countries would be taken into account while drafting Annexure 1. However, the article seriously compromises India's exclusive and sovereign right to decide on the norms for the protection of human subjects in this country and to draw up a code or protocols for vaccine tests on them. For the article says that Annexure 1 will be 'negotiated and signed' by India and the USA.

The very existence of the term 'negotiate' in respect of what cannot be open to negotiation is a serious assault on India's sovereignty in respect of her own citizens' safety. The article grants an alien country and government, that of the USA, a role in negotiating what constitutes adequate 'protection of the rights and welfare of human subjects' in India.

It seems that the objective is to open India to U. S. biotechnology corporations and institutes and turn it into one vast laboratory where all manner of vaccines can be tested without regulation, let or hindrance.

That objective has a significant history. In 1986 the Wistar Institute of Philadelphia, a private firm, tested a bio-engineered rabies vaccine on Argentine cattle without even bothering to let that country's authorities know that it was doing so. Wistar was patently unethical in doing what it did. It failed to isolate the inoculated animals, to place warning signals at the research station, to vaccinate four animal handlers against possible diseases from the cattle under the trials, and to prevent them from drinking milk from the latter.

The Wistar case, about which disclosures were made in September 1986, three months after the trial, evoked a strong protest not only from Buenos Aires but also from American scientists. So did another instance, that of Oregon State University researchers testing a gene altered animal vaccine in New Zealand, also in 1986, although in this case the trial had been approved by Auckland. Yet another controversy has involved the iceminus bacteria, or *Pseudomonas syringae*, genetically engineered by Advanced Genetic Sciences, Inc., which was illegally field-tested on strawberries.

The debate that has followed the Wistar scandal reveals that several U. S. biotechnology corporations and laboratories, now under economic pressure to put their products on the market and earn an income, have drawn up plans to conduct field trials on vaccines in other countries, so as to bypass the U. S. regulatory system altogether. They have decided, to quote Dr Alan R. Goldhammer, a director of the Industrial Biotechnology Association of the USA, a representative industry body, that the pathway may be clearer in foreign nations to getting approval' (*New York times*, 13 Nov. 1986).

Officials of the U. S. National Science Foundation concur: 'We may be overregulating and pushing companies to test their products overseas'. While most U. S environmentalists disagree on the first part of the proposition and argue for stricter regulation, no one questions that U. S. companies are increasingly going abroad. or planning to do so.

After the Argentinian furore over Wistar, it was probably thought wiser to enter into formal agreements with Third World governments which have weak or no regulation on bio-engineered products and their testing. The MOU signed with India is evidently one such agreement.

The Wistar case has not been forgotten. Indeed, in a 59 page 'project paper' prepared last year by the U. S. government, which was the starting point for the VAP agreement with India, Wistar is specifically mentioned as an outstanding example (p,20): 'Rotavirus is the most common cause of diarrhoea in infants, and is the most common cause of death among the diarrhoeal diseases in this most vulnerable age-group. Immunization offers the only prospect for prevention of this disease, and several vaccines developed at the NIH and a less attenuated bovine vaccine developed at the Wistar Institute. Field trials and other research related to rotavirus vaccines will be eligible under the project.' The singular, indeed unique, treatment accorded to Wistar speaks for itself.

But what does India stand to lose if USA-made bioengineered vaccines are field-tested here? It is impossible to predict the biological and environmental consequences of a vaccine trial: it might

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not produce immunization and yet its release could visit devastation upon life-forms and life-support systems, indeed the whole environment.

To quote Jack Doyle of the Environmental Policy Institute in the USA: 'The ability to predict what might happen with genetically engineered organisms will have to build on what's known about the ecology of existing organisms. But that is not much In today's agricultural environment, there are at least 160 species of bacteria; 250 kinds of viruses; 8000 species of insects; and 2000 species of weeds. But some scientists estimate that as many as 80 per cent of our soil microbes have yet to be cultured, and perhaps as many as 90 per cent do not have names. [These numbers are probably several times higher in India—PB.] Of those that are named, we do not know much about their relationship to other microbes. How organisms such as these establish themselves, why some species multiply in nature and others do not is still largely a mystery . . .

. . .Once a recombinant population is established, it can be expected to evolve in ways beneficial to its own survival. And that could increase its undesirable effects as well, if it turns out it has those along the way. Remember that there is no recall of living organisms'.

Dr Martin Alexander of Cornell, who acted as a consultant to the U. S. Environmental Protection Agency on a major risk assessment project, has testified: 'Alien organisms that are inadvertently or deliberately introduced in natural environments may survive, may grow, may find a susceptible host or other environment, and may do harm I believe the probability of all these events accurring is small, but I feel it is likely that the consequences would be enormous.

It is the enormity of such consequences that should be the basic criterion for deciding whether to go in for a project like VAP. The ethical considerations involved are too weighty to be brushed aside. Enlightened opinion in the USA on the issue was best summed up in a *New York Times* editorial apropos the Wistar case: 'It is at the very least a poor way to do science, let alone win friends.'

But such opinions do not seem to have influenced the Reagan administration in formulating what the MOU terms the 'Reagan-Gandhi science and technology initiative'. What has influenced the Indian department of biotechnology into signing the VAP agreement remains a mystery. It is clear that the project should be scrapped forthwith.

Courtsey : The National Medical Journal of India. Volume 1, Number 1, 1988. ▣ ▣

Dear Friend,

For the past six months we have been constantly telling people that there is research going on in North Arcot District regarding KPV (Killed polio vaccine), a product of two companies: INSTITUT MERIEUX (which produces an improved salk vaccine) and CONNAUGHT LABORATORIES (Canada).

We have been drawing attention to the fact that most of the Measles vaccine and distilled water supplied under the POLIO PLUS programme of Rotary International have been made by the same CONNAUGHT LABORATORIES and INSTITUT MERIEUX.

Now comes the srartling revealation that INSTITUT MERIUEX is one of the four partners in the Rs. 100 crore project to be set up under the India-France agreement. This pact will be signed in the first week of February. 75 crore rupees will be invested by Indian sources (Public, Government and IPCL).

Does the medical & scientific community at large have any idea whether we are buying OPV or KPV technology : let alone other details of the agreement ? Why not ? OPV technology is available free from WHO.

Is the cold chain of OPV a problem that we can surmount by producing KPV ? What about the cold chain requirements of Rabies vaccine, of Anti snake venom and even of the Merieux Measles vaccine ? Shouldn't we spend the same money developing solar powered refrigeration instead?

And can measles deaths be prevented by the vaccine only ? Wellnourished children do not die of measles. Malnourished children die without measles !

PRABIR

MFC - Bulletin No. 148, February 1989. 1/14

From the Editors Desk.
Satyamala

R.N. 27565/76

Chloroquin, Cholera And MFC → 8(vi)

Some of the health-strategies of the Govt of India were criticized at the 15th annual meet of the Medico-Friend Circle at Alwaye. The MFC meet concluded that the strategy of giving four tablets of chloroquin to every case of fever is a wrong strategy. It was a part of the strategy of the National Malaria Eradication Programme, where in it was necessary that every case of fever had to be taken as that of malaria and had to be presumptively treated with chloroquin to help stop the transmission of malaria. But now, the eradication strategy has been given up; the aim has been lowered to that of malaria control. In such a situation there is no need to suppress each and every case of Malaria by blindly adminitering chlonoquin.

Secondly, now the cadre of the village health guides has been created and one VHG is available per thousand population. These VHG's can distinguish between fever due to upper respiratary tract infection from malaria fever. There is therefore no need to blindly administer chloroquin to all cases of fever.

The current strategy not only necessarily wastes tonnes of choloroquin but also helps to create resistant strains of malarial parasites, because in practice, most cases of falciparum malaria get inadequate treatment with only 4 tablets of chloroquin.

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The MFC meeting also concluded that cholera vaccine should no longer be used either in epidemic situations or for routine immunization programmes.

This recommendation is based on the following conclusions: a) the cholera vaccine that is presently in use is not efficacious in preventing the spread of cholera epidemics. Transmission of pathogenic organisms is not reduced. b) The number of attacks of clinical cholera occuring in young children is not reduced as a consequence of cholera vaccine inoculation. While the number of attacks of cholera occuring in adults is reduced between 30-50%, their severity is not reduced. c) Even above results are obtained only with good quality vaccine. However it is well known that cholera vaccine produced in India and available in Government stock is generally of poor quality and is poorly maintained. Moreover this level of protection lasts only for approximately 3 to 6 months. d) In the field situationa it is our regular experience that ordinary standards of asepsis and sterilization are not maintained. The risk of spreading diseases such as hepatitis, AIDS and syphlilis through needle is indeed real, as is the risk of local abscesses.

Keeping in mind the grossly unrewarding cost-benefit ratio of performing large scale inoculation under such condition, we feel cholera inoculation is not worth while; moreover it exposes those being vaccinated to unacceptable harzards. In this context it may be noted that similar recommendations have been made by WHO, DGHS and ICMR. Alternative measures are available for international travel.

Existing stocks of currently available vaccine should be destroyed and the production of such a useless vaccine should be discontinued. Briefly following measures are recommended by the MFC to prevent and control cholera/gastro enteritis: a) Longterm: Wide spread availability of safe and potable drinking water supply. Popularisation of scientific and appropriate measures for sanitation and excreta disposal. b) Short term and During Epidemics—Hyperchlorination of water supply up to 6-7 ppm. of chlorine at source. Where these measures are not possible or feasible people should be advised to boil their drinking water. However it should be noted that practically it is difficult for people to do this regularly. It is only a measure of last resort. And lastly the efficacy of ORT should be widely popularised and every effort made to give it currency. People should be convinced that ORT is the first and best treatment for the gastroentritis/cholera complex.

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Views and opinions expressed in the bulletin are those of the authors and not necessarily of the organization.
Annual Subscription—Inland Rs. 20.00
Foreign: Sea Mail US 4 dollars for all countries.
Air Mail: Asia—US 6 dollars Africa & Europe Canada & USA—US 11 dollars
Edited by Sathyamala, B-7/88/1, Safdarjung Enclave, New Delhi 110029
Published by Ulhas Jajoo & S. P. Kalantri for Medico Friend Circle Bulletin Trust, 50 LIC quarter Unive.sity Road, Pune 411016
Printed at Samyayog Mudranalaya, Wardha
Conespondence and Subscriptions to be sent to UN Jajoo, Bajajwadi, Wardha. 442001

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APRIL 1987

Media as a Tool in Health Action

Vimal Balasubrahmanyan

Can the general mass media be used by the rational health movement to influence people's attitude, understanding and behaviour on health matters? As one who has been writing on health issues in various newspapers and journals, I feel this is a topic which needs to be thought about seriously by activists in the movement. People at large can understand the deeper aspects of the politics of health only if they have exposure to adequate information and analysis on the subject—the sort of information confined at present within the 'alternative media' of health activists and progressive social scientists, and circulating therefore mainly among the 'already converted'.

Although in recent years there has been more coverage in the mass media on specific health issues, like harmful drugs, there has been little enlightenment of the public on what health-for-all really means, what people must do to change their own outlook and lifestyle, or what kind of economic and social measures are needed to be implemented as part of health policy. The public stll equates health-for-all with sophisticated medical-care-for-all. which in turn is equated with costly diagnostic facilities, surgical procedures and 'technologised' medicine. In the public mind, the low health status of the people is a result of inadequate medical facilities and hence the clamour for more doctors, more hospitals and more CAT-Scan units.

The serious progressive journals which comment on these issues have an extremely limited, intellectual and academic readership. So, the question facing the health movement is: can a sustained consciousness raising campaign be directed towards the lay public, using the mass media as one of the tools?

One must begin by acknowledging that this kind of health education must necessarily explode a lot of myths and this will inevitably mean that powerful vested interests are not going to like it one bit. To be credible and convincing to the public, this task should not therefore be left to journalists alone, for two reasons.

(a) General articles on health issues (as opposed to reportage on, say, harmful drugs, which has both news value and sensation value) carry greater conviction when the information and advice comes from qualified health personnel. Readers are far more receptive to health advice from a column whose byline is a 'Doctor Somebody'.

(b) The medical profession is itself hostile when a non-medical person exposes malpractices in the area of health care. Health columns which seek to enlighten the public on the politics of health will necessarily tread on Establishment's toes. And when such articles are attacked by qualified and senior medical personnel, often with fancy designations, the public doesn't know whom to believe, the doctor or the journalist.

On the basis of some of my experiences while writing on health issues, I would like to offer some ideas on how the mass media can be used by the health movement and those sympathetic to it, to further the cause:

1. Health activists, especially those with medical degrees and designations, must acquire media skills, establish contact with editors, and introduce regular health columns in the print media. The help and guidance of sympathetic media people can be

enlisted to ensure that these columns are written in appropriate language and style (Dr P.K. Sarkar's column on Harmful Drugs in the Calcutta *Telegra;h*, and LOCOST's Education Service published in the Sunday *Express* magazine are examples of the kind of initiative needed).

2. Constant and tactical use of letters-to-the-editor columns should be made to: initiate debates; get across information on crucial issues; and refute distorted information planted in the media by vested interests. (See example of ORT narrated later in this article).

3. Qualified medical people, especially those in high positions, who may not be 'activists' but are progressive in outlook, should come out on vocal support of any campaign launched by activist groups. This could be in the form of a formal statement issued as a press release or just a letter to the editor. Such endorsement greatly enhances the credibility of the campaign in public eyes. For example, media coverage on the rational drug policy campaign helped in creating some public awareness and even succeeded in getting government's pro-industry proposals stalled for several months. But the movement would have been more successful if the 'eminent' members of the various government appointed committees, which have in the past called for an essential drugs policy, had realised the need to issue statements supporting the demands of the All India Drug Action Network.

4. Health activists must feed information more effectively to committed journalists so that timely coverage of important issues is ensured. The health movement should actively seek out and identify sympathetic media people and keep up a steady flow of information to these contracts so that consistent media coverage on health matters is maintained.

5. It is sometimes more useful to feed information to a news agency rather than to a staffer or a free-lancer whose report can appear in only one paper or journal. An agency report on the other hand has the potential to appear in a large number of papers all over the country. For example, when the MFC critique on painkillers was published, I realised that any article I might write on it would only appear in one of the weekly journals to which I contribute. So I passed it on to a friend in PTI, persuaded him to do a short item on it, and this subsequently appeared in several newspapers in different parts of the country.

6. Specific health actions should be planned and published with an eye on factors like news value and topicality—the two holy criteria for the media people. For example, a critique of cholera vaccination programmes should be timed to coincide with the drought or flood situation when such programmes are usually conducted.

7. If an issue needs coverage in the press, a suitable and timely write-up should be released to the media and this statment should be short, straightaway mentioning the highlights in the first two paragraphs. A long research type report, often polemical in language, may be all right for publishing in the alternative media, but very difficult for use in the general media. It is my impression that health activists do not fully realise this and are often disappointed when reports they send to the press don't get published.

8. The media has to be consciously used by the movement in as dynamic a manner as it is currently being used by the Establishment and Industry. The PR departments of the drug firms work overtime to present a favourable picture of the industry and its products and the public swallows it all. When a harmful drug gets a great deal of adverse publicity, the industry manages to get spokesmen from the medical profession to defend its product and such statements are reported prominently with big headings—leaving the public thoroughly confused as to who is right. Unless these statments are swiftly challenged and refuted, the public will only get distorted information. And this kind of counteraction can only be effective if the health movement maintains the same kind of contact with the media which the industry does, and demands the same kind of coverage and space which the industry is at present getting.

9. The potential of radio and television in serving the cause of the health movement remains almost totally untapped. Some recent programmes on television indicate that immense possibilities exist. We are so obsessed with the notion that radio and television, being government controlled, are not 'free' that we have overlooked the fact that it is precisely because they are government controlled that they have a good potential to serve our purpose. The government, at least on paper, is committed to all kinds of radical ideals, and so it should be possible for the health movement to demand time on these media for health education of the public. Talks, interviews, features, even serials could be planned, with the help of sympathetic and progressive producers on these media to get across information and messages. Since the initiative to do all this won't come from the government, it is up to the health movement to lobby for effective use of the government media to achieve

at least those radical goals which have been accepted in official policy.

The fact is that the different forms of media have been generally thought of as areas of expertise beyond the purview of those not specifically trained to handle them. But activists in progressive movements must realise that it is not difficult to learn to use the media to serve their cuase, and for this they have to begin by going to the media instead of waiting for the media people to come to them.

The ORT Example : Some points raised in this paper may be illustrated by a recent experience.

Since the early 80s, there has been a lot of UNICEF-inspired coverage on ORT, which has acquired the image of a miracle solution to Third World diarrhoeal deaths. ORT as a phrase has become associated with 'poverty' and 'children'. Nowhere does the ORT message clarify that this is a therapy for all rich and poor, adults as well as children. Nor is the ORT slogan accompanied by a statement to the effect that most of the commonly used anti-diarrhoeals are irrational and harmful. In the eyes of the middle-class newspaper reading public, even today after a veritable media blitz on ORT, the salt-and-sugar remedy is seen as something meant for the very poor-those who can't afford to buy antidiarrhoeal drugs.

Although I have written about this aspect of the ORT mystique in various serious progressive forums, I felt it's important to focus on it in a typical Establishment paper whose readers are unlikely to have been exposed to this understanding of the ORT issue and who are also likely to be the kind to consume irrational antidiarrhoeals, either self-prescribed or prescribed by doctors who are themselves unconvinced about ORT.

It has been my experience that both editors and readers are suspicious of controversial health information coming from non-medical writers. So, instead of an 'advice' piece, I did a short 'news report' based on Health Action International's *Diarrhoea File*, and this I sent to the Open Forum of the *Hindu*, which declined to use my item on that page (probably because I am not a doctor and therefore not competent to write on matters medical!) and placed it instead in the Letters-to-the-Editor column. Anyway, my purpose was served.

My piece specially mentioned that many doctors themselves do not promote ORT but prescribe irrational drugs. Not surprisingly, there was an immediate response from a Madras doctor, asserting that 'doctors know best', and defending some of the commonly consumed irrational preparations (which one assumes he was in the habit of prescribing). This was immediately followed by a letter from an eminent Madras doctor, who is well known to the readers of the *Hindu*, defending the statement of his younger colleague, and condemning the misinformed sensationalism indulged in by 'journalists and politicians'.

I now stood thoroughly discredited in the eyes of the *Hindu* readership, and all because I had tried to share with them the information I had regularly been receiving from health action groups and from no less a source than the WHO-supported journal, *Diarrhoea Dialogue*, published from London!

I realised that my own rejoinder would not carry enough conviction unless my stand was also supported by *doctors*. I therefore sent photocopies of my original item and of the responses of the Madras doctors to doctors in health groups all over the country and requested them to respond to the *Hindu*. Of the 16 letters sent by the health activists, the Hindu published about eight—all deploring the attitude of the Madras doctors, welcoming the critique which I had offered, quoting texts to support it, and endorsing my statement on irrational antidiarrhoeals. Some of the letters also used this as an occasion to explain why a rational drugs policy alone can prevent the consumption of harmful and unnecessary drugs, and why it is necessary for socially conscious journalists to inform the public on such issues. There was absolutely no answer to any of this from the Madras doctors, and one assumes that as far as the *Hindu* readership was concerned, the point about ORT had been adequately made in fact, more effectively probably than if my original item had not raised the ire of the Madras doctors. Because, as a result of their intemperate response, the issue was kept alive in the *Hindu's* columns for almost two months afterwards.

This little episode shows that: 1) It is not easy to get radical health information into the Establishment media; 2) Even when one 'smuggles' it in, there is opposition from the medical profession itself; 3) When a doctor contradicts a journalist on a health issue, it is the former's words which carry weight, regardless of how well-informed and scientifically sound the latter's argument may be; 4) In spite of these handicaps it is still possible to save the situation and turn it to the advantage of the movement by mounting an orchestrated attack on the views being propagated by the vested interests; 5) In such a strategy, *the role of qualified medical people is cru*[illegible] 6) The letters pages of the Establishment p[illegible]n ideal

forum to introduce information which may not be readily accepted in the news columns or the features' pages. This fact should be more consistently exploited by the movement; 7) The letters pages also need to be used swiftly to refute every kind of distorted information which may be aimed at misleading the public. For example, when a sophisticated and elitist diagnostic service displays a full page advertisement, using the slogan Health-For-All, and announces that the Health minister will inaugurate the building, a strongly worded letter-to-the editor from activist doctors should set right the picture in public eyes: that Health-For-All does not mean costly medical services for the affluent, and that it is scandalous for the Health minister to be a party to this perpetuation of falsehood.

However, this type of alert action has so far not come naturally to the health movement, because they haven't really thought about it seriously. Taking the ORT episode for instance, many progressives who read the *Hindu* may have silently criticised the Madras doctors' statements but did not realise that in public interest they must sit down and write rejoinders. The activists who did write had to be contacted and briefed, and their subsequent use of the media to put across the viewpoint of the movement was part of an organised strategy. For, this issue of using the media more actively was something we had discussed earlier, during a conference in December 1985 on 'Pharmaceuticals and the Poor'. And so, when the *Hindu* incident cropped up, everyone was alive to the need for swinging into action.

(Adapted and condensed from a background paper, *The Media, The Message and Health For All* prepared for a seminar on 'Health for All: Concept and Reality', organised by the Foundation for Research in Community Health, Bombay, on November 15 and 16, 1986)

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Politics of Medical Work

Part II Radical Medical work

ANANT R S

To begin with, it is to be noted that any medical work simultaneously involves and results in three types of activities, changes.

a) Economic : production, distribution and use of medical technologies. (eg. drugs, equipments, skills and knowledge of medical personnel in the form of therapies).

b) Biotechnical changes : a tubercular lung being converted into a non-tubercular lung; an infected wound into a non-infected wound etc.

c) Cultural, ideological, political change : though most people are not aware of it, medical work automatically, inevitably breeds cultural, ideological relations between doctors, paramedics, patients and the rest of the 'healthy' populations. For example, the concept *sickness* involves some cultural assumptions. A couple of hundred years ago, persons affected by schizophrenia, (madness), were not considered to be sick but were supposed to be possessed by evil spirits. They were tortured and burnt alive. In India, even today in many areas the disease of madness. Has not acquired legitimacy i. e., the status of sickness. In the 19th century, the use of contraceptives was considered immoral, worthy of prostitutes, now no such controversy exists because of a change in social values. A number of such examples can be found to illustrate the value-relations that are established between a diseased person and the rest of the 'health' society. Here we are more concerned about the value-relations that are estabtished during the interaction between a patient and a medical professional such as a doctor. Conventional type of medical work reinforces the dominant, cultural, and ideological values in our society like :

— money determines your status;

— patients are bound to be ignorant, medical knowledge is always very complicated and beyond the scope of a lay person :

— intellectual work as that of a doctor's is inherently superior to that of manual work of a labourer. etc. etc.

Besides these values which legitimize the domination of the upper class, upper caste, male, technical elite, doctors exercise authority over patients. Doctors have the authority to decide whether a worker is sick or not. Doctors employed by the management of a company tend to refuse to call workers sick. Authority can be established by punitive measures like refusing to issue a necessary certificate or by co-optive methods by treating a patient at a concessional rate or by issuing an unjustified certificate. In any society, doctors would be necessary (though not the sole agency) to decide whether continuing work would jeopardise the health of a person or not. But in today's society. based on the antagonistic relations

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of employer and employee, doctors acquire authority (which however can be bought). Doctors have also a disciplinary role to play. Medical care is expensive and sometimes tiresome, (long queues) so that nobody would like to be called sick unless the suffering is too great to be tolerated.

Radical Medical Work

Medical work done with a radical perspective should be done in such a manner that it transcends the limitations imposed on all the three aspects mentioned above by the requirements of the existing dominant social relations. Thus a medical project done by a radical group would create a model, an island where the laws of the existing medical system are flouted and medical work is organized by a newer, higher set of norms. Briefly speaking, radical medical work would demonstrate in practice :

a) How medical resources (drugs, personnel equipment) available in a backward country like ours can be used rationally. This involves analysing medical problems from a pro-people epidemiological approach and planning a strategy of medical interventions on that basis. This is in contrast to the chaotic, irrational intervention of the existing medical profession which suits the requirements of the drug industry, the elite doctors and the existing social hierarchy.

b) How radical Medical work generates values which are contrary to the values bred by conventional type of medical work. This involves demystifying, deprofessionalizing, of medical technology. One example will concretely demonstrate as to how new values can be generated.

Let us imagine that a village health worker manages a case of diarrhoea in such a medical project. In this interaction, the following things happen :

a) a non-profit oriented economic activity takes place based on rational utilization of resources (the economic change).

b) the diarrhoeal disease is controlled (the biotechnical change).

c) a set of socio-cultural-ideological values are created due to the peculiar practice and the perspective behind the practice by the VHW.

— technical health education about diarrhoea; the hows and whys of the causative, curative, preventive aspects of diarrhoea.

— explaining the social aspects of diarrhoea; how it is a disease of the poor and backward areas with improper water supply and how resources are not being utilized for the benefit of the poor; how the solution to the problem of diarrhoea is proper water supply and not drugs; how today's elite doctors and the drug industry are not interested in this rational solution.

— explaining and proving that a doctor is not generally needed to treat a disease like common diarrhoea; how medical work is not always complicated and that certain aspects can be manged by lay people if properly trained.

— explaining that the commercialized, private medical system is against such type of work.

— explaining that the government's medical work is not really committed to this approach.

— showing in practice that the medical work is being done by a team in which the doctor is also bound by the democratic decision making process.

— explaining that such a medical work is being done because people have taken initiative, shown enthusiasm in trying to solve their problem, have organized themselves.

This last point is very important and needs a little elaboration. Health problems are not considered a priority by the poor people in our country because more pressing problems are yet to be solved. People will get attracted to good curative services offered to them. But the kind of democratic enthusiastic participation indispensible for such a project cannot be generated by medical work alone. Poor people are apathetic, dependent because their day to day life of poverty, oppression and dependence smothers their inspiration and enthusiasm. Unless their confidence and aspirations are rekindled, one cannot hope to do medical work in a different way. A non-health input such as a properly implemented developmental work or of a radical medical work. In the absence of such a non-health input, it would become a mere charity or curative work, and all the talk about people's participation, democratic decision making etc. would be shorn of its content. Many health projects in India are accompanied by developmental activity "also". But this "also" type of marginal, decorative developmental activity reinforces the dependent, servile mentality of the

people. Mere pouring of huge financial, material resources has the same effect. Unles developmental work has a conscientizing element in it, unless it is primarily geared to the building of self-confident self-reliant attitude of the people, it would not be conducive to radical medical work. Any work based on the enthusiasm and the people's participationn, dispenses with the "motivation-problem" and with it, also the need to build up elaborate arrange ment to keep watch on who works and who does not.] need not dwell here on all the advantages of genuine people's participation but would only reiterate that it is essential for any radical medical work

The Role of Radical Medical Work

The perspective outlined above does not look upon medical work merely as an "entry point". A conventional type of medical work can act as a stepping stone But that's all. Moreover its method of work and hence the consciousness that it generates contradicts the social perspective of the radical group Radical medical project is also not to be seen as mere stepping stone towards a general radical, social, polltical work though both are conducive to each o'hor. Radical medical work has a subsidiary but nevertheless a definitive autonomous role to play as one of the channels of communicative self education in a broad movement towards revolutionary change. It has an ideological political aspect and can become a part of a revolutionary movement if one does not equate revolutionary change with a mere economic and political change.

What is political about such a medical work? To clarify this, we must be clear as to what is politics. Politics is an activity of establishing, exercising the will to power in order to enhance particular interests of a class, social group, individual etc. Our society Is divided into particular social groups with particular (specific) interests which are many times antagonistic to each other. For example, the interests of the industrial capitalist are different from those of middle - peasants a industrial workers, Our society is not based on general interest of the society as a whole.

The particular interests are not confined to only economic field. They naturally pervade all spheres of life. The conventional, dominant medical system serves the interests of the drug companies, elite medical profession and indirectly the ruling power. A radical medical work on the other hand serves the interests of the people. It has therefore an ideological-political aspect. According to our constitution and laws, the drug companies have the right to produce and sell any medical product and the right to acquire profits. A doctor has the right to refuse medical treatment to a person who does not pay his/her charges and what charges are legitimate is determined by the doctor on the basis of what standards of living and wealth a doctor is considered legitimate by the existing society. A radical medical project flouts these rights in its own work This is a political act. Any action which relates to the domain of rights or authority is a political action.

Radical medical project does not obey some of the existing laws of medical practice. Its scope however does not go beyond the field of medical care. It leaves the main domain of existing system of power relations (in the economic field) untouched Hence this medical work has a subsidiary role to play in the struggle to challenge the existing myriad of rights.

A fundamental socio-economic change does not mean only economic change. This fundamental change must take place in all spheres of life. A movement for a fundamental change in the medical system must start from today eventhough political and economic change is a precondition for a fundamental change int he medical system itself.If an embryonic, prototype, movement, experimentation does not start from now, such a change may never come-the desirable transformation may remain only at economic and political level.

A radical medical project is only a part of a broader health-movement which aims at a fundamental tranformation of all the aspecs of medical system like the prodction and use of drugs, pattern of medical education in medical colleges, a ystematic, community based research on non-allopathic methods of therapies, etc. etc. Such a project has in the main, a demonstrative and experimental value apart from its significance for the local grass-root root work/movement which it is a part of It embodies a critique of the present pattern of medical work and simultaneously represents the embryo of the future pattern. This embryonic current wlll grow only with the growth of revolu tionary social political movement.

In short, even though a medical team working with a radical perspective has fundamental limitations in improving qualitatively the health status of the population in an area (becausa it cannot provide food, water etc, to the people), its medical work can become part of and thereby help a broader movement for fundamental change provided, the medical work is done with the perspechve outlined above.

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Politics of Medical Work

Part I : Conventional Medical Work

Anant R S

A number of new activists groups, hailing from different backgrounds have been working in increasing numbers mostly in the rural areas of India, for the last 10-15 years. Many of them are not associated with any political party but some have leanings towards a socialist or communist view-point. These groups comprise of developmental groups of different shades; militant groups with varying perspectives of organising struggles of the toiling people; charitable, welfare or religious groups.... etc. Of the groups that have been active in the field of health or are interested in such an activity, those who believe that the pressing problems of the poor people cannot be solved in the existing social-political system face a dilemma about taking up medical work. These radical groups differ with each other in their understanding of the social systems, of the fundamental change they want to bring about, or of the methods to achieve their goal. But they all face the same problem of how to link their medical work to their aim of fundamental, radical change in the whole social set up. In what follows, I will briefly try to outline a perspective of how this linkage could possibly be achieved.

Marginal role of Curative Services

All medical problems are on the one hand biomedical problems; at the same time, they are also social problems—i.e., they have non-biotechnical, social aspects. For example, tuberculosis is, on the one hand a biotechnical problem—tubercle bacilli overwhelming the body's defence mechanisms and thus producing a disease complex. On the other hand, it is a social problem caused by social factors like poverty, exploitation, and ignorance. This much is clear. The real difficulties lie ahead—to see the relation between these two aspects. Most medicos especially doctors are not aware that the history of last 100 years tells us that their technical curative work has contributed only marginally to the improvement in the health status of the population in Europe, America as well as in India. The health of a population depends primarily on food, water, housing, sanitation, ecological, occupational, cultural environment and health education. In last 100 years, there has been a tremendous improvement in the health-status of the American and European population primarily because of the vast improvement in these prerequisites of health. The science of medicine has contributed to a certain extent in designing improvements in the above-mentioned factors, especially sanitation and water supply. But the fantastic, dazzling invention of antibiotics and other drugs has contributed very little to the fantastic decrease in the morbidity and mortality due to infections diseases, for example, Pulmonary Tuberculosis in England and Wales. During the last 100 years, the death rate in England and Wales has reduced by 75%; out of which, reduction in deaths due to tuberculosis ranks first by contributing 18% to this fall. But most of it was achieved before the invention of Streptomycin and other drugs and the B.C.G. vaccination. The death rate per thousand was 3.8 in 1838. It came down to 1.8 in 1882 when the tubercular bacillus was discovered by Robert Koch. It dropped down to 1 in 1910, before the TB-Sanitoriums had become fashionable; to 0.6 in 1940 before Streptomycin was invented and to 0.5 in late

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forties before B.C.G. vaccination was introduced. Similar drop has been documented for New York city in the US. In fact in Europe, the scourge of most of the infectious diseases was almost over before the era of antibiotics. Vaccines is the only complicated modern technological product which has contributed to any measure to the substantial fall in the morbidity and mortality due to infectious diseases—for example diphtheria and whooping cough. Antibiotics have taken care of only the residual problem of endemic cases. Thus the credit of the fall in infectious diseases goes not to doctors but to research scientists, sanitary engineers and workers, and above all to the general improvement in the standard of living of the people in Europe. This is not to say that the bio-technological miracles like antibiotics and other modern drugs were irrelevant. They have saved the lives of lakhs of people, reduced pain and suffering, made modern surgery possible etc. But on a social, historical landscape the contribution of these drugs and of curative medicine should not be overestimated. Most of the deaths, and they number in millions and millions, have been saved by non-medical factors.

The situation in India today

In India also, whatever improvement has occurred during the last 50 years in the health status of our population is not mainly due to the brilliance, scholarship and clinical acumen of top-ranking doctors. The disappearance of plague, small pox, the fantastic drop (until recently) in the prevalence of malaria, the substantial reduction in the incidence of cholera, are the chief of the achievements in the field of health in the last 50 years. These are due to the work done by people on the basis of science of preventive and social medicine—health planners, malaria workers, vaccinators, water and sanitary inspectors etc. etc. The highly trained doctors doing (good or bad) clinical practice have contributed virtually nothing to these achievements. The symptomatic, case-to-case treatment given by doctors has its role to play in the amelioration of pain, suffering and also to a certain extent in the decrease in the death rate. But most of the achievements are not due to clinical practitioners.

After 1966-67, i.e., after the third five years plan period, the Indian economy is sinking year after year. Technical, economic, human resources are more and more mal-utilized or even non-utilized. There is degeneration in the social ethos. Under such conditions what is critical for improving the health status of our population is a change in social conditions. If this happens, there will be a qualitative improvement in the health status of our population. Here again, the example of tuberculosis is a pointer—the prevalence (10 million cases) and the death-rate (1 million per year) due to tuberculosis has not decreased in the last 35 years even though all the technical prerequisites like technical knowhow, personnel, drugs, etc. can be easily made available in India today. The critical input that is lacking is the proper social conditions. The same is the case of the problem of malnourishment. The per capita availability of food is even today enough to eliminate malnourishment in children to a substantial extent. It is unequal access to the food produced that is critical in determining the extent of malnourishment today. It is thus social conditions and not bio-technical inputs that are primary in determining the tempo and extent of improvement in the health status of a population.

Health work and medical work

We begin to face the crux of the problem only after the above position is accepted; because now the question arises as to why one needs to do medical work at all until a social revolution takes place? How would medical work help to achieve the aim of social revolution without which health problems cannot be solved to a substantial extent? I would argue that within the context of the perspective outlined so far, it is quite meaningful to do medical work if it is done in a certain way. Before we proceed further, I would like to make clear the distinction between *health-work* and *medical-work*.

In some quarters, medical-work is looked down upon and a lot of talk is made of promotive, preventive health-work. Instead of the term medical-service or medical-work, the term health-service or health-work is used, denoting a broader orientation. But in practice, by and large, the work by a 'health team' remains essentially medical. By medical-work, I mean the work in which knowledge of the science of medicine becomes an important, *indispensable* element and medical technology in the form of medicines, special rays, surgery..etc. used for curative, preventive or rehabilitative purpose is the key instrument of intervention. (Medical work is not tantamount to only curative work. Vaccination, a preventive intervention, is also medical-work). Compare such medical work with that of organizing the rural labourers for higher wages. This work may have a very good, positive impact on their health, but this work of organizing the rural poor is not medical-work. Somewhere in between these two extremes lies health-work in which the science of medicine is only one of important factors guiding the work. For example, building under-

ground drainage system to avoid breeding of mosquitos and flies thereby helping to control malaria and gastrointestinal infections is not medical-work but is health-work because the science of medicine is only one of the important elements guiding this intervention. The result of such an intervention is not only in terms of health but is also in terms of achievement of sense of cleanliness. Similarly, a daily bath is a good health practice, but is more of an aesthetic, cultural necessity. The same is true with building latrines, or well-ventilated houses or sinking tube-wells,..etc. In all these interventions, science of medicine helps to improve the quality of the intervention in terms of the impact of this intervention on health. But here, medical knowledge is not indispensable and the result of the intervention is as much to do with ease, aesthetics, convenience as with health.

Misleading slogans

The above distinction between health-work and medical work is not sterile semantics. I would argue that the role of doctors and other medical people (bearers of knowledge of medicine) is primarily medical. Even when medical people are participating in health-work—water and sanitation programme for example, their specific contribution remains medical. By and large, most 'health-schemes' are primarily medical schemes and most 'health-workers' are primarily medical workers. But since many policy-makers, national and international, for various reasons, are not satisfied with' mere dispensing of pills," everybody in the development field talks about medical people doing 'health-work.' The real problem with this mistaken use of the term 'health-work' starts when international and hence national policy-makers start talking about improving the health of the people through 'health-work.' There are several National Health Programmes which create an illusion that they would make the people healthy. "Health for All by 2000 A.D." becomes the programmatic aim of the health ministry. This slogan is being brandished about, in the context of increasing inflation, unemployment, poverty, squalor, drought. What the health ministry can and should aim at is medical-care and health education for all by 2000 A.D. But that would look too narrow an aim! Hence the health-ministry has the nice slogan of health for all by 2000 A.D.! Even the name of this ministry is now "Ministry of health and family welfare;" Family welfare being the euphemism for population-control.

The role and hence intentions of the international and national agencies pushing this terminology of health-work is suspect. But unfortunately, many well-meaning people in the 'voluntary' sector have not only picked up this terminology but also the ideology behind it; namely that health can be improved with health-work. Let doctors and other medicos working in such projects realize or admit that their specific contribution can only be primarily medical and that medicalwork is not going to improve the overall health-status of a population. Some health-projects have reduced Infant Mortality Rates by their medical work involving better antenatal care, safer delivery, better medical care to mothers and children, immunization and extensive propagation of Oral Rehydration Therapy. But no medical work has improved the overall *health status* of the population as indicated by more sensitive health-indicators like substantial reduction in the incidence of all grades of malnourishment in children. When anything beyond a reduction in IMR or in Maternal Mortality Rate is achieved, there is always some non-medical input like supplementary feeding or rise in income..etc.

Acceptance of the secondary role of medical work in the process of improving the health status of the people does not mean that socially conscious medicos do not have a worthwhile role to play in the process of social revolution or fundamental socio-economic change except by engaging in non-medical activities. Socially conscious or radical medicos can undertake broadly three types of medical activities.

(i) We can make use of our medical knowledge to expose to the public, various irrational practices in medicine—overuse of diagnostic investigations; overuse of drugs, use of irrational, hazardous drugs; misleading claims, advertisements by drug—companies..etc. Medical work does not necessarily mean treating patients with drugs. Any activity which uses medical knowledge as an indispensable, chief tool is an authentic medical activity. This medical-work contributes to the process of social revolution by educating the people about the current rotten state of affairs in the field of Medicine.

(2) There are many unsolved or half-solved problems in the field of development of appropriate 'model' of delivery of health-care to our poor people. For example, to what extent can paramedics handle cases competently? How to prepare appropriate teaching material including good manuals? Why the standard recommended approach of community medicine does not succeed in practice as regards many of the aspects of community medicine? How to maintain the cold-chain for polio-vaccine? How to achieve a high degree of compliance in completion of the complete course of immunization of the various vaccines? What are the

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specific health—educational messages that need to be given to the people, and how? What are the changes required in the content and method of education of doctors so as to make the competent clinicians as well as competent in community medicine at the level of Primary Health Centres, and at the level of general practitioner in urban areas? How to develop democratic working relations between doctors and paramedics? Such questions need further theoretical and practical work for their satisfactory solution. Socially conscious medicos can take up any of such questions and work upon it in a project. This experimental work helps to make our criticism of the existing health-services concrete, mature, instead of it being general and superficial. If there is a new political-economic situation which allows building of a really pro-people structure of health care; we should have concrete examples of how things can be done differently. This sort of medical-work requires understanding of not only clinical medicine but of medical sociology, economics, pedagogy.. etc. Such a project is better done as part of a broader development project aimed at experimenting with an alternative strategy of development and use of resources. This would make available other, non-medical inputs, which are so important for the success of any medical-work.

(3) If this medical work is undertaken in the context of an economico-political movement of the downtrodden people, it would directly contribute to the process of fundamental social revolution. But even if it is not possible to do so, a health project can be a radical one, and can indirectly contribute to the overall march towards fundamental social revolution, if this medical work is done in a radical way. Let me clarify here, as to what I mean by radical medical-work. The beginning however requires an understanding of the ideology and politics of medical work.

(To be concluded)

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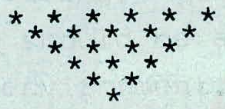
health, disease, and healing. Studying and addressing root causes of illness and despair should be a priority. Ways must be found to renew a badly damaged environment.

Learning and practicing behaviour that redefines persons as God's children rather than as economic or political objects generates hope and is one step toward renewal. Patient community building and making ourselves available to each other elicits hope. Diaconal action in witness and service are expressions of hope, and engender new hope.

The development of positive relationships between the North and the South - penetrating institutions and peoples-is a indication of hope. Movements created and sustained by people from below and breaking through structures of injustice are signs of hope.

The dimensions of agape love and justice in health challenge churches, locally, nationally, and globally to be healing communities".



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Politics of Medical Work

Myths Perpetuated by tha Voulntary Health Sector.

SATHYAMALA

Anant in his article (mfc No. 141-2) has taken great pains to explain the distinction he sees between health work and medical work, and then goes on to outline how medical work with a radical perspective has the possibility of helping a broader movement for fundamental change. Part I of his article conveys the impression that conventional medical work apart from its marginal role played by curative services is harmless enough and groups running health projects may justifiably feel why quibble over terms like 'medical' and 'health' work if the activity is aimed at improvlng the health of a population. I would like to show that it is not as simple as that and the voluntary health sector by not critically evaluating its activities has created a set of myths about what has come to be termed 'Community Healh work' and in the process has played and continues to play an anti-people role. To illustrate this, I would like to take the example of the greatest contribution, if one can call it that, that the voluntary healh sector has made in the last twenty years—demonstration of the possibility of training semi literate-or illiterate persons from villages to provide minimal medical relief at the village level : The Village Health Worker (VHW).

Myth No. 1 : Health is neutral :

"By demonstrating the Acid Fast Bacilli under the microscope, the VHW is convinced that leprosy is not divine curse" (R. S. Arole, Jamkhed). From the time that the 'germ' was discovered, the germ theory of disease has effectively helped to divert attention from the root cause of disease : the fundamentally exploitative nature of society. An outcome of this has been the victim-blaming attitude of most of the health education messages. The attitude of blaming the victim is further strengthened by creating the myth that every one has equal chances of falling sick. For instance, in answer to the question, 'who gets TB', one health message states :

> Anybody can get TB
>
> Rich people and poor people can get TB
>
> Young children and old can get TB
>
> People in the villages and people in the cities can get TB
>
> Good and Bad people can get TB
>
> Men, Women and Children can get TB (1)

According to such messages, there is absolutely no relationship between poverty and ill health. Health education messages in most flash cards and posters encourage people to uncritically develop certain attitudes and beliefs; they basically persuade people to develop an unquestioning faith in doctors and the modern system of medicine. If prevously people believed disease was due to fate or divine curse, which struck them for some fault of their own, they are now encouraged to believe that disease is due to germs which also affect them because of their own fault either because they have not kept clean, eaten well or accepted hazardous contraceptives (2).

It is repeatedly stated that the primary role of the VHW is to impart healh education with particular reference to the priorities of the health programme. And when the VHW repeats the neutral 'health' messages, she becomes the tool of the establishment, albeit unwittingly. It may be too much to expect the government to train a cadre of health workers with the aim of questioning the exploitative practices in the village and in the medical system, but even the groups in the voluntary sector, with their relatively autonomous existence, fear to do so. The reality is, if the project wishs to servive, it cannot afford to alienate the rural elite which is bound to occur if the VHW begins to encourage people to question the exploitative practices ! Infact, the popularity that a health project enjoys with the local elite, is a good index of how effective the programme is. Yet, instead of accepting their sitting-on-the-fence attitude, these projects tend to cover themselves with all the choicest, radical sounding terminology. What is even more shocking is that "there even appears to be an understanding among the local power group, the police, and these organizations that each will leave the other alone. The status quo remains and basic change fails to occur. There is an example of a coordinator at CROSS (Comprehensive Rural

Operations Service Society) who, with the blessings of the director, employs unpaid bonded labour in his farm, while he gets a salary from the organization for the upliftment of the poor" (3).

Some, acknowledging the stratification in the village, have actually recommended that health programme can be organized to mobilize all the people in the village, irrespective of their caste creed and class towards a common goal, thereby helping in creating a 'community' where none exists. This kind of suggestion is at best a reflection of naivete and at worst a deliberate attempt to allay suspicion. It may be possible to mobilize financial support from the rich landowners for an immunization programme just the way big business houses are willing to donate large sums of money for 'charitable' purposes, but this in no way alters the exploitative interactions that constatly take place in the villages between the land owners and the landless labourers. In that sence, it is a misnomer to call a Village a community and health programme formulated in this way, a community bassed programme.

Myth No. 2 : First meet the felt needs of a community and once rapport is built. meet the real needs.

Here a false dichotomy is being created between what is considered felt needs and what is considered real needs. The felt need by virtue of its nature, is considered to be subjective, not rooted in reality but only in the mind of the subject. The real need on the other hand is considered to be objective, for it is what is perceived by the health group. This myth is also stated in another way : Create a balance between curative and preventive services; curative to meet the felt needs and preventive to meet the real needs.

How do the poor view their needs? When a medical team visits a village, it is true that it comes up with the need for curative services. and although almost everyone in the village has a medical complaint, most of these complaints seem to be minor-aches and pains in specified and unspecified parts of the body: If one cares to listen and observe, one finds that the high level of morbidity is generally the unspecific symptoms of under nutrition, over work and the constant stress of making the two ends meet. The people express it as illness and the medical team tries to diagnose it as a disease. There in lies the mistake. The expression on the part of the people is the expression to feel healthy. Since the role of a medical team is perceived to be that of alleviatim of illness, the need gets expressed to the team as the need for curative services. More specifically, the need is expressed as a demand for injections, tonics,—a demand created by the promotional efforts of pharmaceutical companies and the private medical sector. If, instead of a medical team, a non-medical person were to visit the village she would come up with the need for employment, food, drinking water - all 'felt' needs of the poor. And if real needs are being stated as 'preventive services' by the medical team, the above stated felt needs for employment, food, and drinking water are in reality real needs as well. In any case, preventive services in medical terms mean immunization, personal hygiene and health education, all very innocuous and comparatively ineffective as compared to real preventive measures of providing adequate nutritious food and water. It is clear that in providing the traditional preventive services, the medical team is meeting its own need for statistical measurment of its performance. (It is easier to measure performance, if 'the target' to be achieved is in numbers of children to be immunized, pregnant women contacted etc.)

Thus, it is on the basis of what is considered real need as perceived by the medical team that priorities are set. Although much has been made of " start from where the people are . . . ", the medical team approaches the village with its pre-determined objectives, well-defind and time bound and with the help of the VHW imposes these on the people in a subtle way than before. In doing this, the 'community' based programme often becomes the means for ideological brain washing and the VHW the effective vehicle. For instance, in 'community health' programmes, there is a great emphasis on antenatal care. Infact, this is the other major preventive programme aimed at women in the reproductive age group apart from the oppressive population control programme. Justification for this comes in the from of " scientifc " facts which quote the high maternal mortality rate in India, compared to developed countries, as the most important cause of death among the women population. Statistics however show a differnt picture. In 1980, deaths due to child birth and pregnancy accounted for only 1.2% of the deaths due to all major causes in India. Further, deaths due to maternal causes accounted for only 11% of the total deaths among the women population. In other words, 89% of deaths among women were due to causes other than maternal mortality (4).

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Similarly, it is a popular medical belief that one of the major causes of infant mortality and maternal morbidity is births with out proper spacing. It is with this understanding that several hazardous spacing methods are being promoted through the VHW. Again, if one takes the trouble to observe the rural situation, one would find that in any community where the practice of prolonged breast feeding exists, the spacing between two births is on an average from 22-26.5 months, the recommended spacing interval (5).

In reality, the myth operates in a rephrased manner : meet the 'meetable' needs, and after allaying suspicions, impose your own needs. Since the VHW is " one among the people ", people will not be too suspicious and soon enough will come to believe in the propaganda of the ruling classes. This strategy of 'using' health programmes to get what YOU want is not new, the missionaries did it, the colonizers did it, and now the so-called community health programmes are doing it.

Myth No 3 ; Majority of the health problems in rural areas are simple.

It is stated that " what is needed at the community level is not professions expertise, so much as nearness to the community its confidence, emotional rapport with the people, willingness to assist, low cost and capacity to spare the needed time " (6). And further, " Once simple criteria have been developed for diagnosis treatment and after care, it is not essential to deploy professional persons or implementation " (7).

Here, the word simple is being confused with the word common, and it is implied that people do not seek early treatment because of ignorance or due to cultural alienation. Let us take the example of tuberculosis and let us also assume that it is the VHW who has identified a 'suspect'. The VHW is neither in a position to confirm diagnosis nor in a position to initiate treatment and the patient has to therefore depend upon the next tier of the delivery system - the Primary Health Centre, for both these services. What are his/her chances that s/he will get cured of the disease ? Mira Sadgopal from Bankheri has identified 39 obstacles which prevent a patient from being diagnosed and treated for tuberculosis. (8). Except for 6 of the obslactes, which come under the category of 'failure of communication to patient by doctor', (intention or lack of intention of doctor to inform; patient's fears; contradictions in the belief system, in the society about disease; doctor's impatience; mystification of doctor's role; poor relations/faulty communication between PHC staff) the VHW is not in a position to tackle any of the problems that the patient faces. It may be true to an extent that professional expertise in the form of a qualified doctor too will not be able to do anything much apart from those factors under his/her control. But to project a VHW trained in conventional medical work (Anant's definition), as an effective measure to tackle these problems is equally unrealistic. I have purposely not taken the example of diarrhoea in an under-five child as an example because it may seem easier to diagnose and treat with ORT. In a poor household whose very survival depends upon the adult earning member, the illheath of a small child with diarrhoea may be relatively unimportant as compared to that of an adult with tuberculosis.

Before I conclude, I would like to comment on the selection criteria used in the conventional medical projects for choosing a VHW. The conventional medical projects have a long list of the qualities a VHW should possess. Among the visible qualities, the recommended ones are " the VHW should preferably be a married middle aged woman with life experiences such as bearing children and raising them " (9). This is in keeping with the traditional approach in which women and children are the targets of any health programme. However, if the intention is to train a health activist along the line suggested by Anant, activist defined as a person engaged in sustained participation in struggles and social actions; w o is active in the everyday struggles in the life of others and struggles related specifically to her as a woman and a worker then the criteria for selection changes. The VHW is then not only integrated with the people in order to work but also that *she is first of all a person alienated in some crucial way from the normal society, alienated enough to want to change its oppressive character.* In the given context, activism is seen in its developmental process, with its beginnings in nascent activigy, leading to participation in social action backed by an evolving personal and political consciousness (10).

How is this translated into practice ? A study carried out among the health workers in a resettlement colonies in Delhi showed that a large majority of the health worker considered themselves active *prior* to becoming members of their sanghs. They had either taken part in struggles within the kinship network and immediate neighbourhood which in-

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cluded cases of violence against women (domestic, rape and sexual harassment) or had struggled against their own and other women's oppression within their families like fighting against purdah, seclusion on reaching puberty, struggling against extreme forms of domestic violence and even going in for inter-caste marriage, as illustrated by the life of two health workers. "Virmati, 28 years old, a resident of Jehangirpuri, married earlier then widowed and remarried, faced extremes of violence including two occasions when her husband attempted to murder her by setting fire to her. He also attempted to force her into prostitution. Virmati recalls not having accepted her husband's views as final. She refused to keep purdah, and finally decided to end his tyranny by leaving him, along with her daughter and has started earning to support herself and her daughter ".

"Sumitra, 36 years old, a resident of Sundar nagari has led a life of continuous struggle. Ill-treated by her in-laws for not having had a child immediately after marriage, she underwent extreme forms of violence. At one time she was forced to be fully in purdah and was escorted even to the public latrines. Her giving up purdah, sitting on a bed in front of her men folks, drew a vicious attack on her but she continued to struggle, gradually getting in touch with other women, almost desperate to free herself from the confines of the four walls of her house" (11). What is clear is, if such a criteria were to be employed in selecting the health workers, the 'community' may not be interested but infact be antagonistic. These women would probably have a 'bad' name for not having been socially conditioned enough to be 'good' house wives and mothers. The fact is that at least in this health programme in the resettlement colonies of Delhi the health workers have been active for the last four years and have consistently raised issues militantly and have been successful enough to mobilize the women from the slums dispite thein non-conforming life. The VHW concept was a known concept even at the time the Bhore committee sat down to make its recommendations for a health system in the independant India. (The USSR had already demonstrated that a health delivery system could be based on workers at the local level) But it was only after twenty years, that International organizations as well as groups in the voluntary health sector decided to pick this up as a result of international coverage that the 'bare-foot doctors' from China received. By accepting modern medicine uncritically and by promoting it more effectively through the VHWs, the voluntary health sector (and their VHWs) has acted as the extension of the ideological arm of the medical establishment in the process deliberately depoliticising health. In their turn, the International organizations like the WHO, have orchestrated the achievements' of the voluntary health sector, especially in promoting the VHW's concept, because it suited them to 'prove' on mere anecdotal discriptions of these project that health can be improved without any fundamental changes in the society. This is the greatest disservice that the groups in the voluntary health sector have done to the poor of our country.

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NARMADA PROJECT AND THE TRIBALS*

— don't let them drown in despair

Preamble

We are three voluntary groups, working since 1980 amongst the tribals who have been ousted from their traditional homelands by the Sardar Sarovar Project on the Narmada river undertaken by the the Government of Gujarat. Our experience regarding the problems of these tribal rehabilitees has raised many questions and issues in our minds which we would like to share with you.

When ambitious developmental projects like the Narmada Project are undertaken, a large number of families are asked to leave their lands, houses, familiar surroundings and settle elsewhere. This is justified on the basis of 'public purpose' which is essentially that much larger benefits accrue to much larger populations who would otherwise live at a low standard of living. This, of course, must imply that those who give up everything so that the project can become a reality, must also not suffer a drop in their standard of living. In fact it is necessary that they too improve their lot commensurate with similar improvements in the standard of living of the beneficiaries of the project. Our concern is focussed on the social and economic suffering that these oustees are going to face if the governments rehabilitation policy on paper does not match with the actual programme in the field. We have reason to believe that certain ambiguities in policy and trends in implementation seen in that area are going to seriously affect the health, life and future of these people.

Background

About 220 villages in the three States of Gujarat, Maharashtra and Madhya Pradesh are going to be affected by the inundation of large tracts in this area. Among them we have worked with the illiterate tribals of 19 villages in Gujarat and most of the facts and issues discussed derive out of this experience. The main occupation of tribals in this area is agriculture. The income from agriculture is supplemented through collection of forest produce, hunting and other forms of labour.

Due to cultural reasons and administrative hurdles at local levels, the overwhelming majority of tribals have had joint holdings for generations together. Thus a seemingly large land holding (more than 5 acres) in the name of one person, in reality may mean that two or more families are actually earning their livelihood from it.

There are a few landless labourers. Even these earn their livelihood by cultivating government owned, fallow forest land or other waste land. It is not possible to estimate the amount of land brought under such cultivation since this is treated as unauthorised cultivation. Whatever the technicality of such a situation, it is an established fact that they have been living and cultivating such lands for many years and they are entitled to compensation for the loss of this only source of living.

Water Dispute Tribunal

A tribunal was set up to study the problems arising out of the project implementation. Its award took into account the factors of total dependence on land of these tribals as well as the responsibility of the rehabilitation programme in removing the poverty of the 'oustees'. It, therefore, provided land for land compensation (ie., if more than 25 percent of land owned by any family was acquired for the project they were to be given an equal amount of irrigable land). It also made a specific provision of a minimum

of 5 acres of irrigable land to all those whose land holding was less than 5 acres of land. It also stated that first preference would be given for rehabilitation within the command area of the project. However, if the 'oustees' did not want to settle there, they were to be settled in their respective states on a similar basis. In addition, it was decided that the agricultural lands were not to be provided free of cost, but the occupancy price should be recovered from them in 20 yearly interest free instalments; the first instalment being half the compensation received by the 'oustees'. The tribunal has also made the proviso that if an individual is losing atleast 75 percent of his land he should have the option of surrendering the rest of his land as well. This award on the face of it seemed a relatively fair policy and it was hoped that with proper implementation it would tackle all the grievances of the tribals.

Some ambiguities

1. The Narmada Tribunal being an inter-state water dispute tribunal took into account the rehabilitation of oustees from Madhya Pradesh and Maharashtra. No reference was made to those from Gujarat! Clearly what applies to Maharashtra and Madhya Pradesh should apply to oustees of Gujarat as well; but the government of Gujarat has not earmarked any land in the command area of the project for this rehabilitation. Even though these tribals will be the first to be affected, they are expected to buy their own land and only after they do so other basic amenities like wells, schools and roads are to be provided.

2 There is a government resolution (G.R.) of June 1979 of the Irrigation Department of the Government of Gujarat which states that a minimum of 5 acres of land should be provided for each oustee family for their rehabllitation. There is, of course, no provision to provide irrigable land in the command area of the project in this resolution.

3. In the cost estimates in the project report prepared in 1980, the Government has made no provision for the cost of acquiring the total of 40000 acres of land that it would have to acquire to rehabilitate all the oustees. It has instead provided for only 1310 acres of land which is clearly meant for roads and house sites only. In fact the agricultural land to be acquired should be clearly more than the actual amount submerged, specially because a significant proportion of oustees who own less than 5 acres of land are to be provided at least 5 acres as per the directive of the tribunal. The argument that the land is not to be given free of cost, and hence the cost of acquisition need not be mentioned is not tenable, since clearly some initial investment will have to be made by the government.

4 The usual analysis of land records do not show the reality of land holdings in a tribal region where joint holdings are significant. We reanalysed the land holdings not by the units as they are officially recorded but by the number of families who are actually dependent on the land. We found that there were 624 land holdings in the 18 villages surveyed, whereas the number of families actually dependent on them are 2109, since most are joint holdings. Also if holding is taken as the unit only 41.8% of the total holdings are less than 5 acres whereas if family is taken as the unit we found 94% of the families with a holding less than 5 acres!

Damming the tribals

'The construction of dams has effectively resulted in a direct assault on the country's tribal population. Dams are usually constructed in remote, forest areas where most of the tribal groups also live. The sudden influx of the modern system, destruction of the surrounding nature on which their lives are dependent, and ultimately displacement and resettlement, leaves a tradition-bound tribal family totally bewildered, powerless and on the verge of total social, cultural and economic collapse.'

— State of Environment Report, 1982, CSE.

Project implementation and its problems

Some problems have arisen due to the half hearted implementation of a watered down and modified government resolution. These are:

i. The 'oustees' have been shown lands which are so poor in quality and so far away from their traditional homeland (about 150 kms away) that their economic situation insecure as it was, would worsen further and their whole social and cultural life disrupted. Naturally they rejected such outrageous propositions.

ii. When the oustees refused the land the government asked them to purchase land from private land owners from their compensation money. The consequences of this were: (a) the oustees with less than 5 acres of land could not buy 5 acres of land which they were entitled to; (b) some could not even buy the land equal to what they had been originally cultivating; (c) the amenities that they were entitled to could not be had as per the law because of the wide scattering.

iii. It has not been possible for the illiterate tribals to deal on an equal footing with the

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high caste land owners in these land deals thrust upon them by the governments inaction. They have been cheated and exploited. In the beginning the Additional Collector gave active help and the deals were made relatively easily. However, even now these deals are not yet completely registered and the ownership of lands still rests with the original land owners. The whole matter depends on the goodwill of the concerned government official and in our experience there has been a general aloofness and reluctance on their part to get too involved.

iv) The Government of Gujarat has been pleading from the very beginning, that it is virtually impossible to give agricultural land to the oustees as no surplus land is available. Forest lands cannot be given, as only a few forests are left and other waste lands are scarce. However the government could instead purchase or acquire private lands in large tracts so that proper rehabilitation can be carried out, and rehabilitation of the oustees itself could be proclaimed to be a 'public purpose' in this respect.

v) In some villages the situation has arisen where 80% of the village land has been acquired. The land acquisition authority is refusing to acquire the remaining 20% of the land. This land is owned by 20-30 families; of these families, 4-5 of them happen to retain practically all their lands. If these lands are not to be acquired the isolation of these families will be near total. They will be cut off physically, socially and culturally. They will be deprived of other amenities like school, shops and health services. The land acquisition authority is taking a very rigid view of the land acquisition procedure which states that only land under submergence can be acquired.

vi) All the tribals in the affected villages of Gujarat have so far voluntarily surrendered their lands, and other villages are ready to follow suit. There is, however, still widespread uncertainty about the amount of compensation they would be paid. Since all the villages are losing their land under the same project, it is only fair that they should get a uniform and generous compensation. The State Government has not yet made up its mind and is vascillating on the issue. The traditional way of computing the amount of compensation by taking current market values for the land is clearly not applicable to tribal land since for many years no sale deeds have been concluded in this area. In its cost estimates the government has put an estimate of average cost of land acquisition at a rate of Rs. 2000 per acre. This is totally unsatisfactory. This computed average compensaton is so low that most of the villagers will be deprived of their land in exchange for a paltry sum, insufficient to buy adequate alternative land to survive. The consequence of such myopic action of the government can only be that the 'oustees' will become poorer.

To summarise the situation as it exists today — the government has abandoned its primary responsibility of providing land for land as directed by the tribunal; it has offered a totally inadequate sum of compensation; it has shown no aptitude or willingness to keep down the prices of the surrounding private lands which may have to be acquired by the outstees; it has used 'holding' as the unit and not 'family'. in its computation, thus hiding a concrete reality of the tribal regions; and its grave lack of responsibility has resulted in the ousted tribals becoming a prey to high caste land owners and their brokers. In brief, with a policy implementation that is insensitive to the human problem of these tribals it has made the tribunals recommendation of the objective of 'abolition of poverty of the oustees' a myth.

The 'Cost' Facade

Among others, the main claim for this inadequate implementation of the tribunals recommendation has been the cost factor. The government has claimed that land acquisition of the type recommended will push up the cost of the project. The following facts about the governments lop-sided sense of proportions in cost provisions for certain other aspects of the project is not only disturbing but also show how hollow the claim is in the first place.

The project report shows that the cost estimate of the whole rehabilitation programme including compensation for lands, houses etc., in all the 220 villages in the three States is Rs. 19.83 crores, while the cost estimates of the construction of the staff buildings at Kevadia Project Colony alone will be Rs. 23.45 crores. Add to this cost the miscellaneous and establishment costs of the same magnitude and we begin to sense how distorted is the government's sense of proportion. The scales which the government holds in its hand give more than twice the weightage to the temporary needs of providing houses only to a few hundred families of the project in one colony alone. In comparison to this, the entire rehabilitation cost of 10 to 12 thousand families scattered over 220 villages of the three States, which can make or mar their entire lives, gets less than half the weightage. What is more surprising is that the staff quarters, the water lines, the electricity lines, guest homes, the roads in the Kevadia Colony have already been built while the staff are yet to arrive. In contrast the notices to acquire lands from the people to be ousted

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10th February, 1992

MEDICAL EDUCATORS REVIEW MEETING - JUNE 1992

TENTATIVE LIST OF PARTICIPANTS

01. Dr. Abraham Joseph, CMC-Vellore
02. Dr. Prem Pais, SJMC, Bangalore
03. Dr. Alex Zachariah, CMC-Ludhiana
04. Dr. Cherian Thomas, CMC-Miraj
05. Dr. D.K. Srinivasa, NTTC, JIPMER, Pondicherry.
06. Dr. Asha, JIPMER, Pondicherry
07. Dr. Kartikeya Nanavathi, NHLMC, Ahmedabad
08. CMET, AIIMS, New Delhi (Representative)
09. Dr. B. Ekbal, Medical College, Calicut
10. Dr. Ulhas Jajoo, MGIMS, Sevagram
11. Dr. Siddarth Das, KGMC, Lucknow
12. Dr. M.K. Vasundhra, BMC, Bangalore
13. Dr. N.H. Antia, FRCH, Bombay (Special Invitee)
14. Dr. Palitha Abeykoon, WHO-SEARO, New Delhi (Special Invitee)
15. Dr. C.M. Francis, Bangalore
16. Dr. P. Zachariah, Vellore
17. Dr. V. Benjamin, Bangalore
18. Dr. George Joseph, Madras

    \- Advisers, Medical Education Project

19. Dr. Ravi Narayan, Bangalore
20. Dr. Thelma Narayan, Bangalore
21. Dr. Shirdi Prasad Tekur, Bangalore
22. Dr. Mohan K. Isaac, Bangalore
23. Dr. M.J. Thomas, Bangalore

    \- CHC Team

IN ADDITION

-- One additional participant each from the 4 CMC's to be nominated by the Director/Principal (a faculty member who is involved in Medical Education Reform) and whose costs may be met by Institutional fund.

-- One nominee each from CHAI, CMAI and VHAI whose costs may be met by the associations themselves.

*rn/mk

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has already been served but the vital issue of compensation for imminent land loss is still unresolved.

Suggested Changes in Policy

Having worked with the tribals in the 19 villages of Gujarat since 1980, we as a group have just begun to understand the problems from the perspectives of the tribals. We suggest the following changes in the policy of rehabilitation to make it sensitive and relevant to the socio-economic, cultural, psychological and ecological needs of these oustees who are as much the 'public' as any other.

The poverty of "development"

'In a country like India, with a high population density and high level of poverty, virtually every ecological niche is occupied by some occupational or cultural human group for its sustenance. Each time an ecological niche is degraded or its resources appropriated by the more powerful in society, the deprived, weaker sections become further impoverished. For instance, the steady destruction of our natural forests, pasture lands and coastal water bodies has not only meant increased economic poverty for millions of tribals, nomads and traditional fisherfolk, but also a slow cultural and social death: a dismal change from rugged self-sufficient human beings to abjectly dependent landless labourers and squalor-stricken urban migrants. Current development can in fact be described as the process by which the rich and more powerful reallocate the nation's natural resources in their favour and modern technology is the tool that subserves this process.'

— *The State of India's Environment,* 1982, *CSE*

i. The ambiguities in the rehabilitation proposals must be clarified immediately
   - — the rehabilitation of displaced people in all three States is of equal importance;
   - — the land for land compensation with the minimum provision of 5 acres should be implemented efficiently;
   - — the land offered should be irrigable, agricultural and as far as possible within the command area of the project and preferably in their respective States.

ii The government should either buy or acquire private lands in large tracts if it does not have any surplus within its own possession. Under no circumstances should the oustees be asked to purchase their own lands.

iii The government should take a family as a unit (and not 'holding') and provide minimum of 5 acres of irrigable land to each oustee family irrespective of the fact whether they legally own their land or not. If necessary, the government can conduct a detailed survey in the villages to find out the amount of forest land and/or other waste lands they are actually cultivating and provide them with alternate land in appropriate amounts.

iv. Not only must individuals (whose land acquired is more than 75%) be given the option of surrendering the rest but this rule must be extended to the villages as a whole as well if they are going to loose atleast 75% of their total agricultural land.

v. The compensation for land acquired must be adequate and sufficient to buy new land of atleast equivalent size keeping the basic objective of rehabilitation i.e., *abolition of poverty of the oustees in* mind.

The forest issue

Following our recent contacts in the interior villages of Gujarat and Maharashtra, we have come to understand another important dimension of this problem. The tribals, especially Dungari Bhils who, have lived in these forests for centuries cannot imagine how they will survive outside the forests. The forest is so much a part of their life. Even outsiders like us who are quite sympathetic cannot fully appreciate or understand their attachment to the forests, let alone the aloof and faceless bureaucracy of the Narmada Project.

For these tribals, the forests are not only the fountain of their material needs, but also an integral part of their social, cultural and religious life. You have to be with them to understand what forests mean to them. No wonder that the inhabitants of these villages are refusing to move outside the forest area. Even those oustees who agree to resettle on non-forest lands, would opt for forest land, if the option is offered to them.

Why is the Government so adamantly refusing to release forest land for resettlement? The re-evaluation of the government's blanket policy with regard to forest land is urgently called for. The Government's argument is based on the laudable objective of 'conservation of forests" The plausibility of this argument is only superficial. It is clear now that the Government itself is destroying large tracts of forest in the name of 'development'. It also sanctions felling of the forest in the name of 'satisfaction of market needs'. Only when it comes to giving forest lands to tribals, the Government raises the bogey of 'Conservation of forests'. Hidden in this argument is the unfounded charge against the tribals that they are the culprits behind the massive deforestation. The facts if examined closely would reveal exactly the opposite story. The tribals have in fact protected the forests and their needs of forest wood is so small in comparison to the unsatiable hunger of the urban centres for timber that it is sheer perversion to say that they are destroying the forests.

We therefore make a demand that these tribals must be resettled only in Forest land, so that they

10th February, 1992

MEDICAL EDUCATORS REVIEW MEETING - JUNE 1992

TENTATIVE LIST OF PARTICIPANTS

01. Dr. Abraham Joseph, CMC-Vellore
02. Dr. Prem Pais, SJMC, Bangalore
03. Dr. Alex Zachariah, CMC-Ludhiana
04. Dr. Cherian Thomas, CMC-Miraj
05. Dr. D.K. Srinivasa, NTTC, JIPMER, Pondicherry.
06. Dr. Asha, JIPMER, Pondicherry
07. Dr. Kartikeya Nanavathi, NHLMC, Ahmedabad
08. CMET, AIIMS, New Delhi (Representative)
09. Dr. B. Ekbal, Medical College, Calicut
10. Dr. Ulhas Jajoo, MGIMS, Sevagram
11. Dr. Siddarth Das, KGMC, Lucknow
12. Dr. M.K. Vasundhra, BMC, Bangalore
13. Dr. N.H. Antia, FRCH, Bombay (Special Invitee)
14. Dr. Palitha Abeykoon, WHO-SEARO, New Delhi (Special Invitee)
15. Dr. C.M. Francis, Bangalore
16. Dr. P. Zachariah, Vellore
17. Dr. V. Benjamin, Bangalore
18. Dr. George Joseph, Madras

\- Advisers, Medical Education Project

19. Dr. Ravi Narayan, Bangalore
20. Dr. Thelma Narayan, Bangalore
21. Dr. Shirdi Prasad Tekur, Bangalore
22. Dr. Mohan K. Isaac, Bangalore
23. Dr. M.J. Thomas, Bangalore

\- CHC Team

IN ADDITION

-- One additional participant each from the 4 CMC's to be nominated by the Director/Principal (a faculty member who is involved in Medical Education Reform) and whose costs may be met by Institutional fund.

-- One nominee each from CHAI, CMAI and VHAI whose costs may be met by the associations themselves.

*rn/mk

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can preserve their forest bound culture and way of life. In raising this demand we are not at all pitting ourselves against the 'conservation of forest' objective.

If forests are in danger, the tribals living in forests are not basically responsible for it. The objective of 'conservation of forests' and that of resettling the tribals in forests are not incompatible. Indeed they could with imagination become complementary objectives. We, however, challenge these so-called developmental schemes which are destroying both the forests and the defenceless tribals.

Conclusion

Through this report we have tried to bring to your notice the plight of these oustees of the Narmada project and the ambiguities and insensitivity of the government rehabilitation policy. Our attempts to bring about appropriate changes in the policy have made very little progress. We need your help to tackle this problem. We must act and act decisively if we do not want to let the tribals drown in despair!

Further reading

Dams, Forests, Tribals and Health

1. *The State of India's Environment 1982*
   A Citizens Report from Centre for Science and Environment, 807 Vishal Bhavan, 95 Nehru Place, New Delhi 110019 (1982).
2. *Major Dams - a second look*
   LT Sharma and Ravi Sharma (Eds)
   Environmental Cell, Gandhi Peace Foundation, 223 Deen Dayal Upadhyaya Marg, New Delhi 110002 (1981).
3. *Report of the Committee on Forests and Tribals in India,*
   Government of India, Ministry of Home Affairs, Tribal Development Division, New Delhi 1982.
4. *Hills, dams and Forests.*
   Some field observations from the western ghats by Madhav Gadgil. Available from Centre for Theoretical Studies, Indian Institute of Science, Bangalore 560012.
5. *Forest, environment and People: Ecological values and social costs* Water Fernandes (Ed), 1983. Rs. 15-00
6. *People and Forests: the Forest bill and a new forest policy*
   Desmond D'Abreo, 1982. Rs. 7-50
7. *Towards a new Forest Policy*— People's rights and environmental needs.
   Walter Fernandes and Sharad Kulkarni (Ed), 1983. Rs. 25-00
8. *Social Action*
   I S I Quarterly, April-June 1983 and July-September 1983 issues. (Nos 5 to 8 are available with the Indian Social Institute, Lodi Road, New Delhi 110003.)

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The 'MARD' Strike – A View Point

-- Sanjay Nagral, Bombay

The twenty-eight day long strike by resident doctors, interns and medical students all over Maharashtra to protest against the opening of three capitation fee based medical colleges ended a few months ago. The withdrawal of the strike on just a no-victimisation assurance was regarded by many as total surrender. Two of the capitation fee medical colleges have already opened since then and plans have been announced for many more. In that sense the strike was a failure. It was, however, unique in many senses. For example, it was the first time that the M A R D (Maharashtra Association of Resident Doctors) was going on an indefinite strike for an issue other than pay rise. It is important to analyse the various aspects of the strike not just because there is a lot of ground for criticism but more importantly to make us better equipped to react to such struggles in the future. As the interns' representative on the central committee of MARD and on the negotiating team, I had the opportunity to have a close look at the events during the strike, and in this article, I shall try to analyse some of them in the light of its failure.

First of all a few facts about the strike. On the twenty second of June a one day token strike was observed by resident doctors, interns and medical students all over Maharashtra as a mark of protest against the government's decision to permit the opening of three capitation based colleges at Karhad, Satara and Pravaranagar in the State. A delegation of the MARD was literally dismissed by the Chief Minister who refused even to discuss the issue. A decision was then taken to launch an indefinite strike from the tenth of July, the call for which was given by the MARD. The strike action by around 4500 residents was joined right from the start by around 1500 internees and later by around 8000 medical students. It lasted for 28 days and was withdrawn on the 6th of August with just a no-victimisation assurance from the government.

The origin of many of the drawbacks of the strike and of its eventual failure lay in the fact that the leadership of the MARD never understood or analysed the politics behind the opening of capitation colleges. The government's arguments in favour are too nonsensical and ridiculous to merit discussion. The fact remains that this was and is a political move by the government to satisfy the powerful sugar barons (and their children), earn quick cash and at the same time build a pseudo 'pro-rural poor' image. The desperate haste with which some of these colleges were started, flouting all routine norms, the panic on the government's part after the court case was filed, showed that the government had a lot at stake in these institutions. The crude effort to break the strike by offering personal bribes and favours to some of the leaders, proved this even more. And if the MARD leadership hoped that the government would revoke the decision (which meant displeasing people with the clout and money) in response to the protest of a small section of the medical community they were hoping for too much.

Political moves have to be fought politically and by political forces. And with the present strength of the ruling classes and their parties and their total grip over the various state agencies, agitations many a times are likely to end up wresting concessions of varying degrees rather than changing decisions. It was with this undesstanding that some of us from K.E.M. MARD were proposing the idea of negotiating with the government over the percentage of seats to be kept on genuine open merit basis. In fact at one stage, the government was ready to do so. What was dismissed as a 'compromise' was in fact a tactical move keeping the reality of the situation in mind.

A protest against capitation fees means a protest against the right of the government to make education a privilege of the rich and the moneyed. But when a government is a puppet in the hands of the capitalists, landlords and merchant class, it ultimately implies a clash with the strength of the ruling classes. This will necessarily have to involve large sections of the masses, for whom even simple medical education is a dream, for it to succeed. It was these political realities that the MARD leadership failed to grasp. Although the strike did teach quite a few lessons in cunning, ruling class politics, by and large the attitude of the leadership remained immature and at times even opportunist. And not in a few instances was this not due to innocence but a genuine desire for fast popularity and personal gains.

To begin with, was the total lack of preparation and ground work for such a big struggle. Many assumed that just residents striking work and paralysing public hospitals would bring the government down to its knees. That in the past, the demand was always a small pay rise, was totally forgotten. Then, there was the total lack of effort (except by some sections) to involve the medical fraternity as well as other sections in the struggle. It was not surprising that many senior doctors and their organisations although generously offering a lot of sympathy refused to join the strike. Most of them are so well entrenched in the profession and have so readily accepted to be a part of a corrupt and wretched medical system that to take such a step would be to invite the wrath of the very government to whose tune they dance. The classical example was of the IMA many of whose office bearers although openly supporting the strike refused to criticise the health minister or take action against her as a president elect

(*Continued on page* 8)

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of the IMA. There is no doubt, however, that if the senior doctors had joined the strike, the impact would have been much greater because of the total paralysis of even the skeleton emergency services that would have ensued.

Excessive faith and hope was placed by many in the legal system to give a favourable decision. The counsel for MARD bared it all very early when he bluntly told us that the case against capitation colleges was strong only as far as the 'standard of education' part was concerned. That this legal system does not consider 'capitation' as illegal and unconstitutional was apparent in the court's verdict also. In fact this 'standard of education' ploy was used time and again by the government during the negotiations to trap us into discussing something irrelevant. The minister would go to extreme lengths to point out how the standards were being maintained and some of the MARD leaders would very obligingly deviate from the issue of capitation.

Mention must be made here of the role of the KEM unit of MARD, for here a definite attempt was made to broaden the base of the struggle. The mass contact programme, street plays, public meetings and parallel out patient departments, were all efforts to take the issue to the public Meetings of trade unions and student organisations were held to chalk out a more broad plan of action. It would be appropriate to mention that very few trade unions responded to the invitation and those who attended showed extreme lethargy to take any concrete action. Thus, what was an excellent opportunity for the working class movement to fight for a genuine issue was lost. The gherao of an ENT Surgeon from Bombay was deliberately planned to prove that members of the profession who associated themselves with these colleges should be exposed and attacked.

Two of the colleges have since then opened with a lot of fan fare. Many more are being proposed. These will start sprouting up with regular frequency, closely competing with engineering institutions. The fight therefore will have to be a prolonged one. Organizations like the MARD cannot and should not fight such struggles alone. This is the work of mass organisations; trade unions and working class parties. Science movements and organisations like the medico friend circle must take up such issues. Always keeping in mind however that it is the symptoms of a wretched and rotting economic structure that are being manifest, time and again. It should also be borne in mind that non-capitation 'open merit' education although apparently giving equality of opportunity is heavily loaded in favour of the rich and the moneyed. This is especially true of higher education. This is not very surprising since it is the moneyed who rule. Capitation fees is just a more vulgar and crude form of a degrading but crumbling system. The only way to put a permanent stop to such terrible obscenity is to strike at the roots of the disease. Such struggles however have to be fought and if fought with the right perspective can contribute a lot in this direction.

DRUG ACTION FORUM-KARNATAKA

Kittur 591 115
Bailhongal Taluk
Belgaum District

18 January 1989

Dear

Greetings from Kittur!

You may remember my mentioning to some of you earlier of the need for drug issue to be taken up at the grass root level as an awareness building process as part of the community health and development programme being undertaken by you and your team.

In this connection, I, on behalf of DAF-K, had a discussion with the Community Health Cell team (CHC team) in Bangalore, and I am happy to inform you that they have agreed to give us the necessary technical support to hold a Workshop on Drug Issues in the month of April 1989 in Bangalore.

The CHC team are of the opinion that an effective awareness building process can be initiated only if all those involved are themselves well informed about all aspects of Drugs and Drug Policy Issues and are in touch with the ongoing efforts all over the country. They are willing to put together all the information/resources and facilitate the workshop. However, the CHC team has indicated that it wishes to plan this workshop on a participatory basis and, therefore, we would request you to start the process by filling in the enclosed form. The filled in form may please be sent to:

The Co-ordinator
Drug Workshop
Community Health Cell
No 47/1, St Mark's Road
Bangalore 560 001.

by 5th February 1989.

The venue, duration and the dates of the workshop will be fixed on hearing from you.

With best wishes to you and to your team,

Yours sincerely,
for DAF-Karnataka,

Gopal Dabade

To

This is shocking. If looked at from one angle it is a great hypocrisy, on the other side, it is a great self deception, an escape from reality, a coward attitude to run away from the war front.

What we object to is the basic character of the new religion of community Health as it gives a so-called rational basis to a running, frustrated, hypocritic individual.

So we urge to face reality.

Prevention and Education, though sugar coated, are bitter capsules. We feel that though all the basic principles of community health are to be accepted in totality, the direction of its application is wrong. The spread of community health principles will be visible only if the cure system is changed. The person who cures, and relieves patients from pain and death; though not god, is the best person to educate people. So whoever is concerned must enter this pond of mud to fight the present dirty status.

It is basic commonsense that those who want to bring something new must provide first, an alternative to old & bad and that is what we are missing.

But it is not an easy job to enter this 'Cure Market' with determination to serve ethically, academically and with principles of community health in mind. There is no thrill in it. The person who enters is an odd one. Neither is he an exploiter nor a revolutionary. As the funding agencies are now in pseudo euphoria of community health, there are no funds available. To open an operation theatre. a doctor has to invest up to Rs 1 lakh. Banks charge him 15% interest irrespective of where he opens. So he has to charge not just to fulfil his own living requirement but to repay loans, to pay servants. So in the eyes of the poor he is just like any other quack. Due to insistence that there are no injections for energy, no tonics for weakness, no inj. (I.M.) to accelerate labour, no cheap 5 rupees treatment for chronic suppurative bronchitis, he loses patients. So he has to live with fear in the mind, he has to live in isolation. He has to spend empty hours. He has to fight the frustration. In one sentence he has to wait and wait endlessly. He has to take all the risk in the world to go ahead and perform Ceaserian section on a very serious patient, he has to adjust with available help.

But there are opportunities to grab. He saves the life of a patient by successful Caeserian section and now can teach the whole village about ANC. He cures fever persisting for two months with antimalarial drug and can convince the patient about uselessness of injections. He cures the severely dehydrated child and is in a position to teach ORT. We may convince the poor illiterate person about the ORT by our Health guide, but unfortunately there is not a single doctor to back this up on clinical front. He will even suggest NBM* till Vomiting & Diarrhoea stops, if not, he will laugh at the idea and since he is the person who is going to give medicines to the same poor person, the whole funds, time, efforts invested in ORT training would be evaporated. This will happen and this is happening. Direction of Health education is just never from patient to doctor. It must be from Doctor to patient. Unfortunately we neglect our Cure front which is never in tune with Community Health as only the money oriented doctors, quacks are ruling this empire and our motivated doctors are running away.

The list is unending.

To start with Clinical Practice, to educate along with Clinical Practice, to give patients correct and cheap medicines to establish a rapport through cure and to stimulate all patients to think is the basis for all the community health activities in future. We can not build up this future without a strong base. The present situation on clinical front is just horrible and at this moment the person who wants to serve the poor must never leave 'cure side'. The doctors shedding this basic responsibility in order to serve the poor through seminars, research, bulletins, ANCs, Balwadies, departments of PSM are Neros playing fiddle when ROME is burning and sadly with the belief that this playing fiddle is the 'cure' for the burning ROME. One Doctor friend of mine sarcastically commented. "Doctor cannot do much. It is your totally baseless assumption. He is just a policeman directing the Journey of a patient from birth to death and above all, taking bribe for the same!"

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With best wishes to you and to your team,

Yours sincerely,
for DAF-Karnataka,

Gopal Dabade

To

MFC 124

'When Rome Is Burning'

DR. ARUN GADRE

DR. JYOTI GADRE

(Now running a Private Nursing Home in Kinwat, Dist. Nanded)

Along with MFC, many organisations, institutes and individuals are working to spread awareness about Preventive, Educative and Social facets of Health care which are neglected for long. The priority of social service through Health is now shifted towards 'community health'. There is glamour attached to it. All funding agencies are funding these projects and there is a Pseudo euphoria for the same in all the intellectuals. Fortunately or unfortunately the methods of application of the principles of community health are not rigid. On one hand it calls for innovation and on the other hand this leads to sheer confusion and frustration. There are now doubts expressed about its basic role and some even proclaim that unless the basic socio-eccnomic system is changed through political action there is no use trying to change the health care system.

But still, this new religion of Community Health is fast becoming an escape route for ideologically motivated fresh graduates who do not want to enter the pond of mud of clinical practice. This is what we are worried about. On the one hand the majority of trained clinicians are entering this golden rush without a second thought. They give cut, take cut, from rackets, join hands with Pharmaceutical industry and exploit ruthlessly. Naturally we cannot expect these doctors to go into the rural, remote areas where margin of profit is negligible. And our young motivated doctor who is a potential candidate is leaving 'Clinical Practice' to join Community Health Projects, that too with a belief that he/she is really doing something for the poor.

This is a great paradox.

The net result is, the internal brain drain. The person in whom society has made investment so as to get him trained to 'cure' in return is leaving his specialised field to the very non-specialised Community Health sphere. The doctor acting thus does not understand the simple fact that all the Community Health projects are just non-specialised simple jobs. So it is a form of brain drain and this leaves the poor masses in rural are in the hands of quacks. The most horrified line of treatment is followed here, some out of ignorance, some to exploit. The medical shops, the third rate pharmaceuticals with fourth rate combinations with the help of quacks, half doctors, ruthless exploiters rule the health of the poor person. The poor landless labourer spends half of his income on Bplex injections when actually he is suffering from Pulmonary Tuberculosis. Later on takes some 15-20 inj of streptomycin with rifampicin for 15-20 days as a starting treatment. Later he receives I.V. Glucose as a sure medicine to get cured. Lastly only death can cure him of his extensive pulmonary T.B. A patient with cold receives dexamethasone. Parents spend money to buy tonics for their child suffering from PCM. Old man receives five good bottles of I.V. Glucose when suffering from congestive cardiac failure. The woman in desperation spends hundreds of rupees for 3 consecutive injections of E.P. Forte in order to get an abortion done and finally ends up in 16 wks pregnancy. She dies of obstructed labour in a remote rural area where she has no access to an operation theatre. The market oriented specialist is not a fool to invest in that area. The Govt. Hospitals are run by incompetent corrupt doctors. And the social organisations are not nowadays interested in this routine clinical service. So the woman with obstructed labour must die. May be she is well oriented to ORT, immunisation theories thanks to this new religion of Community Health, but she must die of obstructed labour. So the quacks do MTPs. They give a 100 rupees worth magic spectacles to 'cure' cataract as not a single motivated opthalmologist is available to educate, to operate. (There might be somebody with a degree but now doing a revolutionary work of finding out the Statistics of Vit A Deficiency blindness). So the rural landless labourer has to spend 2000 rupees in two years to get cured of bronchial asthma as not a single doctor takes her Blood pressure in these two years so as to diagnose her condition as c.c.f. due to severe hypertension. Thanks to our M.D. Physicians busy in debates about 'what is the ideal caloric diet for poor?' in a seminar at some posh resthouse in a Hill station resort supported by a Foreign funding agency. So the poor person loses his confidence in existent rural Health Care system where he has nobody to go with expectation to get cured even for a simple ailment. And to serve him our potential doctors are going door to door urging him not to go to open air defecation as it will prevent him from getting all those illnesses.

12 6 Mar 1987

87 When Rome is Burning (response)

10

'When Rome is Burning' by Arun and Jyoti Gadre (MFC, 124), was a surprise. Their observations on the 'dirty' state of the present clinical medicine in India seems to be true and their contention that someone needs to clean up the "pond of mud" is also the need of the hour. But their views on the "new religion of Community Medicine" are not supported by logical arguments or statistics.

I do not agree that community medicine has become an escape route for the 'ideologically motivated, frustrated and hypocritic individuals'. Community medicine is as yet the most unexplored and difficult branch of medicine. There are no set patterns of progress in the field of community medicine; each one has to find his/her own path. And that is where the challenge lies. Such a field cannot be an escape route for anyone. The idea of the 'internal brain drain' put forward by the Gadres is not supported by any quantification. For instance, in Gujarat for the year 1981 (the latest figures available), 432 post graduate degrees/diplomas were awarded; none of which were in Preventive Medicine (1). The picture has not changed very much since then. My guess is that not more than 1 to 2 percent of doctors go in for community medicine. This miniscule proportion can hardly affect the doctors available for clinical services; and this would hardly qualify to be called brain drain.

The Gadres' belief that society expects doctors to 'cure' is a very limited view of the field of medicine and is perhaps the outcome of the curative orientation of the present medical services and medical education. The doctor is there to promote health, prevent diseases and i. required cure and rehabilitate. So those who practice community medicine instead of curative services are not betraying the society; on the contrary, they are serving the society much more efficiently.

The Gadres' belief that community medicine projects are "just non-specialized, simple jobs" seems to be naive. If that were so, no one would have ever known or honoured Aroles and Amte and many more who carried out such projects. I would not consider the organization of an immunization programme or teaching village people about ORT less specialized or simpler than doing caesarean section or operating a cataract. Only those who have done both can tell us better which one is difficult.

The Gadres' argument that most of the funds are now put in community medicine is also not true, if you take into account the local donations besides the foreign agencies' funds. Many more people still donate money for hospitals, wards, or sophisticated equipments than for community medicine. Their prescription that one has to cure before prevention is like putting the cart before the horse. It totally ignores the age old saying that 'prevention is better than cure'. Cure will be infrequently required if prevention and promotional activities are very strong. A woman may not have to die because of obstructed labour if a well trained dai or an ANM is available for proper antenatal care, and of course with clinical back up. A child may not reach the stage of severe dehydration if sanitation is good and ORT is available. In both theory and practice no community medicine person worth the salt neglects curative services. On the other hand hardly any clinician remembers to practice community medicine.

Finally I do agree completely with the Gadres' that the "clinical front is just horrible" and it does need to be changed. But trying to do it at the expense of community medicine will be like adding fuel to the already burning Rome!

— Dileep Mavalankar,
Ahmedabad.

(Ref. 1, Health statistics of Gujarat, 1984, State Bureau of Health Intelligence, Directorate of Health, Medical services and Medical education, Ahmedabad.)

MFCB- 127 . April 1987 — When Rome is Burning (Response) P 7-8 10

DEAR FRIEND,

The pressure of attempting to ethically practice clinical medicine, and that too in a small town, is such that one can appreciate the Gadres frustration (MFCB, 124). Generally, the denunciation of community health arises from the fact that people tend to confuse it with the type that is taught and practised by the PSM departments of our medical colleges. It is also true that philosophical discussions can be highly irritating to one who is struggling to perform an emergency caesarian operation with meagre resources, in a near hopeless situation.

I wish to assure the Gadres that the Health-Wallahs who attend seminars, gather statistics on Vitamin A deficiency blindness and run bulletins (how neatly I fit into this) are too small a number to be bothered about. (They can take a lesson from the govt. as to how to ignore us!) We are in this either because we want to earn name and fame instead of money, (they are not the ignored lot) or because we are social drop-outs: Bless us, but without us where else could the Gadres find a forum to express their genuine frustration. If there is no religion of community health, we will find or invent some other creed, but would never enter the portals of the established church of clinical Medicine. Neither clinical medicine nor community health either gain or lose anything, by our presence (or absence).

However, a word about community health in its correct perspective. It is not preventive medicine. It is wrong to think there is no 'cure medicine' in the practice of community health. As long as there are diseases in the community, they need to be treated. There are many who are doing this successfully, the most well-known example being the Aroles of Jamkhed. The role of clinical medicine in community health is neither denied nor denounced.

However what is it that organisations like the MFC are crying about? The Gadres have, for instance, mentioned malaria and ORT for diarrhoea-just two examples; the list does not end there. The question is not whether to treat diarrhoea with ORT or antibiotics, the issue is not about which are the first line drugs for tuberculosis. Our main question is, why are these diseases allowed to exist, the degree that they exist, in this age of super-computers? In short we are asking for community health and not community medicine. We would like a situation where we can apply our brains and our skills to treat diseases that really need treatment, and not dispense vitamin A drops, teach how to prepare ORT etc. The latter is the real internal brain drain, and hence we feel that today whether a doctor is in clinical medicine or out of it, is immaterial. There is no genuine clinical medicine. What we are forced to practice today is a non-specialised simple job, and have no scope for the "very specialised field".

Yes, Rome is burning, but the Neros are in Delhi. Their fiddle screeching is so loud and atrocious, the people's wails are drowned in it. If doctors really want to practice good clinical medicine, they should join us with kettle drums and trumpets, so that the Neros in Delhi can no more ignore us, and more important cannot ignore the people.

Kamala Jaya Rao
(A social Dropout)
Hyderabad.

* * *

"How many of the existing public or private community health projects are engaged in pure research or community health activities without providing curative care?"... "What proportion of the thousands of doctors passing out of medical colleges opt for working with such projects rather than entering into medical (mal) practice?"... "And what proportion amongst those clinicians interested in community health research are researching into areas absolutely unrelated to their training in clinical medicine?"...

The answer to all the above questions is common and that is 'Negligible'. The reasons are obvious.

Of the small minority that wishes to be away from the muddy ditch of private practice, a few resort to working in community health projects not always because they have tried and failed to settle down in practice but chiefly because most of the community health projects are located in or around urban areas and also provide curative service to the people. A common problem faced by community health agencies wherever they are working has always been a dearth of devoted and motivated doctors. The Gadres' fears about internal brain drain are, therefore unfounded.

Comparing a handful of research organisations and the preventive and social medicine departments to Nero playing the fiddle when Rome was burning is grossly underscoring the importance of research in community health. What research is being conducted at these places and whether it could be made more meaningful and applicable could be a point of debate and it is for doctors like the Gadres to raise their

PTO

voice against wasteful research and pin-point areas where it is needed most. The answer is certainly not in the packing up of these institutions or leaving them completely in the hands of the non-medicos, driving the clinicians working with them out to remote areas for practising curative medicine. A clinician's close association with the researcher is a must to identify areas of research that would prove relevant and useful and to see that the outcome of the research is applicable to tackle the problems in the field. The right place for the best of our motivated brains should always be with the researchers. Unfortunately, this is not the case. The fault probably lies in the system that discourages and fails to attract these brains away from the lucrative business of private practice. One would call it a welcome change if more clinicians than there are now, opt to join community health service and/or research.

The burning problem of poverty of curative care amidst plenty of medical hands may be solved not by individual doctors to set-up their practices in the rural areas just because they claim to be motivated or that they believe in ethical practice, but by:

(a) Strengthening the infrastructure in remote rural areas by the public sector/government policies.

(b) making doctors, after they get the qualification, work in remote rural areas for a stipulated period of not less than a year, before allowing them to make their choice.

(c) making the voluntary agencies work more in the areas where they are needed most.

It would be unwise to compartmentalise curative medicine and community health. With the oversaturation of urban centres with medical practitioners and saturation even in the semi-urban areas, doctors will be forced to go to villages to earn a living but no amount of inputs into curative care is going to help us solve our problems for good. The state of health of the vast slums of Bombay is a living example. Co-ordinating with a community health agency to spend and manage safe drinking water supply to an area would be far more advantageous in the present circumstances than coercing a handful of clinicians to give up research to treat diarrhoeas, dysentries, dehydration and worm infestations.

The research in community health, if relevant and useful must continue on a priority basis.

—Mukund Uplekar
FRCH Bombay

Dear Friend,

When Rome is Burning:

Dr Arun and Jyoti Gadre's article (mfcb-124) has brought in a whiff of clean air of realism in the prevaling intellectual and erucdite atmosphere of the mfc bulletin. The article makes its entry as if like a bull in a china shop and pierces holes — I lost count how many, — in the padded framework of progressive health debate. I appreciate it for the simple reason that we, in West Bengal, have been working so long with the same view in mind. Health activists (for want of a better term), who have been crying for a people oriented health care service, have somehow been shunted into a world of their own, isolated from the real health scene. That is why they did not find it necessary to identify the real actors in the health drama being daily enacted in real life, before prescribing roles and revising scripts. Gadres' article, though a little bit strident and somewhat emotive does just that by focussing the attention on the real priorities. It is time for even the elitist and snob section of the health activists to realise that as a slogan 'prevention is better than cure' is no longer the in-thing in fashion. The sincere and serious health activists, particularly those with left orientation, should stop to give a second look to the political, social, economic and cultural realities of the attractive populist formulations. True, that curative medicine can never be the answer to the problem of ill health, but preventive and social cannot be delivered without a political vehicle. Health planners may imagine that they are offering a novel path of salvation to the people by raising the slogans of Community Health, Self Care, People's Health in People's Hands, Demystified Medicine, Integrated Medicine and what not. But these have not been able to attract people's attention. People, who struggle to earn their daily bread just cannot afford the luxury of shunning life-saving modern medical care in their own desperate situation. Rakku's story (Sheila Zurbrigg) dramatically exposes the options before the people. People's need of the hour is medical care and that is what they demand. There is no real contradiction between their need and demand as the specialists would have us believe. It may be true that there are matters where people do not understand what is right as the specialists do. But it is not universally true. There are subjects where people can very well realise what is right, in spite of the specialists' efforts to confuse the issue. Health, I guess, is one of the latter subjects. Here, direct observations and real life experiences are eminently helpful. People have observed that vociferous protogonists of preventive medicine never waste a moment to seek curative medicine when they are in need themselves. It is common experience that the teachers of Self-Helt immediately rush towards a modern hospital or a nursing home when their own dear ones are in trouble. As the Indian sage once said, to a hungry person God must approach in the form of food, health activists should realise that to moribund patients, preventive medicine or community health carries no meaning at all except ridicule.

Gadres assert that the doctors who are engaged in curative practice are the best persons to educate people in Health matters. I am hesistant to make such a bold declaration. But I can guess at what they want to imply. A health care system cannot be run without a sound medical care service. Even in a heavenly world where all preventive techniques have been exhaustively implemented, diseases will still occur and medical care be needed. In a country like ours, basic determinants of health like food, clothing, shelter, employment, education, women's lib etc., cannot be realised without a fundamental political and economic change. It cannot be achieved by parallel social efforts, (termed grass root actions) keeping the State apparatuses in the hands of the exploiting classes. People must win power in order to realise the basic health determinants for themselves. And, one must admit that peoples' struggle in that direction will continue in spite of the health activists. But one cannot allow the premature deaths and avoidable disabilities till the end. What the health activists, at present, are required to do is to join the people in their demand for medical care and force the ruling classes to concede the demand.

It is sad that the health activists overlook the emerging phenomena that the ruling classes have borrowed a leaf out of the progressives' manifesto and lent their voices in chanting the glory of preventive medicine, community health, self-care, indigenous medicine etc. and that is how they proceed to arm their slogan 'Health for All'. Prevention is the answer — so stop offering medical care to the poor. The recalcitrant poor however, refuse to digest the brilliant proven theory of preventive medicine and community health, and had already tasted the fruits of modern medicare which they continue to demand. But you cannot provide the poor with costly medicare and maintain the profit rate too. So give them a cheaper alternative and here comes the allocation of 1/3 rd of health budget to indigenous medicine in the 7th Plan. Take care — that the people do not look upon indigenous medicine as a pseudo. On the one hand, invoke the glory of Indian tradition and precious people's culture, and on the other, expose the heinous exploitation of the modern medical practitioners. This will do the trick. The trick is perhaps succeeding and the Government appears to be getting away with it. But why the health activists should turn a blind eye to the people's urgent need of life-saving medicare? The Editor however asks a pertinent question. "Can one really practice ethical, quality curative medicine in the present socio-economic set up without the crutches of tonics, injections and other magic remedies? How often does it end as a conflict between survival and service?" O.K. then, — let us put the blame on the socio-economic system and not expect the doctors to act as noble men and women. But how come community health appears as an alternative?

Sujit K Das
Calcutta

MFCB-129 June 1987 P6&7

Dear Friend,

When Rome is burning:

A man lives by his stomach. When his diet is balanced and his environment sound, he remains healthy. But are many of our countrymen able to have a balanced diet? Eating to subsist is their first priority ..... keeping healthy their next.

45 to 50% of India's population is below the poverty line. (A landless labourer who can spend Rs 2000/- ie. Rs 80/- p.m. on medicines over a period of 2 years is probably above the line). It is not surprising that "ideologically motivated fresh graduates" ..... and not so fresh too, should opt for Community Health. Of course, this can be questioned if they just limit themselves to seminars, research, etc.

The major focus of Community Health appears to be Prevention. But prevention alone is not the answer, I agree. Curative services are important. But Community Health includes above all EDUCATION.

In a rural town in Maharashtra curative services were offered by a non-governmental organisation. To be of greater service to the poor community, the doctor trained in general surgery and set up an operation theatre. Maintenance required raising of fees ..... though they were kept low. However in the 5 years after setting up the operation theatre just 2 Caesarean Sections were performed and those too on women who could afford going to better equipped places.

The conclusion is that well-equipped curative centres can only cater to the middle class and better off citizens. In the above mentioned case, the really poor did not attend the curative centre because they could not afford the fees ..... however low. They went to a Government Hospital or died at home.

So the poor have no choice besides Govt. Hospitals. I do not agree with Arun and Jyoti Gadre's sweeping statement that Govt. Hospitals are run by incompetent and corrupt doctors. Some might be incompetent and many corrupt. Nothing can be done about the incompetent unless they are caught in flagrant incompetency ..... Remember they have been trained in the same institutions as those in the rest of the country including the Gadres and the ideologically motivated doctors.

As regards corruption, it exists not in Govt Hospitals alone. It also exists in Private Practice. And corruption can be tackled if there truly exists a COMMUNITY Health Program which includes 'Education'.

Education to what?

— To how the PHC is administered and one's rights in obtaining services ..... whether free or in certain cases fairly low fee.

— To the use and abuse of injections, prescriptions, diagnostic procedures by GPs, Specialists, and Govt. Doctors.

— To the Pharmaceutical Industries, including the MNCs, aim of making profits through means fair or foul.

And finally, an idelogically motivated doctor who forms part of the community he/she is working with, will not rest satisfied unless the socio-economic conditions of the community is improved....for only then can she hope to achieve COMMUNITY HEALTH.

Marie D'Souza
Nandurba

6. What do you expect will emerge from such a Workshop?

7. Any other relevant/related issues?

Please fill in this form and return it to

The Co-ordinator
Drug Workshop
Community Health Cell
47/1 St Mark's Road
Bangalore 560 001

by 5th February 1989.

"When Rome is burning"
response by Dhruv Mankad

Dhruv Mankad's Response

The debate on 'medical care vs community health', which started with the Gadres' high pitched cry of "Down with Community Health" has reached a stage when, all parties concerned, need to pause and clarify a number of issues. First, neither Gadres nor Kamla Jayarao, Uplekar——and now Das, have clarified what they mean by the term 'Community Health'. Though, Kamla Jayarao has given us some glimpses of what she has in mind by implication, she has still responded only tangentially to Gadres' attack on community health.

Gadres' main complaint is (1) it is almost 'criminal' for doctors trained to deliver medical care to go into community health; (2) such a 'capitulation' is indeed glorified by the health establishment including the funding agencies. What we are not told very clearly is, whether they are against community health as such or, against community health by *doctors* alone. Das has now joined this debate by enlightening the "elitist and snob sections of the health activists" that the slogan "prevention is better than cure is no longer an in-thing in fashion" and also that "to a moribund patient .. community health carries no meaning except ridicule."

Gadres seem to have completely misunderstood what community health really is and therefore their attack is, in fact, a 'non-attack', attacking what at present goes in the name of community health (with some notable exceptions though). Das, too, confuses the issue further by flocking together community health with other equally unclear terms like self-help.

Therefore, let me try to clarify what, according to me, is meant by community health.

"Community Health is .... a way of looking at the problem of dealing with *ill health in individuals in their social, biological, and physical setting.* Community Health has at its focus *both individual and environment.* Community Health is .... about the health of all the individuals in the community". (emphasis mine) (1). The specific tool of Community Health approach is Epidemiology besides the conventional tool of clinical medicine.

Community Health is about asking the question 'why did this child suffer from pneumonia in the first place' after treating the moribund child with bronchopneumonia following measles—a

child whom Das is so anxious to save. Further it is about asking the question—why do so many children suffer and/or die from pneumonia following measles in the locality where a doctor practices. It is also about asking the question 'why does tuberculosis *persist in the community despite* 20 years of the National Tuberculosis Control Programme and with extremely potent anti-tubercular drugs like Rifampicin available. In no way does it preclude treating an individual suffering from tuberculosis but it certainly prevents a doctor getting the wrong idea that by modern, medical care *alone*,—and thus by modern medical doctors *alone*, tuberculosis can be controlled. Community health approach by placing the illness that presents itself at the clinic—which is often the tail end of the disease process—in the community, it places medical intervention in its proper place: amongst many other types of interventions namely, socio-economic, political and cultural, all of which are needed to do away with a disease.

Secondly, contrary to what the Gadres and Das seem to imply, community health is not (and should not be) a separate discipline. Though a doctor can (and should) obtain special skills in epidemiology, there need not be community health doctors as there need be surgeons, physicians, and gynaecologists. It is possible and it is imperative to impart a community health orientation to clinical medicine. For instance, a doctor who is able to see that a TB patient is unable to come to a District TB Centre for his/her daily stretptomycin injections because it is 10Kms from his/her village and s/he is too poor to afford the bus fare, has the community health perspective. Or a doctor who perceives a pattern in several patients of infective hepatitis coming to his/her clinic from a particular locality and demands that the water supply of the locality be tested is practicing community health. Today, an epidemiological outlook in clinical practice is becoming all the more important to a clinician because of the appearance of iatrogenic diseases. Side effects and toxic manifestations of a a drug do not become obvious unless the treating doctor carefully *looks* for unusual symptoms in a *number* of patients consuming the drug in question. Forming of even such impressions on the basis of observation is community health, in the broadest sense of the term.

Finally, Das' attempt, to defend the existing status of medical practice by absolutizing an important but only one of its aspects namely, the "much needed life saving medicare" is nothing but an exercise in ideological rationalisation of the profit-oriented, often irrational and incompetent, as well as the over-glorified practices in clinical medicine. Does he really believe that the thousands of doctors who flock every city/town in the country are really busy saving people's lives, all or even most of the time? What about cough and cold practice, and un-necessary medications, injections as well as surgery? What about cut-practice? What about the activities favouring pharmaceutical companies wittingly or unwittingly? Or should we not diagnose and treat the deep rooted disease that afflicts the 'noble' profession because everybody else is also suffering from the same disease? Like the omnipresent 'foreign hand', Das invokes the ruling class's attempt to push forward indigenous medicine and self-help and its attempt to denigrate modern medicine in order to, 'destabilize' it. There is some truth in this theory, no doubt. But is it not also true that it is the very nature of modern medical practice at present that has provided the ruling class the ground for crticising it and utilising the criticism to deny modern medicine to the people?

Dhruv Mankad, Nipani

References

1. Ashvin Patel and Anil Patel; "A note on teaching of community health—A Critique"; Background paper presented at the X Annual Meet of MFC, 1983.

* * * *

DRUG ACTION FORUM-KARNATAKA

Kittur 591 115
Bailhongal Taluk
Belgaum District

18 January 1989

Dear

Greetings from Kittur!

You may remember my mentioning to some of you earlier of the need for drug issue to be taken up at the grass root level as an awareness building process as part of the community health and development programme being undertaken by you and your team.

In this connection, I, on behalf of DAF-K, had a discussion with the Community Health Cell team (CHC team) in Bangalore, and I am happy to inform you that they have agreed to give us the necessary technical support to hold a Workshop on Drug Issues in the month of April 1989 in Bangalore.

The CHC team are of the opinion that an effective awareness building process can be initiated only if all those involved are themselves well informed about all aspects of Drugs and Drug Policy Issues and are in touch with the ongoing efforts all over the country. They are willing to put together all the information/resources and facilitate the workshop. However, the CHC team has indicated that it wishes to plan this workshop on a participatory basis and, therefore, we would request you to start the process by filling in the enclosed form. The filled in form may please be sent to:

The Co-ordinator
Drug Workshop
Community Health Cell
No 47/1, St Mark's Road
Bangalore 560 001.

by 5th February 1989.

The venue, duration and the dates of the workshop will be fixed on hearing from you.

With best wishes to you and to your team,

Yours sincerely,
for DAF-Karnataka,

Gopal Dabade

To

Response to "When Rome is Burning"

Dear Friend,

Inspite of being one of the 'cowards' myself I share the basic point that the Gadres have made in their article 'When Rome is Burning' (mfcb-124). In fact it is from the point of view of community health itself, defined in its broadest and most political sense, that I see the need for more attempts at and experiments in clinical medical practice. The process of evolving an alternative health system(s) has to include alternative ways of clinical practice. Community health theory has to include an analysis of existing clinical practice (which it has to a large extent) as well as evolve a system of curative health activity conducive to our notion of an egalitarian, human, health system. But any theory evolving in a vaccum is meaningless. Theory and practice together can be the only way of working out any socially meaningful alternative.

Of course, clinical practice alone has its limitations. But don't community health activities alone have their own limitations as well? Curative medicine always ends up forming an important part of any such programme and most of us fall back upon the conventional form of clinical practice. However, our major impact in terms of the message carried to the people is often through the curative services rendered because they are the ones felt to be the most needed and relevant by the 'people' themselves. It is the most important contact point and a major need. But as yet, I feel, that we have failed to evolve modes of clinical practice in accordance with our understanding of the existing and of the desirable health system: the doctor-patient relationship, technology to be used, the approach towards 'treatment' and 'healing', the holistic vs partial view of a patient/person, the balance to be struck between treatment as human intervention and allowing nature to do its own work in the healing process etc. etc... Not that all these issues have been theoretically resolved as yet but neither can they be without trying out various options in practice and testing their validity in the social reality rather than as we think it to be.

All I'm trying to point out is that it isn't a question of clinical practice vs, community health work. They are both a part of and complementary to each other. Both are socially relevant from a radical progressive view point if undertaken with certain value positions and with attempts at fresh thinking and innovative action in response to the social reality around us. One can understand the reaction of the 'community health wallas' to curative medicine because of the overriding emphasis on it with neglect of the social aspects and because of the nature of curative medicine in the established health system. Unfortunately it has also resulted in our acquiring a 'holier than thou' attitude bordering on the contemptuous towards clinical practitioners, even those trying to practice honestly, ethically and creatively. This is what the Gadres are reacting against, and therefore the extreme positions and strong language that they have used.

And this kind of clinical practice is in many ways a much more difficult task than that of keeping one's hands clean and staying out, engaging either in safe, 'clean' work such as a community health project doing preventive, educative and social activities or engaging in 'research'. To be able to hold one's own and work amidst others who are corrupt, within a system which can easily eliminate, amidst a clientele which demands a certain kind of services which it has been habituated/addicted to is an extremely intimidating task, full of frustration, helplessness and the fear of getting carried along with the tide. It requires much greater strength of conviction and an inner strength to be able to hold out. It also requires the ability to innovate and creatively use available resources in accordance with one's critique of prevalent medicine and clinical practice. Mutual support and exchange of experiences could be most helpful in such a situation.

Therefore if we see the two (clinical practice and community health work) as parts of a whole I would consider it important to support and encourage clinical practice of the kind referred to. I wonder if mfc can become, besides a group of doctors and others focussing on community health, also a forum for discussion and debate on ethical, innovative clinical practice. The mfc bulletin can probably be used to initiate the dialogue among such clinical practitioners and between them and those focussing on community health. Later a separate cell could be made for this if the need arises making the mfc, as I see it, more 'wholistic'. Or may be a separate organisation becomes necessary, but that is yet far in the future.

Ritu Priya, New Delhi

MFL- Bangalore.

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Special Issue : Child Health

CHILD HEALTH IN INDIA

What is our commitment ?

"Real and lasting improvement in the condition of our children can be brought about only through a successful attack on the basic problems of poverty and social injustice and not through adhoc palliative programmes . . . . . if we have to successfully attack these problems, the concept that human resources represent a most valuable national asset must become the central theme of our national developmental strategy . . . . . "

— C. Gopalan, Jawaharlal Memorial Lecture, 1979.

The selection of the theme — "Children's Health — Tomorrow's Wealth" by the World Health Organization for the year 1984 has once again focussed attention on the urgent need for action on behalf of the world's children, many of whom continue to die, get diseased and disabled in numbers and in conditions that are scientifically and socially unacceptable today. Five years ago the International Year of the Child (1979) generated enthusiasm and awareness on the needs and rights of children on an unprecedented scale. Action programmes were initiated and expanded and long term plans were drawn up. Mounting evidence in recent years has, however, shown that the ability of nations to transform this enthusiasm into action has been limited.

A UNICEF (1984 b) study has shown that the world economy in the 1980's has been in the deepest and most sustained recession since the Great Depression of 1930's. Due to falling family incomes and cutbacks in government investment in welfare and education, there has been great deterioration in the lives of children, who are most affected by these events. The study reports that India (also China) has been least affected because of past economic progress and relative self-sufficiency. However, the situation of children in India is not vastly different from the rest of the developing world. The year 1984 could well become the starting point for an analytical review of the situation and a commitment to concerted action. Is this happening?

Situation of children in India

A UNICEF report (1984 c) published recently has found that "of the more than 270 million children of India, the number who have access to an essential minimum of nutrition, health care and learning opportunities may be less than half. Indeed the effects of ignorance and ill-health seem to have spread even wider than the immediate results of poverty like lack of food". This is a strong indictment of the lack of governmental, professional and social/public commitment to the National Policy for Children adopted a decade ago (1974) which stated that the 'nations children are a supremely important asset and their nurture and solicitude are our responsibility'.

The important findings of this report are summarised in Box I. The demographic, health, nutritional and social indicators available on the situation of children in India present a grim picture. Hidden in these very numbers are further important aspects of our social reality.

First there is a wide disparity between States in the magnitude of these indicators., eg. IMR in Kerala is 40 while in UP it is 159. Uttar Pradesh, Madhya Pradesh, Bihar, Gujarat, Rajasthan, Assam, Orissa and Haryana form a critical infant mortality belt (all above 100).

Secondly, there are wide variations between rural and urban areas, and within each of these situations, between the well-to-do and the disadvantaged

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I — SITUATION OF CHILDREN IN INDIA

(some indicators)

A. DEMOGRAPHIC

Population below 15 = 255 million
Rural = 204 m. Urban = 51 m.
Children below subsistence level
Rural = 55% Urban = 45%
Infant Mortality Rate = 114
Rural = 124 Urban = 65

Infant Mortality:

Almost half (47 per cent) the total number of deaths occur in the age group 0-4 years. About a third of all deaths occur in the first year of life. Nearly a fifth of all deaths occur in the first month and about a tenth of all deaths occur in the first week.

Female Mortality: Higher in 1-4 & 5-14 age groups. Life expectancy at birth: Male = 55.1 Female = 54.3

B. HEALTH

Malnutrition = 23% of under fives
Anaemia = Under 3 = 63%, 3-5 = 45%
Vit. A Def. = 30000 blind/year
Tuberculosis = 1% per year
Leprosy = 0.64 million
Measles = 14 million per year
Diarrhoea = 1.5 million deaths per year
Poliomyelitis = 0.2 million per year
Immunization coverage: DPT = 38.2%
Polio = 17.7% BCG = 8.8%

C. SOCIAL

Pre-school education: 5% of 3-6 group covered
School education: 75% are enrolled in primary and middle school age group
Water supply: 163 million have no access
Child labour: 16.3 million are working
Disabled children (in thousands)
Blind = 250 Deaf = 250
Orthopaedic = 500 Orphans = 18000
Mentally retarded = 2300

— An analysis of the situation of Children in India, UNICEF, 1984.

sections of the community eg., in 1978 the IMR in rural and urban India was 136 and 70 respectively but for scheduled castes as a separate group in the same situations it was 159 and 90 respectively.

Thirdly, when these indicators are separated out on a sex basis, the situation of the female child is found to be uniformly poor reflecting the social discrimination against females in health care and nutrition, which is an all too common factor in our social life.

Fourthly, the reliability of these indicators is itself open to question. Many of these indicators are extrapolated to national levels from micro-level data collections which often have an urban bias. In recent years the sample registration scheme, the model registration scheme and the national nutrition monitoring bureau are helping to make available some reliable data for purposes of planning. However, anyone who has had occasion to witness the dynamics of record-keeping and record 'cooking' in our health centres will realise that for a long time to come statistical indicators based on records of questionable quality kept in our health centres, hospitals and dispensaries are bound to be misleading. The reality will always be much worse.

An Asian Conference on Children and Youth held in Bangkok in 1966 observed that "one of the serious problems affecting the preparation of development plans for children is the prevailing lack of sufficient data on the nature and extent of children's problems."[4] Eighteen years later the quality of data available on children in India is definitely not a tribute to the large number of research personnel, institutions and statistical services that we have in the country. The Central Statistical Organization have themselves bemoaned the fact that "there has been almost no national multi-sectoral studies that have established a wide data base as well as an indepth analytical framework".[4]

Interventions in Child Health and Welfare

The history of interventions in child health and welfare in India may be broadly divided into three phases.

I — Pre-independence :

This phase was marked by little or no involvement of the State in child welfare. Many pioneering child welfare agencies of the voluntary sector were established during this period. Balkanji Bari and Children's Aid Society (Bombay) and the Guild of Service (Madras) are the best examples.[4] However, all of them were urban based and institutional in their approach.

II — Post-independence (till the seventies)

The constitution of India pledged support to the needs and welfare of the child but the first two five year plans saw not even a mention of the child. However the establishment of the Indian Council of Child Welfare (ICCW) in 1952 and the Central Social Welfare Board (CSWB) in 1953 helped to mobilise voluntary activity in all the States on behalf of children's needs and welfare. Through grants-in-aid to voluntary organisations, both these organisations supported balwadis, nursery schools, creches, orphanages and rehabilitation centres. However, the stress was on the charity and welfare dimensions strengthened through the institutional framework of the services. As in previous years, the focus was on urban areas though the balwadi programme did reach

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some of the rural areas through the organisation of supportive mahila mandals. In the third plan at the instance of ICCW a Child Welfare Plan was contemplated but beyond a few integrated child health programmes like the Indo-Dutch project at Chevella Block (Andhra Pradesh) and some balsevika training programmes nothing much materialised.[4]

III — 1970 onwa

In the last fifteen years the child in India has for the first time found a separate niche in our planning exercises. Children are beginning to be considered as an economic asset in whose health, welfare and education the country should invest.

In the early seventies, special nutrition programmes trying to integrate health care, nutrition and health/nutrition education were launched. These were the special nutrition programme (SNP), applied nutrition programme (ANP), mid-day meal programme for school children (MDMP) and more recently the world bank supported Tamil Nadu Nutrition Programme (TNP). These programmes helped in creating a general awareness and some organisational base for future programmes in terms of centres and field workers. However, there were major weaknesses which prevented them from making much impact. Limited financial resources, poor project formulation, inadequate monitoring and feed back systems and lack of community participation were the most important among these.[5]

The National Poilcy Statement on Children (1974) was the next major event. It sought to provide adequate services for children both before and after their birth conducive to their physical, mental and social development. It was envisaged that the National Children's Board and two national institutes — the National Institute for Public Cooperation and Child Development (NIPCCD) and National Institute for Social Defence (NISD) established for this special policy would plan and coordinate a series of programmes organised through the Ministry of Social Welfare. These programmes would offer health and nutrition services; free and compulsory education upto 14; pre-school education and non-formal education for school drop outs; physical education and recreational, scientific and cultural activities; programmes for disadvantaged and disabled children, protection against neglect, cruelty and exploitation; control of child labour; relief in times of natural disasters; child welfare legislation and attempts to strengthen family ties through the organised services.[4]

The Integrated Child Development Services, a package plan for 0-6 year olds in urban slums, rural and tribal areas launched in 1975 was the foremost of these proposed programmes. Starting with 33 experimental blocks, it was increased to cover 620 blocks in 1982-83 and is expected to cover 1000 blocks by 1985. (See Box II and III for overview and evaluation). This programme which in its magnitude is probably the largest one of its kind in the world is

II — INTEGRATED CHILD DEVELOPMENT SERVICES (an overview)

Objectives

1. Reduce malnutrition, morbidity and mortality in 0-6 years
2. Improve health/nutritional status
3. Provide environment for social, physical, psychological development
4. Enhance child care ability of mothers.

Organizational set up

Ministry of Social Welfare at Centre/State level
Block : BDO coordinates with Child Development Project Officer (CDPO)
Village : Anganwadi for every 1000 population with anganwadi worker offering services.

Beneficiaries (by 1985)

Immunization and Health Care = 10.3 million
Supplementary Nutrition:
Children = 6.1 million Women = 1.1 million
Mothers with non-formal education = 3.4 million

Package of services

— supplementary feeding;
— immunization and health check up
— referral services
— nutrition and health education
— pre-school education
— non-formal education for women

Coverage

1975-76 — 33 blocks (experimental)
1982-83 — 620 blocks
1985 — 1000 blocks
(Total no. of blocks in the country = 5011)

Financial outlay (1982-83) per project in rupees

Rural = 1.5 million Tribal = 0.95 million
Urban = 1.68 million
(costs include costs of staff, strengthening PHC, recurring cost of medicine and POL, supplementary nutrition and non-recurring costs).

— ICDS — An Assessment
UNICEF, May 1983

III—INTEGRATED CHILD DEVELOPMENT SERVICE (An assessment)

Positive Points

* 60% of 0-6 age group covered in areas of operation
* 62% of children from poor families were covered
* More children received immunization/nutrition services in ICDS areas as compared to non-ICDS areas depending on regular PHC services
* Immunization coverage was beyond 50%
* Cost of Anganwadi is Rs. 12 per year per beneficiary over and above the cost of health services infrastructure

Negative Points

* High drop out rate in serial immunizations
* Vaccines not available regularly
* Poor arrangement for referral services
* Important drugs not generally available especially in rural/tribal blocks
* Visits by medical/para medical staff irregular. Busy with family planning and other campaigns
* Personal hygiene of children poor
* Severely malnourished children detected but no special diet developed. Food supplement merely doubled
* Community contribution and participation poor and adhoc

Problem areas

* Quality and applicability of training
* Magnitude of community involvement
* Regularity of delivery of supplementary food
* Social/cultural barriers which limit participation by certain castes
* Weak link between the grass-root level worker and the block.

— Krishnamurthi & Nadkarni (1983)[5]
B. N. Tandon et al (1983)[5]

the symbol of this new and definite commitment to comprehensive child health and development in the country. How far this change of focus and effort will be sustained and supported only the future will show.

The 1980's have seen the development of a plethora of National Policies and Perspective Plans: eg., National Population Policy, National Health Policy (1983), Projections and targets for Health for All by the year 2000 with a 20 year perspective, Targets for Water and Sanitation Decade (1981-1990), Objectives and Targets of the Sixth Plan (1980-85), Approach to the 7th Plan (1985-89). All these have components that will make major impacts on child health and development if they become even partial realities. The question, however, is whether our present socio-political situation and the imagination of our health professionals can sustain such a commitment.

The Challenges ahead

After decades of rhetoric we have now moved into a phase of realism (or is it populism?) where in quantitative and qualitative terms the commitment to child survival, protection and development issues have begun to receive more than casual attention. However, even though the outlay on social welfare has shown a fifty times increase from the first to the sixth plan, it is still important to remember that this is still 0.2% of the total plan outlay (the highest percentage was in the second and fourth plans = 0.6%) and represents an actual decrease from previous plans.[4] From this fact itself it is obvions that in spite of policy statements we have yet to realise the value of children as potential human resource for the future of the nation.

The ICDS is an important milestone in keeping with the growing realisation that "whether judged by hard-headed economic calculation or by the elementary tenets of human welfare, protection of the physical and mental capacities of a nation's people and a nation's future (children) is the most fundamental of all investments'[4] Recent evaluations and assessments (see Box) show that we have a long way to go to make the scheme reach the urneached millions. Even where it has reached, the status-quo factors in our social, cultural, political and professional milieu are preventing the services from being effective. Is that surprising?

The challenges ahead are multiple. Firstly, a challenge to our professional and technical manpower and in reality to Indian Science itself. As Dr. Ramalingaswami has recently said "the tragedy of Indian science is that while we have demonstrated the ability to put a geostationery satellite in orbit and set up nuclear power stations, we are still faltering in national immunization programmes in which at best no more than a third to one half of the eligible child population are getting immunised now".

Secondly, a challenge to health workers in particular who need to 'lend their expertise to much more far reaching campaigns involving people, institutions and channels of communication which go far beyond the present scope of health services themselves'!

Thirdly, a challenge to our socio-political system for it is well-known that 'greater social justice is of fundamental relevance to the well-being of children'.

— *An Editorial Review*

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(Abridged copies of 1 & 2 and copies 3, 4 & 5 available on request form UNICEF, 73 Lodi Estate, New Delhi 11003)

(*Contd. from p. 12*)

the number of ORS packets per 100 children under five in 1984 was only 34 in 1984 (State of World's Children UNICEF, 1987).

If neither within nations nor between nations, structural changes are going to take place even if they are moved by the plight of the dying children what makes UNICEF confident that nations will want to adopt the UIP ? "Assignment Children", 61/62 UNICEF states"....the decision maker must either see the problem as a felt need, as a poltically attractive issue, or be willing to make it one. Small pox eradication was not initially a high priority in a number of endemic areas. Threats of economic sanctions and international quarantine helped these reticent nations to develop a cammitment to the programme. Offers to pay for a programme, such as US funding of the global malaria campiagn of the 1960s can often create political will. As unpleasant as it sounds, such coercion is not uncommon and can serve useful ends". (Haven't we heard this before ?)

"Assignment Children", 69/72 UNICEF further states "There are perhpas two main reasons why the governments of the industrilized world might wish to consider a much greater support in order to realize the greater potential for UIP ? The first, and most important, is that the immunization of all children remains one of the greatest humanitarian goals. The second is that it would also result in very signifcant economic gains for the industrialized nations themselves. Evidence for this can be found in the annals of the international campaign to eradicate smallpox. In 1967, smallpox killed an estimated 2 million people, In 1977, the last case of small pox was recorded in Somalia. The cost of the eradication campaign was approximately US $ 24 million a year, of which about one third came from the developing countries themselves. For the duration of the programme, the USA contributed a total of US $ 32 million (in 1970 dollars). Since then, the Government of the United States of America has been able to discontinue small pox vaccination and dismantle its elaborate quarantine and surveillance systems—which were costing approximately US $ 120 million a year in today's terms. In other words, the eradication of a major disease has meant that the USA is now saving *every few months* more than the total amount it invested in the eradication programme itself (emphasis theirs). As we have already stated, the USA is today spending approximately US $ 50 million a year on vaccination and routine surveillance against measles and will contine to do so for as long as measles is at large in the world. A successful eradication programme would therefore save the USA, US $ 50 million a year—every year from now on".

A child Survival *Revolution* strategy could either mean that we go round and round in circles, spinning on one's axis or overthrow, or change the explotitave system, the major deterrant to survivals.

It is not because of some quirk in one's character that one keeps harping on the socio-economic-political roots of both illhealth and the strategies that are popularised/imposed (and it certainly does not improve one's temper !), I too feel the need to think positively, but give us some evidence please.

Sathyamala

MFC - Bulletin NO 133-134, OCT-NOV 1987
From the Editors Desk - By Satyamala 5(ii)

R.N. 27565/76

From the Editor's Desk

The theme for the next annual meet is Child Health in India. Unlike the general trend in mfc to critique a new policy/strategy, the moment it is announced, this time we will have the experiences of five years of GOBI (Growth monitoring, oral rehydration, breast feeding, immunization) and the three years of UIP (Universal Immunization Programme) of the UNICEF. So, instead of sounding like prophets of doom, we have the possibility of looking at these programmes in the light of the 'Indian' experience. But this exercisse will probably be hampered by a major constraint.

There are no authentic studies to show the general pattern of illnesses in the under-five population. Most of the quoted figures are from sample surveys localized to specific areas and hence cannot be generalized. What everyone does seem to agree is that infant mortality rate in India is high (again estimates vary from 105-220/1000 live births). By putting together the little data we have, one can come to a common agreement that the major cause of mortality in the under-five children is diarrhoea followed by respiratory infections and measles/tetanus with polio causing a high level of disability and pertussis, perhaps, a high level of morbidity (but there are no community based surveys to show the extent). According to the only large community based study that we seem to have, (Narangwal, 1971/73), of the 135 deaths per 1000 in the age group of 0-3 years, 39 was due to diarrhoea/enteritis, 19 due to pneumonia/respiratory, 5 due to malnutrition (starvation ?) including low birth weight, 2 due to tetanus, 1 due to measles and 34 due to other causes.

Both diarrhoea and respiratory infections although the most common causes of death, are muti-factorial in etiology and are not preventable by vaccines available today. With measles, it is a well known fact that mortality increases by 400 times in under-nourished children.

Tetanus is probably the only one in which the relationship between nutrition and mortality/morbidity has not been established (but nevertheless it is a reflection of poverty and disparities). Yet we are going to be spending approximately Rs. 161 crores, 70% of which will be supposedly contributed by the GOI, on the vertical UIP to prevent immunizable diseases. If the intention was to reduce childhood mortality, surely the vaccination technology provides a second best alternative. Why then this emphasis ? UNICEF's "State of the World's Children, 1987" provides a clue. "Poverty is the basic cause of early deaths, ill health and poor growth among so many of the world's children. In the 1980s, programmes against that poverty has been slowed, and in many nations thrown into reverse, by the effects of a long-running world recession....structural change within nations—including land reforms, the redistribution of income-earning opportunities, and economic policies designed to increase the participation and productivity of the poor are fundamental to the reacceleration of the progress. Similarly, structural change between nations..(yes, this *is* from the UNICEF's report)....is also fundamental to the restoration of growth worldwide and to the creation of the conditions in which the vast majority of the world's families can earn enough, through their own efforts, to improve the quality of life for themselves and their families....UNICEF which devotes the bulk of its own resources to the development of basic living conditions in the developing world, is now drawing on its own experience, and that of the many governments it has worked with over the last forty years, to try and to find new ways and means of maintaining progress for the world's children even in the absence of significant increases in the resources available".

So the key phrase is "in the absence of significant increases in the resources". Attacks on diarrhoea is not possible without an attack on poverty. Even in diarrhoea, a half-hearted attempt was made at introducing the 'appropriate' technology of ORS which met with a very low success;

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JULY 1987

Paralytic Poliomyelitis : A Tragedy on the Rise

Gloria Burrett

The Spastic Society of Northern India is a voluntary organisation which runs the Centre for Special Education. This is a special school for children with cerebral palsy. Here problems such as stubborn self willed limbs, specific learning difficulties, hearing problems and unintelligible speech are handled by a group of professionals working closely with the parents of the affected children. This article traces our increasing intervention in the area of polio, both in management and prevention. This is significant in that, cerebral palsy was intended to be our main area of specialisation. We also hope to project through this the enormity of the problem in that—epidemics of polio are occurring in an area well connected to hospitals; despite the OPV (oral polio vaccine) children are being affected by polio; and general practitioners are aggravating the problem by the indiscriminate use of injections.

Our rural centre:

Two years after starting our centre at Delhi and following our brief experiment with the children from Madangir (an urban slum development area of Delhi), we felt it was necessary to reach out to the many children affected by cerebral palsy in the villages. Our centre would have to be sufficiently distant from Delhi for it to be viewed as a necessity and yet close enough for our regular visits. This October will have made it six years since the inception of our rural centre at Dayalpur village (Faridabad District). The centre is situated within the Primary Health Centre campus, 10 kms from the district hospital at Ballabgarh which is also the training centre for interns from the All India Institute of Medical Sciences, and approximately 20 Kms from the main civil hospital at Faridabad. One could say that the area we chose had access to primary health care as well to other referral services.

Soon after the rural centre was opened, we realised that there were several problems in starting a centre of this kind in villages. The whole area of "handicap" is not a priority. Children with severe cerebral palsy die or are starved to death. In poorer families like those of the daily wage earners where the work load on parents is greater, each day's wage is precious; and where it is difficult to feed one's normal children, the handicapped child is a problem that is best forgotten. So, often we had to create a problem in the minds of parents and make the child's handicap appear more serious than it seemed to them at that time. In our minds we could imagine these disabled children growing into handicapped adults.

Shift of Priorities:

Of the seven students we started with, only one, a severely handicapped, immobile, intelligent, eight year old with cerebral palsy was brought in by parents who were desperate for our services. The others we admitted were either mildly affected physically and/or had speech problems. One was a child with polio whom we wanted to integrate into a normal school as quickly as possible. There was always the feeling that with our limited staff and our initial intention of rehabilitating children with cerebral palsy, the condition of polio could never take precedence. We believed that the severely affected spastic children in the course of time would make up our numbers and take up our full attention.

However, within six months, and increasingly so today, the great number of polio referrals and to a lesser extent those with hearing problems have made us think otherwise. The following facts are indicative of our growing involvement with polio.

Today the breakup of our children is as follows:

Polio	—52
Hard of hearing	—24
Cerebral palsy	—17
Others	—13

These figures are not a complete index of cases existing in this area, but only those who attend our centre. There are many mildly affected polio cases who see no need for our services and some severely affected cerebral palsy children who are unable to attend our centre. But we are aware that the number of polio children who are not being catered to by the centre at present far exceeds the latter.

To cater to the growing number of cases other than cerebral palsy, a home management programme was introduced for children needing specific help in one or two areas and needing to attend the centre only once a week, fortnight or a month. We held a six-months training course for local men and women to enable them to detect, diagnose and treat polio. Right now there are six fully trained rural rehabilitators who are instrumental in increasing the number of polio referrals. Their closeness with the community aids detection. They also have a special ability to motivate parents as three of them have children affected by polio.

Our medical follow-ups include regulation of drug doses for epilepsy, diagnosis of neurological conditions, audiograms, applying for free aids available in hospitals and operations. Of these, the most running around is involved in the case of operations. Upto five visits are necessary before a child is admitted and another four during admission to get feed-back from doctors. Of the 25 cases we have referred so far, 23 are cases of polio. Following surgery, and also in most polio cases not requiring surgery, calipers and crutches are essential. This requires another round of hospital visits, to ensure that the recommendations we forward are heeded by the doctors. Getting into the area of polio sometimes forces from us a greater involvement by way of time, energy and manpower than we had bargained for and yet there is no choice for us.

What would happen if we referred all such cases to the nearest hospital? The Civil Hospital at Faridabad has two orthopaedic surgeons but our operation cases were turned away with the statement that "this operation is not done here". The District hospital at Ballabgarh does not have an orthopaedic consultant. Four years ago, during an ICMR project on polio, a team from the Rehabilitation department of the All India Institute of Medical Sciences visited the hospital regularly twice a week. Since then all cases requiring rehabilitation are referred to Delhi where the department provides us maximum support by way of diagnosis and provision of aids. A word about the ICMR project is in order here as an example of Government's intervention in the area of polio. The project covered the greater part of Faridabad district. The ICMR team conducted an impressive survey of the number of handicapped children of all categories in all the villages. Measurements for calipers for all polio children were taken at one go and the families were promised delivery of free calipers at their homes. Although some children did receive the calipers immediately, we know that these were still being delivered as much as two years later. Apart from the obvious outcome of ill-fitting calipers and disappointed parents, even those with well-fitting calipers discarded them in a couple of months due to a lack of follow-up. Many homes in the ICMR project area display calipers hung up on the walls as an 'object de art'!

Coming back to the question of referral services for the handicapped children, the chances are that they would be sent onto the hospitals in Delhi of which, Kalavati Saran Children's hospital, the All India Institute of Medical Sciences, and the Safdarjung hospitals are the most frequented. Generally in these hospitals, even if they boast of superspecialities, the rehabilitation units tell a sad tale. I recollect how an intelligent and a very confident parent of one of our polio children had to intervene in his son's treatment. He realised that the fixed contracture would need more than the wax treatment his son was being given. The Consultant was, fortunately, honest enough to admit the misktake—a costly one for the father, who had to travel the long distance from Haryana to Delhi, but the father was allowed to meet the consultant only on his third try when accompanied by me. We also have had parents tell how

futile they felt the daily sessions to be and even after a year of treatment at one of these hospitals many parents have no real knowledge of the problem. Over 50% of our cases are drop-outs from such hospitals because of the problems of distance, time and money, They now have children needing operations for unattended fixed joints because of parental frustration in the face of the uncaring medical profession.

All this has forced us to get into this area of polio in greater depth. We have had to follow-up old hospital cases, accompany parents to hospitals, be actively involved at every stage of the operation procedure, and motivate parents and children into doing therapy so that mobility and integration may follow.

This management of polio has made a difference in that it has helped us gain more credibility. While earlier, a high percentage of acute cases relied on the local village 'phalwan', who claim to have the ability to activate flail limbs through vigorous massage (even within the very vulnerable first month following the onset of polio), today, we are being referred acute cases as compared to the initial referral pattern of cases of plus-five years of duration.

From Rehabilitation to Prevention

The next step was apparently to go beyond the acute cases and evolve measures to prevent or lessen the incidence of polio. However, after giving it much thought, we felt ill-equipped to get involved with such measures. It would have meant involving ourselves with too many priority problems, a situation where we would be spreading ourselves too thin. We already had on our priority list the following priority areas: training courses, sheltered workshop, employment opportunities in factories, educational programming, integration, daily management of cases, following-up government facilities for the handicapped and completing the medical follow-up. But two issues forced us into the area of prevention sooner than we thought. The first was a recent case of polio following an injection administered by a private practitioner for low grade fever. The second an epidemic of six cases of polio at Madalpur village. This epidemic would have gone unnoticed save for the referral by a Physical Training instructor in the regular school who had been approached by parents to strengthen their daughter's lifeless limbs (she had been a normal two years old till two days before the paralysis). Since then an isolated case of six-days onset was detected by us in Tigaon. In all 10 acute cases were enrolled in the month of April 1987.

There were three disturbing facts about this epidemic. (1) A recent survey carried out by the Dayalpur primary health centre showed that out of the 36 cases who had received three doses of OPV, 18 had contacted polio; (2) why with two hospitals within half an hour away, should there be such an epidemic? Both these hospitals run primary health centres attached to them, and immunisation is meant to be a priority area for the staff; (3) It is a known fact that 90% of the polio cases follow injections given during the early symptomatic stage of fever/cold. Why then were the doctors indiscriminately using injections for fever cases in children? The urgency of the situation however, demanded that we take immediate action. Our action included working at four levels:

1. *Private doctors*— A meeting was held where all the private doctors from the nearby villages were invited to find out their routine 'treatment' of polio as well as their awareness to the link between intra-muscular injections and polio. The meeting was most revealing in that none of the doctors present knew that an IM injection could aggravate paralysis. They felt that as long as there was no reaction to the injection and as long as it was properly given, no problem could result. They surmised that only when the child was injected wrongly, 'injection palsy' could result, and the fault therefore lay with the technique and not with the practice.

We did manage to convince them of otherwise with our practical experience, medical data, and explanations. They were also made aware of our seriousness in following up each such case with the doctor concerned. Even those who did not attend our meeting were sent a summary of the proceedings. Appreciating the doctor's problem of giving into persistent parents to whom an injection is a magic remedy, we arrived at the following compromise. The doctors could continue using injections as before except in children under five years of age suffering from fever and chills and especially during the months of May to September. As a follow-up to our meeting, a private doctor ready to inject a child put the syringe away and persuaded the mother to rely on tablets, on sighting two of our staff who chose that moment to call on him!

2. *Affected Families*— A day after hearing about the epidemic, our local team went round Madalpur with their charts and songs on polio. As people who had gone through similar experiences, the members of the team supported and advised the parents of the affected children. Stress was placed on 'what not to do' in the first month following the attack. A report was lodged with the Sarpanch, and details regarding our centre was left with the parents. A month later as none of them had visited us, another visit was made to explain the change in treatment and to look into the matter.

3. *Community*— An all out effort was made to inform all our old and new parents as well as their neighbours about the epidemic, the need for immunization and the role of injections. Many who had not been given the OPV in Tigaon were referred immediately to Ballabgarh hospital.

4. *Government Health Authorities*— Madalpur village is under the jurisdiction of the Chief Medical Officer, BK Hospital, Faridabad. Through a letter personally delivered to him, we appraised him of the situation and the need for follow-up action. We also offered our help. However, there was further feed back only when our local team made a second visit to the area a month later and found out that children had been given their first round of OPV. Following the CMO's delay in getting back to us, we approached a doctor at Ballabgarh district hospital who felt that it was not possible for one government organisation to interfere with the area that lies within the jurisdiction of another government organisation. He also felt that we, as a voluntary organisation, should not have delayed in buying vaccines and administering them in the village when we came to know of the epidemic. It was obvious that the problem was back in our court. But the question remains as to why a voluntary organisation be asked to take on a major responsibility when there were well-equipped and well-staffed government hospitals that were supposed to provide comprehensive health care to the population it covered. We still have to meet the CMO, the Health Workers, and Supervisors at the two sub-centres (Madalpur and Tigaon) to find out details pertaining to the immunisation programme.

There is no way of knowing how effective all this will be. Our credibility in this area has certainly

(*Contd. on p. 7*)

(*Contd. from p. 4*) 5(iv)

gone up. Following repeated requests from the parents of polio children and the village leaders, a new centre has been opened at Tigaon. A recent survey done by the local society (Jan Kalyan Samiti) gave us the names of 50 polio children. This did not include the 8 already being treated by us, and those detected more recently. It is interesting to note that the list has 3 deaf children and one child with cerebral palsy. It does seem that we will have to change our priority from providing services for spastic children to helping children handicapped with polio. It is not so much the change in priority that is causing us concern, as much as the question—When the simple technology of immunization is available why should a situation of increasing incidence of paralytic poliomyelitis come up? Could this tragedy not have been averted?

ii) Our efforts should be focussed on supporting existing system to promote HFA 2000.

iii) Our efforts should be health oriented and should balance knowledge, attitude and practice dimensions.

iv) Need to train people as role models.

v) Should foster team work not individualism or isolationist approach.

vi) Should utilize all existing resources in the community.

vii) Should promote a flexibility in human resource development responding to different needs in different communities.

viii) We should prioritise the categories of people who need to be trained. The present system is top heavy, disoriented and too expensive for the community and the government. We need to balance the categories.

ix) Human resource developments should be related to needs and based on decentralised planning.

x) While determining the optimum mix we should make conscious decisions to allocate finances for different categories as well as use existing resources optimally.

xi) The policy must stress continuing education and constant updating of knowledge and attitudes at all levels.

The broad principles that emerged in the groups deliberations were that our new policy emphasis should be

i) <u>On humanpower</u> development training at the peripheral level

a) Full time government and other workers, rural development, extension workers, panchayat workers.

b) Quasi government - Anganwadi, Community health volunteers guides etc.

c) Volunteers - TBA's, traditional medical practitioners

d) Religious groups, social activists and NGO's.

ii) We should work together and support each other.

iii) We should be accountable to the community and focus on educating and empowering people to their own roles and responsibilities in health.

iv) We should also identify people at higher levels of the system - doctors and administrators and try and foster the right attitudes, values and practices in them.

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MARCH 1988

Report of the XIV Annual Meet of the MFC on Child Health

20-21 January 1988, Jaipur, Rajasthan

The theme for the annual meet had been chosen keeping in mind the current emphasis on child survival as the most revolutionary concept in child health. As several participants had not received the background papers in time, the sessions started with the summarizing of the background papers. The discussions that followed in the small groups was facilitated by the listing out of questions that arose in the context of the information that was presented. The four major areas that were identified for discussions were :

1. Acute respiratory infections;
2. Immunization;
3. Survival of the girl child;
4. Nutrition and child health.

Following is a brief report of the discussions that took place in the 1½ days of the mfc meet. The afternoon session of the second day was spent on discussing the changing emphasis from child health to child survival. The meet ended with the evaluation by the participants.

Acute Respiratory Infections (ARI) : Among childhood diseases, ARI forms the second most common cause of deaths in children. Estimates of mortality range from 15% to 25% of the total childhood deaths. Studies have shown that 20-40% of out patient and 12-35% of childhood hospital admissions are due to ARI. The background paper prepared by Abhay Bang highlighted the problem and the strategies that are being proposed to deal with them. Studies have shown that the frequency of attacks of ARI per child per year is similar in the developed and developing countries. Within developing countries, frequency is more in urban areas as compared to rural areas. This would suggest that socio-economic improvement may not be a major determinant of the *frequency* of ARIs but overcrowding is certainly an important factor as the organisms cannot survive in the absence of a large population in constant interaction with each other. However, the severity of the infection and the resultant mortality are significantly high in the under-nourished children. For instance, in a study carried out in Manilla, the case fatality ratio in well-nourished children was 6/1000 episodes whereas in the severely under-nourished children it was 77/1000. Smoke (fuel and tobacco), vitamin A deficiency are other factors influencing incidence and mortality rates.

The control of ARI through a single vaccine is not possible because of the large variety of causative organisms involved although it is estimated that 25% of the total mortality due to ARI can be prevented through the vaccines available today (against diphtheria, whooping cough, tuberculosis and measles). Based on the fact that majority of the acute lower respiratory infections are caused by bacteria and hence amenable to treatment with antibiotics, and based on the Narangwal experience that showed a dramatic

reduction in mortality when these children were treated with injection penicillin by Family Health Workers, a secondary prevention approach—Case Management Approach has been formulated. According to the guidelines, a respiratory rate of 50/minute is the criterion chosen for identifying children who need antibiotics. Currently pilot studies are being carried out in 4 centres in India to assess the feasibility of launching a nation wide programme of ARI control through the case management approach.

Question was raised about the sensitivity of the indicator recommended i.e., respiratory rate of 50/minute. According to the background paper, this rate was likely to give the lowest number of false positive and false negatives. Some participants however felt that the 72% (true positive) was too low a figure to justify its use as a diagnostic criterion. It was also noted that if one increases the sensitivity of a test, its specificity may not remain and therefore a balance has to be achieved and the recommended criterion of the respiratory rate along with history given by the mother (difficulty in breathing) should be sufficiently sensitive. A suggestion that field workers be given a stethoscope did not find favour as it would not improve diagnostic possibilities.

The case management approach raised two major areas of concern. One was related to the development of high levels of antibiotic resistance in the community and the other, the possibility of hypersensitivity reactions to the antibiotic recommended (penicillin). It was agreed that antibiotic resistance would definitely emerge as an outcome of its widespread use, but it was contended that in any case resistence is going to occur in about 10-20 years because of the widespread *misuse* of antibiotics by private practitioners, so at least till then why not let all sections of the society get its benefit! To the question of sensitivity reactions it was stated that in children anaphylactic reaction to penicillin is very rare and since some felt that intra-dermal test was quite useless it was well within limits to accept the risk of 1 in 2.5 lakh without the test dose. This question was not resolved to everyone's satisfaction. The question of referral was then considered. It was suggested that in the case of recurrent symptoms and wheezing, referrals may be required and that there was a need for an x-ray unit at the referral level. There was some dissent on this.

The etiological picture in ARI is different between the developed countries and the developing ones. In developed countries, viruses and mycoplasma were the major organisms whereas in the developing countries 60% of the cases were bacterial. It was suggested that climatic conditions could be an additional factor but it was pointed out that the native American Indians living in Arizona in a relatively lower temperature, also showed organisms similar to that in developing countries. It is possible that even in developing countries ARI may be of viral in origin with superimposed bacterial infections.

No consesus was reached about the ARI control programme on a nation wide basis. If this programme was to be launched, it will be yet another vertical programme to add to the other existing vertical programmes with all the attendant problems. At present adequate data is not available within India as the pilot studies are still underway. There may be opposition from the medical establishment if paramedical workers are allowed to handle antibiotics. Finally, a programme such as this might succeed in decreasing mortality but the attack rate and morbidity will continue to remain high.

Immunization : The article entitled "Universal Immunization Programme: A Positive view" by Ashok Bhargav and Anil Patel (mfcb 133-34) formed the background paper for discussion. (Since it has already appeared in the bulletin, it will not be summarized here). Despite the non-achievement of targets in the Extended Programme of Immunization, our country launched the Universal Immunization Programme in Nov 1985. (The EPI had only 14% coverage for DPT and 5% for polio). Given this experience is UIP a desirable strategy? The group felt that there are many 'dark' areas in the figures available regarding the prevalence of communicable diseases in our country, the coverage by immunization programme, the cost-effectivity of such programmes etc. It was felt certain parts of the country do not have as high an incidence of a particular disease as other areas. It is perhaps necessary to substantiate the prevalence of the six vaccine preventable diseases in the various parts of the country with data. It is essential to do this prior to planning the strategy. At the present moment it is not possible to work out the cost-effectivity of the programme. Statistics necessary for such an effort do not appear to be available. Secondly, in the current socio-political set up, it is extremely difficult, if not impossible to say that a particular programme has resulted in a particular effect. It is quite possible that an improvement in drinking

water supply, sanitation etc. may be equally cost-effective. The manner in which UIP is being promoted, as an approach in isolation, as a panacea for childhood morbidity is not acceptable. UIP cannot be a substitute for socio-economic improvement. Individual experiences shared in the group highlighted the fact that UIP is acceptable only as an integral part of primary health care programmes. It is not true that vested interests are not involved in the planning and promotion of UIP. There could be international and national political influence in the planning and selection of strategies such as the UIP. Planning for an immunization programme is more likely to be effective if it is location specific rather than uniform nation wide. Several experiences were shared regarding the different strategies each had adopted. The strength of the measles immunization programme implemented in the city of Jaipur was the large number of private practitioners that were enrolled for the effort. A single day was declared immunization day and prior publicity was given through the media. About 30,000 children were vaccinated that day in the age group of 0-5 years. The immunization programme carried out in the 20 villages around Wardha as part of the primary health care programme being carried out by the medical college had 90-95% coverage with measles, 70-75% with DPT and polio. The dropout rate between the doses was minimal and most of it occurred because the services could not be rendered at a particular time. In the subsequent years, the drop out rates diminished and for the past three years, there is not a single case of measles or polio. If planning and execution is done in an efficient manner, targets can be reached effectively.

Consensus could not be reached on these questions : can 2 live vaccines be given at the same time and whether 3 or 5 doses be given in polio immunization. Since the UIP is already amongst us, what should be our reaction to it could not be discussed due to paucity of time.

Survival of the girl child : Leela Visaria's paper "Gender bias in survival and Nutritional status of Children : Review of available Evidence" brought out clearly the paucity of substantiative data to support that girls are discriminated against in terms of food allocation. According to her, the only study that had attempted to measure in detail the quantity of food intake of children was carried out in Matlab (Bangla Desh) which indicated food intake was biased in favour of male children. Although at the macro level it is well established that in India females at ages from 0 to well into reproductive period suffer from higher risks of mortality as compared to males, efforts to understand exactly how discrimination takes place seem to pinpoint that medical intervention at the time of illness could be the crucial factor in determining mortality rates. From her own experience and on the basis of other studies carried out in India, it appears that there is no hard evidence to indicate any discrimination on a regular basis, discrimination exists only in terms of special foods such as butter, sweets, ghee etc. Kamala Jayarao had analysed the data of the National Nutrition Monitoring Bureau (NNMB) which showed that adult females have less calorie deficit than adult males i.e., the food intake of women is better than that in men or that the energy intakes are similar. Further, in the underfive age group there were no sex difierences although the underfive girls had a greater body deficit. This difference was lost when girls grew up and body deficit in women was less than in men. The conclusion reached was that women were not as underweight as men. Her paper also presented evidence from an NIN study which followed up a large number of children whose weights and heights were recorded when they were 1-5 years of age and later. The results showed that surprisingly in girls with severe malnutrition there was an attempt to catch up (the increase in height of girls who suffered from severe grades of malnutrition, the increase was much greater than not only those who were in mild and moderate grades but even than in American girls.) However the increments were not sufficient to allow them to attain a normal height. The reasons for the better performance of girls in late childhood and adolescence was not clear.

All this naturally led to a very energetic discussion. In neither of the papers there was adequate evidence that no discrimination exists in terms of food intake. Yet the impression that was created by both the papers was that no nutritional discrimination exists. Can one really quantify in statistical terms the differences in nutritional intake within a family? The very fact that an outsider (the researcher) is measuring food allocated to the different members within a family would surely introduce a bias. Does a lack of substantiative data mean that discrimination does not exist ? The NNMB data came under attack and was questioned for its statistical validity. The data had been obtained for purposes other than establishing discrimination and it was agreed that the

data should be checked for its biases. It was also pointed out that earlier when Harvard standards were used, which is a combination for girls and boys, girls tended to be more under-nourished whereas when different standards were used for boys and girls boys appear more under-nourished. The 1960-70 studies from ICMR, NIN had shown nutritional deficits in girls based on anthropometric indices. Therefore, it seemed unlikely that the situation had changed so much since the ICMR's findings that there was no longer a major nutritional deficit experienced by girls. The only conclusion that the group could come to was that there were no adequate studies to substantiate the forms that discrimination takes although they are observed as widespread phenomenon.

The group also contended that caution needs to be exercised in accepting 'access to health services' as the determinant factor in mortality rates among the girls. Firstly, until recently hardly any rural population had access to health services and this would have affected children of both sexes more or less uniformly. Secondly, we need to define what we mean by access to health services. There may be a PHC, subcentre, private practitioner or local healer easily 'accessible' to the population, but this in no way means access to effective health services. The mere act of taking a child to any of these services in itself does not indicate that they are effective enough to prevent mortality. It was also pointed out that the higher mortality rates in girls may be due to an interaction of several factors rather than the result of a single factor and that we may not be aware of these factors at this point of time because of the inadequate attention paid to the subject. The discussion then veered off into the question of how important is it to understand the factors responsible for the higher mortality and morbidity rates in the female population in order to intervene positively? Are we all not aware of the fact that women are dying and suffering as a result of the patriarchal attitudes and values in the society? In that case the positive intervention would be to attempt to change these attitudes and values and for this purpose the understanding of the *forms* of discrimination is largely irrelevant. This brought us to the same (old!) debate that has continued (and one hopes will continue) since the inception of MFC : To reduce a 'disease' of socio-economic-political origin what is the 'level' at which a socially conscious medico intervene ?

Nutrition and Child health : "At the risk of stating the obvious, it must be emphasised that growth monitoring is no more than a diagnostic and (possibly) educational tool....Growth monitoring by itself, however efficiently executed, cannot bring about nutritional improvement; it must always be followed by action on the part of the health worker and the mother—the action consisting of appropriate and necessary improvements in child-feeding and child-rearing practices. Thus, growth monitoring is not even a means to an end; it is only a means to the means" was the central point in C Gopalan's paper "Growth monitoring : Some basic issues". The ICDS (Integrated Child Development Services) with its emphasis on supplementary feeding programme is using growth monitoring (age to weight) to screen children for its feeding programme. The use of the 'under-five' growth cards is no longer concerned with the detection of growth faltering, rather it is to identify children who have become sufficiently undernourished for rehabilitation through the feeding programme. This shift has been on the authority of various Western scientists who contend that mild and moderate under-nutrition in a third world population is acceptable as these children in any case adapt as they grow up by stunting their height and a population of stunted adults is normal and healthy given the 'environmental and economical conditions'. The field level experiences of many of the participants showed that ICDS is failing to achieve even this limited objective, in that the under-three and the grade III children are not reached through the ICDS as the programme expects the children to either walk upto the Anganwadi or be brought there by someone else. Further, feeding programmes are offset by the perennial problems of substitutes, pilferage etc. Manipulation of records is the usual practice and in some instances it was seen that the weight of 2 or 3 children were marked on the same card. Integration with the health services is poor and the training institutions work in isolation and continue to emphasise 'high protein' foods. Despite these, the official evaluation have always been laudatory and independent evaluation consistently bring out failures.

In terms of intervention, to improve the nutritional status of children using growth monitoring to identify early stages of growth faltering, Gopalan's paper had quoted the study from Ludhiana which showed that marginal changes in child feeding and rearing practices which are feasible and within the means and resources of poor families might suffice to arrest growth retardation. This was greeted with some amount of scepticism.

Can mere health education improve the nutritional status in a situation where access to resources is extremely restricted because of poverty. The group also criticised the recent trends in 'harnessing' the adolescent girls for child rearing since they themselves are in need of opportunities for better growth.

Low birthweight continues to be a major problem. There seems to be a direct relationship between stunting of the mothers and the occurrence of low birth weights in the offspring. Studies have found that the *pre-pregnancy* nutritional status of mothers an important determinant of low birth weights. Medical and nutritional intervention during the time of pregnancy seems to have little impact in reducing the incidence of low birth weights.

The major issue that faced the group was the difference in the concept of child health and child survival. Only 2-4% of the under-five children suffer from severe grades of under-nutrition and some of them succeed in surviving. About 60% of children are mildly or moderately affected by under-nutrition, and most of them survive to reach adult hood. What is the 'quality of life' of these survivors? Kamala Jayarao's paper "Malnutrition and child survival" attempted to answer the question. Studies have shown that even severe under-nutrition does not damage the capacity of the body to grow during adolescence, particularly the linear growth, but the children cannot make up the handicap suffered during early childhood. A small body size results in a decreased work capacity, and hence the earning capacity, Studies have also shown that physical labour during late childhood in under-nourished children may adversely affect subsequent growth.

Kamala Jayarao in another paper entitled "Health and Nutrition" had compared the IMR and nutritional status of children in Punjab and Kerala. Punjab has a higher IMR as compared to Kerala, However, in the under five age group the incidence of under nutrition among 1-5 year olds is much lower than that in Kerala. The reason could be that the availability of better health services, better road facilities and the high female literacy in Kerala, enables mothers to seek early treatment for their children thereby reducing IMR, child mortality but because of poverty (percent living below the poverty line in Kerala, is about 47% as compared to the 15% in Punjab) food intakes continue to be low and hence the incidence of under-nutrition is higher in Kerala. *Child survival cannot be equated with good child nutrition.* Therefore programmes that aim at child survival by 'fire-fighting' strategies should not be carried out in isolation but need to be implemented in the context of the improved possibility of improved child nutrition irrespective of their degrees of under-nutrition.

The current fixation for mortality indicators like the IMR have arisen out of the fact that these parameters can be managed and manipulated without attempting to change the socio-economic-political situation. Since the time of Bhore committee we have shifted from a near-comprehensive commitment to improved quality of life to narrower and narrower concepts like child survival. Gopalan's paper "Heights of populations : An index of their nutrition and socio-economic development" pointed out that infant mortality rates, increase in life expectancy do provide a measure of the overall improvement in health status but do not tell us much about the state of health, nutrition and well being of the survivors. He suggests that height measurements and quantification of height deficits through comparison with an international or national standard and the application of the procedure of Z scores will help us to identify differences in nutritional status as between different regions, populations, groups and social classes in the country and to monitor changes over a period of time.

It must also be remembered that the concept of child survival was postulated on the basis that a policy of population control will not be successful as long as there is no substantial reduction in infant and child mortality. The national and the International planners are not interested in improving the quality of life for the children in the third world countries and attempt to do so is considered a luxury that a poor country can ill afford and is therefore discouraged. This dangerous trend must be reversed and the propaganda be exposed for what it is.

Sathyamala

(Background papers of this meet are available from the convenor's office for Rs. 10/ - per set).

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Universal Child Immunization and Child Survival : A Positive View

Ashok Bhargava & Anil Patel

The Universal Child Immunization (UCI) as a goal to be achieved by the year 1990 through a strategy of Extended Programme of Immunization (EPI) is very much in vogue now a days. Health authorities in India, for a change, are also now talking about the EPI-UCI. However, many questions are being raised regarding EPI. How serious is the Government about the EPI ? Is EPI feasible ? Can it help bring down infant and child mortality as claimed ? Or is it a facade, deception or a diversion ? Is EPI yet another ad hoc vertical programme at cross purpose with primary health care ? Is it flight of unrealistic ideas through and through ? Or is it within the reach of the art of possible ? This article attempts to address these and other related questions.

When one views the Government propaganda and take a somewhat cursory look at the published material by the Government, depending on the degree of one's gullibility or scepticism, s/he will either accept or reject out of hand Government's claim. We believe that neither will do. For a group like ours which is actively involved in evolving different aspects of women and child health care programme including immunization programme, it is not enough to just brush off Government's claims. We need an in-depth analysis of the EPI strategy as conceived and implemented by the Government. It is only by doing so we will be able to clearly identify the levels at which the Government's EPI strategy suffers from shortcomings. For, it is not enough just to point out dismally low levels of immunization attained and reject the claims.

Even a correctly conceived and implemented strategy of EPI is bound to have low rates of immunization in country like ours in the initial phase. Therefore, demonstrably low rates of achievement can hardly clinch an issue and help us decide our stand Vis-a-Vis UCI. It is only by taking the Government's claim seriously and studying the strategy more thoroughly we can assess the level of seriousness, commitment and likelyhood of success.

We therefore, begin from the beginning i.e. setting of target.

Target : The yardstick of performance

A close examination of the exercise of target setting is necessary to understand and assess the Government's intention and willingness to achieve the target requisite levels of immunization in the children population by the year 1990.

Surveys done in India have shown that at least in the year in which the EPI was officially launched (1978), the coverage of DPT and Polio vaccines was around 14% and 5% respectively (Table 2). These figures did not materially change during the years 1980-81, 1981-82 and 1982-83 (table 1). The final target of 85% of DPT, Polio and measles vaccines is to be achieved by the year 1990. The whole exercise of target setting at a theoretical level has been accomplished already (Figure 1 : John J. 1985). One would expect that the Government should set up systematically and progressively increasing targets to achieve

the final target in time. There is no evidence however to show that the Government is proceeding to set the targets in such a fashion. What one observes instead is the mystically arrived at magic figures handed down to the hierarchical order of the health bureaucracy. Since no rationale is given, one can only conclude that this is an arbitrary exercise in tune with typical bureaucratic flair for target chasing for its own sake. On the other hand, published evidence indicate that the authority has no appreciation for such increamental target setting. Thus in the handbook for medical officers (Sokhey et. al 1983) published by the Ministry of Health and Family Welfare, Government of India, the crucial question of setting target is discussed vaguely (1). This ensures that no precise annual targets will be set against which the performance can be judged. The first link in the chain of successful achievement of UCI is thus missing.

Table-1

DPT and Polio Vaccine Coverage of Under-1 Population

in millions

Year	Under-1 Population	DPT	Per cent	Polio	Percent
1980-81	48.7	6.0	12.3	1.4	2.9
1981-82	50.9	7.2	14.1	2.3	4.5
1982-83	53.2	8.3	15.6	3.7	6.9

Source : Health Statistics of India 1985, Central Bureau of Health Intelligence, Ministry of Health and Family Welfare, New Delhi.

Performance

As shown in Table 1, the DPT vaccination coverage for India is stagnating at dismally low level of 15.5% and that for Polio at around 7% even after the five years of EPI implementation.

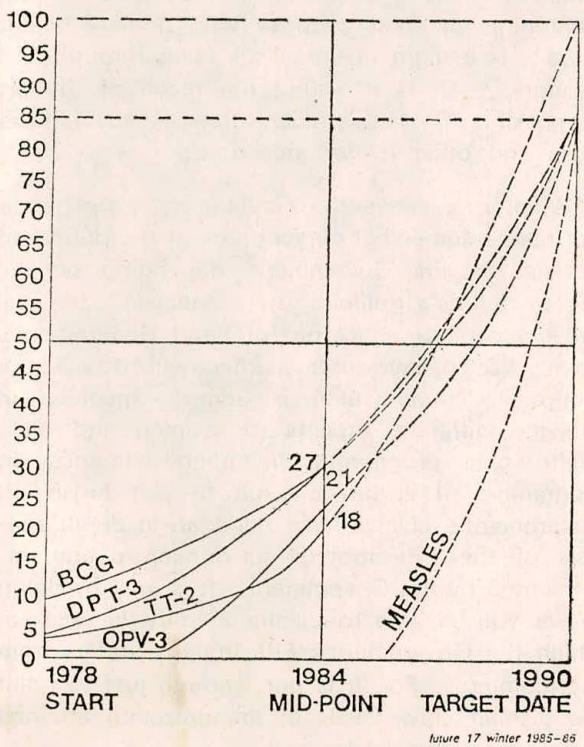
If we break down these figures for rural and urban areas the hopelessness of the situation is glaring (See Table 2).

What is the strategy adopted by the health authorities to achieve the EPI targets of 85% coverage by the year 1990 ? Does it inspire any confidence ? Unfortunately the answer is in the negative !

Don't miss any opportunity

The World Health Organisation (WHO) recommends and the Government of India accepts the following : a child's visit to any health centre, clinic, hospital for any reason should be viewed as an opportunity to immunize the child and such opportunity should be seized. This part of the strategy is hardly more than a decorative piece, because overwhelming majority of the target population is in the rural area and number of health centres which have semblance of working are far and few. Even if the opportunities are not missed, which in fact they always do (in a study done at the out patient department of Christian Medical College, Vellore Steinhoff et. al 1985 it was found that as large as 57% of children of who could be safely immunized went back without it), the impact on the coverage would be insignificant. Vast number of Primary Health Centres are oddly placed so that accessibility through public transport is greatly hampered (See Table 3). Whereas, the WHO boldly recommends that even for a single child a new vial should be opened and that not to do so is a false economy (WHO 1987), the Health Ministry blithely instructs the Medical officers that a minimum of 10 children

EPI FULL COVERAGE OF UNDER-ONES AND PREGNANT WOMEN 1978-1990



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per immunization session are necessary to make the exercise economically viable (Sokhey et al 1983).

Out reach Operations and Campaigns

For the population beyond 5 Kms. of the health centre, the para medical staff has to go and immunize en mass the children in villages. The population which cannot be covered through centre based routine immunization, and out reach operations, should be covered through campaigns (Sokhey et al 1983). Both these parts of the strategy as outlined in the Handbook are fine. But it slurs over a crucial part of the problem which is—are these teams of paramedics going to go round all the villages beyond 5 Kms all round the year continually immunizing the child population, including those who are being added in the list continually ? It does not also say much about another curcial problem—who is going to regularly update the list of eligible children and bring to the notice of the paramedics teams.

Having thoughtlessly and whimsically got rid of the vast net work of Village Health Workers (VHWs) in the beginning of 1986 (in the middle of the EPI campaign) and having failed to replace them, the Government is faced with infrasturctural vacuum at the village level. The Handbook which was prepared in 1983 when VHW net work was presumably intact and in place, does not even assign and acknowledge these crucial functions to the VHWs. There is little doubt that the preparation of the Handbook is a futile exercise in isolation and most probably is an attempt to play to the gallery. Disastrous gaps at the heart of this strategy as revealed in the Handbook is yet another hard evidence of missing link in the strategy of the EPI. Clearly the Government does not mean business.

The infrastructure

Having played havoc with the village level infrastructure in a most cavalier manner, the Government can do precious little at the moment to push for the coverage of the target population. The EPI is suffering from grievous injury—self inflicted no doubt ! The Handbook says that one third of the refrigerators at PHCs are not working. One is sorely tempted to speculate that the Centres at which the 'fridges are not working, the electricity is available and vice-versa ! And there goes the maintenance of the cold chain ! If the paramedics have continuously to visit the villages to immunize, who will look after the family planning programme—the sacred cow of the Government ! (Iyengar and Bhargava 1987) Those who are knowledgeable and realist do not need to be told as to what will be sacrificed at the altar of the Development !

Ordinarily this should suffice as a critique of the EPI as it is conceived and sought to be operationalized here. However, we should add one more point to it for the sake of record—what about the supply of syringes and needles and their effective sterilization. Injection borne hapatitis B virus is

TABLE-2

Percent distribution of under-1 children found immunized in 1978

	DPT	POLIO
RURAL	8.70	2.20
URBAN	34.04	15.58
TOTAL*	14.20	5.00

*Totals are calculated on the basis of Rural-Urban Percentage.

Source : Survey of Infant and Child Mortality, Office of the Registrar General, India, New Delhi-1979.

TABLE-3

Percent Distribution of Rural Population covered by Transport and Medical Facility

Distance	Bus stand	Medical facility
Within 2 kms.	44.7	34.9
2—5 Kms.	26.2	25.0
5—10 Kms.	18.6	24.1
10Kms and above	10.3	16.0

Source: Survey on Infant and Child Mortality Office of the Registrar General, India, New Delhi-1979.

spreading like wild fire thanks to insanitary practices (we must refrain from joining the AIDS mania). How does the health authorities propose to cotain this menace, we have no clue.

Control versus Eradication

We would certainly like to eradicate as many infectious diseases as possible, which kill and maim. The considerations which should prevent us from going for eradication, when it is possible, are those of costs and even more importantly distortions in the even development of primary health care that may result. There is no inherent tendency in the UCI to drift towards eradication. No doubt, there are enthusiasts who would like to give a push in this direction but this has been soundly and wisely resisted by those who are for healthy evolution of primary health care (Hopkins et. al 1982, Henderson 1982) Nor does that mean that at no stage of development of health care we should not push for eradication. The only point is, that at this juncture it is premature and even quixotic to aim at eradication.

The UCI and Primary Health Care

As it is, the UCI has all the markings of a vertical programme, that is, it appears to be outside and independent of primary health care, conceived and imposed from above where the community by and large is a passive receipent. There is a legitimate fear that the UCI might by-pass and scuttle the fragile primary health care set-up (This is discussed above in the section of strategy). However, this is not inevitable. In the existing situation, the viable strategy of the UCI must make a judicious combination of elements of a vertical programme and those of primary health care. The target setting, the supply of vaccines, maintenance of the cold chain and supply of trained health workers, at least in the first phase of the programme, when a huge back log of unimmunized children has to be taken care of—they all have the hall marks of vertical programme. Gradually as the UCI takes roots and becomes more acceptable to the community, more and more tasks will be taken over by the primary health workers with an increasing involvement of the community.

Reflections on some critiques of the UCI :

The UCI is open to a potential attack from yet another angle. There exists a deeply radical critique of health interventions of various sorts including health services which asserts that most of the dangerous infectious diseases in Europe came under control, before such medical interventions became available, due largely to profound socio-economic reforms. In view of this historical experience it is held that medical interventions are by and large irrelevant, if not useless for improving the health status of the society. Another variant of basically the same theory argues that all types of medical interventions, including the UCI, are not necessarily ineffective or useless but given the socio-economic structure and forces, being what they are, these interventions have no chances whatever to succeed. They are merely techniques and unless the socio-economic structure is changed in certain ways, these techniques in fact will remain ineffective and useless. The logical outcome of this argument, although not always explicitly stated, is to bring about socio-economic changes of certain kind before the technics—health intervention measures—are implemented to achieve the desired effects.

There is no doubt some truth in the above argument. The health measure technologies have to be effectively integrated into the socio-economic situation. It is also true that varying degrees of changes in the socio-economic setup and even health measures will have to be brought about. But to fashion the multi-pronged strategy to alter the health status of the community is a practical question to be worked out patiently and diligently in practice in the real life situation. What is possible and what is not possible, in this context, is not purely a theoretical question. To insist a priority that since socio-economic changes of certain types are not affected, the health intervention measures of this type or other cannot succeed, is to mistake a practical question for a theoretical one, a serious mistake indeed. Besides, even if we do not challenge the analysis of historical trend as a fact, which is open to serious doubts, it does not necessarily follow that all the societies at different time and places have to pass through the same pattern of experiences, as though driven by the force of the law of nature.

Such radical critiques have consequence, if unintended, of rejecting one and all forms of interventions strategies out of hand. Any modification in the proposed strategy or even proposing a new one is completely out of question by definition. The government, as a result gets away with most shoddy pieces of strategy without facing even a token opposition let alone a serious opposition.

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A few suggestions

From our critique of the Government's strategy of the UCI above, it is clear that the Government lacks the will and intention to carry out the programme of UCI efficiently and successfully in the first place. If it were not so, the Government was bound to take into consideration the critical features of problem analysis which are established and well known.

Problem of art of possible is not even properly posed by the Government, where is the question of its solution.

Since 1978, when the UCI was first announced, there have been several useful developments which allow a degree of optimism that a progress towards universal immunization is within the realm of possibility even for a country like India whose socio-economic order is believed to be inimical to achievement of such goals. This is so, for a simple reason that many other countries whose socio-economic order is not so much different from ours have done much better than we have. In India also, in small pockets where the will for immuization is found the comparable high rates of immunization have been achieved without unduly high investment of resources. (Balraj, V. & T. J. John, 1986; Dyal Chand, A. 1987).

The Art of Possible

A successful programme of immunization depends on logistics of vaccine supply at right temperature (2), at right time, at right age, at right place and in right quantity in the most interior villages of India and the resources in terms of equipments and personnel that would be required to carry out this exacting task (3).

Happily there have been positive developments in the last few years which pertain to improvment in vaccine, improved storage and transport of vaccine and simplified and more effective monitoring of the 'Cold Chain' (Handerson 1984a). They also include the epidemiological insight into the efficiency of immunization. As a result it is now known that immunization of children can begin at 6 weeks for DPT and even earlier for Polio (Halsey & Galazka 1985). This small looking insight has tremendous implications for acceptance and high coverage of the most difficult vaccine DPT, as we shall see. Large number of epidemiological studies have been responsible in knocking down one after another contraindication (Galazka 1984) and unnecessary precuations which created countless barriers on path of wide coverage and made the whole process of immunization extremely cumbersome. This is yet another boon in simplifying the immunization procedures facilitating the involvement of VHWs and attaining high coverage to provide protection to practically all the children.

Let us now have a look at the problems of coverage of various vaccines at village level. They are problems of different types. Most important problem is that the Village Health Workers network is demolished without any replacement. The VHWs, when they were there, and other primary health workers were totally geared to the family planning targets so the orientation and training needed to identify and solve the problems of immunization at various stages of the UCI at village level were not imparted to them. Therefore, these vital gaps must be immediately made good. The most important vaccine is measles vaccine which is still to be incorporated in the EPI in India. It must be immediately included in the EPI.

There are problems arising from the characteristics of vaccines and popular response to various types of vaccines. The polio vaccine since it is to be given orally and measles vaccine since it is only one time affair, are largely acceptable to the community. But they both require maintenance of cold chain and measles vaccination in addtion suffers from constraint that it cannot be given before 9 months of age and must be given before 15 months of age if the children have to be provided maximum protection against measles. (4). These factors effectively rule out the policy of routine immunization all round the year at village level by even the well trained VHWs.

The main problem with the DPT is the post vaccination reaction of transient fever and muscle pain, especially among the children who can walk and run. Because of this, parental reaction to this vaccine is the most formidable block. Acceptance of polio and measles vaccines also often get adversely affected because of this. Happily DPT vaccine is relatively stable at room temperature (5) and DPT vaccine unlike measles vaccination can be initiated at an early age of 6 weeks. Through out the year DPT can be given. This probably will have an effect of drastically reducing the frequency and intensity of reactions, helping to bring down parental resistance.

This will have an additional and probably a beneficial effect of dissociating two types of immunizations e.g. polio and measles vaccination on the one hand and DPT on the other.

Pulse Vaccination Versus Routine Vaccination

Utility, effectiveness and feasibility of pulse vaccination has been well established at Vellore by the pioneering work of Dr. Jacob John and his colleagues. In the context of the problem analysis we have presented, it is obvious that there is no opposition between the two approaches. They both complement each other in accomplishing the UCI and both support and strengthen primary health care. The UCI can succeed and attain its objective of child survival only if it is squarely embedded in the primary health care.

The DPT vaccination, thanks to relative heat stability and effectiveness, even in infants as young as 6 weeks can be carried out routinely and continually at the village level by well trained and supervised VHWs covering the young children of 6-14 weeks. Since the total number of immunization will be spread over 12 months, the mind boggling problem of supply of large number of needles and syringes and their steam sterilization, as is the case when pulse vaccination is carried out, is effectively minimised. Only a small number of syringes and needles will do. They can be easily and efficiently steam sterilised to kill viruses of hapatitis B & AIDS. (World Health Forum 1987).

Pulse immunization is useful in clearing out the huge backlog and also for polio and measles vaccination in the semi-annual cycles. (Sabin 1980). Problems of maintenance of cold chain upto the village level are thereby practically removed.

Concluding Observations

The Government of India although having adopted the programme of the UCI by 1990. has clearly no heart in it. It is totally preoccupied and obsessed with family planning programme. The child survival is yet to command the necessary attention. The UCI is merely a decorative piece. The Government of India in its single mindedness could not care less about what happens to the primary health care or so it appears.

Our case is that the UCI is basically a sound programme—sound on theoretical and empirical grounds. It has potential to improve the child survival, it is an ally of primary health care, and given the will and correct strategy it is within the reach of possible.

The Government must be forced to adopt the UCI with the sincerity and honesty of purpose it deserves.

Notes :

1. To set the target for immunization programme according to the Handbook (Sokhey et. al 1983) first the population of Children under 2 years should be calculated by the formula. Total population X Birth Rate X (1-IMR)X2. From this figure number of children immunized last year should be deducted and the target should be fixed at 85% of the outcome. But when one looks at official figures one finds that not only the targets fixed are much lower than that can be arrived at by the above formula but also the increase in the child population every year is not taken care of; the target figures for immunization remained same year after year. (Health Statistics of Gujarat, 1984, State Bureau of Health Intelligence, Directorate of Health, Medical Services and Medical Education, Ahmedabad. Gujarat).
2. In tropical climate vaccines are more difficult to keep at the appropriate temperature. Even highly heat stable tetanus toxide can be destroyed within minutes when exposed to temperatures of 60 C, easily obtained inside of a closed jeep parked in the sun (Handerson 1984).
3. In a typical village of about 2000 population there would be 100 children to be vaccinated. If each child takes about 4 minutes, about 7 hours working day for that village will be required.
4. *Target age group for different vaccine coverage*

Polio	Antibodies to all 3 types of viruses are present by school age. Most paralytic disease occure before age three (Beneson, A.S. ed. Control of Communicable Diseases in Man, APHA. Washington 1985). Hence all the children from birth to 36 months should be immunized.
DPT	Highest incidence of whooping cough and Diphtheria is found under five years of age in India (Park J.E. The Text book of PSM, Banarasidas Bhanot, Jabalpur 1983). Therefore all children between 6 week and 60 months should be protected.
Measles	Most of the children will have an attack before 3 years. Every child between 9 months and 36 months should be immunized. (Park, J.E. ibid).

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5. *Vaccine Stability at 37°C*

Measles (unconstituted)	Approximately 1 week
DPT	Approximately 1 week
OPV	Approximately 1 day (Upto 3 weeks at 18°C —22°C).

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The New Drug Price Control Order

—A mockery of rational planning.

Anant R S

So finally the crunch has come ! Something which some of us who have been lobbying for a pro-people rational drug policy, were hoping would not happen. But with the declaration of the New Drug Policy in December, 1986, the writing was there on the wall for everybody to see—two things were definite after the declaration of the NDP—the basket of price-control was to be drastically reduced and the mark-up on the price-controlled drug was also to be substantially jacked up almost doubled. What remained to be seen was the precise extent of this price-decontrol and the precise list of the drugs to be under price-control. These two details have now been announced on 26th August. In analysing this new Drug Price Control Order, one finds that the list of drugs included in this new DPCO is not based on any consistent principle or a set of criteria. Secondly, there is no mention of implementing other recommendations of the Kelkar Committee's report on whose recommendations this new DPCO has supposedly taken a final shape. Thirdly, there is no sign of any mechanism to eliminate irrational and hazardous drugs, contrary to the promise made in the policy-announcement on 18th December, 1986. The result is that the drug-industry has got the best of all the worlds—comparatively very few price-controlled drugs; almost doubling in the mark-up on price-controlled drugs and no obstacles to the production of irrational and hazardous drugs or their combinations.

Shameless omissions :

The NDP of 18th December, 1986 had said that the drugs under price-control would now be in two new categories—Category-I would consist of drugs required for the National Health Programmes. The Maximum Allowable Post-manufacturing Expenses (MAPE, a new name for mark-up)—for this category is to be 75%, as compared to 40% allowed for the erstwhile category-I consisting of life-saving drugs—of the DPCO of 1970.

To begin with, it is highly questionable as to why life-saving drugs have now been shifted from the old Category-I (40% mark-up allowed) to the new Category-II (100% mark-up allowed). The Government could have atleast retained them in the new category-I (75% mark-up). This new categorisation would lead to a sudden jump in the prices of most of the life-saving drugs by more than 40%. Critics have pointed out that this increase in the mark-up is based on a study funded by the OPPI (which represents the interests of MNCs) though conducted by the National Council of Applied Economic Research. Unless the cost-data supplied by the drug-companies are available for independent scrutiny, such studies cannot be taken as representing the true state of affairs. That is why this increase in mark-up has been criticized by many analysts. Secondly, the idea of removing the life-saving drugs from category-I shows that the government cares little for the life of the people and is 'bold' enough to take such a shameless step.

It reflects on the efficiency of "the Government that works faster," that it took eight months to decide as to which drugs belong to this new category-I. There are about a dozen National Health Programmes, atleast on paper, and it has been reported that the officials of the Health-ministry prepared a list of 150 drugs to be included in this category. But it is not the Health-ministry which has a major say in the drug-policy, but it is the Ministry of Chemicals and Petrochemicals which holds the reins. These gentlemen quietly kept aside this list, and instead, a list of a mere 27 drugs was included in Category-I.

This list has many shocking omissions. The most glaring omissions from category-I are the vaccines. This happens in a period when so much is being talked about "the biggest ever vaccination programme" to be executed in India as a part of the strategy of 'Health for All by 2000 A.D.' Drugs used for prevention of diseases should be given top priority in Health-planning and hence their prices should be kept as low as possible; but since the drug policy is not seen primarily as a part of health-policy, this elementary consideration has not been taken into account. Exclusion of Vitamin-A from Category-I occurs when 40,000 children go blind every year due to vitamin A deficiency and when the Government has declared a war on this national shame, with the help of a National Programme for the prevention of blindness. Other National programmes have been formulated because they seek to prevent millions of

illnesses and deaths. But the list declared on 26th August takes care of only Tuberculosis, Leprosy, Trachoma, Malaria, Filaria and includes oral Rehydration salt for 'prevention of dehydration.' It does not include even the oral contracetive pill which is used in the Government's pet programme of family-planning. In the drugs for malaria, Primaquin-the second-most important drug is missing whereas paracetamol (available under the brand-names like: Crocin, Metcacin.. etc.) a drug used in ordinary fevers, and which is not used for treatment of malaria finds a place ! Such queer selection can only be called hair-brained ; and such gross omission of a whole set of drugs required for many National Programmes can only be called shameless.

Category-II Drugs :

The Category-II drugs are supposed to contain 'other-essential drugs.' It appears that this list of 139 drugs as announced by the government is a truncated version of the Kelkar-committee's list of 154 drugs. If we compare this list with the guideline list of essential drugs recommended by the WHO, we find many glaring omissions in the government's list. Except lignocaine, which is used for local anaesthesia, none of the drugs used for anaesthesia-ether, halothane, Nitrous oxide, oxygen, thiopental, scoline, neostigmine, atropine.. etc. have been included. These drugs were not included in the Kelkar-committee's recommendations under the imbecile, bureaucratic pretext that these drugs are not "directly consumed by human users." Morphine and pethidine, routinely used in surgery are also missing. The second-important class of drugs not included in Category-II are Anti Rabies vaccine, Polyvalent antisnake venom serum (for treatment of snake-bite), diphtheria and tetanus anti-toxin, all of which are classical life-saving drugs; and are required in large quantities in our country. Thirdly, many of the skin-preparations (neither Benzoic plus salicylic acid-the classical ointment for fungal infection of skin, nor the new antifungal agents like miconazole, nystatin) find a place in this list even though fungal infections are quite rampant in our country. What is most surprising is the exclusion of the lotions used for the treatment of scabies—Benzyl Benzoate and gamma benzene hexachloride (BHC or lindane) even though scabies is typically a very common skin-infestation in the poorer communities and when the current prices of these drugs are already beyond the reach of poor people. Mebendazole, the drug of first choice for treatment of worms, is also missing. Ferrous sulfate which is being distributed to millions and millions of pregnant anaemic women and anaemic children, is missing in this list, so is the case with calcium-gluconate, which is required in hundreds of tons to be given to poor pregnant women whose bones get depleted with repeated pregnancies.

It has been argued that drugs whose annual total consumption in India is less than Rs. 50 lac have been excluded; otherwise the practical work of controlling prices of all and sundry becomes too much to handle. It is difficult to take this argument seriously in the world of computerization. But even if one accepts this argument, the omission of these common drugs which are required on a huge scale cannot be defended. ANOTHER criteria that has been put forward is that of 'encouraging the indigenous producers.' Obviously minerals like ferrous sulfate and calcium gluconate do not require sophisticated technology, so is the case with many skin-preparations. Production of Sera is also not a new technology at all in India. What is so peculiar about the technology for the production of morphine, pethidine, codein for them to be exempted for price-control, when so many drugs produced by the Indian sector by using complicated technology have been included in category II ?

One has to conclude that in making this list, none of the criteria have been consistently adhered to. The most important consideration that seems to have been applied is to make this list as small as possible and to please the big-shots in the industry. The strangest thing that defies any logic is the inclusion of a few drugs which are not in the WHO essential drug-list and which are therapeutically not important in the Indian context either or are even obsolete. These are : Baralgan, Ketone, Bephenium, Cyproheptadine, (health-groups have asked for a ban on this drug !) Levamisole, Piroxicam (a dangerous drug) Tetramisole and fifteen more such drugs. Instead of these drugs, the really essential drugs mentioned above could have been included without lengthening the list, (if that is to be accepted as a cons traint).

To offset the sharp price-rise in these essential drugs due to this new DPCO, the Kelkar committee had recommended the abolition of all taxes on them. If the Government accepts this recommendation, there would not be a steep rise in drug-prices but the Government's income would come down to that extent; to be made good by fresh taxes on other items or higher budgetary deficit

in the next budget : Ultimately, the consumer will have to pay in one way or the other for the increased profitability of the drug-industry.

The ultimate result of this new DPCO is that instead of 347 drugs under price-control as of now, there will be only 156 drugs under price control and even in this category, the mark-up has been almost doubled from 40 and 55 per cent to 75 and 100 per cent for category-I and II respectively. The result of this mockery of the concept of rational planning will be experienced by all of us in a few days.

The production of certain essential drugs currently under short supply is likely to increase because the Government has now almost doubled the mark-up on these drugs. Now that the Government has responded to the drug-industry's black-mail by conceding a much higher rate of profit, the companies will now utilize the capacities kept idle as part of their black-mailing strategy. But so long as there is no ban on irrational drugs nor any control on their profitability, the drug industry would continue to focus on these production of these non-essential but highly profitable drugs.

There is a way out :

The text of the New Drug Policy released on the 18th December, 1986, had said that A National Drug and Pharmaceutical Authority will be created and "Among other things, it would go into the question of rationalization of existing formulations in the market including the banning of formulations of harmful nature." But since then, there has not been any effective action in this regard. Banning irrational drug-combinations is important from purely price-aspect also. If only rational drugs and their rational combinations are allowed, the drug-bill of the consumer would be more than halved ! For example, most of the anti-diarrhoeal mixtures contain one rational antimicrobial agent and three to five useless or otherwise irrational ingredients. In cough-mixtures, it is difficult to find even a single really useful ingredient recommended by standard medical textbooks. So called tonics, as is wellknown, abound in irrationalities and overdosages of water-soluble vitamins whose only function is to enrich the sewerage and the drug companies. If only rational combinations are allowed, the drug-prices would come down drastically due to the deletion of unnecessary ingredients.

If it is proved by independent study open to public scrutiny, that the earlier 40% and 55% mark-up was really less compared to other industries and hence in need of an increase, such increase in mark-up should be accompanied by a ban on all irrational drugs and irrational combinations. Let the drug-industry get an adequate rate of profit without cheating the people. Then increased profits can be coupled with decreased prices of drugs : But even this simple demand is not being granted. Apparently, for the power that be, modernization and march towards the TWENTYFIRST CENTURY does not mean adopting modern, scientific planning !!

There is only one slender hope of forcing the issue of controlling the prices of many drug-combination. This can be done by putting a finger on the definiton of Category I and Category II formulations as given in this new DPCO. These definitions specify category I and II formulations as containing any bulk-drug either individually or in combination, specified for either category-I or Category-II formulations. If we strictly follow this definition, it would mean that *any* combination containing any of the drugs in Category-I and II would be under price-control. For exampl,e if a company manufactures a combination containing say theophylline (a Category-II drug) and 2-3 non-essential or useless drugs, this combination would come under Category-II and would be under price-control. In this manner, hundreds of drug-combinations would be under price-control. The Drug industry would, of course resist such interpretation but it is possible to force the government to take its own declaration seriously.

But the above is only to extract something out of a hopeless situation. The real scientific way to get out of the present muddle is to allow only those drugs and their combinations which have been recommended by medical text books and by National Medical Authorities; to disallow all other products and to give a uniform, adequate rate of profit to all such essential drugs. There is no need to make different categories within the category of rational drugs and to allow differential rate of profit for different categories. (The only exception would be research-products.) If this simple scientific demand is conceded, instead of 40-60 thousand formulations, to be controlled, or monitored, there would be at the most a thousand rational formulations made out of all the 250 essential drugs and say a hundred more second-line drugs. Let the drug-industry accept this simple demand of making a good business without cheating the people !

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JANUARY 1988

Sex Differentials in Nutritional Status in a Rural Area of Gujarat State : An Interim Report

PART—I

Leela Visaria

Women are regarded as both biologically stronger and physiologically superior to men. Biologically, the presence of a pair of X chromosome protects women against chromosome linked recessive disorders and makes them less susceptible to infectious diseases (1). Physiologically, women are reported to be more efficient than men; for a given quantum of work, they require somewhat less protein and energy than men(2). Other things being equal, these innate differences would result in lower female mortality compared to that of men; this situation is observed in most parts of the world today. In the developed countries, the sex differences in mortality has been widening. By 1983, a difference of 7 to 8 years in the life expectancy at birth between males and females was not at all uncommon and was reported by USA, France, Finland and Australia (3). The once common maternal deaths have been virtually eliminated. At the same time, the biological disadvantage of men is aggravated by a stressful life style and accidents, which account for a significant proportion of deaths. The observed high male-differences in mortality at ages 35-75 in countries such as Finland, France, USA and USSR are attributable to the higher incidence of cardiovascular and respiratory diseases (including lung cancer) and accidents among men (4). In sharp contrast to this general pattern is the situation reported by the populations of the Indian subcontinent where males enjoy lower mortality than females almost from birth until about the end of the reproductive period of the latter. This has been an important factor contributing to the anomalous excess of males in the population reported by the censuses for nearly a century now. The age specific death rates based on the recent large data sets such as the Sample Registration System in India have confirmed the excess female mortality suggested by the earlier estimates of life expectancy at birth and other ages, based on the census age data.

This paper is a preliminary examination of the data on birth weight and on nutritional status or weight gain among children under the five years of age available from a research-cum-action project in a rural area of Kachchh district of Gujarat state, to see whether and how far these support the widely held hypotheses about differentials in treatment between young boys and girls in terms of food allocation and health care, being a major cause of higher female mortality.

The Study Area

The study area was selected because of the scope for collaboration with an NGO (non-governmental organisation) based in Ratadia village in Mundra Taluka in Kachchh district. The NGO, named Shri Sangh, is led by two health professionals, actively involved in multi-faceted developmental work while employed by the Panchayat hospital with an attached maternity home. The project area, spread over 25 villages, covers about 3400 households with a population of 17,000.

Following a pretest in April 1985, a benchmark survey of all the households was carried out during June-July 1985. The region is very heterogenous in caste composition and also has a long tradition of outmigration to Bombay and other urban centres and even abroad, to East Africa in earlier decades and recently to the Gulf countries. This is reflected in the sex ratio of population in rural areas of Kachchh district, 975 males per 1000 females in 1981, was lowest in the State, compared to 1043 for Rural Gujarat.[1]

The action programme involves a careful recording of all the pregnancies, births and deaths as well as monthly monitoring of the weight of all the children below five years (or sixty months) of age. (Measurement of height began in October, 1986). The growth monitoring activity began on October 2, 1985 in five villages (total population, 2490; number of under-five children, 374). It was expanded to four more villages in May 1986 (total population 3509, number of under-five children, 414). The tenth village was added in August 1986. In addition, we have data on births that occurred in the maternity home since 1980.

Sex Differences in Birth Weights

Out of about 200-225 deliveries occuring in the Ratadia maternity home each year, between 60 and 70 percent are to the mothers who come from the project area.[2] The hospital maintains records of all the deliveries with details about the caste, education, occupation of the parents along with the sex, parity and the birthweight of each baby.[3] Over the six years 1980-85, recorded birthweights are available for almost 800 babies from the project area villages.

Admittedly, the information on the gestational age of the fetus is not accurate. Most of the women come to the hospital for the first time at the time of delivery or register their names just a couple of weeks before the date of delivery. Therefore, the information on the time elapsed since last menstruation, given by the women or their relatives, is accepted at its face value. The hospital did not until recently ascertain the gestational age of the fetus independently through measurement of the fundus height.

Interestingly, the percentage distribution of children of various caste groups according to their birth weight Shows that both the mean and the distribution are similar to those observed in many other Indian Studies (cited in Visaria, 1985)[4]. About 25 per cent of the children (22 percent of boys and 28 percent of girls, born in our project area during 1980-85, had a birth weight of less than 2500 grams. The intercaste variations in this percentage are very small except that more than 50 percent of the Harijan children (45 percent of boys and 56 percent of girls) had birth weight of less than 2500 grams. Such babies are considered "high risk" according to the WHO standards. However, the Indian pediatricians report that "full-term" babies weighing between 2000 and 2500 grams can survive with minimum inputs. As noted above, the data do not include any information on the duration of gestation, but about 5 percent of all children (4 and 6 percent of boys and girls, respectively), and 15 percent of the Harijan children (8 percent of boys and 23 percent of girls) had a birthweight of less than 2000 grams and were "at risk" according to the Indian "standards" as well.[5]

The observed sex difference in birthweights in our project area was similar to that in the data for the reference population of the National Center for Health Statistics (NCHS). On an average, girls weighed about 200 grams less than boys at birth but the difference was not statistically significant. The intercaste differences also do not seem to be significant. The limited number of observed births might be the likely explanatory variable. Yet, surprisingly, among the Barot babies, the average birthweight of girls exceeded that of boys by 110 grams. Unlike other women in this region, the Barot women tend to be tall and better-built, but the observed difference is certainly not statistically significant[6].

On the whole, boys do not begin life with any marked advantage over girls in our project area. We shall next examine whether and when in the course of next five years, clearly identifiable disadvantages emerge which adversely affect the girls.

Dynamics of the Child Population Under Observation

In our programme of monthly weighing of children, the base population changes every month. Apart from the loss of some children because of deaths, some children cross the stipulated age limit; some migrate from the region permanently with their families or are temporarily away; they are not weighed. Some children may not be brought for weighing because of illness or because parents are busy or for any other reason. The changes in the denominator as well as the numerator need to be monitored every month to assess the proportion of children weighed and the reasons

for the non-weighing of others. A summary of our data on the subject in Table 1 below indicates that close to 90 percent of the children eligible for weighing have been weighed at least twice. In a given month, however, this proportion may be somewhat less, partly because of temporary migration.

Further, prima facie, the sex composition of the under five children, who were weighed, shows a preponderance of boys (52.7 percent) over girls (a sex ratio of 1113) but its underlying factors remain to be explored. An analysis of data by village also will have to be done in order to understand the sex composition of the young children.

Table 1

Dynamics of the Under-five Child Population in Nine Villages of Kachchh District

	Boys	Girls	All
1. Total number of under-five children listed in the Baseline survey plus new births.	414	374	788
2. Number who completed five years or permanently migrated or died before weighing began in 5 and 4 villages in October 1985 and May 1986, respectively.	34	37	71
3. Number eligible for weighing	380	337	717
4. Number weighed only once	40	37	79
5. Number for whom pairs of weight measurements are available and whose weight data are analysed	336	302	638
5 as % of 3	88.6	89.6	89.0

Distribution of the Children by their Nutritional Status and Age

A list of under-five children was prepared for each village on the basis of the baseline survey data. The list was again checked and updated and ages were verified at the time of weighing of children which began in five villages in October 1985. Updating was done for births, deaths, migration and completion of 5 years during the intervention period. If ages of certain children could not still be ascertained, reference was made to the other children in the family and occasionally even to the weight of the child. In the latter cases, judgement of the health workers might have influenced the recorded age, although we had to resort to this approach only in very few cases.

Children are weighed on a Salter spring balance scale which is calibrated for 100 grams. The scale has to be suspended from a beam. The health workers have been trained in the procedures of weighing the children, reading the weight accurately, managing the child who is fidgety or crying and recording the weight in a register as well as on the growth chart, which is kept with the mother and which she brings during the weighing sessions. The mother is shown the plotted graph and is told how her child is faring in relation to the previous month's weight and in relation to the reference curves.

Subsequently, the weights of these children are plotted on large graphs separately for boys and girls so that both the weight distribution of all children and the weight increment status of each child over time are readily comprehensible at a glance.

The nutritional status of the project area children is assessed by using the data gathered by the National Centre for Health Statistics of the United States of America (NCHS) as the reference population. These data are based on a sample of American children which contains between 300 and 1600 children in each yearly age group. In addition to height and weight, other anthropometric measurements are also available such as arm and head circumference, skinfold thickness etc. The Indian standards prepared by the National Institute of Nutrition are not based on anthropometric measurements for a sufficiently large sample. The NCHS data are increasingly considered as most suitable for use as an international reference. One of the advantages of NCHS reference is that the measurements are available separately for boys and girls.[7]

So far, we have been able to collect data on weight only. (Measurement of heights of the children has begun in October 1986. It is expected that the height of the children will be measured once in every three or four months, because the increments in height are very small). The median or the mean curve of the NCHS reference data is taken as the standard. Cross-sectionally, very few Indian children fall above the mean curve. The other three reference curves on the growth card

show the two standard deviations below the mean, three standard deviations below the mean and 60 percent of the mean, for each age. The area between the three standard deviations curve and 60 percent of the mean curve is shaded and warns the health workers and the mothers that the child falling in this region is a high risk child and should be watched carefully. Those children who fall below the 60 percent of the mean curve are clearly in the very high risk category and would need nutritional supplementation under careful supervision. A single episode of illness in such children can be hazardous.

On the whole, after the age of six months, the nutritional status of each child that prevailed during a major part of the period shows a remarkable stability in the weight increment status of children in the sense that they rarely "Cross over" to the adjoining reference curves.

Table 2 examines all available pairs of weight measurements in terms of weight gain, constant weight and weight loss. The salient findings are :

1. While 3 percent of all girls (majority of them were in the age group 0-5 months) were above the NCHS median, and 35 percent above the two standard deviations from the mean curves, the corresponding percentages for boys were less than one and 34, respectively.

2. A higher proportion of girls (23.6 percent) fell below the three standard deviations from the mean curve than boys (20.8 percent). Thus, the proportion of girls at the two extremes of nutritional status was higher than that of boys.

3. As might be expected, during the initial six months after birth, 90 percent of the children fared well in terms of their nutritional status mea-

Table 2

Distribution of Pairs of Observations of Weights of Children in Project Area According to Their Nutritional Status, Direction of Change and Sex

Nutritional Status	Number of children	Total Pairs of Observations	Percent of Children Showing			Total
			Weight gain	Weight unchanged	Weight loss	
Boys						
Above the Mean	2	5	100.0	—	—	100.0
bet. mean & 2 SD	114	481	71.3	10.2	18.5	100.0
bet. 2 SE & 3 SD	150	762	60.5	11.4	28.1	100.0
bet. 3 SD & 60% of mean	59	270	62.6	11.9	25.5	100.0
60% of mean	11	41	61.0	7.3	31.7	100.0
Total	336	1559	64.3	11.0	24.7	100.0
Girls						
Above the mean	9	33	72.7	9.1	18.2	100.0
bet. mean & 2 SD	108	456	67.8	11.8	20.4	100.0
bet. 2 SD & 3 SD	115	575	67.7	10.6	21.7	100.0
bet. 3 SD & 60% of mean	58	343	61.4	12.5	26.3	100.0
60% of mean	12	61	54.1	18.0	27.9	100.0
Total	302	1468	65.7	11.7	22.6	100.0

sured by weight; but a higher proportion of girls (12.3) than of boys (4.7 percent) fell in the "at risk" category. The birth weight of a large majority of children puts them between the mean and the three standard deviations curves, and their growth pattern broadly follows the standard curves.

4. After the age of six months, however, faltering of growth begins among both boys and girls. The percentage of children below the three standard deviations curve rises to 20-25 percent or more from about six months upto four years of age, with a relatively small sex difference. A proper feeding of the children during the post-weaning period as well as managing the weight loss or lack of gain due to infectious diseases seem to pose a problem.

5. After the age of 3 years, a markedly higher percentage of girls. than of boys falls below the three standard deviations from the mean curve. However, given the small number of children, the sampling error is large and the observed sex differences are not statistically significant.

6. As indicated in Table 2, on an average, we have 4.7 pairs of observations of weight per child. About 65 per cent of the observed cases of both boys and girls relate to weight gain. About 23-25 percent of weight observations indicated loss of weight between two successive months. The extent of seasonality in weight gain or loss, is yet to be explored.

Another way of looking at the serial weight measurements (discussed by Jelliffe 1966) brings some of the above observations in a sharper focus. Ideally one needs a minimum of one year's weight observations in order to calculate the average monthly weight gain by age. However, to obtain a larger number of observations in each group, weight data for five villages (where the programme was launched in October 1985) and those for four villages (where it was launched in May 1986) are pooled. The data for five villages based on 11 months' observations show a sex and age pattern very similar to that evident from the pooled information as for nine villages. The data indicate that the total weight gain of the project children upto five years of age was 68 percent and 77 percent of the mean standard of the NCHS for boys and girls, respectively. Interestingly, girls faired better than boys in relation to the standard from the age of 6 months onwards. At every age, the difference in the weight of boys and girls in the projects area is smaller than observed in the NCHS reference data.

The data also indicate that the weight gain of the project area children was short of the NCHS standard more during the first year of life than during the next four years. Within the first year of age, the growth shortfall was somewhat more during the second half or the post-weaning period; the difference was particularly marked in the case of girls.

Notes :

(refers to numbers in small print)

1. Besides rural Kachchh, an excess of females in the population was reported by only one other area-rural Valsad district (Sex ratio of 993 males per 1000 females) according to the 1981 census.

2. According to our baseline survey, nearly 30 percent of the births of the previous one year in the project area took place either at Ratadia hospital or at a similar institution elsewhere. This figure is quite high for a rural area of Gujarat. In rural area of Gujarat State as a whole, the Sample Registration System has reported less than 13 percent of the births to be occurring in an institutional setting during 1982 and 1983 (SRS 1982, 1983).

3. The hospital nurse generally weighs the newborn on a spring baby weighing scale which is calibrated for 50 gms.

4. Prima facie, the implied sex ratio at birth of 1154 boys per 1000 girls appears implausible and needs to be investigated.

5. An effort is under way to trace each of these children to find out how they have fared later in terms of their weight and survival.

6. Barots in Kachchh are largely engaged in animal husbandry and maintain large herds of goats and sheep. They also own some milch cattle as well as land which is generally unirrigated. The Barot women are quite active in tending the cattle and also appear to enjoy decision-making power in household matters including marriage.

7. For a discussion of the NCHS data, and their advantages over other similar large data sets, see : (Waterlow, 1977).

(Contd. in the next issue)

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Sex Differentials in Nutritional Status in a Rural area of Gujarat State

PART II

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Leela Visaria

Medical Intervention in the Event of Fatal Illness

A review of studies and our own data on nutritional status provides little clear evidence of a discriminatory behaviour towards girls. The question then arises; are there differentials in the prevalence as well as the incidence of infant and childhood illnesses ? Unfortunately, the relevant information on morbidity patterns in our field area is not yet analysed. However, what is available is the information on infant and child mortality, from our efforts at continuous recording of vital events. We have tried to ascertain from the parents of each deceased child, the symptoms preceding the death of the child, the medical help sought (if any) along with the names of the practitioners and wherever possible the actual treatment. One of the doctors attached to the project in Ratadia has examined these records to indicate further whether and to what extent the cause of death can be diagnosed from the reported symptoms.

The data relating to the infant and child deaths during the 15 months since our benchmark survey conducted during June-July 1985—upto September 30, 1986 are summarized in Table 3. The number of female infant deaths was two and a half times that of male infants. But, yet, because of the small number of events, it is difficult to generalize about the sex-bias in the incidence of fatal illnesses or in the utilization of medical help prior to death. However, diarrhoea, infections of respiratory tract and post-measles complications account for close to 80 percent of all deaths. The remainder were due to congenital problems, prematurity or sheer "wasting away", presumed to be due to chronic infection.

Interestingly, the sex bias, which is believed to exist in the seeking of medical help, does not seem to be extensive here. In the case of three female child deaths, and one male child death the family had relied on home remedies only; the percentages of these deaths to total child deaths were 17.6 and 14.3, respectively. Yet, overall, young girls were also taken to the "doctors" outside the village, when there was no "health medical practitioner" within the village. (Out of nine villages for which data on death are presented, six had no "doctor" within the village, their residents had to travel about 5 to 7 kms. to reach a village with a medical practitioner. Each village is connected with Ratadia by bus communication, with at least one service per day.) In the case of four girls, parents even went to the district head quarters (Bhuj) and to another town (Anjar) to consult qualified trained doctors. Perhaps, our study region is a typical relative to other parts of the country. The contacts with urban areas as well as outside world have perhaps influenced the perceptions of parents about seeking help in the event of illness. Yet, given the wide sex-differentials in mortality, one cannot help wonder whether parents seek medical help for their daughters when it may be too late to do much to save their life.

Discussion

On the whole, we cannot identify any clear sex-bias in health care or food allocation in our project area in Kachchh. Yet, the difference in the number of boys and girls succumbing to death appears quite so that one has a feeling that somewhere something goes against girls in the process of growing up. The one dark area to which we referred earlier is the timely recourse to medical help provided to girls. Is it sought too late ? In the instance of two girls (both belonging to the Rajput caste) we were told plainly that only home remedies were tried because they were girls. Strangely enough, one of the girls was a second parity child; the earlier daughter born to the mother also had died in infancy. The other girl was a tenth parity child, with two surviving sisters and six surviving brothers. (Another daughter had died earlier). In the case of a third child (fifth parity, with two surviving brothers and one surviving sister) belonging to a scheduled caste, poverty was apparently the reason for not seeking help from a private practitioner in the nearby village. While help at Ratadia is free,

TABLE 3

Statistics Related to the Antecedents of Infant and Child Deaths

	Males	Females	All
1. Population of nine villages* (July 1, 1985)	2617	2533	5150
2. Infant deaths (July 85-Sept. 86)	5	12	17
3. Child deaths (July 85-Sept. 86)	2	5	7
4. Total deaths under age 5	7	17	24
5. Symptoms preceding death :			
(i) diarrohea	1	8	9
(ii) respiratory tract infections	3	4	7
(iii) Measles and post-measles complications	1	2	3
(iv) congenital problems	—	1	1
(v) premature birth	2	—	2
(vi) 'Wasting away'	—	2	2
6. Medical help Sought :			
(i) at Ratadia	3	3	6
(ii) within the village	—	2	2
(iii) in another village	2	5	7
(iv) in the neighbouring urban area	1	4	5
(v) used home remedy only	1	3	4

* It has not been possible to register vital events in one of the villages due to internal conflicts; our health workers have not been able to carry out their tasks, except for monthly visits to weigh the children.

money needed for busfare and the loss of a day's wage can be a problem. The mother of this unfortunate girl primarily collected fuelwood for sale to the Rajput households, while her father was a labourer engaged in stone-quarrying (considered so arduous that apparently the workers need to rest for a day after every three or four days of work).

Another issue, noted during our field visits but not yet investigated in any depth, is the position of Rajput women in the community. The available anecdotal information indicates that at the time of marriage of a Rajput daughter, her parents bid her farewell for good and give her, among other things, even a shroud to cover her dead body. The parents apparently do not hope to see the married daughter again. Quite probably, this practice is a relic of bygone era, when the transport facilities were limited and maternal mortality high, so that these women rarely had a chance to visit their natal homes. The transport facility is important because the Rajputs of Kachchh, called 'Jadejas', had to marry non-Jadeja Rajputs, of whom there are none in Kachchh. (The Jadejas of Kachchh claim themselves to be the direct descendants of the ruling family of erstwhile princely state of Kutch. Although today most of them are small cultivators with their women folk supplementing the limited family income by spinning yarn at home, their behaviour and temper resemble that of a feudal ruling caste. According to our baseline survey, the Jadejas formed a little over 20 percent of the total population of 10 villages). Therefore, spouses for marriageable children had to be found in other parts of Gujarat as well as Rajasthan. Even today, many daughters-in-law, brought from some districts of Rajasthan, have come to Kachchh from more than 500 Kilometers away and have not visited their parental homes even once in several years. Also, unlike in other areas, the Rajput marriages were traditionally performed in the village of the bridegroom, with the bride brought there with only four escorts.

Further, the married Rajput women observe 'purdah', stay indoors and do not take up work outside their homes even when their family is poor. They do not even fetch water from the village well or collect fuelwood; these tasks are done by the men; or those who can afford, employ servants for the work. During their conversation with us, the Rajput men often cite these facts to argue that their women enjoy a high status in the family and are spared the arduous chores that women of other communities have to perform. However, Jadeja women, especially young daughters-in-law, narrate very different grim tales. They recognize their low status and feel that they are a burden on the family.

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Another point reported during our interaction with some of the women was that girls are not sent to school so that after marriage they may not narrate their woes to parents through letters; And yet, some informal channels presumbably operate to facilitate exchange of Rajput news about daughters between Kachchh and other areas.

In recent years a small percentage of Jadeja women have become literate or educated and young girls have started going to school in large numbers. The educated men are taking up salaried jobs in urban areas; they take their spouses with them. When they visit their native village, their urban culture presumably has some demonstration effect on others. In the short run, each caste group functions virtually as an autonomous entity, hardly subject to influence by other castes. Over time, however, pressures do build up to alter the traditional behaviour.

Jadejas form a small minority in our project villages as a group but in some villages they are a dominant group. There are indications, however, that the position of Jadeja women and indeed of other women has begun to improve; the question is one of accelerating the frustratingly slow pace of change. The social scientists must cling to the fond hope that their efforts at understanding the prevalent situation will facilitate the social engineering necessary to loosen the foundations of centuries-old prejudices and behaviour. To serve this purpose, the social science research on such issues will have to assume a multi-disciplinary character to unravel the complex web of intra-family relationships. We shall attempt to pursue these issues over the next two years.

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- STEP BY STEP -

Towards An Appropriate Medical Education

The CHC/CMAI/CHAI/CMC-L Project on `Strategies for Social Relevance and Community Orientation in Medical Education - Building on the Indian Experience' was based on a long involvement of the primary researchers in exploring how medical education could be made more relevant to the needs of society. These included many initiatives before the formation of CHC, followed by some during CHC's formative years.

This report therefore brings together the key initiatives/reflections of the researchers which preceded the study and helped to give the project greater focus.

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IV MFC ANTHOLOGY HANDOUT.

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MFC 106, October 1984

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Child Care and the Prosperity of Punjab

S. N. CHAUDHURI*

I had visited Punjab once in 1968 and again in 1983. The change I noticed over the years was remarkable. The people looked prosperous. Entering Ludhiana city, the sight of thousands of television antennas on the roofs was really impressive. Coming from Bengal where one is used to the crowded city of Calcutta and of rural areas with thatched or tiled roofs, mud walled houses, unpaved roads, the contrasting signs of prosperity as evidenced by a profusion of scooters and well paved roads was very significant.

In the villages around Ludhiana, the fields were under intensive cultivation, with bullocks as well as tractors. In many places Punjabi farmers had parked their scooters next to the field while supervising the labourers or giving directions about farming and agriculture. The village houses were all of brick and cement and neatly whitewashed. In many of the yards there were tractors, motor cycles, scooters as well as agricultural machinery for cutting fodder and other chores.

Most of the farmers own atleast 15-20 buffaloes and the houses have furniture and television sets. Even in the houses of scheduled castes there were buffaloes as also goats reared for meat. Most of the roads were paved.

Many of the primary and subsidiary health centres did not have the usual crowd of patients. Qualified MBBS doctors were posted to the subsidiary health centres which were adequately stocked with medicines needed for day to day care. Primary health centre workers move around in well organized beats to cover every house, enquiring after everyone's health and referring patients to the centres if necessary.

It is logical to think that the level of child care would be high in the presence of such prosperity. Milk is in abundant supply and the normal Punjabi diet based on wheat, dal, vegetables and milk products is naturally a balanced one. Most of the children looked apparently healthy.

During visits to the houses of some of the farmers including those of the scheduled caste, we however discovered certain aspects of child health not in consonance with the overall prosperity.

* Bottle feeding with diluted milk was not uncommon.

* Immunization — second and third doses — were not always possible because the mothers were working on the field.

* Mothers who had to cook for large numbers of farm labourers and family members were not able to give adequate attention to their children especially those who were ill — this resulted in some not reaching the health centre when they should.

* Attention was given mostly to the male children rather than the female who was often neglected and ill.

* The mothers were aware of ill effects of bottle feeding, repeat doses of immunization, family planning operations and facilities available at the health centre. This awareness could not always be translated into practice because of their work and other pre-occupations.

These observations once again brought into focus the socio-cultural factors of discrimination between sexes,, the wilful neglect of the female child, the status of women and their bearing on mother and child health. Though these were similiar to other parts of India, the evident prosperity of Punjab did not seem to have made any dent on these issues. In the face of this social reality will improvement in the health of mother and children remain a distant mirage!

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115 medico friend circle bulletin

JULY 1985

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Blessed are the small in size — if they are Indians

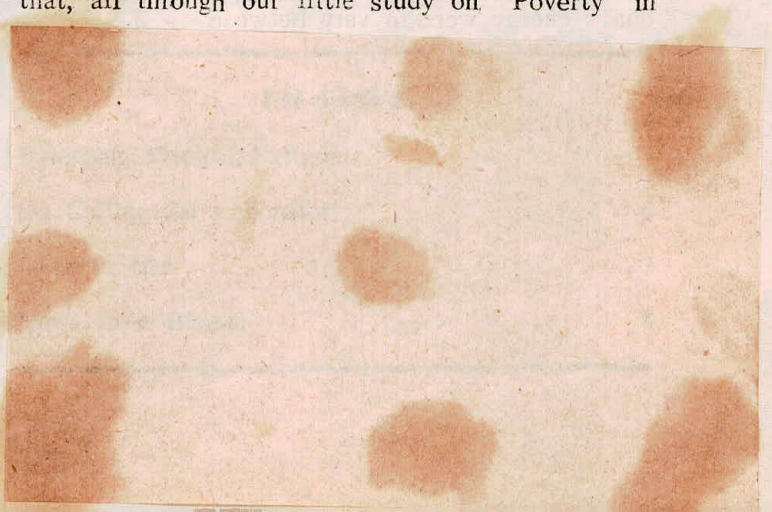
Kamala S. Jaya Rao

(A debate has been going on over the past 4—5 years regarding the meaning of malnutrition and the significance of small body size. The debate is published mainly in Economic and Political Weekly, and to some extent, elsewhere also. The debate was sparked off by a study by V. M. Dandekar and N. Rath on the measurement of poverty in India. Since the whole debate is of topical interest and concern to mfc, Anil Patel has been coaxing me to write about it in the Bulletin. I have been hesitating because, being a debate mainly between economists and statisticians, I felt I cannot do ample justice to it. However, I agree with Anil about the importance of the subject to mfc and Abhay Bang assured me it is not too late even now to write about it. I have, for obvious reasons, kept absolutely clear of all complicated statistical definitions and arguments. Yet, I hope, I have brought out the essence of the debate, and more importantly, the implications of it.)

In 1971, Dandekar and Rath published the results of their study on measurement of poverty in India. The definition of poverty is relative, and varies from place to place and, from time to time. Any criterion chosen to measure the incidence of poverty has, therefore, to be necessarily arbitrary. However, there has to be strong logic in using that particular criterion. Dandekar and Rath used the mean per capita energy requirement of a household as the cut-off point; percentage of households consuming less energy than this value should be considered a percentage of population that is poor. The argument being that the income of the household was so low that it did not permit them to buy adequate food to meet the specified energy. Therefore households with such low energy intakes may be considered poor and therefore income levels of such households be considered as being below the poverty line. This argument sounds logical It is well-known that in countries where malnutrition is a sizeable problem, the major cause is poverty. It is also known that in poor households, a major part — 80% or more — of the total income is spent on purchase of food. Dandekar and Rath therefore considered income levels which did not meet with the mean per capita energy intake of a household, as being below the poverty line. Thus estimated, the incidence of poverty, in the seventies, was 40%. It is necessary to point out one thing here: this does not mean that a household with low energy consumption (less than 2,250 Kcals) is necessarily poor or that one consuming more than 2,250 Kcals is necessarily not poor. The figure only indicates that by the chosen yard-stick the incidence of poverty in India was 40%.

Dr. Sukhatme objected to the use of the mean energy intake as the cut-off point. Perhaps Dr. Sukhatme would not have objected if the figure was higher, but strangely and unfortunately the figure was 40%. Let me explain this. In a large population, if the values follow a normal distribution (statistical normal) the mean and the median values will be similar; so, half the population will have values above the mean, and half below the mean. Dr. Sukhatme argued that if nearly half the population is to be considered undernourished, the other half must be overnourished. Hence, there will be no one with normal nutrition! Therefore, the use of the mean figure as a cut-off point was wrong. If you notice, the focus took a strange turn. While Dandekar and Rath said that about 40% of the households were **poor**, Sukhatme said that 40% of the population was **not undernourished**

Dandekar (EPW 16 (30) 1241, 1981) pointed out this anomaly. He said, 'I wish to emphasise that, all through our little study on Poverty in



India, Rath and myself have been discussing poverty and not undernutrition'.

When a population is classified on the basis of a certain income or expenditure, howsoever determined, ... we are defining poverty ....., on the the other hand, if we classify a population by its energy intake, we are trying to identify undernutrition. ..... The two are related, ... But the two are not identical'.

I will explain in a little more detail why Sukhatme is not willing to accept the mean figure as the cut-off point. However, it is necessary to point out that while Dandekar was considering energy intake of households, Sukhatme was talking of energy intake of individuals.

The range of values for any parameter indicates that the value for that parameter is not the same for every individual studied. Different individuals have different values, and the whole forms the range. Thus there are variations in values of individuals, that is, there is inter-individual variation. Apart from this, there is an intra-individual variation. For example, if my fasting blood sugar is 80 mg% one day, it may be 75 on another day 85 on another day—but all within the normal range.

According to Sukhatme, the inter- and intra-individual variation in energy intake of individuals of a given physiological group, are similar. Thus, if the energy intakes of females of my age and body size were to range from 1900-2500 Kcals, my energy intake on different days may also vary from 1900-2500 Kcals. Sukhatme derived this by analysing data published by other workers. His contention may be true, or may not be true. The reason for my doubt is not on statistical grounds; but from a purely common sense point of view, it seems incredible that the variation can be so large. Nevertheless, we shall accept it in the absence of any contrary data. This being the case, Sukhatme says that one should consider only values below—2 S.D. of Mean as low intakes. Thus estimated, and according to Sukhatme, the incidence of undernutrition in the country is only about 20%, or half of the figure derived by Dandekar. Dandekar, in turn, analysed data published by the NNMB, using the criterion suggested by Sukhatme and found that 40 — 45% of the households had energy inadequacy. Dr. Sukhatme promptly rejected this on grounds that NNMB data were not reliable.

Two questions arise here. If a normal individual's energy were to vary between — 2 S.D. to + 2 S. D. of mean, why can it not on occasion fall below — 2 S.D. too. Why should he be classified as undernourished if on one day his value is this low; in the next few days he may go back to the above—2 S.D. level, since his intake is highly variable. Secondly, how does the body deal with such large variation in energy intake? Sukhatme gave his answer (EPW 17 (50) 2000, 1982): 'If the control system in the body were to tolerate energy balance of this order and yet maintain body weight within narrow limits ..... (it) means that the control of body weight is exercised through ancillary co-factors'.

'The only inference I can draw is that energy intake is used with variable efficiency by means of some homeostatic mechanism working for the good of the whole body and controlling body weight in the process..... The real controlling variable of the homeostatic process is not energy balance, but fluxes, pressures, electric potentials, concentrations and body temperature, environment, etc.' 'However, a point is reached in the intake; below which the body is not able to maintain body temperature and is forced to part with its fat to maintain weight. That is the point of undernutrition, also alternatively called the lower threshold value of the homeostatic range, for maintaining nutrition state of the body. In ... Kerala, external temperatures are close to body temperature, heat dissipation is negligible and body weight can be maintained at relatively low intakes'.

I will not comment on Sukhatme's knowledge of human physiology. Perhaps, he should have stuck to his own field of statistics and not strayed into nutrition and physiology. He calls the '-2 S.D. level', a threshold value. Thus, wittingly or unwittingly, he has invested this statistical cut-off point with physiological significance. It is important to remember that this so-called 'threshold' is a statistically derived value for a set of energy intakes. If nutritionists were to discover at any later date, that what they hitherto considered the mean energy requirement was an error, and that the mean is actually higher or lower than the presently considered value, the 2 S.D. value may also change. Then, will the body also change the level at which it is 'able to maintain body temperature'?

Now Sukhatme's argument was that since in a healthy, active population half of them are expected to have energy intakes less than the mean, if we accept Dandekar's figure of 40%; it shows that the population is healthy, active and normal! We must remember that energy intakes of half a normal population will indeed be below the mean but but if their requirements were higher, they can afford to buy the extra food. Dandekar was saying that 40% of the households had incomes which did not permit expenditure on food to meet the mean requirement. He therefore sarcastically asked whether in a healthy, active population half of them should have such low incomes too! He said Sukhatme was unable to clearly see the distinction between poverty and undernutrition; the two are related; but not identical, phenomena. He then said, 'Sukhatme is confused'. I do not agree with Dandekar. Sukhatme was not confused. Sukhatme simply tried and succeeded in confusing nutritionists as well as administrators, by neatly exploiting the fact that Dandekar used energy requirement as a yard-stick to measure poverty. Sukhatme's argument that undernutrition is far less than 40%, and his use of terms like 'threshold value' — have come in handy in many quarters. Dr. Gopalan put it mild-

ly when he said that this has 'generated the unfortunate impression among policy-makers that undernutrition is not a serious problem in the country any more' (EPW 18 (15) 591, 1983). Sukhatme himself proudly proclaimed (EPW 16 (32) 1318, 1981): 'Already the term mild malnutrition has disappeared..the principle that an individual eating below the recommended intake is at risk and that as the intake decreases the risk of deficiency increases, is being reformulated'. Whoever has helped Sukhatme in performing this hat trick, I am certain it is not the sensible among the nutritionists.

In assessing nutritional status, energy intake cannot be the sole measure. In fact, a single assessment by itself is not a reliable indicator. It has to be taken in conjunction with anthropometric measurements, at least, height and weight. Irrespective of whether values below mean energy requirement or below—2 S.D. of mean, should be considered as undernutrition, if a large portion of the population is underweight or underheight or both, this needs to be taken note of. Since undernutrition is a major cause of growth retardation in a country like ours, this should also indicate the incidence of undernutrition in a population. If Sukhatme's argument was correct, then a large proportion of the population should have normal body size, which we know is not true. Sukhatme was quick to realize that this argument would crop up.

In fact, he was quicker than the nutritionists, who for some reason kept quiet for a long time. Either we were overwhelmed by the statistical language, or the whole debate was considered to pertain only to statistics. Or, Sukhatme succeeded and he totally confused the nutritionists. It was an opportunity lost for the nutritionists and a tactical gain for Sukhatme. To forestall the above argument, Sukhatme advanced two more hypotheses — leading the issue into a very disturbing and dangerous situation.

First, was the postulate of a threshold value. He said (EPW 13:1373 1978) "fortunately for most of us, unless the intake is too low; the efficiency of utilisation of energy is improved. Therefore, an intake lower than the average may not cause any hardship unless this was so low that the power of regulatory mechanism is diminished'. Although he argues that values above 2 S.D. are all normal (which may be true), implicit in the words 'too low' and 'so low' in the above passage, is the acknowledgement that values below the mean may be low. Then he acknowledges that in their 'own surveys in Uruli — Kanchan and in villages around Pune....the body build of children living on intakes smaller than the average was certainly small', and adds a strange comment that 'the inference that they were ..... undernourished ....was found to be unwarranted on biochemical examination of blood'! And, I was under the impression that nutritionists were yet to find a biochemical index more sensitive than body size to assess undernutrition. If food intake and body size are not good indicators of undernutrition, not only would one be eager to know what this wonderful biochemical measure is, but would have been immensely grateful to Sukhatme had he declared its nature.

Whether it is warranted or unwarranted to label them as undernourished, the fact remains that a large number have a small body size. In Nepal and Sri. Lanka which are our neighbouring countries, and whose data Sukhatme has published (EPW 17 (50) 2000, 1982), ignoring India, only 40—60% have normal body size. So at least 40% have small size (height or low body weight or both). Strange, but we have come back to the figure of 40%! What about this? Tell them, tell the policy-makers and planners they are 'small but healthy' says Sukhatme. They can work hard, they do not die; in other words, they have 'adapted' to this and they are in no danger.

It is indeed true that the small body size is an end-result of adaptation. But what is this adaptation? A growing child cannot grow normally if the building material, namely nutrients, are lacking. That is, there is growth retardation. The organism in order to survive physically, has cut down its growth rate to conform to the energy available. Here, instead of food being sufficient for normal growth, growth has suffered due to lack of food. This 'adaptation' cannot be considered a normal state but as a compromised state, and at what physiological cost it has occured we do not know Gopalan said (EPW 18 (15) 591 1983): 'Adaptation, in the current context, represents not a stage of normalcy but one of "strategic metabolic and functional retreat"..... 'The assumption that these stunted children are perfectly healthy and functionally as effective and productive as children with normal growth and development, is a sweeping one .....The new low levels proposed as the limits of calorie adequacy (mean —2 S.D.) may be a good prescription for a "survival ration" which will permit mere existence. Those interested in building a strong vigorous nation, of healthy productive adults, and of active children who can run, play and bounce about.... may however not be prepared to buy such a prescription'. However, it is not hard to see that there are many who actively welcome such prescriptions.

Sukhatme's argument is two-fold. Since the mild and moderate degrees of malnutrition can take care of themselves we need to bother only about the severe cases and their number is small. Even if this be true, Gopalan pointed out a fallacy (NFI Bull. Oct. 1983 and Apr. 1984). The so-called mild, moderate and severe forms of malnutrition is an arbitrary classification. More importantly, they are not static conditions. The mild and moderate cases can and do slide into severe degrees of malnutrition. Therefore to think of extending help only to severe cases is extremely unwise. This would in effect mean that we wait till a mild case becomes severe and then extend help to it. This is like the Sanskrit saying that one starts digging a well after the house has caught fire.

This argument about small individuals being 'adapted' individuals who are at no risk unless they go below a 'threshold' level is a very harmful theory. This is relegating a large part of the population not merely to remain small in size but to suffer all ills of which the small size is a consequence. Therefore Asok Mitra, formerly of the Planning Commission, said, "the turn the controversy has taken in recent years has not helped in reducing malnutrition.... (but) has sought to bring about what I once called instant revolution ....Intellectuals and scientists responsible for introducing this line, must be held clearly accountable. I would not hesitate to call it harmful, witting or unwitting sophistry because in other forums of debate, we grade the progress of people and countries for instance .....by the average national weight and height.....For our own children we do not consider small bones, low height, small weight, low physical performance and low energy level "beautiful" or "good nourishment" at all'. (Future 11:12).

Sukhatme's second argument is that the small body size is not a consequence of undernutrition but is due to poor environmental sanitation and diarrhoeas. That these two have a role to play, no one would deny. But to say, undernutrition has no role to play whatsoever, without supporting evidence, is most unscientific. On the other hand, there are any number of animal experiments, where environment has been maintained evenly and the animals showed growth retardation when food was restricted.

When Dandekar and Rath spoke of the incidence of poverty, Sukhatme diverted it towards undernutrition, and says undernutrition is no big problem in the country. The statistical jargon and formulae were enough to totally confuse the nutritionists. Then he talked of "adaptation to low energy intakes" and made many off the cuff statements regarding energy balance, BMR, genetics etc.

The papers were published in the EPW which most biologists do not read anyway. The arguments, on the other hand, being outside the field of economics, the economists kept quiet. Having however acknowledged that body size is small, he has advanced the "small but beautiful" hypothesis. And now, ultimately this body size restriction is said not be due to undernutrition but poverty. But, what is the extent of poverty he does not mention. He says (EPW 17: 2000, 1982) : 'The second problem we are confronted with is the problem of poverty. small stature in children is the direct result of this poverty and low socio-economic status, expressing itself in miserable conditions of living. Intervention to deal with this problem need not be focused on food and water ..... As overall economic growth increases environmental conditions may be expected to improve. This will necessarily be a slow process, but this aspect need not disturb us unduly because these people will normally be in energy homeostasis and although looking small in stature for their age, cannot be considered to be under risk of developing malnutrition".

If you have not read the above passage carefully, please do so. We are told we have a problem of poverty. As a consequence our children are small in size. But that will improve, when economic conditions improve. However, do not be anxious about the economic conditions. They take a very, very long time to improve. But even otherwise, the children have adapted to the low food intake and will continue to survive. God bless them.

In case you are the type who will not believe what an Indian tells you and want to hear it from a white-skinned 'expert', here is David Seckler endorsing the Indian's view (Seckler in Newer Concepts in Nutrition — Maharashtra Assn. for Cultivation of Science, Pune. ED. P.V. Sukhatme pp 127-137). Seckler says there are two types of smallness, one 'due to poverty, to poor physical and socio-economic environment'. Second is due to malnutrition. He says in the first instance the environment should be improved; and, Sukhatme has already told us that this is a slow process, but the children though small in size are under no risk. Now, any 'sensible' person would ask sooner or later, that if the population is not under risk, if it is 'small but healthy', why should even the environment be improved? That will automatically solve so many other problems, will it not?

Regarding the second one, Seckler says intervention should be addressed towards individuals. What sort of intervention? In Seckler's own words. 'The great challenge to nutritional science is to devise anthropometric indexes based on safe minimum standards rather than maximum genetic potential'.

The message is clear. Sukhatme says we need not eat as much as the nutritionists ask us to eat, and which the Americans, Europeans and many others are eating. We do not die even if we eat less. We are doing all the necessary work. Your problem is you are shorter and lighter than the Americans. So what, but you are 'healthy'.

Seckler says, who told you, you are small. You are aiming too high. Why should you be so tall and so heavy. What if your own nutritionists have shown that when nutrition, environment and health care are good, your children grow up like the Americans. You need not reach the Standard. Bring down your Standards. So, eat food bare enough to keep you living and bring down your anthropometric standards. See, there is no problem of either undernutrition or small body size.

By equating sheer ability to survive, with health, Sukhatme and Seckler have declared that there is no problem of under nutrition. The existence of poverty is acknowledged but implied is the meaning that we need not be much exercised

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about it, since the people are 'healthy' and surviving. It is obvious that this will be most welcome to a government, which hitherto did not know how to deal with this problem of poverty and undernutrition. We can now, not make even a show of socialism and can, as is being done now, talk more openly of computers, colour TVs, delux cars and what not. It is, therefore, important that this issue is again taken up freshly — the issue of poverty and under nutrition. Previously we were told we were small in size because of racial and genetic factors. When this was disproved, we are now told being small is no handicap. Sukhatme's arguments have led the country into a dangerous situation, and created a happy situation for those who want to see us always small, poor and undernourished. We must realise that the three go together and cannot be artifically separated as Seckler has tried to do. It is time some economists, nutritionists and other scientists write strongly and clearly about this issue. This is not just a statistical exercise, as the nutritionists hitherto thought. Nor is it a question of mere nutritional physiology as perhaps the economists are thinking. It is a very important issue of whether the race will survive as a strong, independent nation or not.

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THE RELEVANCE OF PRESENT MEDICAL EDUCATION IN MAKING DOCTORS FOR RURAL INDIA.

— Yogesh Jain

What necessiatates the raising of this basic issue ? There is definitely something wrong somewherere. Thrue quarters of all doctors remain in cities and larger towns where only 20'/. of our population lives. (1) Does it reflect the efforts of a "Socialist" pattern of development espoused by our leaders. The question is of greater significance when it is remembered that the vast majority of doctors are trained at the expense of the state i. e. at the expense of the common man. Another question, why has the health set up developed in such a village-(in appropriate) way? Why does the discipline of PSM have a very poor image amongst the students? (2) The answers to the questions outlined above and it shall be our endeavour to answer them.

Let's clarify at the outset. That the doctors in rural India are not the sole determinants of health improvement. Much more important is the improvement in the economy. As economy shall improve, over population and malnutrition shall decrease and hence the diseases in general. Doctors, again have to act in harmony with other cogs in the health care system. There is a second clarification that the type of health care system we adopt ideally determines the type of medical education system in the country. It is understandable that an attempt to make this system specially relevant for rural India is made, simply because 80'/. of our people are in rural areas.

The question now, is the present medical education system relevant in making doctors for rural India? No it isn't. Let's begin with three basic ingrained assumptions in our medical profession which are detrimental to this aim. First, being highly educated and skilled professional group, doctors will best understand societies healt needs. Second a doctor's responsibility is still at an individual level. The doctor patient relationship is not only inviolable, it is exclusive, the implication being that members of this profession need not take into consideration the social responsibility. Lastly, the profession as a whole will defend its assumed right to use its skills in a private as opposed to a social contact. Having jotted down the assumptions, we go onto the raw material which comes into the medical colleges. A recent study (3) found that 88./' of doctors working at AIIMS came from urban families and 69'/. of their fathers had college education. Moreover, 96'/. of doctors were either from professional, business, govt. service or land owning families. 71'/. enjoyed the very special privilege of private education. AIIMS may be the most elits institution, but not a very different picture is seen in other medical colleges. In an analysis of students in seven medical colleges in various states by Taylor (4), only 35'/. of students had a rural background and that 60'/. of their fathers had college education. The AIIMS study also revealed that 88'/. of doctors were from Brahmin or higher non-Brahmin castes. Clearly, people er tering the medical profession tend to come from an urban background with predominantly public school education and generally from an upper class and caste. These students would naturally carry their urban bias through their education and over to their professional life.

These factors lead to almost total cultural and economic alienation of the doctors from village life. Their participation in a modern, predominantly urban education proeess leads to a change in perspective that comes from "having made it !" having an educational and ecomic security which is based on a degree rather than manual labour. This elitist position creates a sense of pride (we are the cream of our countryl) and dissociation from rural life.

The medical education system, it is agreed, developed in a colonial way in the pre-Independence era. And when independence came, instead of adapting the medical education system to our needs, we edopted the 'scientific core" of medical sciences (a most welcome diffusion of a cultural innovation from the western world) with certain cultural political and social overcoatings which were definitely against the wider interests of the country (5). Even in industrialized conutries, medical education is in a translation from "scientific era" of the early sixties to the "community era" (6). The need for reorientalion in India was much stronger and more urgent because of more compelling considerations of our health needs. We shall discuss them one by one and see how they have been met (or not met) in our present medical education system.

First, it was needed to separate the "core" of natrual sciences from the sociocultural overcoatings of the western countries and to be inserted into a new "envelope" that will harmonize better with the social, cultural and economic environment of India (7). This process is taking place but it is slow. Moreover, in the absence of any teaching in humanities, it shall remain a wishful aim.

Second, the limitation of available resources with which a doctor in a village has to work, should have made devising of inexpensive methods in medicine faster. Third, the disease load per unit population on the doctor is much higher. Qualitatively, our diseases are still in an infectious era. Medical education had to be tuned to the massive health problems of high maternal and child mortality etc. This, regrettably didn't come about. Medical education has incorporated our urban bias and hence it is basically curative, highly technical with emphasis on advanced technology. Naturally, students develop interest in these technical fields and aspire to use their experience. This is detrimental

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to make a doctor relevant for rural India.

Fourth, as per recommendations of Bhore Committee and Mudaliar Committee, Govt. agencies had taken the major responsibility for dealing with health problems of India. An enormous network of services was established & the medical education should have been influenced by this, i. e. it should have geared itself to train doctors to man these services and not for private clinical practice.

Any analysis of the medical education would be incomplete without a discussion of preventive and social medicine. These courses were started in medical colleges to serve as a catalytic agent to bring about social orientation of medical education. It was a challenging task but the experience of adecade and a half showed that the impact of these departments so far does not appear to be as distinctive and enduring as one would have hoped (8). On the other hand with creation of PSM, teachers of medicine, surgery etc. have in many instances stopped teaching the preventive aspects of their subjects (9). This has out at the very root of teaching of comprehensive integrated medical care.

To conclude, the present medical education alone can't be accused for the present dearth of quality and quantity of doctors in rural India, simply because the content of medical education alone is not very important in making doctors for villages. What is of prime importance is our values due to our predominantly urban background. Lack of adaptation in the medical education system handed over to us by the British is also responsible. we ought to learn from the success of the China barefoot doctor in managing the health problems of an equally populous country.

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Integration of Medical Systems

(A theoretical Perspective and Practical Blue Print)

S.K. Kelkar*

Broadly speaking, Eastern people are known for a synthetic mind and for having a wholistic vision. Occidentals are highly analytical but tend to be fragmentary in their approach. With very well developed communication channels and the cultural fluxes to which the world today (India in particular), is subjected to, it is inevitable that the two have to meet at many points and possibly head for a common culture.

Medical systems also cannot escape it. People in India have voiced various opinions about the existing medical systems in the world. These opinions border from almost fanaticism to fragmented isolated thoughts. But the broad principle which appears to be surfacing frequently in all these currents is that there should be integration of medical systems especially the Indian Ayurvedic system with the Western Allopathy. While we think of integration several aspects must be understood first. What exactly do we mean by integration; the desirability or otherwise of integration; and the attitudes involved as regards this word and process on both allopathic and ayurvedic sides.

Integration can be considered as bringing two dissimilar entities together on certain common grounds of utmost importance, taking something from and giving something to each other without losing special identifying features of noble virtues, with the intention of developing later into a homogenous new but not an uniform new. That Ayurveda and Allopathy are dissimilar there is no doubt. Yet there are broad areas like anatomy, surgery, which are almost identical. The other common ground is that of patient welfare of which cure is one part albeit an important one. Here there is certainly scope for exchange. We would have to discover for every disease its most effective pathy. The identity loss is only partial and it will be in the areas where knowledge has been proved to be incorrect or obsolete or both, in either pathies. To that extent no one needs to grudge the identity loss. The words homogenous and not-uniform are important. When the distinctive features come to stay side by side they do not assume the characteristics of other pathy and still do not clash or turn antagonistic. It can be further stated that we are for Unity and not for Uniformity.

Desirability: I think the question of whether it is desirable to integrate is superfluous. The necessity appears to be a foregone conclusion., Certain aspects of this need elucidation. Allopathy as it exists is a very effective proven science in disease alleviation in many areas and has shown enormous potential for growth due to its research orientation. The statistics of disease mortality ratio reduction, proven remedies on statistical basis etc., is not so well developed in Ayurvedic sciences. Yet Allopathy is not a complete science. Its approach is on the basis of structural changes preceded by functional changes on tissue level. Allopathy has developed tremendously as regards elucidation of structural changes even chemical changes which are also structural. That knowledge needs to be utilized by others.

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Although there is an attempt to discover the forces of mind, intellect, subconscious, unconscious existences, soul etc., they are by no means well found out. The Ayurvedic orientation is substantially in these realms of existence. This can be used for developing more mature attitudes in people towards disease entities and to life itself. Again these two have to meet somewhere. Whether spirtualism, however well developed could keep a disease state away is still debatable. Ramakrishna Paramahamsa's and Vivekananda's diabetes can be give as examples. All this needs to be studied.

There is an attempt, logical, for arrangement of data in older sciences, arrangement of citing past experiences and to learn and to teach. It is needed that everybody knows about these ways. Definite areas have been demarcated in Allopathy where the causology and treatment of diseases is highly unsatisfactory. It is worth its while to discover their solutions in other pathies for the benefit of humankind.

Faith: People have an uncanny faith in the powers of pathies other than Allopathy. Allopathy has failed to generate it especially in the Indian mind. This faith takes to a level of their being a panacea to all forms of illhealth. It is worth its while to prove that this faith is correct. If we do so we will have a gold mine uncovered. Strictly speaking, it is equally essential to say that if we cannot prove it by methodological research, that the faith is wrongly formed and that as a science it is either worthless or will have to state its limits and potentialities once for all. This means that the whole of Ayurveda will have to be restated about where it fails, where its applications are limited, where its powers must be recognized and where it can supplant or supplement Allopathy.

Cost : Allopathy in its higher forms is costly, hospital oriented and comparatively distant and somewhat beyond the reach of the common people. Still in more manageable disease states the answers Allopathy has, is more effective than the other pathies. One cannot dismiss it on this bias alone, as long as other less expensive alternatives are not found out. Cost wise Homeopathy is definitely cheaper although it is time consuming in its process of diagnosis and can be practised (truly that is) at a consultant level. I am not sure that costwise and that includes loss of human-days from work, that Ayurveda is in any way cheaper than Allopathic general out-patient practice. Unless more data is available it will not be fair to comment upon this. This could be an important area of research.

Causal Cures? Symptomatic Cures? Suppressed illnesses?

We have discussed faith above. There is an almost universal belief in the Indian mind that Ayurvedic cures are delayed but permanent. So with Homeopathy. On the reverse it is held that Allopthic cures are symptomatic and not causal. They suppress the illness but the disease remains dormant in the body. I do not subscribe to both. In most places for both there are only controls to be achieved by continuous medication in the form of medicines or certain other practices, dietary, yogic massage, change of environment etc.

This belief has come about due to a lack of understanding about allopathic thinking. Allopathy has established the physical basis of illness on the structural side by demonstrating the structural change/deviation from the normal. There is a spectrum of normalcy of structures which is not uniform, though all are normal. The immune system as we understand is largely the basis of our concept of why disease occurs. There are demonstrated alterations on the physical plane of body cells and immune cells. This has not been accepted by the laity and Ayurvedacharis alike. The possible reason is that it does not concur with the Tridosha theory for which physical basis is lacking as having not been demonstrated. This in itself is due to the fact that all body mechanisms, say, swallowing have not been broken down into its structural elements. These structural elements constitute a unit functioning of that process. The individual structural units have not been ascribed a particular unique function which no other dissimilar tissue can carry out. This has been done in a demonstrable fashion on the basis of the structural deviations from normal in Allopathy. The subsequent derangement of functions resulting in disease is the basis of allopathic concept of disease. The Tridosha theory lacks it.

This has resulted in the non-acceptance of the cause of disease and has consequently led to the non-acceptance of the permanency of cure regarding allopathic science. A further problem related to this is that the Ayurvedacharis are afraid that they will have to replace their basis of understanding the causation of diseases if they accept this which would probably lead to a total loss of identity of Ayurveda. Could Ayurveda still be practiced even if this school of thought of disease causation is accepted? It is a

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very complicated question and I do not have the answer. One way out is to watch the more discrete disease labels in Allopathy, say, pulmonary tuberculosis or pneumonia by a similar disease label from the Tridosha theory disease differentiation.

Historically in Allopathy the syndromic representation of similar diseases was comparatively greater. When structural studies progressed the syndromes were broken down into disease entities. This was also done by finding out the variations of one symptom common to all these diseases grouped into a syndrome and by delineating the associated symptoms which are found in some but never in others. This was further substantiated by marking the association of prior occurrences with the development of more severe illness. For example, the diagnosis of acute glomerulonephritis and rheumatic fever are almost always associated with a minor throat infections which pass off even without any treatment. It forms the basis of diagnosis and has considerable importance.

As far as I can see the grouping of diseases in large syndromes with comparatively less differentiation into individual labelled disease is very much present in Ayurveda. For historical reasons the minute differentiation of this into more discrete entity has not reached the scale as in Allopathy. (It is also true that even in Allopathy, some diseases remain at the syndromic level in the present state of knowledge.)

Whatever it may be, the fact remains that the crux is the theory of causation and the concept of cure. To either cover it up, or to avoid confrontation, certain theories have been taken advantage of by both Ayurveda and Homeopathy. It is the theory of vital forces being deranged thereby causing disease. Allopathy does not talk about this functional non tangible side of causation of disease and this is the argument put forward to silence allopaths. Now if I say that in an infection we identify the derangement in vital force as the failure of the immune system, we may be accused of and perhaps ridiculed of having finally subscribed to the functional theory of Ayurveda. At the same time we will not be patted on the back for giving a physical basis to the theory of vital force. Today Allopathy is poised for a break through by devising simple chemical means by which the powers of immune system are sought to be awakened to simply gobble up even diseases like cancer. If it is so, actual success apart, the claims made by both the Ayurveds and the Allopaths i.e., of reawakening the vital force or the immune system, are only truths stated differently and not two different theories. I will clarify this point by anticipating the next question: Do we consider the immune system to be the vital force? The answer is probably that the immune system is one manifestation of the vital force on physical level and there are probably others about which not much is known. Scientific function abounds with speculation of it but it has not become science yet.

Defining cures and the criteria of cure:

Since there are difficulties in understanding the theory of causation of diseases the question of defining what is cure becomes almost impossible. The variation of symptoms especially in time is the one that is clearly understood by Allopathy. I do not think it is indistinct in Ayurveda. Defining cure is essential in clinical settings if the treatment has to be evaluated. Probably the definition of cure for each evaluation of disease is the greatest difficulty when it comes to double blind clinical trials and that too involving two systems and not two drugs from one.

For instance, in the case of jaundice, people tend to take 'native' medicines of which several are known. Generally the time duration of jaundice is from 3 days to 3 months and according to Allopathy most patients will recover between 20-28 days provided it is Type A. It does not have any serious complications and the body is left intact. By the initial blood testing we can always get a fair estimate that this jaundice is likely to last for so many days and that it is Type A and not B. Whether it is treated or not it will have spontaneous cure. How do we prove that the native medicine has acted? That can be if the duration of the problem is shortened to say 5 days or so in almost 100% of the cases. When remedies are claimed to be effective they do not mention the time elapse before the medicine was started. Neither is the alteration in bilirubin estimated nor its return to normal. According to Allopathy anyway there is going to be spontaneous cure. Further the treatment of jaundice as given is symptomatic and does not take into consideration the cause. It can be of Type A, Type B, due to malignancy, obstruction of bile passage or drug induced. What is it that the native medicines are curing when they have not established what they are treating. This is what we mean by defining cure. A definition of cure in jaundice could be that the drug should substantially reduce jaundice or eliminate it in a defined short period of time.

Similarly in the case of, say, systemic lupus erythematosus or rheumatoid arthritis the criterion for cure could be that the drug alleviates pain, swelling and dysfunction early and that it stops further eruption of the disease once the drug is stopped. According to Allopathy, these diseases can only be controlled by continuous medication which have considerable side effects and in the case of SLE, the disease progressively involves more and more systems despite medication. Let SLE be simultaneously defined as a wata or some tridosha disease and be treated by Ayurveda but the criterion should be the halting or reversal of disease preferably without medication after a particular time period.

Criterion for cure is similarly confused in diabetes. Allopathy is considedred to control diabetes and Ayurveda to cure it. The criterion for cure could be that after a period of time, no medication is necessary and after another specified time no dietary restriction. Allopathy confesses that in rare instances temporary diabetes may appear and get cured for years with no drugs or restrictions. Medicine given for such a patient can claim cure but it is purely coincidental. If the cure is real all diabetics must be given a cure. There are stress states like pregnancy, in which diabetes disappears once the stress is over. These variations of diabetes can be distinguished normally also. A medicine claiming cure in this second state also has to clarify the role of this stress in the so called cure. I know hundreds of cases when people claim that they are undergoing Ayurvedic treatment and that their diabetes is cured. On closer enquiry it is found that they continue to take the tablets at times 6-10 per day, continue to observe dietary restrictions etc., etc. The claim is cure. In what way is it different from Allopathy? Allopathy too believes that when dietary control, adequate exercises, rest, tranquility, reduction in obesity, etc are achieved, and sugar does not come within normal limits, the person would require drugs or insulin but there is no cure.

So is the case with every disease state. Its natural course has been outlined. While evaluating ayurvedic therapies, the criteria and definition of cure will have to be outlined and the drug trial undertaken. Then only the Ayurvedic methods will gain precision. It will be possible to evaluate the claims and assess success & failure rates. In our terms, when these methods do not exist in a science it is an empirical science and the propositions become debatable. It has to be reduced to the level of non empirical reproducible science.

Alongwith 'cure criteria', importance of the parameters developed for testing in blood etc and the way they change in disease states must be accepted as a reproducible method for establishing cure. Parameters alter in disease state and come back to normal with cure. A hypertensive/diabetic continues to feel okay with elevated levels does not mean that these levels have been reduced to acceptable levels. And again the acceptable levels are the ones known to be desirable from the patient's point of view because it leaves a safety block or range before it can turn abnormal and consequently dangerous. In elevated levels this safety range is markedly reduced.

All in all there is need to put all sciences on firm footings so that we know the weaknesses, the strengths, limitations etc. through a specified research model. Let us supplement, supplant or complement each other where necessary for the alleviation of human suffering.

(Dear reader, this is only a part of the article written by the author. We are keen to know if such articles are useful. Only if we have a positive response from you will we print the other part-Editor)

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Integration of Medical Systems

A response by B.K. Sinha on Kelkar's article in MFC-B No. 128.

This refers to the article "Integration of Medical Systems" (mfcb No. 128). Yes, publication of such articles is useful but it is just one step forward in a long march to evolve a system of treatment capable of meeting human's need and aspiration of freedom from illness and sufferings.

The starting point, therefore, of such an endeavour becomes to look critically at treatments recommended by different systems, not merely to identify what is common between them to bring two systems like ayurveda and allopathy on one common ground which Kelkar describes as integration of two systems, but to provide the ground from which to proceed further to study what is considered to be *cure* in different systems and situations and how it is accomplished in different systems. It would seem to be possible to abstract laws that regulate cure in specific situations and cases. Side by side these, laws have to be integrated with the knowledge of life, mechanisms and processses affecting human life, body's own curative power in specific situations and in terms of specific disorders, types and the course of diseases in different situations, different ways of affecting cures and costs involved in treatment not only in terms of drugs and other necessities, but also in terms of human days lost and dangers to other health. Such a data base could give us a clue to work out a system of cure which is most acceptable to the individual sufferers as well as the societies in which the sufferings take place. Knowledge embodied in different systems of treatment then would be integrated to become a whole. But then it will not be an integration of ayurveda and allopathy, or allopathy and homeopathy (which is not central to the need); it would be the integration of human's knowldedge geared to meet human need.

Besides, integration does not mean, as Kelkar maintains, "bringing two "dissimilar entities together on common ground of utmost importance .....taking something from and giving something to other, .. with an intention of developing later into a homogenous new but not an uniform new". Integration of two dissimilar entities might result in their transformation into qualitatively different entities as chemical combination so appropriately demonstrates. Human's quest to understand nature has given birth to different branches of science with specific problems and specific laws. These laws may look even contradictory as the indivisibility of atoms in chemistry and physics. Yet, both these branches of science are true and are integrated in the great scheme of science. Similar can be the situation in terms of disease, treatment and medicine in the integrated system of medicine. Hope, it will find hospitality in your bulletin.

B.K. Sinha, Bembla.

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MAY 1987

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Integration of Medical Systems

(A theoretical Perspective and Practical Blue Print)

S.K. Kelkar*

Broadly speaking, Eastern people are known for a synthetic mind and for having a wholistic vision. Occidentals are highly analytical but tend to be fragmentary in their approach. With very well developed communication channels and the cultural fluxes to which the world today (India in particular), is subjected to, it is inevitable that the two have to meet at many points and possibly head for a common culture.

Medical systems also cannot escape it. People in India have voiced various opinions about the existing medical systems in the world. These opinions border from almost fanaticism to fragmented isolated thoughts. But the broad principle which appears to be surfacing frequently in all these currents is that there should be integration of medical systems especially the Indian Ayurvedic system with the Western Allopathy. While we think of integration several aspects must be understood first. What exactly do we mean by integration; the desirability or otherwise of integration; and the attitudes involved as regards this word and process on both allopathic and ayurvedic sides.

Integration can be considered as bringing two dissimilar entities together on certain common grounds of utmost importance, taking something from and giving something to each other without losing special identifying features of noble virtues, with the intention of developing later into a homogenous new but not an uniform new. That Ayurveda and Allopathy are dissimilar there is no doubt. Yet there are broad areas like anatomy, surgery, which are almost identical. The other common ground is that of patient welfare of which cure is one part albeit an important one. Here there is certainly scope for exchange. We would have to discover for every disease its most effective pathy. The identity loss is only partial and it will be in the areas where knowledge has been proved to be incorrect or obsolete or both, in either pathies. To that extent no one needs to grudge the identity loss. The words homogenous and not-uniform are important. When the distinctive features come to stay side by side they do not assume the characteristics of other pathy and still do not clash or turn antagonistic. It can be further stated that we are for Unity and not for Uniformity.

Desirability: I think the question of whether it is desirable to integrate is superfluous. The necessity appears to be a foregone conclusion., Certain aspects of this need elucidation. Allopathy as it exists is a very effective proven science in disease alleviation in many areas and has shown enormous potential for growth due to its research orientation. The statistics of disease mortality ratio reduction, proven remedies on statistical basis etc., is not so well developed in Ayurvedic sciences. Yet Allopathy is not a complete science. Its approach is on the basis of structural changes preceded by functional changes on tissue level. Allopathy has developed tremendously as regards elucidation of structural changes even chemical changes which are also structural. That knowledge needs to be utilized by others.

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Although there is an attempt to discover the forces of mind, intellect, subconscious, unconscious existences, soul etc., they are by no means well found out. The Ayurvedic orientation is substantially in these realms of existence. This can be used for developing more mature attitudes in people towards disease entities and to life itself. Again these two have to meet somewhere. Whether spirtualism, however well developed could keep a disease state away is still debatable. Ramakrishna Paramahamsa's and Vivekananda's diabetes can be give as examples. All this needs to be studied.

There is an attempt, logical, for arrangement of data in older sciences, arrangement of citing past experiences and to learn and to teach. It is needed that everybody knows about these ways. Definite areas have been demarcated in Allopathy where the causology and treatment of diseases is highly unsatisfactory. It is worth its while to discover their solutions in other pathies for the benefit of humankind.

Faith: People have an uncanny faith in the powers of pathies other than Allopathy. Allopathy has failed to generate it especially in the Indian mind. This faith takes to a level of their being a panacea to all forms of illhealth. It is worth its while to prove that this faith is correct. If we do so we will have a gold mine uncovered. Strictly speaking, it is equally essential to say that if we cannot prove it by methodological research, that the faith is wrongly formed and that as a science it is either worthless or will have to state its limits and potentialities once for all. This means that the whole of Ayurveda will have to be restated about where it fails, where its applications are limited, where its powers must be recognized and where it can supplant or supplement Allopathy.

Cost : Allopathy in its higher forms is costly, hospital oriented and comparatively distant and somewhat beyond the reach of the common people. Still in more manageable disease states the answers Allopathy has, is more effective than the other pathies. One cannot dismiss it on this bias alone, as long as other less expensive alternatives are not found out. Cost wise Homeopathy is definitely cheaper although it is time consuming in its process of diagnosis and can be practised (truly that is) at a consultant level. I am not sure that costwise and that includes loss of human-days from work, that Ayurveda is in any way cheaper than Allopathic general out-patient practice. Unless more data is available it will not be fair to comment upon this. This could be an important area of research.

Causal Cures? Symptomatic Cures? Suppressed illnesses?

We have discussed faith above. There is an almost universal belief in the Indian mind that Ayurvedic cures are delayed but permanent. So with Homeopathy. On the reverse it is held that Allopthic cures are symptomatic and not causal. They suppress the illness but the disease remains dormant in the body. I do not subscribe to both. In most places for both there are only controls to be achieved by continuous medication in the form of medicines or certain other practices, dietary, yogic massage, change of environment etc.

This belief has come about due to a lack of understanding about allopathic thinking. Allopathy has established the physical basis of illness on the structural side by demonstrating the structural change/deviation from the normal. There is a spectrum of normalcy of structures which is not uniform, though all are normal. The immune system as we understand is largely the basis of our concept of why disease occurs. There are demonstrated alterations on the physical plane of body cells and immune cells. This has not been accepted by the laity and Ayurvedacharis alike. The possible reason is that it does not concur with the Tridosha theory for which physical basis is lacking as having not been demonstrated. This in itself is due to the fact that all body mechanisms, say, swallowing have not been broken down into its structural elements. These structural elements constitute a unit functioning of that process. The individual structural units have not been ascribed a particular unique function which no other dissimilar tissue can carry out. This has been done in a demonstrable fashion on the basis of the structural deviations from normal in Allopathy. The subsequent derangement of functions resulting in disease is the basis of allopathic concept of disease. The Tridosha theory lacks it.

This has resulted in the non-acceptance of the cause of disease and has consequently led to the non-acceptance of the permanency of cure regarding allopathic science. A further problem related to this is that the Ayurvedacharis are afraid that they will have to replace their basis of understanding the causation of diseases if they accept this which would probably lead to a total loss of identity of Ayurveda. Could Ayurveda still be practiced even if this school of thought of disease causation is accepted? It is a

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very complicated question and I do not have the answer. One way out is to watch the more discrete disease labels in Allopathy, say, pulmonary tuberculosis or pneumonia by a similar disease label from the Tridosha theory disease differentiation.

Historically in Allopathy the syndromic representation of similar diseases was comparatively greater. When structural studies progressed the syndromes were broken down into disease entities. This was also done by finding out the variations of one symptom common to all these diseases grouped into a syndrome and by delineating the associated symptoms which are found in some but never in others. This was further substantiated by marking the association of prior occurrences with the development of more severe illness. For example, the diagnosis of acute glomerulonephritis and rheumatic fever are almost always associated with a minor throat infections which pass off even without any treatment. It forms the basis of diagnosis and has considerable importance.

As far as I can see the grouping of diseases in large syndromes with comparatively less differentiation into individual labelled disease is very much present in Ayurveda. For historical reasons the minute differentiation of this into more discrete entity has not reached the scale as in Allopathy. (It is also true that even in Allopathy, some diseases remain at the syndromic level in the present state of knowledge.)

Whatever it may be, the fact remains that the crux is the theory of causation and the concept of cure. To either cover it up, or to avoid confrontation, certain theories have been taken advantage of by both Ayurveda and Homeopathy. It is the theory of vital forces being deranged thereby causing disease. Allopathy does not talk about this functional non tangible side of causation of disease and this is the argument put forward to silence allopaths. Now if I say that in an infection we identify the derangement in vital force as the failure of the immune system, we may be accused of and perhaps ridiculed of having finally subscribed to the functional theory of Ayurveda. At the same time we will not be patted on the back for giving a physical basis to the theory of vital force. Today Allopathy is poised for a break through by devising simple chemical means by which the powers of immune system are sought to be awakened to simply gobble up even diseases like cancer. If it is so, actual success apart, the claims made by both the Ayurveds and the Allopaths i.e., of reawakening the vital force or the immune system, are only truths stated differently and not two different theories. I will clarify this point by anticipating the next question: Do we consider the immune system to be the vital force? The answer is probably that the immune system is one manifestation of the vital force on physical level and there are probably others about which not much is known. Scientific function abounds with speculation of it but it has not become science yet.

Defining cures and the criteria of cure:

Since there are difficulties in understanding the theory of causation of diseases the question of defining what is cure becomes almost impossible. The variation of symptoms especially in time is the one that is clearly understood by Allopathy. I do not think it is indistinct in Ayurveda. Defining cure is essential in clinical settings if the treatment has to be evaluated. Probably the definition of cure for each evaluation of disease is the greatest difficulty when it comes to double blind clinical trials and that too involving two systems and not two drugs from one.

For instance, in the case of jaundice, people tend to take 'native' medicines of which several are known. Generally the time duration of jaundice is from 3 days to 3 months and according to Allopathy most patients will recover between 20-28 days provided it is Type A. It does not have any serious complications and the body is left intact. By the initial blood testing we can always get a fair estimate that this jaundice is likely to last for so many days and that it is Type A and not B. Whether it is treated or not it will have spontaneous cure. How do we prove that the native medicine has acted? That can be if the duration of the problem is shortened to say 5 days or so in almost 100% of the cases. When remedies are claimed to be effective they do not mention the time elapse before the medicine was started. Neither is the alteration in bilirubin estimated nor its return to normal. According to Allopathy anyway there is going to be spontaneous cure. Further the treatment of jaundice as given is symptomatic and does not take into consideration the cause. It can be of Type A, Type B, due to malignancy, obstruction of bile passage or drug induced. What is it that the native medicines are curing when they have not established what they are treating. This is what we mean by defining cure. A definition of cure in jaundice could be that the drug should substantially reduce jaundice or eliminate it in a defined short period of time.

Similarly in the case of, say, systemic lupus erythematosus or rheumatoid arthritis the criterion for cure could be that the drug alleviates pain, swelling and dysfunction early and that it stops further eruption of the disease once the drug is stopped. According to Allopathy, these diseases can only be controlled by continuous medication which have considerable side effects and in the case of SLE, the disease progressively involves more and more systems despite medication. Let SLE be simultaneously defined as a wata or some tridosha disease and be treated by Ayurveda but the criterion should be the halting or reversal of disease preferably without medication after a particular time period.

Criterion for cure is similarly confused in diabetes. Allopathy is considedred to control diabetes and Ayurveda to cure it. The criterion for cure could be that after a period of time, no medication is necessary and after another specified time no dietary restriction. Allopathy confesses that in rare instances temporary diabetes may appear and get cured for years with no drugs or restrictions. Medicine given for such a patient can claim cure but it is purely coincidental. If the cure is real all diabetics must be given a cure. There are stress states like pregnancy, in which diabetes disappears once the stress is over. These variations of diabetes can be distinguished normally also. A medicine claiming cure in this second state also has to clarify the role of this stress in the so called cure. I know hundreds of cases when people claim that they are undergoing Ayurvedic treatment and that their diabetes is cured. On closer enquiry it is found that they continue to take the tablets at times 6-10 per day, continue to observe dietary restrictions etc., etc. The claim is cure. In what way is it different from Allopathy? Allopathy too believes that when dietary control, adequate exercises, rest, tranquility, reduction in obesity, etc are achieved, and sugar does not come within normal limits, the person would require drugs or insulin but there is no cure.

So is the case with every disease state. Its natural course has been outlined. While evaluating ayurvedic therapies, the criteria and definition of cure will have to be outlined and the drug trial undertaken. Then only the Ayurvedic methods will gain precision. It will be possible to evaluate the claims and assess success & failure rates. In our terms, when these methods do not exist in a science it is an empirical science and the propositions become debatable. It has to be reduced to the level of non empirical reproducible science.

Alongwith 'cure criteria', importance of the parameters developed for testing in blood etc and the way they change in disease states must be accepted as a reproducible method for establishing cure. Parameters alter in disease state and come back to normal with cure. A hypertensive/diabetic continues to feel okay with elevated levels does not mean that these levels have been reduced to acceptable levels. And again the acceptable levels are the ones known to be desirable from the patient's point of view because it leaves a safety block or range before it can turn abnormal and consequently dangerous. In elevated levels this safety range is markedly reduced.

All in all there is need to put all sciences on firm footings so that we know the weaknesses, the strengths, limitations etc. through a specified research model. Let us supplement, supplant or complement each other where necessary for the alleviation of human suffering.

(Dear reader, this is only a part of the article written by the author. We are keen to know if such articles are useful. Only if we have a positive response from you will we print the other part-Editor)

Integration of Medical Systems

A response by B.K. Sinha on Kelkar's article in MFC-B No. 128.

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SEPTEMBER 1987

The Epidemiological Approach : Its Elements and its Scope

Ritu Priya

Epidemiology is defined as the study of the distribution and determinants of disease frequency in man(1). This invovles study of its distribution in time and place, in terms of its quantity, in terms of the persons affected, their age and sex distribution etc. The determinants of disease are the causal factors—factors involving the agent, the host and the environment and their inter-linkages in the 'web of causation'.

The Approach

Epidemiology is basically an approach to studying any health problem of a population, commonly applied to studying the causality of disease. The approach primarily involves studying the problem as it exists in the population, in all its various aspects, and then using this information as the basis for understanding the causation of the problem; very often with the additional perspective of trying to identify means to prevent or control or otherwise effectively deal with the problem.

Principles underlying the approach are :

(1) It is a comprehensive, holistic approach; taking into account the various dimensions of the problem—physiological, pathological, demographic, environmental. Based on the understanding that human disease is related to man's environment, it involves study of the population's physical, chemical, biological, social, economic and cultural environment. It thus deals with both medical and social sciences and uses the tools of both. Its field of enquiry will extend "from the molecule to the social group, from the prevalence of sickle cell trait to the conditions of industrial morale,"(2).

(2) It deals with large populations and not with individuals. Thus, for example, the difference in dealing with the natural history of a disease. In an individual, natural history of a disease connotes the process of pathogenesis of the disease--from pre-pathogenic phase, to incubation period, to early discernible lesions, to advanced disease. Epidemiology studies this in order to explain the behaviour of the disease in society, its distribution over time, its seasonal variations, its geographical distribution, the characteristics of persons affected, the conditions for variations in natural history in individuals etc. It is interested in "community diagnosis' just as clinical medicine is interested in diagnosing the health problems of the individual. It is a' reconstructive science' in contrast to the laboratory approach of studying minute components of the whole.

(3) It depends upon the quantifications of phenomena using statistical concepts and tools. This helps in a systematic and 'objective' collection and representation of data, in drawing inferences and establishing associations, in generalizing from partial data, and in knowing the possible degree of error in one's deductions.

The health status of a population is measured in terms of morbidity and mortality rates. Causal relationship between events is established by proving a statistically significant, statistically determined association between them and then substantiating this association with other evidence like time sequence, strength of association, existing knowledge about the mechanisms involved, or by direct experiments.

(4) It tests its hypotheses by experiments, even on human populations, in addition to using the

various tools used by other disciplines. The 'epidemiological experiments' involve comparisons between a study and a control group or between two groups subject to conditions differing only in the one factor under study. These groups may be created by natural conditions or by direct, planned intervention.

(5) It deals with dynamic processes and therefore has to keep a constant track of changes in disease patterns, in health status, and in the various factors influencing them. To be able to do this it has also to keep testing and altering its specific tools, evolving new tools, and seeking out new indices of health and disease.

Epidemiology can help in :

(1) Understanding disease processes in populations—the history of the rise and fall of diseases in specific societies and changes in their character. This will help in understanding present health problems and in making useful projections into the future. For example, McDermott (3) uses the morbidity rates of various infectious diseases in the USA at the beginning of this century to show that these diseases had begun to decline even before specific therapeutic and preventive measures for them had been discovered. He explains this trend by the general improvement in socio-economic conditions and thereby rise in the standard of living. This understanding should help in building our overall perspective towards preventive measures, emphasising the importance of socio-economic measures over medical technology based solutions.

(2) Identifying causes of a disease and establsihing their relative importance (multiple-cause theory) by studying the incidence in different groups, defined in terms of their composition, their inheritance and experience, their behaviour and environment. This knowledge will help in evolving means of treatment and of undertaking the various levels of prevention.

(3) Planning, organising and monitoring health services by diagnosing the health of the communtiy in terms of incidence, prevalence and mortality; to define health problems for community action, and their relative importance and priority; to identify vulnerable groups needing special protection.

Studying the working of health services with a view to their improvement. Operational research translates knowledge of community health in terms of needs and demand. The supply of services is described and how they are utilised, their success in reaching standards and in improving health ought to be appraised. All this has to be related to other social policies and to resources.

(4) Furthering the knowledge of individual diseases and of medicine as a whole by completing the clinical picture of diseases and describing their natural history on the basis of study of a large number of cases of all kinds, and by following the course of remission and relapse, adjustment and disability (by detecting early sub-clinical disease and relating this to the clinical and by discovering precursor abnormalities during the pathogenesis) ; identifying syndromes by describing the distribution, association and dissociation of clinical phenomena in the population; estimating individual risks and chances, on average, of disease, accident and defect; testing hypotheses and techniques emerging from laboratories and clinics about causality, about risk factors, about effectiveness and side effects of new drugs etc.

Some Potentials and Limitations in the Scope of the Epidemiological Approach

(1) *All 'Disease' and no 'Health'* : Having started as the study of epidemics per se, epidemiology has extended to the study of disease in non-epidemic times and to chronic diseases; and from the study of infectious disease to those non-infectious in nature. Having thus been concerned primarily with disease, a further advance in its scope is study of the positive components of health and its determinants. This also involves redefining 'health'. There are some who think otherwise. While ready to concede the application of epidemiology to ' other biological processes, including growth, multiple pregnancy, sex determination, intelligence, and fertility", they do not think it important enough to study 'health.'

It is sometimes suggested that epidemiology should also be concerned with the positive components of health implicit in the definition used by the World Health Organisation. According to this definition, "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". However, the number of widespread and serious diseases of which the etiology is unknown is more than sufficient to occupy epidemiologists for many years to come. Concentration of effort on these diseases appears to be indicated by the urgent need for knowledge leading to their prevention, as well as by the practical difficulties in quantitative investigation of concepts that have not been defined in clinical, pathologic, or other operational terms.

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Even a 'progressive' book like Morris 'Uses of Epidemiology' (2) does not think of positive health as worth mentioning. Besides the above view, epidemiology appears to have an inherent limitation in studying 'health', because of its basic reliance on statistical measurements. Disease and death are easier phenomena to quantify than health. Health remains more qualitative than quantitative. May be it is possible to evolve indices of 'positive health' and attempts should be made in that direction.

Turshen(3) shows how the clinical picture of health dominates disease and the individual is placed at the centre, and health suffers. He argues that this has come about as a result of development of the capitalistic mode of production in the industrialized countries.

He explores the limits of the clinical paradigm that has defined disease and health for centuries. This paradigm takes individual physiology as the norm for pathology (as contrasted with broader social conditions) and locates sickness in the individual's body. A typical nineteenth century variant held that every illness was the disturbance, exaggeration, dimunition or cessation of a corresponding normal function. In this veiw treatment readjusted the body until its physiological norm was restored, a mechanistic approach that reduced the body to a machine whose organs could be discretely examined and regulated. Implicit in this notion was the concept of health as the absence of disease.No positive concept of health was advanced.

The clinical perception of disease could not have emerged in the nineteenth century if the science of quantification had not been developed earlier, since it depended on operational verification by measurement, clinical study and experiment, and evaluation according to engineering norms. The medical quantifiers of the nineteenth century placed sickness in the center of a medical system that was a mechanised framework for the investigation of the mechanical troubles of the human body.

Foucault, in his study of the origins of modern medicine, makes the interesting observation that, until the end of the eighteenth century medicine was more concerned with health, with qualities of vigor, suppleness and fluidity that were lost in illness and had to be restored, than with normality, an analysis of regularity, the search for functional deviation, and the return to an equilibrium,. Foucault suggests that from this early concern for health there followed not only an interest in nutrition but also the possibility of self-help, since the sick person could treat himself or herself by following a certain diet. Nineteenth century medicine, by contrast, with its emphasis on the normal functioning of an organic structure, required a knowledge of physiology for its practice. It was on this view, the life sciences in the nineteenth century were built, not on the comprehensive and transferable nature of biological concepts, but on the opposition of health and illness.

Social and preventive medicine extended the clinical model in the direction of health, expanding its application from the individual to his or her family and immediate environment. Environmental sanitation reflects a further extension to the wider physical milieu : environmental sanitation is the study of disease based on bourgeois epidemiology, i.e., the classical triad—host, disease agent, and environment. It is in no sense a study of collectivities. Insofar as these disciplines remained dominated by the clinical model, none seems to grasp the notion of collectivity, without which there can be no adequate difinition of health.

A medical paradigm that is not holistic and collective produces only an inexact and inadequate body of medical knowledge.

This suggests an additional proposition—that medicine's failure to develop a positive definition of health results from the individualistic and ideological bias that pervades medical research and medical practice, structural relations between practitioners and patients, shapes the approaches selected for treatment (eg. chemical or surgical intervention) and the technology employed, and rejects the initiation of collective social action by communities.

The closest I have ever come to finding a positive definition of health is the following formulation : Marx regarded as the aim of the socialist movement "a society, in which menliberated from the 'alienations' and 'mediations' of capitalist society, would be the masters of their own destiny, through their understanding and control of both Nature and their own Social relationships."

Thus while one may or may not agree with all his propositions, one cannot deny the need for a change in the basic perspective of medical science today, specially in the light of even the 'establishments' professions of emphasis on community participation and the attempts by 'non-establishment' to initiate community action in health.

(2) *'Holistic', but no 'Political Environment'* :
Epidemiology has from the beginning had the basic understanding that human disease is related to the human environment. The environment has from the earliest (even Hippocrates) been taken to include the physical and geographical, the biological and the socio-cultural (food habits, addictions, physical exercise and labor). It still remains primarily restricted to these (and in fact even the socio-cultural aspect is taken in a very limited sense). But with its holistic approach it can, and must, cover more and more the varied and complex social economic and political dimensions of the human environment.

Attempts are being made in recent times to add to the dimensions under purview of epidemiology by naming new aspects like 'medical ecology' (the study of human disease in relation to physical, biological and social environment) and studying the 'political economy of health' and the 'political ecology of disease.'

One can start with the understanding, as Turshen(3) does, that, "the theoretical assumptions on which medicince is based are subjective....." Both scientific and medical knowledge depend on material production and reflect the social organisation of that production, not on historical objectivity". It follows then "that contemporary medical definitions of health and disease are inadequate because they are abstraction derived, for specific historical reasons, from the clinical study of the individual". The study of these social, economic and political reasons thus becomes necessary for understanding the existing medical perspective and for evolving the 'new' perspective.

The definitions are inadequate expressions of the relation of medical states (illness) to reality since individuals are not clinical entities. In reality the human essence is the product of an example of social relations. The clinical model does not encompass the social relations of the individuals it studies, even at its most progressive limits (3).

The idea that the human environment is a complex interacting web has been accepted in the biological and social sciences since the time of Darwin. Use of the concept entails analysing natural pheomena in the context of their total environment. This theory of holism rarely directs studies of human ecology, because many hidden assumptions preclude the consideration of cardinal social and political factors. Enzensberger, in his critique of ecology, points out how recent studies (eg., the hasty global projections of the club of Rome) fail to consider the complexity of relations between people and their environment. He traces this failure to the use of narrow biological methods in the analysis of problems that are broadly social. "For in the case of man, the mediation between the whole and the part, between subsystem and global system, cannot be explained by the tools of biology. This mediation is social, and its explication requires an elaborated social theory and at the very least some basic assumptions about the historical process."

Little attention has been paid to this social aspect of hygiene, especially since the scientific advances of the nineteenth century gave the practice of medicine a solid though theoretically narrow foundation.

Turshen asserts that the one branch of biology that has taken it up is medical ecology. He goes on to describe the conception of environmental factors according to medical ecology, but I would contend that they be considered a part of epidemiology and his description can be freely applied to epidemiology as a whole.

Medical ecology thus asserts a relation between environment disease, and man, but selects only biological and socio-cultural factors as relevant. It looks at the convergence of environmental and community factors only within the person of the patient. At no point is it concerned with the collectivity as such. By dismissing political and economic factors as irrelevent, it suffers from a failure to consider the relation of people to their environment in all its complexity. As with ecology and biology, the methodology of medical ecology is too limited to solve the problems of public health. It is constrained by the individualistic and ideological bias of the clinical paradigm which medical ecology reflects.

These points can be illustrated with a brief example from Vietnam. In discussing the influence of culture on human disease occurrence in northern Vietnam, J.M. May, a prominent medical ecologist, wrote in 1953 : "From the water the people get their food, also their cholera, their dysenteries, their tyhpoid fevers, their malaria; from the earth they get their hookworm; from the crowded villages they get their plague and typhus; and from the food their protein deficiencies, their beriberi."

May, who worked as a surgeon in the French colonial service, recognized the direct influence of scarcity and starvation on the pathology he described but dismissed any examination of their causes: "We

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will not discuss here the fantastic edifice of mortgages and debts which rises above the fraction of an acre of land on which family life is built. Nor shall we describe the land tenure laws and customs that have resulted in the reduction of the size of property through the years to insignificant proportions." To discuss and describe in these circumstances was dangerous, for no intelligent observer could escape the conclusion that the origins of indebtedness and land tenure laws were the key to the ecology of disease in Vietnam. The etiology was no 'cultural maladjustment'; it was the dislocation of the Vietnamese political economy by French colonialism, which imposed a system of land classification and taxation that impoverished the peasantry. Medical ecology could not take political and economic factors into consideration without challenging the legitimacy of colonial rule.

As the above example clearly shows study of socio-economic and political factors is important for understanding the existing conditions of health of people and the condition of medical science and health services. And this understanding is an imperative for future developments in these fields.

Conclusion

If we accept the two propositions stated above, that of incorporating 'health' within the purview of epidemiology and that of incorporating socio-economic and political conditions as part of 'human environment', we can easily substitute the word 'problems' for 'diseases' in the five uses of epidemiology stated above. The epidemiological approach can then be applied to all dimensions of the health field. In fact the basic elements of the approach can be applied to study the various aspects of society at various levels. It all depends on what parameters one defines for 'health'. Inherent limitations to this application of the epidemiological approach will definitely emerge and it cannot be the only means of understanding the complexities of society but it can definitely be one of the many tools in an attempt to do so.

Other fields studying society too seem to share the 'clinical' concept and its impact is seen in other modern social institutions and organisations as well. As Morris (2) says "One of the urgent needs of society is to identify ways of healthy living, the wisdom of body and mind and the principles of social organisation that will reduce the burden of disease and improve the quality of life. The quest for this knowledge is the main use of epidemiology".

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Dear Friend,

Prashant's question put to Amar Jesani (mfc 130) provides an appropriate clinical situation wherein the difference between a purely clinical approach and a community health approach can be demonstrated. I therefore, take the liberty of responding to it.

Prashant's question contains within itself an answer from a purely clinical view point. A patient (the woman facing oppression) presents hereself with a malady (pregnancy, may be having a female fetus) to the clinic. What should a Doctor do ? Prashant's clinician genuinely moved by her misery, advises Sex Determination test and if she finds a female fetus, does an abortion, feeling satisfied at having successfully relieved the patient of her malady through medical intervention. Instead, a socially sensitive clinician adopting a community Health approach would ask "Has the woman really been relieved of her misery by this medical intervention ? How long would I go on advising SD/abortion, every time she come with a pregnancy ? What is the guarantee that she will not be harassed for having borne a female fetus in the first place, abortion or no abortion? Proceeding on these lines s/he will come to realise that the harassment of the woman due to bearing of daughters only, is a *Social* problem and not a *Medical* one at all, wherein medical intervention can only be partially effective or as in this case, may even be a dangerous short cut. It would perpetuate her misery without giving her any advice on the ways and means of obtaining freedom from her oppression. This is because a purely clinical approach sees getting rid of her female fetus as her 'need' while a community health approach perceives it as the need to be relieved of harassment. Therefore, neither advocating SD/abortion (in case of a female fetus) or giving her a long lecture on medical ethics can be the appropriate way of intervening here. Her need can only be met by referring her to a women's group able and willing to share her misery and to make a collective effort to help her struggle against oppression.

Medical intervention while being useful as a palliative measure in other such 'medico-social' problems, can turn out to be counter productive in this particular situation as it may even perpetuate her harassment of undergoing multiple abortions till a male fetus is born.

This instance illustrates the need and the possibility of adopting a Community Health approach in one's clinical practice, a theme I touched upon earlier in this column (mfcb 130).

Dhruv Mankad, Nipani.

Apropos Gloria Burret's article "Paralytic Poliomyelitis" (mfcb 130) I would like to have the following information :

1. The exact data to suggest that paralytic polio has rising incidence (fresh new cases/1000 population) in India. The data should include incidence 10, 20, 30 years ago and the present incidence to show that there is rise over a period of time per thousand susceptible population. Data naturally have to be community based rather than hospital based.

2. There has been a plea raised from various quarters that the number of polio vaccine doses should be increased from three to five or more because the efficacy of the vaccine is low in our country. I would like to know whether the accepted formula

$$\text{vaccine efficacy} = \frac{\text{attack rate in the unimmunized} - \text{attack rate in the immunized} \times 100}{\text{attack rate in the unimmunized}}$$

has been applied by those who are advocating the raise on an all India basis.

3. The author has quoted Jacob John's article to say that partial coverage through vaccine causes increasing incidence. This is, according to John, because of retardation in the virus circulating and that retardation is due to (a) improvement in hygiene (b) because immune individuals are poor transmitters of the virus. Improvement of hygiene has not apparently occurred in this country. No data suggests this conclusion. As regards immunity gained through vaccination, less than 6.1% of the population had been immunized in the year John's article was published. It may be presumed that this 6.1% population belonged mostly to the larger urban areas. Would such a small number residing in specifically located areas be responsible for retardation of virus circulation in a country as vast and as far flung as India? If it indeed did retard circulation of the virus, would such an eventuality reduce the incidence or increase it? During epidemics, administration of vaccine is advocated to reduce the incidence of polio why ?

Warerkar, Solapur

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Injury Prevention and Basic Preventive Strategies

Dinesh Mohan

The injury problem in developing countries looks so complex that many tend to throw up their hands in helplessness. It is often recognised that problems exist and they need attention. But the most that is done is to put up posters and billboards exhorting their readers to behave more responsibly. The problem remains unsloved. This is partly because there are many myths prevalent regarding the control of injuries. Most people think that injuries are mainly the problem of rich countries. This is not so. The data available from developing countries suggest that in every sphere of activity the proportion of persons killed or injured is similar to or higher than that in industrialized countries. Another myth is that education, propaganda, and law enforcement can be the most effective tools in injury control. This also does not seem to be borne out by many studies around the world. The whole problem can be best understood if we are reasonably clear about the concepts which follow.

"Accidents" and injuries are not "Acts of God"

It is vital first step to realize that the occurrence and outcome of events which may cause injury are predictable and subject in many cases to human control. Often an injury can be prevented even where an accident cannot. In a motorcycle crash, the occurrence and severity of head injury depend on whether a helmet was used and on the quality of helmet used. Fires and explosions in the kitchen are reduced drastically when safer cooking methods are used. Children do not fall out of windows which have proper screens.

Similarly, even the so called natural disasters are not really 'natural' If they were, then the effects of floods would be the same in the rich and poor countries. It is rare to see thousands made homeless in the US, but it is a yearly ritual in India. Even in India, it is the poor who seem to be more adversely affected by floods, and storms than the rich. Therefore, how a physical event influences human beings is largely influenced by the human beings themselves. Even the occurrence of the physical event itself is very often a result of man's activity. For example, floods may be caused by deforestation, faulty designs of dams, blocking up of drainage in cities, etc. Therefore man has a great deal to do with whether or not accidents and disasters take place and how these events affect us. We can design our environment and products such that the incidence and effects of accidents and disasters are minimised.

There is no difference between injury and disease

Injury is a disease that results from acute exposure of the body to physical and chemical agents. There are no basic scientific distinctions between injury and disease. When one drowns, one may die because of fluid in the lungs which prevent exchange of oxygen between air and blood. The cause of death in pneumonia is the same. Any infectious disease may cause fever, pain, disability, or death. Injuries do the same. Therefore, the concept of injury is coextensive with the concept of disease as illustrated by the following table.

Comparative epidemiology of Malaria and Skull Fracture

Pathological condition	Host	Agent	Vector/ Vehicle	Interaction
Malaria	Man	Plasmodium	Mosquito	Bite
Skull fracture	Man	Mechanical energy	Motorcycle	Crash

Further if injuries are viewed as diseases, the community may stop viewing them as events resulting primarily by carelessness. Long ago we learned that it does little good to blame the victim of a disease for being sick. For example, when a patient goes to a doctor with malaria, the doctor does not blame the victim for not killing the mosquito before it bit him. The most effective disease control measures often consists of modifying the environment, not the behaviour of the individuals, to make contracting the disease less likely.

Up to now, our efforts at injury control have often been retarded by a preoccupation with fixation of blame. This has led to repeated attempts to prevent injuries by changing the behaviour of their potential victims. Such attempts are usually costly, not often successful, and have added to the public's sense that injuries are an unavoidable evil. In general, the same principles used in disease control may successfully be applied to injuries.

All Injuries cannot be prevented

Most efforts to reduce injuries are termed "accident prevention" campaigns. We should be clear that

accident prevention is just one aspect—and not often the most rewarding one—of a much longer range of countermeasures used in effective injury control programme. This is because, making mistakes is very 'normal' and not 'abnormal'. It is normal for professional drivers to be distracted during some periods of their long driving hours; it is normal for cooks to be day dreaming at some point in the kitchen; it is normal for a factory worker to make a mistake when he thinks of the hundred problems at home; and it is normal for children to do the unexpected and hurt themselves.

In short, we will never eliminate carelessness, absentmindedness and even neglect in day to day activity. However, by designing our products and environment to be more tolerant of these normal variations in human performance, we can minimise the number of resulting accidents and injuries. Accidents result from a temporary imbalance between an individual's performance and the demands of the system in which he is functioning. They can be prevented by an alteration in either but most effectively by focusing on the system and not on the user. the user.

In many areas of public health we understand this very well. We know that drinking water should be purified at its source; it is unreasonable to expect everyone to boil water before drinking it. Ironically, it is quite common to create a product or environment which is likely to cause injury, warn the user to be careful, and blame the user if a mishap occurs. We would never tolerate a person who introduced cholera germs into a city water supply and then asked every citizen to boil water before drinking it. But this we do all the time to as far as injuries are concerned.

Injury Control measures can be developed systematically

Even if one considers injuries to be a health problem, very often it remains difficult to think of all the possible counter measures because the problem appears to be too large and un-wieldy. It is always easier to work in a step-by-step manner. One useful approach is to consider each injury problem as resulting from an interection between several discrete factors occurring over distinct phases in time. This can be done if we divide all time into three categories: before the injury producing event, during the event, and after the event. The physical universe can be divided into these factors: man, the device under consideration, and the environment which consists of everything else. These can be used to create a 3 x 3 matrix as shown in the table.

Injury Matrix

Factors

Phases	Human	Vehicles & equipment	Physical, & socio-economic environ.
Pre-event	1	2	3
Event	4	5	6
Post-event	7	8	9

(From: "To prevent Harm", Insurance Institute of Highway Safety, Washington D C)

In developing a program for injury control measures for a particular injury problem we can go systematically through each cell of the matrix and think of all possible counter measures applicable to that cell. (In classifying an intervention according to time, it is the point at which an intervention exerts its effect, not the time at which it is undertaken, which is considered). The usefulness of the matrix is as a tool for generating ideas. At this stage, every possible strategy should be documented and nothing held back because of political or financial considerations. After all the possible countermeasures have been listed, injury control experts and policy makers can select those which are most feasible, effective and acceptable politically.

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By Satyamala. Misc (5)
MFC Bulletin No 141, June 1988

R.N. 27585/76

From the Editor's Desk

Last year in September, the media splashed, somewhat sensationally, the news that 18 unmarried nurses, recruits to the government DK Hospital in Raipur, MP, were forced to undergo pervaginal (P/V) examination to determine their virginity. The pressure was that the nurses salaries would be withheld if they refused the P/V examination. It was only when the nurses struck work and the Junior doctors and Class 3 employees threatened to join the stir, that a magisterial inquiry was ordered and the Medical Superintendent sent on long leave. A small opinion poll conducted by Chattisgarh Mahila Jagruti Sangatan following this incident showed that approximately 56% men and 65% women surveyed felt that nursing as a profession was looked down upon and the nurses were considered objects of pity or sexual objects by society. The CAHP-TNAI Nursing Survey in India (1975) has also shown that the necessity of attending to males and dealing with male colleagues and having to do night duty accounted for the largest proportion of negative feelings about nurses.

Nursing as an acceptable profession for women emerged in the late 19th century out of a desire to open up non-industrial occupations for women from the upper classes. Earlier to that, the few women employed in the hospitals to look after the dying were generally drunken and indulged in prostituton and thievery. Since the upper class women were moving out of the protection and the sanctity of their homes for the first time, it was essential to elevate nursing from its lowly position. Thus, Florence Nightingale frequently reiterated in her writings the equation good women equals good nurse. Nightingale insisted on the existence of a close link between nursing and feminity, the latter being defined by a combination of moral qualities which differentiate men from women. The success of nursing reforms depended primarily, according to her, on cultivating the feminine character rather than on training and education (Gamarinikow, 1978).

Although the nursing education is somewhat different today, the necessity for being 'good' women is still emphasised. The introductory pages of the Text Book for Auxiliary Nurse-Midwives states. "In order to maintain respect for the nursing profession, and in order that there should be no hindrance in her practical work, the nurse should always be clean and neat and the uniform complete and correct in every detail. No jewellery is to be worn and no perfume used. She should wear a suitable hair style with the hair kept clear of her neck and forehead. The material and style of her uniform should be plain. If a sari is worn, it must not be loose at the shoulder and there must be no gap at the waist. Shoes or sandals must be worn and they should not be fancy in style or colour." And a little less blatantly, "there will be great demands on her strength and endurance, and she must always be in control of her emotions if she is to inspire confidence and give needed support to patients and their relatives" (Chalkey, 1974).

The victimised nurses' viewpoint about the Raipur indident was also on similar lines. "Our virginity has come under question; Madam please do not perform the P/V on my daughter.. it is a question of her life (a nurse's mother); this has not only led to the degradation of a few victims but has denigrated all womanhood; if such practices continue people would not want to send their daughters to work; the entire nursing community that draws its inspiration from Florence Nightingale has been degraded" (Awaz Aurat Ki, March 88).

The incident at Raipur is not an isolated freak occurrence as it may seem. It is merely a logical extension of the society's desire to maintain the 'morality' and control the sexuality of women in general, the other side of the coin being the licence given to men to

(*Contd. on p. 5*)

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Views and opinions expressed in the bulletin are those of the authors and not necessarily of the organization.
Annual Subscription — Inland Rs. 20.00
Foreign: Sea Mail US $ 4 for all countries
Air Mail: Asia — US $ 6; Africa & Europe Canada & USA — US $ 11
Edited by Sathyamala, B-7/88/1, Safdarjung Enclave, New Delhi 110029
Published by Sathyamala for Medico Friend Circle Bulletin Trust, 50 LIC quarter University Road, Pune 411016
Printed by Sathyamala at Kalpana Printing House, L-4, Green Park Extn., N. Delhi 16
Correspondence and subscriptions to be sent to—The Editor, F-30 (GF), Jungpura Extn., New Delhi-110014.

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(*Contd. from p. 6*)

sexually exploit women. The situation gets aggravated since nurses come from a lower strata of the society as compared to, for instance, women doctors who are not subjected to large scale abuse in the work place. Unless the issue is fought at this level, the profession of nursing will continue to be denigrated and the nurses treated as available sex objects by all their male colleagues and patients.

—Sathyamala

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Issues For Debate On Peoples Science In Health Care

(*C. R. BIJOY*, Pathanjalipuri - P. O., Thadagam, Coimbatore - 641108)

The dominant health care system of our country is essentialy based on the modern Allopathic system. The state and the market have organised health care to promote the development of this dominant health care system. A well established institutional network consisting of educational institutions, pharmaceutical companies, medical equipment manufacturers, marketing network, medical establishments - hospitals, nursinghomes, clinics and private practice, huge monolith of a health care structure established by the state with its hospitals, primary health centres and sub centres have penetrated into the most remote areas. Yet this dominant health care system is not accessible nor affordable to most of our people. It is highly exclusivist, expensive, generates overuse of unnecessary drugs, creates dependancy upon a class of medical / health care practitioner through the mediation of scientific mystification. It does not reach the majority of our people and oppresses the majority of those who approach it. The dominant perspective sees the modern health care system as a legitimate and logical conclusion to meeting the health needs of the people. It persists by further establishment of an even more elaborate system with an even more efficient network of infrastructural facilities, developing even more informations, programmes, manpower and services that bulldozes amongst our people to provide them with "benefits" of the modern world in the manner they choose and under the assumption that they are desirable, beneficial, apolitical and inevitable.

The reactions to such a state of health care system are efforts to reform within the present system of health care using modern medicine through stress on primary health care, extension of health care facilities to the rural and tribal areas, protection of consumer rights, opposition to continued marketing of banned and bannable drugs, pressure against the continued hospital - doctor - disease - drug approach to health care, a more rational drug and health policy, increase in professional and managerial abilities of the health personnel and efforts at promotion of people's participation and their self reliance where promotion of traditional systems of medicine, folk, herbal and home remedies and local health practices have an important role.

One stream of thinking is that the existing socio-economic and political system is responsible for the evils of the present health and medical system. The problem is seen as arising out of an elite, urban bias in the priorities of policy makers, commercialisation of medical profession, the capitilist distortion of modern medical science and technology and its mystification. The counter stream looks critically at the ideological and conceptual basis of modern society. The societies In which modern health S & T evolved are imperialistic and the propogation of this S & T itself is part of colonisation of third world, both intellectually and materially. The sickness and limitations of the industrial culture, of which this science is a part, in the countries of origin is too evident now. Alternative life style and culture is seen as a way out. Indigenous science and technologies, including that of health and disease, in the context of indigenous life styles and practices is to be the basis for evolving a truly appropriate need based democratic and participative (health care) system.

This alternative and counter stream is to be seen in the following context :-

- extremely limited access of modern health system and the escalating loss of whatever benefits from traditional systems;
- minority enjoying access to all types of health and medical care including grudging and condescending incorporation of traditional systems of medicine;
- the failure of the western ethno-centric approach to meet the needs and aspirations of the people even after four decades of independance;
- the development process that increases disparities in the control and use of resources;
- the social process where market forces determine what constitutes knowledge and practice;
- the cooption of the state by the market;
- the health of an individual or community

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defined in terms of the political state implies the power of individual and community to control decisions that affect their physical, mental and environmental state.

Some basic notions :

1. Different communities perceive different resources in the same environment. The same resources are more over perceived and put to use differently by different communities. The evolution of knowledge and practice, of science and technology is a cultural construct and is based on the specific social formation and the mode of production of that particular community at that point of time. The exiestence of heirarchy of cultures is founded on the ideology of the oppressive classes and is also used as a tool against the oppressive classes by the oppressed in a liberative process.

2. Culture is built upon complex interactions involving physical, environmental, Ideological, political and economic dimensions. The relations of production, exchange and consumption find expression in cultural and social responses. Traditions is the vestiges of earlier cultural trends ideologically influencing the present and future.

3. Traditional science and technologies are the emperical results of socio-cultural and envi. ronmental demands rather than mere economic imperatives. It is characterised by its localised expressions suited to locally available resources evolving local skills, are ecologically sound, suited to renewable forms of energy, low capital outlays and high labour content The ensuing products are 'Unsophisticated' and geared to serve limited and specific markets and are based on agrarian economies.

4. Modern science and technologies are based on the ecnomic imperatives of industrial economies rather than the socio-cultural and environmental demands. It is characterized by centralised production requiring newer skills utilising non-renewable sources of energy, with high capital outlays and low labour content and are generally ecological disasters. The ensulng products are sophisticated and geared to serve a broad market through the creation of homogeneous consumption behaviour.

5. The health care system is always articulated in a given social formation and the mode of production of that social formation gives rise to its corresponding health care system. The present social formation is that of dominance and control exercised to maintain the exploitative relations of production.

6. The aspects of mystification and professionalism is rooted in the economlc base, and has nothing to do with the systems of medicine, and is the expression of these systems in the given social formation.

7. The traditional systems of medicine is closer to the indigenous socio-cultural pattern, peoples consciousness of health and disease, local skills and resources.

On a peoples science movement in health care :

The traditional systems of medicine has a comprehensive body of knowledge in health science with a well developed theoretical foundation based on emperical data, sclentific methodology and a materialist philosophy. It developed in its practice in heterogenous forms catering to the needs of people according to the then social formation of specific communities. But with the advent of the market with its modern science and technology and the state as a mechanism to create conditions for the development of the market, the common properties, resources and rights of communities to it are being expropriated from the people. Consequently, the knowledge base, practices, the science and technology and skills are pushed out of the control the accessibility, affordability and suitability of the communities. The state delegitimises the right of communities to t is knowledge and practices of communities by the development of the process of institutionalisation.

The inability of modern health care system of the state and the market to satisfy the health needs and aspirations of the people and the inability of the modern medicine to exclusively provide a safe and satisfactory solution to all health problems has led to the increasing respectability of the traditional systems of medicine by the state and the market. The Chopra committee of 1948, the WHO report in-

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traditional systems of medicine, ICSSR - ICMR report of 1981, the National Health policy 1982 etc, provides sanctity to this process. The state now sets itself to increase the patronage to traditional systems of medicine under the garb of virtues as rich heritage, glorious achievements and cultural compatabillty. The present form of health care system has meanwhile made inroads into traditional systems of medicine developing institutions of learning skills and production suited to the mode of production and social formation of the day. Incorporation in the modern health care system on the basis of testing done primarily with modern medicine rather than the framework of folk knowledge, keeping with the assumption and logic of that science is the trend considered to be valid. As the market incorporates the products of traditional systems of medicine, the resource base of traditional systems of medicine, the resources base of communities and their rights over it, is further expropriated. The crisis in the forms of knowledge, practice and organisation of indigenous people health care deepens further.

A peoples science movement in health care should seek to legitimise the rights of people to common properties and to increase the space for individuals and communities to take care of their health with available resources and skills.

(Paper presented at the seminar on "People's Science Movement", Coimbatore, Tamilnadu, 26-27 December, 1987).

b) Pre-Professional Course :

The present pre-professional course is to a large extent unnecessary repetition of the higher secondary or preunivers course. All the subjects taught are not adequately medical oriented :

i) In Botany or Zoology the stress should be understanding the basic principles of human anatomy & physiology by a study of similar structure and functi in plants and animals.

ii) In Physics and Chemistry - various aspects of so-call Biophysics and Biochemistry should be stressed.

iii) The student should be prepared for his role in socie through lectures in certain aspects of sociolog anthropology, elements of economics, statistics & biomathematics even at this stage.

c) Pre-Clinical Course :

1. Anatomy and Physiology form the basis of our medic education and the content of these courses cannot radically altered except that the teaching should be le cadaver-oriented and more clinically oriented. The stude must be exposed to clinical material to help him understa better the normal anatomy and physiology of an individu and the changes in them which constitute disease.

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family's income is spent on bottled formula (of families with a six-month old baby).

- As most poor families cannot really afford baby food of this kind, 82% of the mothers in Barbados were diluting the formula. They were making a 4-day can last from 5 days to 3 weeks.

As the Protein Advisory Group of the UN says "in many instances, placing an infant on a bottle is tantamount to signing the death certificate of the child".

Nevertheless this drive to modernisation fuelled by agribusinesses (and compounded by high female illteracy) goes on unchecked. The UN Yearbook on International Trade Statistics states that baby food export to the impoverished Sahelian state of Niger increased by 88% in one year! It has been estimated that underdeveloped countries using baby formula imports have suffered economic losses in billions of dollars.

This situation shows the willingness of firms to exploit the most vulnerable of populations for monetary gain. Greater and greater control of food supplies in the Third World are controlled by fewer and fewer corporations. It also means lower quality higher priced food because that is where profits are. Most importantly, agribusinesses in their quest for modernisation and profit maximisation give us distorted land use - land is used not for what people need economically but for what is needed economically by the corporations.

From a Statement to the Press
by Dr. Roy Brown

...There is absolutely nothing that impedes more a maternity ward nurse's ability to help mothers of newborns to breastfeed, than the ready availability of piles of infant formula. And this method of feeding which seems to the mother to be easy, free and recommended by the hospital becomes a nightmare outside, where she has to pay for it and try to find clean water and sanitary conditions in order to prepare it.

Dumping supplies, especially in underresourced Third World hospitals, puts health care workers into the position of being de-facto sales people for the formula companies. In my experience as a paediatrician working in Africa, Asia and Latin America, I have seen thousands of cases of severe infant malnutrition and diarrhoea among infants whose mothers have been persuaded by company promotion that formula is superior to breastfeeding but who have neither the money nor the hygienic conditions to prepare the formula safely to feed their children. This is the Bottle Baby Disease.

TECHNOLOGY AND HEALTH CARE

ISSUES AND PERSPECTIVES

AN APPROACH PAPER

by Dr. Ravi Narayan

[This is a background paper written to serve as a basis for discussion at the medico-friends circle (mfc) annual meeting. It is not exhaustive nor comprehensive but attempts to list out some points that would help participants to understand the basis for some of the concerns and issues related to the theme. Those with access to earlier issues of mfc bulletins would find additional information in bulletin numbers 57, 60, 62, 65, 88, 115, 121, 143-44 and 145.]

WHY DISCUSS TECHNOLOGY AND HEALTH CARE?

There are many reasons why the 'technological' dimensions of medical/health care in India need to be critically examined and assessed. Some of these are:-

Health For All by 2000 A.D.: India's commitment to this lofty goal demands a critical appraisal of all aspects of the existing health care service and an evaluation of alternative approaches and options. With the increasing awareness that the western high technology institutional model of health care is inappropriate, this appraisal becomes very important.

Technology Missions: In recent years the concept of 'Technology Missions' has grown and some options have been made and are being actively promoted. Atleast two of the present missions are directly related to health care - immunisations and drinking water.

Urban-Rural Disparity in Medical Technology: In keeping with our inequitous social structure and planning priorities, there has been a greater advancement of the technological status of medical/health centres in the urban area in both the governmental/non-governmental sectors and a stagnation in the Rural Primary Health Centres.

Proliferation of Diagnostic Centres: In recent years due to various aspects of a liberalised industrial policy, there has been a massive growth of diagnostic technology centres in the urban areas, all over the country. Most of these centres promote sophisticated technologies like CAT scan, Ultrasound, Echo etc., and are all in the private sector. What are its implications?

Overuse of Unnecessary Investigations and Surgery: As elsewhere in the world and particularly in countries where there is a well developed private sector in medical care, there is a growing concern that unnecessary investigations and often unnecessary surgery are taking place to support profit margins of hospitals, laboratories and medical practitioners.

Doctor-Medical Technology Axis: The ICMR-ICSSR Health for All report warns that 'eternal vigilance' is required against the growing Doctor- Drug Producer axis. Little is documented about the growing links between practitioners and diagnostic centres. The kick-back available for ordering a CAT scan is a glaring example.

Misuse of Medical Technology: The growth of amniocentesis/sex determination centres highlighted by health activists in recent years is one among many such examples which need further investigation.

Medical/Health Care Is Not Only Drugs: In recent years, drugs and consequently Rational Drug Policy and Rational Therapeutics have received much attention from health and development activists, consumer groups, professional associations and policy researchers. Groups like mfc and others have also looked at medical education and policies like TB control, Family Planning, Child survival

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and so on. But the technological dimension of medical/health care particularly diagnostic technology, surgery and related aspects have never been scrutinized critically. Considering that these form quite a major part of the cost of medical care, they need immediate assessment.

TECHNOLOGY AND HEALTH CARE

The theme can be explored in many ways.

Technology and Health Status: A major area of exploration can be the relationship between advances in health care technology and the health of people - their longevity, morbidity, alleviation from pain etc. McKeown in his book "The Role of Medicine" distinguishes five groups of measures while assessing the impact of science and technology in health status.

i. Measures which are scientific but owe little to professional science - manuring of land by farmers and limitation of family size by parents.

ii. Measures leading to environmental improvements derived from observations on the relationship of living conditions to health.

iii. Non-medical science and technology - chemical fertilizers, insecticides, herbicides in agriculture and engineering technology which contribute to control of the environment.

iv. Bio-medical research which extended non-personal measures like food and water hygiene.

v. Bio-medical research which resulted in immunization and treatment.

He concludes that at least in the West items iv. & v. have had less contribution to change in health status while i. to iii. have had more impact.

This is not an easy hypothesis to discuss here but some issues could be considered.

Has development of preventive/promotive measures been neglected? If so, why?

Is health status improvement to be expected by technological interventions or by socio-economic-cultural changes/interventions?

How has the growth of medical/health technology affected social values, medical ethics and so on?

In this paper it has been decided to focus on a few areas:

a) common investigations at Primary Health Centres and general practice

b) more sophisticated investigations in hospitals and consultant practice

c) therapeutic technologies like injections and many forms of surgery

d) technologies for community health/community level interventions

Appropriate Technology: What it is and What it is not?:

'Appropriateness' of a technology is for a particular need, a particular situation, a particular level. At the ICMR National Workshop on 'Appropriate Technology for Primary Health Care' two experts tried to define what 'Appropriate Technology' 'was' and 'was not'. Between them they explore all the important dimensions as well as the misconceptions.

Appropriate Technology : : What it is

To be appropriate for the circumstances in which it will be used, a technology must be

1. scientifically effective (it works)

2. culturally acceptable (it fits into the hands and minds of the people and does not endanger a social fabric that may already be fragile)

3. economically feasible (they can afford it within the resources available)

4 have an evolutionary capacity (it can be extended and built upon and is likely to lead to other changes)

5.should be environmentally harmless or atleast, minimally harmful".

- Katherine Elliott/ Nicolas Jequier

Appropriate Technology : : What it is not

"Appropriate technology is not against industrialisation or against modern technology. It does not represent a return to traditional technology.

It is not restricted to production, hardware and industry but it also involves products in all sectors such as agriculture, health, communication and others.

It is not primitive or low technology and does not imply undermining basic research. In fact it emphasises an even greater stress on basic research because in the absence of the beaten Western path in conventional technology, there is no alternative but falling back on fundamental research and new insights.

It is not a substitute for the socio-economic changes required for real development.

It is not pointless within the present frame work of society because it becomes the key to the transformation of society."

AVK Reddy

CLINICAL INVESTIGATIONS AND DANGEROUS DIAGNOSIS

Recognising Limitations of Lab Tests: The pathological, micro biological and bio-chemical investigations of ill health as well as the study of internal anatomy of the diseased body have revolutionized not only the understanding of disease, but, today they are the sheet anchor of medical treatment, aiding diagnosis, assessing cure and predicting prognosis. However, there are some basic facts about the measurement of biological parameters and/or the visualization of internal anatomy that is commonly forgotten. All laboratory tests have their own limitations. They are sensitive and specific to different extents. In simpler terms, it means that there are false positives and false negatives, ie., normal findings in ill health and abnormal findings in health. Since most biological parameters follow normal distribution and the ranges for assessment are narrow, there will always be a few healthy subjects with levels at the lower end or higher end of normality or just outside the range. All tests need to be done by specific, well-defined procedures and routines. In the absence of quality control and when corners are cut due to haste, poor training, over work or disinterest by laboratory personnel the reliability of the tests decrease.

In addition, when the test is given a significance out of context of patient history or is substituted for clinical judgement based on good physical examination

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then the reliability and 'hazard' potential increase. In measurements that use technology requiring electricity, changes in voltage can affect readings. With more complex technologies repair and regular maintenance become crucial. It is significant that many of these limitations are not known to the medical personnel as well and even less to the patient or consumer public. With the proliferation of diagnostic centres and the absence of any quality controlling authority, the situation of 'dangerous' or 'wrong' diagnosis can become 'epidemic' in proportion in countries like ours and it is time we recognise this. When investigations get ordered for profit motive and get routinised this problem will increase phenomenally.

Dangerous Diagnosis: Mendelsohn in his now famous book "Confessions of a Medical Heretic" records a series of very reliable surveys done on the situation of diagnosis in the U.S. Using the term Dangerous Diagnosis he quotes from studies of monitoring/regulating by the Centre for Disease Control on less than ten percent of the best labs in the country. Some of his findings are revealing:

Dangerous Diagnosis

ECG: "A survey revealed that the reports of expert ECG interpreters varied by twenty percent among individuals and by another twenty percent when the same individuals re-read the same tracing at another time.

In one test the ECG delivered a positive finding in only twenty five percent of cases of proven myocardial infarction an equivocal finding in half and a totally negative finding in the rest.

In one test, more than half of the readings taken of healthy people were grossly abnormal".

EEG: "About twenty percent of people with clinically established convulsive disorders never have an abnormal EEG. Yet fifteen to twenty percent of perfectly normal people have abnormal EEGs!"

X-RAYS: "Conservative estimates peg the number of deaths each year directly attributable to medical and dental radiation at 4000.

A survey showed that as many as twenty four percent of radiologists differed with each other in interpreting the same chest film even in cases of extensive disease. Thirty one percent of them even disagreed with themselves when re- reading the same films.

LABORATORY TESTS

In 1975, the Centre for Disease Control (CDC) reported that its surveys of labs across the country demonstrated that ten to forty percent of their work in bacteriologic testing was unsatisfactory, thirty to fifty percent failed various simple clinical chemistry tests, twelve to eighteen percent flubbed blood grouping and typing, and twenty to thirty percent botched haemoglobin and serum electrolyte tests. Overall, erroneous results were obtained in more than a quarter of all tests.

In a nation wide survey, fifty percent of "high standard" labs licensed for Medicare work failed to pass.

For $12 billion worth of lab tests each year, thirty one percent of a group of labs tested by CDC could not identify sickle-cell anemia. From ten to twenty percent of the tested groups incorrectly identified specimens as indicating leukemia. And from five to twelve percent could be counted on to find something wrong with specimens which were healthy.

In one study 197 out of 200 people were "cured" of their abnormalities simply by repeating their lab tests."

The situation in India would definitely be worse. It is time consumer groups and professional authorities recognised this danger.

SURGICAL TECHNOLOGY AND RITUAL MUTILATIONS

Assessing Surgery: The technology for surgery has made great advances in keeping with the development of more complicated and sometimes more intricate forms of surgery. However, it is true that surgical technique has also begun to be misused, overused and routinised for a variety of motives- to playsafe, for greater profits or due to impatience of the patient or doctor with medical treatment or for other such questionable reasons.

What is not commonly known is that many surgical techniques now in common application have not been adequately tested for effectiveness or for providing better prognosis. As more controlled studies are being done and costs measured against relative benefits, many surgical techniques are coming under critical assessment and are proving to be unnecessary or of 'unproven efficacy' or 'effectiveness'. Episiotomy, tonsillectomy, adenoidectomy, some forms of gastric surgery, radical mastectomy and so on are now under increasing suspicion.

In a country like ours, in the absence of good clinical records, record linkage and efficient professional quality control, this problem is very difficult to assess, but many surgeons are concerned about the problem.

"**Ritual Mutilations**": Mendelsohn in the book mentioned earlier lists out some interesting surveys done again on the American scene. He uses the terminology "Ritual Mutilations" to indicate how like branding, circumcision and other forms of ritual surgery linked to socio-cultural beliefs, we continue to accept, promote and inflict forms of surgery which should have been discarded based on informed and critical professional opinion.

RITUAL MUTILATIONS

"Conservative estimates by a congressional sub-committee say that about 2.4 million operations performed every year are unnecessary and that these operations cost $4 billion and 12000 lives or five percent of the quarter million deaths following or during surgery each year.

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The Independent Health Research Group says the number of unnecessary operations is more than 3 million. Various studies have put the number of useless operations between eleven and thirty percent.

One study closely reviewed people who were recommended for surgery. Not only did they find that most of them needed no surgery but fully half of them needed no medical treatment at all.

In six New York Hospitals, forty three percent of the hysterectomies reviewed were found to be unjustified.

A seven year study by the Veterans Administration of more than 1000 people found that except for high risk patients with rare left main artery disease, the coronary bypass provided no benefit. Mortality rates for surgery patients were not significantly different from those medically treated. Among the low risk patients, the mortality rates after four years were slightly higher among those receiving the operation.

The rate of Caesarean deliveries in US Hospitals is around twenty five percent. In some hospitals, it is reaching fifty percent. Studies of comparable deliveries show that Caesarean deliveries occur three to four times more often in births attended by electronic foetal monitoring than in those monitored with a stethescope."

Why does this happen? To what extent could this be a problem in a country like ours?

TECHNOLOGY FOR COMMUNITY HEALTH: DIFFICULT CHOICES

Critical assessment of options in the choice of technology becomes particularly crucial when one is planning for community needs - be they local, regional or national. Mass health care and national programmes require more careful planning and the choices, because of cost, accessibility and availability of services, logistics, etc., are rather difficult. This paper will, however, not explore this dimension in detail. Choices like sputum AFB vs. X-ray or MMR; ORT vs. IV fluids and antidiarrhoeals; which vaccines to include in immunization programmes; oral polio vaccine vs. injectable polio vaccine; cholera vaccine vs. safe water programmes; iodised salt or iodised oil injections; choice of contraceptives etc. all exemplify the technical, epidemiological, social, economic and managerial factors that need to be considered in making such decisions. Very often, the choice is not really based on a detailed analysis of all the factors and is based on more ad hoc or empirical decisions and these need to be constantly scrutinised and critically debated.

SOCIAL ISSUES AND HEALTH CARE TECHNOLOGY

From Micro to Macro Analysis: While reviewing literature one constantly comes across social, economic, cultural, political, ecological, historical and ethical factors which determine the growth and development as well as the transfer, adoption and promotion of technologies. This is applicable to all technological development not only to those in health care.

It needs to be recognised and emphasised that macro-factors in society have often a greater impact on technological choice than micro factors - be they professional, technical or managerial.

In our deliberations, therefore, we need to constantly look at a macro analysis as well as a micro analysis; a social analysis as well as a technico-clinical or technico-epidemiological analysis.

A Social Critique: Professor Banerji in his recent book - HEALTH AND FAMILY PLANNING SERVICES IN INDIA - outlines some of the factors critical to a social choice of technology, emphasising particularly the effect of market forces and industrial development on the growth of medical/health technology as well as the concomitant glorification of 'technological fixes' to solve societal problems.

MEDICAL TECHNOLOGY

One of the features of the development of the Western system of medicine is the phenomenal growth and development of medical technology. This technology is often projected as a liberator of human beings from many dreaded diseases. Treatment of a disease is considered to need some sort of 'technological fix'. In the flush of major medical breakthroughs it was earlier believed that what one needed, for alleviation of suffering caused by diseases, was a clever, well equipped medical technologist, who would 'fix' most of the diseases.

As is the case with other products in rapidly industrialising societies, market pressures have been a powerful motive force in the spectacular advance in medical science and technology. They have played a critical role in projecting problems of sickness, not simply as technological problems, as problems requiring a 'technological fix', but also as problems that are amenable to the particular brand of technology marketed by them.

Thus, apart from having elements, that are undoubtedly rational and scientific and instrumental in alleviating suffering, the Western system of medicine also has many elements which are patently extraneous, imposed on it by market forces. Unnecessary hospitalization, excessive or even totally unwarranted use of drugs, tonics, vitamins and baby foods, excessive use of diagnostic tests and performance of unnecessary surgical operations are some examples of the undesirable consequences of this. Probably even more than being an instrument for alleviation of suffering of the sick, the entire system of medicine in Western countries has taken the form of an industry in which human suffering becomes an object of profit and market forces 'create' demands for the products of the industry among the potential consumers."

Exploring Social Links in Technology Choice and Application: Apart from the factors mentioned in the earlier critique there are many other important ones as well:

a. Privatization: The transfer of provision of health care from the public sector to the private sector has major effects on accessibility and availability of health services, and on costs as well.The latter is more likely to respond to the profit motive and market pressures. The socially disadvantaged would be less likely to be covered by adequate health care.

b. Gender Discrimination: The social ethos which favours gender discrimination may affect technological choice, eg., female contraceptives being researched more than male contraceptives. Also the promotion of female sterilization surgery when male sterilization (vasectomy) is easier, less costly, safer and logistically more relevant is a case in point.

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c. Dumping of Technology: Third world countries have become a 'dumping ground' for obsolete and often hazardous technologies. This may be equally true for medical technology transfer in the country at present.

d. Class differences: In an inequitous social set up where the upper classes control decision making and choices, various coercive tactics, disincentives and other organisational procedures may be thrust into planning affecting the lower income and socially disadvantaged groups. Programmes of compulsory sterilization during emergency symbolised this best though a subtle element of coercion continues even today.

This is not an extensive list and participants may like to identify more factors and add to the same.

POLICY STATEMENTS: INADEQUATE ASSESSMENT

National Health Policy 1983: The National Health Policy Statement of 1983 refers to the issue of Technology in Health Care in somewhat ambiguous terms. In the section on PROGRESS ACHIEVED, it notes that 'significant indigenous capacity has been established for the production of drugs and pharmaceuticals, vaccines, sera and hospital equipment'.

In the section on THE EXISTING PICTURE, it concludes that 'the establishment of curative centres based on the Western models are inappropriate and irrelevant to the real needs of our people and the socio-economic conditions in the country'.

In the section on NEED FOR PROVIDING PRIMARY HEALTH CARE, it plans to 'provide specialist services as near to the beneficiaries as possible, within a well planned network' and suggests that 'expenditure should be reduced ... by economical investment in the purchase of machineries and equipment, ensuring against avoidable duplication of such acquisitions. It is also necessary to device effective mechanisms for the repair, maintenance and proper upkeep of all bio-medical equipments to secure their maximum utilization'.

In the section on MEDICAL INDUSTRY, it notes interestingly that 'the practitioners of the modern medical system rely heavily on diagnostic aids involving extensive use of costly, sophisticated bio-medical equipment. Effective mechanisms should be established to identify essential equipments required for extensive use and to promote and enlarge indigenous manufactures, for such devices being readily available at reasonable prices for use at the health care centres.

On the whole the pronouncements are vague and do not reflect a comprehensive analysis of the issues of technological choice, use, misuse or policy.

In the section on PROBLEMS REQUIRING URGENT ATTENTION, it does mention nutrition, prevention of food adulteration, water supply and sanitation, environmental protection, immunization, maternal and child health, school health and occupational health as priority issues but in all these, the issues of technological choice and development are vague and lost in generalities.

ICMR/ICSSR Health for All Report: This document, which is meant to be an important policy guideline for national health planning, has also not tackled this issue adequately. While drugs and pharmaceuticals are given much importance, other aspects of medical/health technology are not adequately researched.

The concept of Appropriate Technologies is, however, mentioned and a somewhat ambiguous plea is made for a balance between 'over sophistication' and 'under-sophistication'.

APPROPRIATE TECHNOLOGIES

In the existing health system, there is an emphasis on over sophistication which necessarily influences research. In the alternative model we have proposed, the emphasis is shifted to the utilization of paramedical personnel and the development of alternative, simple easy-to-use technologies. The research programmes and policies should be suitably modified to meet this need. This does not imply a swing to the other extreme of under-sophistication. What is needed is a proper balance between the two approaches to meet real social needs.

Health for All - An Alternative Strategy

ICMR/ICSSR Study Group

It is apparent that while science and technology policy statements are the order of the day in the country, Health Care/Medical Care policy statements still suffer from an inadequate analysis and require greater clarity and commitment to the difficult choices that need to be made.

CONCLUSION

The topic 'Technology in Health Care' is a complex matrix of issues and problems, which cannot all be covered in one meeting. The MFC meeting could, however,become the focal point for a beginning of a process of technological assessment. Issues and perspectives could be clarified and an approach to assessment can begin to be explored.

In the present social ethos, 'Technology' is subject to glorification, high pressure sell, and inequitous investment. Its impact on Medical/Health Care is bound to affect the nature of Health Care development in India. It is time for a 'critical' and 'informed' assessment of choices. Could we make a beginning?

LIFE-THREATENING TECHNOLOGIES - Scenes from Malaysia

(Malaysia in so many ways God's own country - the green canopy of the rain forest blanketing the country as far as the eye can see, (in fact over 50% of the landmass) enormous natural resources - rubber, petroleum, tin - endless beaches of surpassing beauty, easy agriculture that produces crops with surprising ease, a multi-racial society that enjoys a fair degree of what one can term as "democracy" and a rapidly emerging industrial base.

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PATIEI'S RIGHT

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The scrutiny of these codes reveals that the is *progressively* increasing awareness, recognition an respect for '*autonomy*' of the patient in medica care. The importance of the need for recognitio of autonomy of patient becomes apparent whe one realizes that:

a) the very nature of medical persuit leads t intervention into a person or personality,

b) the specialization and superspecialization in medicine has 'lured' the practitioners to be more concerned with 'parts' of a person rather than the whole person and

c) the religion and medicine have always been associated in the past. History of medicine has references to priest medicine man or witch-doctor trying to employ special 'power' including communication with 'God' to effect healing. The erroneous self-perception of the healers had led them to take on a 'superior breed' position.

The phrase 'Patient's Rights' might conjure in the minds of some medical practitioners an alarming picture of someone trying to snatch away from them something exclusive their domain. It might provoke a confrontist response stemming from a sub-conscious feeling of vulnerability that plagues human minds. On the other hand 'duties towards patients' is something that is more amenable to doctor's frame of mind, for he/she is consciously or sub-consciously aware of the ethical requirements of profession. The doctor's duties towards his patients and their rights are in fact, two sides of the same coin, and the two are completely compatible with each other. Dr George Jacoby, who was the first to differentiate medical ethics from medical etiquettes puts it

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— He has right to be cared by a physician whose ethical judgements are free from outside interference.

— A patient may refuse treatment after receiving adequate information.

— A patient has right to die with dignity.

— A patient has right to receive or call for spiritual and moral comfort.

Adherence to the Declarations: Moral binding on Indian counterpart

India, a member of the World Medical Association, is a signatory to these declarations and therefore in spirit the medical fraternity of the country endorses the codes. The Indian Medical Council must see to it that ethics are properly implemented. The ethics have been described in detail in "Principles of Bio-medical Ethics" edited by Beauchamp and Childress, and are also available in the American Hospital Association's Bill of patient's rights. I reproduce them briefly here:

The patient has a right ..

1 to considerate and respectful care.

2 to obtain from his physician complete current information concerning his diagnosis, treatment and prognosis in terms that he can be reasonably expected to understand, unless it is not medically advisable to give such information to him (in which case such information should be made available to an appropriate person on his behalf.)

3 except in case of emergencies, to receive from his physician information prior to the start of any procedure i. e. informed consent and/or treatment.

4 to refuse treatment to the extent permitted by law and to be informed of the medical consequences of his action.

5 to every consideration of his privacy concerning his own medical care program.

6 to expect that within its capacity a hospital will comply to the request of a patient for services.

7 to obtain information as regards relationship of his hospital to other health care and educational institutions in so far as his care is concerned.

8 to be advised if the hospital proposes to undertake human experimentation affecting his care or treatment.

9 to examine and receive explanation of his bill regardless of the source of payment.

10 to have reasonable continuity of care.

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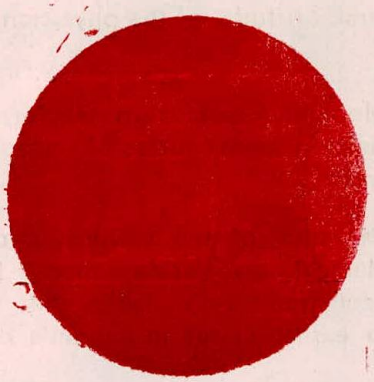

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No catalogue of rights can guarantee the patient the kind of treatment he has the right to expect. A hospital has many functions to perform, including the prevention and treatment of disease, the education of both health professional and patients, and the conduct of clinical research. All these activities must be conducted with an *overriding concern for dignity of the patient.*

Since few issues in medical ethics receive more attention than right of information and informed consent, I plan to discuss them at length.

Right of Information about diagnosis, treatment & Prognosis :

Three arguments are often put forth for limited disclosure in practice :

(i) Fear of alarming the patient, a sort of benevolent deception. It must be however remembered that such acts violate the principle of respect for persons and fidelity, as well as pose threat to the relationship of trust between physicians and patients.

(ii) Health care professionals cannot even know, let alone communicate, the "whole truth."

(iii) Some patients particularly the very sick ones, do not want to know the truth about their condition. Should a patient desire so, his/her wish ought to be respected.

Now I shall take a hypothetical case :

The declaration of Oslo (1970, revised 1983) on abortion has modified "the human life from conception" to "human life from its beginning." The declaration gives a green signal to the therapeutic abortion. The Maharashtra State Act dealing with amniocentesis and prevention of Female Foeticide, forbids a doctor from disclosing the results of amniocentesis to the patient. The Declaration of Geneva implores the doctor "not to use his medical knowledge contrary to the laws of humanity even under threat." Since revealing the results of amniocentesis tests might, and have been found to, lead to discrimination against female foetus, a doctor should keep his lips sealed when asked about the sex of the foetus. But then does this contravene with the spirit of the codes ? How should a doctor reconcile with this situation ? I should appreciate reader's response on this issue.

Right of Informed Consent :

In recent years virtually all medical and research codes of ethics have held, and it is legally binding, that physicians must obtain informed consent of patients before undertaking significant therapeutic or research procedures. Though these consent measures have been designed largely to protect the autonomy of patients and subjects, they are observed more in breach than in adherence. Often the consent papers merely serve as legal passport for the treating physician to get away with anything; obtaining informed consent being just an "empty ritual."

Since misconceptions regarding informed consent are common, it is worthwhile examining what important functions does informed consent serve. Alexander Capron has identified these functions :

1. The promotion of individual autonomy
2. The protection of patients and subjects
3. The avoidance of fraud and duress.
4. The encouragement of self-scrutiny by medical professionals.
5. The promotion of rational decisions.
6. The involvement of the public in promoting autonomy & in controlling biomedical research.

Beachamp and Childress have pointed that the act of consent must be genuinely voluntary and that there must be adequate *disclosure* of information. They note that there are two elements of informed consent, each presenting distinct issue. The information component refers to adequate disclousre of information and adequate comprehension by patients of what is disclosed, while the consent component refers to a voluntary decision on the part of a competent person. They question, "but how much and what types of information must be imparted, how well must it be understood ? Is consent valid if it is given under conditions of social, institutional, or family pressure or if the consent is irresponsible ?"

Informed Consent

- The voluntary consent of the human subject is absolutely essential.

  — The Nuremberg Code (1947)

- Informed Consent: Consent to surgery by a patient or the participation in a medical experiment by a subject after achieving an understanding of what is involved.

  — The Webster's Medical Desk Dictionary

- Patient has a right to self-determination and that he (she) is entitled to know and approve of his (her) treatment.

  — The American College of Physicians Ethics Manual

- Willing and uncoerced acceptance of a medical intervention by a patient after adequate disclosure by the physician of the nature of the interventions, its risks, and benefits as well as of alternatives with their risks and benefits.

  — Jonson et al.

And this leads us to the main issue at stake :

Why medical ethics are observed more in breach than in adherence ? The issue is complex and doctors and patients are both responsible for this situation. It is indeed a paradox that no medical student is ever taugth medical ethics during undergraduate training. Medical Journals in India also seldom seem to discuss ethical problems. Journal of Medical ethics, which deals exclusively with ethics, has carved a niche for itself in very few medical libraries. Given this continued negligence of the subject, medical students are hardly interested in knowing medical ethics, let alone implement them in future practice.

'Cancer' in 1987 published a study designed to determine why physicians have misgivings about the need for informed consent. The study showed that doctors see a loss of decision making power, feel uncomfortable because of increase in professional accountability, and are concerned that it might affect the ongoing relationship with the patient.

It is too naive to assume that doctors are not following medical ethics simply because most of them are not aware of ethical issues. Doctors are becoming more money-conscious, they are more callous to the patient's needs than they were before, no longer are they 'Friend-Philosopher-Guide' to their patients. Such excuses as 'work pressure and outside influences' are lame.

Since patient is always at the receiving end, it is necessary that he must be conscious of his rights. Benevolent paternalism from doctors; 'let me think for you,' and patient's blind faith in his doctor : "Afterall he is the best judge of my problems, I would do what my doctor says anyway", will be harmful in the long run. Every consultation must bring these questions to the patient's mind: What is my doctor doing ? Why he is doing so ? Will it harm me ? Do I have suitable alternatives ?

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AUGUST 1987

Family Planning in India : Theoretical Assumptions, Implementations and Alternatives

(Report of the Thirteenth MFC Annual Meet)

As is the tradition of the MFC meet, the 13th meet, held at Kaya, Rajasthan during January 26-27, 1987 also invited a few individuals to prepare background papers on the theme: *Family Planning* well in advance and aimed to distribute them to the participants much before the meet. Thus, rather than the authors presenting the individual papers, time can be well spent in discussing the issues which emerge, resolving the inconsistencies and arriving at some common platform. However, as happens often, not all the 14 papers were prepared in advance. Although by the time the meet went into business, all the papers were available to the participants, their non-availability before the Meet did somewhat adversely affect the flow of the discussion.

In any event, this note endeavours to summarize the major thrust of the deliberations which lasted for nearly two days, among nearly 75 persons from all walks of life ranging from medicos, activists, social scientists and government or semi-government officials.

The issue of family planning was considered from three broad perspectives: Theoretical framework keeping in mind the debate on resource constraint versus population problem (Is there really a resource constraint and is population control an answer, even if partial, to it. The second perspective related to the Indian family planning programme and its actual implementation as well as underlying medical and social implications. In light of this reality, the third perspective aimed to consider workable alternatives such as natural family planning methods.

Anant Phadke's paper "Population Versus Resources: An Apparent Problem" and Ilina Sen's paper "Population Policy in China: Theory and Practice", set the discussion of the first day's meet. The group of nearly 75 participants were divided into four subgroups to deliberate on the theoretical assumptions underlying the oft-debated issue of population control versus resource constraints. A set of issues which appear pertinent were listed before hand, by some of the members, to be used as a guide. The four groups, after spending nearly four hours each discussing the issues on the theme, met together in a plenary session the same evening, where the four reporters presented the gist of the discussion in their respective groups.

The setting for the discussion was the fundamental question: whether there is a resource constraint or not. According to one school of thought, resources are finite and cannot easily be replenished. In a situation of growing population, the available stock of resources will not last long. Hence, the need to curb the growth of population. According to the second school of thought, with the advancement in technology and explorations of alternative sources of energy and other resources, the scope is unlimited. In this context, the question of population control becomes baseless. What is at issue is not limits on potential availability of resources but their *distribution* which is highly skewed, with the majority of the population having access to a small proportion of the resources and the few rich nations (and few wealthy individuals within all nations) cornering and using up a lion's share of the resources. In this context, it has been suggested that the development model or the pattern of development, needs to be carefully re-examined and suitably altered ormodified.

After great deliberations it was, however, recognized that the whole area of alternative sources

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of energy is yet an unchartered area. Although theoretically it offers immense possibilities, one would have to weigh the pros and cons of each of such possibilities, and safeguard against another Bhopal or Chernobyl like disasters. Thus, one would have to, for the time being, accept the premises that resources are finite.

It was further agreed upon that even in a situation of far more egalitarian distribution than what prevails today, we have to have a population *policy* as distinct from population *control*, and disseminate information on various birth control methods, so that individuals can exercise their free choice. (The various concepts—birth control, population control, population policy, family planning denote very different meanings and should not be confused). It was generally felt that questioning the justification of population control does not mean that we deny the need for information on birth control as a human right. The group as a whole was against population control, especially because in the Indian context, it implied coercion and interference with personal lives.

Also, the group expressed a view that it is necessary to gain better understanding of what determines family size and fertility rather than examining the issue in a narrow context of population versus resources. In this context questions were raised about an absence of well-defined policy on resource utilization, although there is a national policy on population. It was felt that we cannot really have one without having the other.

(There was a group within the MFC which felt rather strongly that those who work to make resources usable are not the ones who consume them and yet it is their reproduction which is sought to be curbed in the guise of population policy or family planning. Further, there ought to be a policy regarding those who consume the resources to revitalize and regenerate those resources).

The context and the content of the family planning programme in India were discussed with reference to three major questions. (i) Is the Indian programme, wittingly or unwittingly influenced by the developed countries and their vested interests? (ii) Does the population policy of China and the recent shifts in that policy offer any lessons for us? and (iii) should the family planning programme be integrated with maternal and child health?

The role of developed countries in influencing our population policy created a lot of heat. A feeling was expressed by some of the participants that there often are hidden agenda in the population programme which receive foreign funding. This may be true even with regard to foreign funds received by some of the activists or radical elements. In fact, the elite interests in the country may themselves be sometimes in tandem with the foreign agencies. It must, however, be recognized that this issue is highly emotionally charged. What is needed is objectivity and willingness to examine the facts with calmness and maturity.

Regarding the question of China's population policy and the recent changes in that policy, a view was expressed that the great strides that China has made in material development has not been without a heavy price. Also a question was raised whether the active pursuation of family planning policy by the Chinese government was a felt need or a created need (resulting from the desire to accumulate capital). In light of such doubts and in view of the changes that the Chinese themselves are moving towards, do we emulate the Chinese model? Or does it offer any lessons? It was, however, agreed upon that we do not know enough about China's population policy, except through the impressions of the visitors, and the official statments of its political leaders, and therefore, the need is to learn more, historically, about the Chinese population policy.

On the issue of integration of maternal and child health with family planning, the group, nearly everyone unanimously agreed that this has resulted in allocating and spending a lion's share on family planning at the cost of the MCH programme. Even the Community Health Volunteer (CHV) scheme has financial allocation under the family planning head. Theoretically it is difficult to find fault with this integration because family planning should naturally follow a good MCH programme. However, in the target oriented set-up, detailed targets are laid for family planning performance (and not for the MCH performance), and the emphasis and priorities become lop-sided and are infact reversed.

On the second day the larger group was divided into three sub-groups, each having a specific theme to discuss and deliberate upon. A few papers formed a backdrop to guide the discussion. The three themes that emerged from the background papers were: Contraceptives, targetting of family planning towards women; and financial resources and parameters which affect family planning, including the spread of family planning among the tribal population.

Papers by Sathyamala entitled "Contraceptive Choice: Safety Vs. Efficacy and by Leela Visaria, "Relative Risk of Pregnancy Vs. Risk of Contraception" and by Mira Sadgopal and Sadhna Saxena on

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"Fertility Awareness and Natural Birth Control: Beyond Family Planning" raised a lot of enthusiasm among the participants. Overall, it was observed that as far as the risk of contraception is concerned, most of the studies and the data pertain to the developed world, which may or may not apply to a developing country like ours. Therefore, there is a need for systematic, long-term studies within our country. For example, individuals who have undergone tubectomy and/or laparoscopy (these being the most widely used family limitation methods in India today) should be followed for an extended period of time to study morbidity, or what is often described as post-tubectomy syndrome, as well as mortality in a systematic manner.

It was further felt that the camp approach to promote family planning contributes to an increase in morbidity and mortality among its users. This is because some of the essential preconditions are overlooked. For example, aseptic conditions are not maintained properly in the camps and the doctors are not always well trained. Also, follow-up of the individuals undergoing surgery is minimal at best. All these must be giving rise to morbidity among the sterlized patients. A through study not only of the camps but also of individuals participating in this endeavour is in order.

The group as a whole also felt that all available information indicated that vasectomy as a method of family limitation was the safest as well as the most simple. For the couple who has completed family size, the group recommended vasectomy as a method. It was also recommended that condom was the safest method for spacing compared to most other methods currently in use. However, in the event of a failure or pregnancy, it should be backed up by safe and early abortion facilities.

As far as natural family planning is concerned, it was agreed upon that among the various natural methods, the cervical mucus method was the easiest and the simplest and even the illiterate women in rural areas can learn it and use it effectively. A general feeling was expressed that the natural methods should also be promoted by the family planning programme. However, one of the major drawbacks of natural methods is that they demand full support and co-operation of the husbands. However, this is an area, where a lot of ground has to be cleared before we can hope for any results. There ought to be a systematic teaching of fertility awareness, which can give self-confidence to the participants. Funds ought to be earmarked for teaching the rural as well as urban couples about fertility awareness, their own selves and population related issues.

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Padma Prakash's note on "Family Planning Programme: Women as Targets" was addressed to the issue that women have been the focus of family planning programme since its inception. This, on the one hand means that contraception becomes available to women, but on the other hand, it places heavy burden on women in terms of having to bear heavy load of morbidity associated with contraceptives which interfere with hormonal balance. The group strongly felt that along with female methods, male methods should also be made popular again, and while a couple should have freedom to choose the method best suited to them, the burden of limiting family size cannot be entirely that of women.

Two papers; one by Sudarshan Iyengar and Ashok Bhargava, entitled "Primary Health Care and Family Planning Programme in Rural Gujarat: Some Issues" and the other by Ravi Duggal, entitled "Financing Family Planning", formed the background material for discussion on financial resources and parameters which affect the financial allocation to the family planning programme.

The issue of financial allocation was viewed in the context of the larger health issue and it was shown that in the target oriented programme, health programmes get neglected and family planning achievements or fulfilment of targets receive priority. It was further noted that the performance of the PHC workers is judged on the basis of the family planning performance. Health related activities are relegated to the lower place in the order of priorities.

Leela Visaria

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From the Editor's Desk

The National Family Planning Programme rests on several assumptions which are based more on wishful thinking than on actual facts. One such assumption is — if it is consistently and continuously dinned into everyone's head 'A small family, Happy family', 'We two, ours two', 'Delay the first, Space the second, Stop the third' etc., through all the avaiable communication channels, the people will soon enough come to accept the desirability of acting on the message. Looking at Kerala with its low infant mortality rate, high female literacy rate and low birth rate, it is assumed that there is a direct correlation and that if these factors are manipulated in a population showing high birth rates, there will be an automatic decline in the fertility levels. The article reproduced in this issue of the bulletin challenges these very assumptions; a large proportion of the population may adopt sterilization to limit their family size but this in no way indicates that they have adopted the two-child family norm as well; a village may be innundated with modern facilities but this in no way indcates that the way of life for the majority has changed in such a way as to make it advantageous to have fewer children.

If people do not behave the way the government wants them to, the only option then seems to be to force them into submission. Learning from its past mistakes, of the Emergency days, the government no longer considers direct force as a feasible option. Instead, it merely links FPP to poverty alleviation and drought relief programmes. Rajasthan for instance, has experienced severe drought for the last three years. One of the prerequisite for an 'eligible' couple to get work in the food-for work programme is to show that one of them is sterilized (if not, they are 'advised' to undergo sterilization). And when attempts are made on the part of the activists to expose such 'excesses', they are immediately arrested for disturbing the peace of the country. (last month two activists from the Rajasthan Kisan Sanghathan were arrested for demonstrating against such measures).

Apart from such indirect strategies, there are also two essential differences in the coercive tactics used by the government in the past and today. During the Emergency, the pressure was on the 'targets' and the targets were men. Today, the pressure is on the Health Workers and the targets are women. In Uttar Pradesh, 500 Multi purpose workers were sacked for their failure to achieve individual targets fixed for a six month period (*Indian Express*, 16th Oct. 1985).

The Supreme Court is clear about what all this amounts to; it is not the object of State action (however laudable or desirable such action may be) but the direct effect of such action on the citizen and his fundamental rights that must be seen. Thus, according to two lawyers in the supreme Court (Mr Ganesh and Venkatramani), "if a given administrative act contravenes or infringes or even constitutes an imminent threat to the citizen's guarenteed rights, such acts would be unconstitutional notwithstanding the fact that it was done pursuant to a laudable policy or for the intended benefit of the citizen".

Sathyamala

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Two Decades of Sterilization, Modernisation and Population Growth in a Rural Context*

Stanely A Freed and Ruth S. Freed

Despite a popular reaction against the alleged coercive aspects of the sterilization programme during the Emergency from June 25, 1975 to March 21, 1977, the Government of India did succeed, much faster than might otherwise have happened, in establishing sterilization as a routine and acceptable option for couples wishing to terminate childbearing. In India, as in the United States, sterilization is now the principal birth control technique for couples who want to end childbearing rather than just to control the timing of pregnancies. This development has led to a certain journalistic optimism during the last two or three years at least in New York, concerning the possibility of controlling India's population growth. But caution has also been expressed and the reason could be found in a photograph accompanying one of the report: a sterilized mother, presumbly more or less typical, was shown sitting on a cot with four of her five living children, rather than the two children that the government would prefer.

If a significant number of people who undergo sterilization do so only after having had five children, it seems clear that survivorship, that is, the average number of surviving children of mothers at the end of the childbearing span, will merit more attention than it has received until now. The fertility rate and the number of persons who "accept family planning", more often invoked than survivorship in discussions of population growth, are important, but to minimise the significance of the size of the completed families can lead to surprises when the decennial census results are published. Thus the most noteworthy feature of the 1981 census of India is perhaps the slight increase in the rate of population growth during the 1970s in comparison to growth during the 1960s, despite an energetic governmental campaign to introduce birth control, the growing use of contraception, most especially sterilization, a declining birth rate, and the modernisation of education, communications, and the economy. Although the growth rate only rose from 2.20 to 2.23 percent, it nonetheless did not decrease as had been expected. The apparent paradox of a stable or slightly increasing rate of population growth in the face of increasing modernisation, rising sterilization, and falling fertility has been something of a surprise. The usual explanation, that mortality has declined as fast or faster than fertility, while mathematically sound, offers little insight into a complex social phenomenon.

This essay concerns the relationships among sterilization, modernisation and survivorship in the north Indian village of Shanti Nagar (a pseudonym) based on the studies made in 1958-59, 1977-78, and 1983. The 25 year period of research is especially noteworthy because it includes the end of the 1950s, when very few people were sterilized, and the 1970s just after the Emergency when sterilization was well established. Studies carried out in a single village may fairly represent a limited region, but one must be very careful about extending the conclusions to the greater part of India or even to the north-western quadrant of the country where Shanti Nagar is located. However village studies have the important advantage of intensity and are a valuable complement to broad surveys.

Studies of change in the rate of population growth in India often concentrate on today on two principal determinants: modernisation and contraception. Modernisation is generally defined as a combination

* Condensed from the original in 'Economic & Political weekly', 20:49, 2171-75, Dec. 1985

of some or all of the following processes: industrialisation, urbanisation, enhanced communications, spread of education, improved health and nutrition, female employment outside the home, erosion of traditional customs, and an increase in specific attitudinal and psychological processes such as 'rational' as opposed to 'traditional' thinking. Sometimes several attitudes or values are conceptually combined and designated as "modernity values" or a "modernity syndrome". Fertility is generally assumed, with qualifications to have an inverse linear relationship with most aspects of modernisation. In India, effective contraception, the second important determinant of population growth, is chiefly sterilization. The widespread recourse to sterilization suggests that India's persistently high rate of population growth might be better understood if attention were to some extent shifted from birth and death rates to survivorship because survivorship, sterilization, and the kind of fertility limitation means that is called 'parity specific' are all related. Parity-specific fertility limitation means that couples begin to limit their families only after having had the number of children that *they* want. Sterilization and survivorship are closely related because a couple's decision to undergo sterilization is based principally on the number of their surviving children especially sons. Parity-specific fertility limitation is influenced by the sex of children, for sons are preferred to daughters. There are many reasons for this preference, most of them widely recognised. Few couples are satisfied with just one son, for the rate of infant mortality is still high enough to make parents with only one son very anxious.

One might think that, for sterilized couples, family size depends on sterilization, for sterilization puts an end to childbearing. In fact, the relationship is the reverse; *sterilization depends on the number of couple's living children, especially sons, because couples practice gender-influenced parity-specific fertility limitation.* They do not have a sterilization operation until they have all the children that they think are necessary. The fertility rate has rather a peripheral role in such a perspective on family size and the rate of population growth. Husbands and wives do not base their sterilization decision on the number of live births, the basis of the fertility rate, but rather on the number and sex of the surviving children.

Population Growth

Shanti Nagar, located in the north of the Union Territory of Delhi, is in general demographically and economically similar to many of the villages in the adjacent parts of Haryana and Uttar Pradesh. From the 1950s to the 1970s, Shanti Nagar experienced an economic, educational, and communications revolution. The village acquired electricity, brick houses replaced mud huts, and streets were paved. Farm machinery have largely displaced bullock power and hand labour. Frequent bus service has increased the ease of commuting to urban areas where many of the men have urban jobs. Radios are now common, and there are some television sets, and newspapers are delivered daily. The educational level has risen dramatically for both men and women. Modern health facilities are more easily accessible. A nurse-midwife regularly visits the village to discuss, among other matters, family planning and sterilization. Many villagers have been sterilized. The village has become much more modern, more prosperous, and better informed about governmental programmes including the Family Planning Programme. Modernisation has had relatively little effect on the family, which generally maintains its traditional form and functions. There were 110 families in the 1950s and 176 in the 1970s with an average of more than seven members in both decades.

During the intercensal period of 19.5 years, the population increased by 525 persons (65.7%), tantamount to an average annual rate of population growth of 2.59 percent, rather higher than the all India figure of about 2.21 percent for two decades from 1961 to 1981. When we include in the calculation individuals currently living away from Shanti Nagar who are members of the village families (for example, sons living away from home for the purposes of employment) while excluding married daughters visiting their parents because they are no longer permanent residents of the village, the average annual rate of population increase was 2.77 percent. The crude birth rate during the intercensal period was estimated at 38.5. It should be borne in mind that both the rate of population growth and the estimated crude birth rates are averages over a period of years and could be expected to have changed, perhaps significantly, during the period. The proportion of males in the population increased from 51% in the 1950s to 52.5% in the 1970s. The population increase has been much less for young children than for old persons. For example, the percent increase from the 1950s to the 1970s for children two years of age and less has been only 23 percent as compared to 66 percent for the whole village. Although Indian censuses may tend to undernumerate children four years of age and younger, we think that the principal reason that the increase in the number of young children is relatively modest is due to intense birth control programme that the Government of India pursued during the Emergency. We began to take our 1977 census only about 6.5 months after the end of this 21 month

period. Therefore, the relatively small number of infants upto about 2.5 to 3 years of age partly reflects the effectiveness of the sterilization programme during the Emergency.

Sterilization

We knew of only one sterilized person in Shanti Nagar before 1968, but from then on at least one person was sterilized every year. When we took our census in 1977-78, there were 68 sterilized persons, both men and women, equivalent to 26% of the women of childbearing age (15-45 years). Bv late 1983, there were 93 individuals. Sterilization has run an uneven course. From 1968-74, 3.4 individuals on the average were sterilized annually. Then came the 21 months of the Emergency, and the average number of persons who underwent sterilization increased to about 20 per year. After the Emergency, the figure returned to almost to the pre-Emergency norm; from 1977 to late 1983, 4.7 persons were sterilized per year. The big jump in sterilizations during the Emergency was due to the strong campaign mounted by the government, which was especially effective with men holding government jobs. Most of the men sterilized during the Emergency were in governmental service.

Before 1977, men had 53 percent of the sterilization operations. After the Emergency, this figure dropped to 15%. This noteworthy change in the proportion of men to women who undergo sterilization is probably related principally to the introduction of the surgical technique of laparoscopy, which has become popular and has made female sterilization easier, but there are probably other reasons as well. An important post-Emergency development is the lower age at which people are sterilized. Before the end of the Emergency, the mean age of a woman either at her own sterilization or that of her husband was 33.2 years; after the Emergency, it was 29.1 years. Correlated with the decline in the average age at sterilization is a reduction in the average number of children per sterilized couple. Couples sterilized before or during Emergency had families of five living children; people sterilized after the Emergency had an average of 4.25 children. The average sterilized couple had about three sons and daughters, a sexual disparity that appears to be increasing. Until the end of Emergency, sterilized couples had an average of 1.4 sons to each daughter, but afterwards, they averaged twice as many sons as daughters. It is important to note that sterilization by itself cannot influence the sex of children. However if either by random chance or the mistreatment of female children, a couple has more sons than daughters, sterilization makes the situation more permanent, provided that there are no untimely deaths of sons. The usual explanation for the greater number of males than females in north India is the preference of males and the suspected mistreatment of female children. It is also possible that female children are undernumerated in censuses. One explanation does not preclude the other and both may be involved. The motive for most respondents for not being sterilized was too few sons. On the other hand the expenses of raising children was overwhelmingly the main motive for undergoing sterilization. Couples also frequently cited the governmental sterilization campaign, principally its coercive aspects as reason for the operation, and some people said that the sterilization was needed in their cases because of specific female health problems.

That parents seem to be especially concerned with the expenses of childbearing calls attention to the value of child labour in the rural areas where children work on the family farm from an early age. Although the value of their labour remains considerable, the modernization of agriculture has generally reduced the amount of child labour needed. Moreover there has been an increase in employment opportunities that require an educational qualifications. Under these conditions, the maximum economic return from a child involves an investment that most parents cannot afford for a large family which combined with the declining value of child labour puts pressure on parents to terminate childbearing after fewer children than would have been the case a decade or two earlier. However, the cost of childbearing and the value of child labour of children are not the only factors that parents need to take into account when considering sterilization. There is also the question of the economic security that children provide and this one consideration may outweigh all the low-fertility motives in the thinking of many parents.

Respondents regarded all contraceptive measures (condom, Copper T, loop or foam) except sterilization as unreliable and/or dangerous. The majority of sterilization took place within 10 months of the couple's last childbirth, that is, just before the end of what one respondent called the "safe period", which is approximately 11-month post-partum amenorrhoeic period that accompanies breastfeeding when there is no supplementary feeding of the infant.

Living children, Sterilization and Modernisation

The relationship of the number of living children, sterilization and aspects of modernisation are investigated by multiple regression analysis, a commonly

used statistical technique to establish a linear relationship between a dependent variable and several independent variables. The dependent variables are the number of living children and sterilization. The independent variables form two groups: the modernisation variables, namely urbanisation (defined as an individual's having lived and/or worked in a city some time during his/her life) and education as they affect women, family heads and husbands; and the biological and traditional variables namely a woman's age, caste rank, family land-ownership, and when sterilization is the dependent variable, number of living children. The most prominent conclusion to be drawn from the analysis is that *women's age and sterilization are the only two variables strongly related to the number of surviving children*. That a woman's age and the number of her living children are positively related is basically a truism; therefore, the strong probabilities of a significant relationship in both the 1950s and the 1970s are no surprise. Sterilization and the number of surviving children are also positively related; when all other variables are held constant, a sterilized couple has 1.28 more children than an unsterilized couple. That a contraceptive measure is positively related to the number of living children would appear to be a paradox were it not for the fact that people decide to be sterilized after having had a certain number of children, especially sons. Therefore, a sterilized woman has more children than her unsterilized counterpart when variables such as age are controlled.

None of the modernisation variables has a significant relationship with the number of living children. The probabilities in the case of both women's urbanisation and the urbanisation of family heads are low enough to attract attention, but the effects of the two variables are not consistent; the relationship is positive for women's urbanisation and negative for the urbanisation of family heads. The inconsistent effect of the urbanisation illustrates a noteworthy feature, aside from the insignificant probabilities of the modernisation variables: they do not always show consistent effects where one would expect to find them.

When sterilization is taken as the dependent variable, we find a strong positive association between it and the number of a mother's living children. There is also a significant positive relationship between sterilization and the urbanisation of husbands, a connection that is probably valid because men classified as urbanised almost always held city employment, frequently in government, and were therefore especially vulnerable to the sterilization campaign. However, the relationship of urbanisation and sterilization does not extend to family heads, another example of the apparently inconsistent effects of the modernisation variables. There is also the possibility that the education of family heads may be positively associated with sterilization although the connection is weak. The apparent lack of any significant relationship of either the woman's education or that of her husband with sterilization would weaken the general inference of a general association of education and sterilization.

Size of completed families and Childbearing span

The average number of living children per mother of completed fertility, both sterilized and unsterilized, increased from 5.0 in the 1950s to 5.2 for all mothers of completed fertility in the 1970s and to 5.5 for unsterilized mothers but declined slightly to 4.9 children for all sterilized mothers and to 4.3 children for mothers sterilized after the Emergency. In general, all mothers of completed fertility had a fraction more living children in the 1970s than in the 1950s, an increase achieved *despite* a reduction of the childbearing span of about 2.9 years for all mothers: from 17.1 years in the 1950s to 14.2 years in the 1970s. The reduction was only 0.8 years for unsterilized mothers but a substantial five years for unsterilized mothers (from 17.1 to 12.1 years). Yet this impressive lessening of the childbearing span resulted in only a slight decrease in the number of living children per mother, a development which reflects in all likelihood a decline in the rate of infant and child mortality. That mothers appear able to squeeze four or five living children into a relatively brief childbearing span would seem to suggest that to postpone the marriage of women until the age of 19 or 20 years, a prospect that often arouses high hopes for population control, might not significantly reduce the average number of surviving children by the end of a woman's childbearing span.

Remarks

At the present time, sterilization is the only method acceptable to the people of Shanti Nagar that can check a rapid population increase. However in the post-Emergency period, only about five persons per year chose to be sterilized and sterilized couples continued to have an average of between four and five children, a number necessary for the protection and support of parents in their old age. Couples generally look to their own interests when deciding whether to be sterilized and how many children to have before doing so. Their self-interest may sometime conflict with the best interests of the society, a conflict that is

often termed the 'isolation paradox' or the 'tragedy of the commons', the point of which is that sometimes what is good for the individual is bad for the society. In the case of sterilization, a vasectomy or a tubectomy after four or five children, which from society's point of view is better than no operation at all, will still allow a rate of population growth that will be tolerable only in the near term. The discrepancy between governmental family planning programme, which urges that families be limited to no more than two or three children, and individual family planning, which often requires four or five children, is sometimes overlooked in evaluating the potential effects on population growth of increasing number of people who "accept family planning".

On the basis of the Shanti Nagar data, one may cautiously suggest that indirect effects to control population through aspects of modernisation such as enhanced education and urbanisation cannot be expected to contribute significantly to fertility control, at least in the short term. The modernisation variables used in this analysis do not seem to be correlated consistently with reduced fertility. The education of females is perhaps an exception, but its effects is relatively weak until women reach a rather high educational standard, generally the college level, and a college education is currently beyond the reach of most rural women. The urbanisation and education of husbands and family heads are in general positively related to sterilization but this relationship largely derives from Government of India policies during the Emergency and may not characterise the post-Emergency period of entirely voluntary sterilization to the same extent.

Despite the declining birth rate and the increase in contraception, it is unlikely that the problem of population growth has been solved. Many rural couples feel insecure with fewer than two sons, which means that the ultimate governmental goal of the two child family makes no sense to most rural people. Even if there were a national comprehensive system of old age social security, many, if not most, rural people would still not believe that anyone but their sons would take care of them when they grow old. Their experience has been that government and policies change too frequently to be trusted in the long term. Families of four or five children may be larger than many people want but these same people may nonetheless believe that they are necessary in view of existing circumstances. Thus, the number of children left alive at the end of the average women's childbearing span will in all probability provide greater insight into India's demographic future, than the drop of a few points in the birth rate or a slight increase in the number of people who are said to accept family planning. If parity at completed childbearing were to stabilise, at between four and five children, India would continue to live up to its reputation as a demographic juggernaut.

(For Notes and References see original article in the Economic and Political Weekly).

Needed—A Transfusion

Dear Reader,

Last month, while posting the bulletins, I made the shocking discovery that we have barely 350 subscribers! With growing suspicion, I opened the account book, and had another shock! No money to pay the printers for the next issues. A quick calculation revealed that we need a minimum of 1000 subscribers to cover the basic expenses; each issue costs Rs 1.60 to print and there is the added expense of postage. This works out to be more than the annual subscription. Apart from the finacial problem, I am sure you will agree that it is a question of the good old 'honour' — no self-respecting bulletin would like to admit that it has so few subscribers!

So kindly put on your chappals or whatever and go forth into the wide world (or at least up to the medical college, or hospital in your area) and collect a minimum of FIVE subscriptions each (I am not being greedy, just being practical). This, I am sure, will not be too difficult because in India we produce something like 12,000 doctors and 8000 nurses per year; and of the NGOs, one has lost count. (Where *are* they?) I expect to be flooded with money orders in the coming months, otherwise we will have to sink without a gurgle.

Yours (clutching at the last straw),
Editor/Publisher

121 medico friend circle bulletin

4(iv)

OCTOBER 1986

A Feminist Understanding of Contraception

(Manisha Gupte)

Few topics related to the women's health movement are as controversial as is contraception. Liberating heterosexual women at one end by giving them the choice to control their own reproduction, it snatches away the same control when contraceptives, many of them invasive and harmful, come as a package deal with population control programmes that select, motivate and whenever necessary coerce helpless targets. Male hegemony exists in medicine, in policy and decision making and in research. Do women end up having lesser choice and lesser control over their bodies through the usage of existing contraceptives? what designs operate to keep control of women's bodies out of the latter's hands? And is there a solution?

To understand the above, it becomes necessary to clarify our own position regarding contraception. It is particularly important to do so when we are faced with the possibility that injectable contraceptives may be officially introduced into the Indian government's family planning programme. Whereas our fight should be directed against all contraceptives that are invasive, harmful and which have systemic effects, at this moment it is necessary to concentrate our efforts to examine injectable contraceptives vis a vis the personal choice of a woman regarding contraception.

The present paper, based largely on existing information, attempts to bring forward some views regarding contraception, the choice that women are able or unable to exercise when confronted with unsafe contraceptives within a target oriented, coercive population control programme.

Feminism and Contraception :

As regards contraception, one argument put forward is that while it does help a woman to avoid conception the availability of contraceptives has made women 'sexually available' for men. The argument has been especially true in the context of our Western sisters and the recent works of Germaine Greer and Betty Friedan bear testimony to the fact that the sexual revolution of the West, did infact oppress women themselves. The same argument is put forward in India by well meaning persons about the abortion issue. What they want to stress upon and to warn is that once contraceptives are available, men become more irresponsible in their sexual relation with women, since then a woman's sexual availability can be separated from unwanted conception and the accompanying guilt and responsibilities. In the event that conceptions do occur, the woman then is made to go through repeated abortions, much against her will and her physical well being. The position of these protagonists is in principle quite different from that of the moralists who see sexuality without conception as evil, especially if it occurs outside marriage, and who consider accidental pregnancy ensuing out of such a relation as a well deserved punishment.

Let us examine this position and its consequences. In fact, one might raise a counter question in argument. Are we trying to say that if contraceptives were not made available, women too would no longer be 'available' for sexual purposes? In such a situation, what would be our analysis? The fact is that partriarchy is powerful and all pervading. It adapts itself to almost every situation with incredible ease. Infact it has the power to mould situations, even progressive

DRUG ACTION FORUM-KARNATAKA

Kittur 591 115
Bailhongal Taluk
Belgaum District

18 January 1989

Dear

Greetings from Kittur!

You may remember my mentioning to some of you earlier of the need for drug issue to be taken up at the grass root level as an awareness building process as part of the community health and development programme being undertaken by you and your team.

In this connection, I, on behalf of DAF-K, had a discussion with the Community Health Cell team (CHC team) in Bangalore, and I am happy to inform you that they have agreed to give us the necessary technical support to hold a Workshop on Drug Issues in the month of April 1989 in Bangalore.

The CHC team are of the opinion that an effective awareness building process can be initiated only if all those involved are themselves well informed about all aspects of Drugs and Drug Policy Issues and are in touch with the ongoing efforts all over the country. They are willing to put together all the information/resources and facilitate the workshop. However, the CHC team has indicated that it wishes to plan this workshop on a participatory basis and, therefore, we would request you to start the process by filling in the enclosed form. The filled in form may please be sent to:

The Co-ordinator
Drug Workshop
Community Health Cell
No 47/1, St Mark's Road
Bangalore 560 001.

by 5th February 1989.

The venue, duration and the dates of the workshop will be fixed on hearing from you.

With best wishes to you and to your team,

Yours sincerely,
for DAF-Karnataka,

Gopal Dabade

To

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and radical, for newer forms of oppression. It existed in feudal society, it functions hand in hand with capitalism; what is even more depressing is that it has also not been driven out of post revolutionary societies, nor from left movements. It should not surprise anybody therefore if it exploited the sexual revolution of the West or the availability of contraceptives in general.

Our fight therefore has to be directed against the real enemy. Patriarchy that oppresses us, degrades us to being sexual objects, that refuses to accept responsibility of conception and child rearing and which overtakes any move by us to gain control of our own bodies. Withdrawal of legalised abortion or of contraception would in result be no different from what rightist moralists would desire in complacent glee: a further punishment for women. If we accept the fact that a woman is not free sexually, then to take away her defence mechanisms would amount to victim blaming.

Within marriage, the 'availability' of the wife for sexual gratification in relation to the contraception issue raises delicate questions. Similar to the argument raised earlier, does a wife become a sexual slave only when the couple practices contraception? The reality of the sexual rights of a husband is more deep than is contraception. Restitution of conjugal rights is one such issue that encroaches on to the human rights of the wife. In the Hindu family, the wife cannot raise the issue of rape within marriage, because according to the law she has given her consent once and for all during the marriage ceremony, itself. Legal cases have been filed by husbands when the wife has refused to bear children. Where does contraception figure in these cases?

The woman's choice and control over her own sexuality would more often be much reduced within marriage. Each time she goes through an unwanted sexual experience, she may not be actually 'raped', often, the consequences of not sleeping with her husband may far outweigh the consequences of having slept with him. She may be threatened with insecurity, with the accusation of not fulfilling her conjugal duties, of frigidity and in dire circumstances with desertion. In such a situation, infact contraception comes to the rescue of a woman: she can at least hold on to one end of the rope, however feebly.

One is definitely not making a case that wives and women in general are sexless and that everytime they undergo a heterosexual experience, they are doing it against their own will, only to gratify the man. Of course not. Women can and should express their sexuality in their own right. And yet, they should have the freedom to control their own reproduction, within or without marriage.

From this point, emerges another hotly debated issue: is contraception solely the responsibility of the woman? It is clearly not so, and we have to constantly question as to why there is more research into contraceptives for women as compared to those for men, why women are the more favoured target group in population control programmes and why unsafe and invasive contraceptives are being dumped onto women. Ideally, contraception should be shared equally by the couple and significantly, the natural family planning method which is the safest method of contraception demands such mutual cooperation and understanding. The man respects the women's demand against conception and actively cooperates. Here, however, we are referring to the man who handles an intimate relationship with some amount of responsibility. He may well be exception to the rule. In Bombay city alone the officially registered MTPs in a single year were around 50,000 besides many more that go unregistered, (Karkal, 1985) proving that there were atleast so many unwanted pregnancies in one city in one year.

The point one is trying to make is that while w are aware that contraception is shared responsibility in the absence of a pro-women milieu, avoiding un wanted conceptions through contraception become the woman's last line of defence.

Is there a choice?

If contraception is liberating because it allows a woman to control her own fertility, existing contracep tives tell a sad tale. Contraceptive choice today i not determined so much by the woman in question but by designs that are beyond her control. These designs work at national and international levels namely the government's policy regarding population control and the interests of multinational companies The interests of the latter become clear when one realises the tremendous potential market that they have in healthy women all over the world. Three to five million women in seventy countries were on depo provera alone, in 1978 (Corfman, 1978). According to the 1981 Census of India, 43.4% of all women are in the reproductive age group and of these 80.48% are married. That makes for 11.6 crores of married women in the reproductive age group only on the Indian subcontinent. Since injectables are to be used as a spacing method, all of these women become potential targets at least once in their lifetimes.

It is therefore easy to understand the direct and indirect involvement of drug manufacturers in research

related to long acting contraceptives and the implicit bias underlying all these research studies. Even 'prestigious' international bodies such as the International Planned Parenthood Federation (IPPF) describes all injectable contraceptives as a 'most dependable and useful method of family planning (IPPF, 1978). Contraceptive technology is more under the control of multinationals than it is with women. Delivery of contraceptives may lie with women, as it does in Britain or in India, but this in itself does not mean that decision making or the power to decide on a particular contraceptive on a macro level lies with women. Male hegemony exists and contraception therefore remains an area where all heterosexual women are disadvantaged by a limited choice. (Roberts, 1981). Moreover, the medical establishment is male dominated and much worse, women are made to fit into male defined categories. It is with this preconceived bias that the medical establishment sees our menstrual problems. Since our gynaecological disorders are termed as 'psychosomatic' there is little understanding for menstrual chaos, pain or other psychological disorders that invasive contraceptives induce inside our bodies.

The findings of many of the reasearch studies are questionable. In field trial studies, the necessary physical examination is not always performed on women because it would discourage a woman to continue to participate in the study and would give FP a bad name at the village level (Balasubrahmanyan, 1981). No long term follow up is also conducted. On what basis then are claims of safety made? Hormones can cause long term havoc, therefore women taking hormonal contraceptives have to be monitored for years. Not only they but in the event that they used these drugs in the post partum period, their children too have to be watched until the latter reach puberty. In this context, our fight has also to be directed against the Pill and all contraceptive preparations that cause hormonal and systemic effects. Our concentrated effort against the introduction of injectables, however is more because least control over our own bodies is possible with long acting contraceptives, the dangerous effects of which we cannot remedy by immediate withdrawal and the higher potential of abuse that is related with injectables.

Long acting contraceptives, especially injectables are very important where the question of choice is concerned. The 'value' of injectables, as the proponents of PC see, lies exactly in the fact that it steals choice from women into the hands of male hegemony. A fourteen year old black girl from London was given a shot of DP without her knowledge when she was under general anaesthesia for abortion (Rakasen, 1981). Social workers from Scotland report that a young girl was given a shot of DP, disguised as a glucose injection. In Britain, Asian women in their post partum period are routinely given a DP shot along with the rubella vaccine, without any consideration for the child that would absorb the hormonal drug whilst breastfeeding.

The above examples are only the tip of the iceberg. They are vivid because one can clearly see how choice is snatched from us, throughabuse of the injectable, but the general picture would be more subtle. Throughout the world, especially in the developing countries, injectables would be pushed for the 'sake of convenience'. The question is: whose convenience? When the woman in question cannot decide which contraceptive she must use, 'informed consent' is actually telling half-truths and when she cannot control the long term sequelae of the systemic and hormonal effects on her body, it is inhuman to speak of 'convenience'. Infact, it is the convenience of the drug companies and the dons of population control that is being considered, so that this dangerous hormonal preparation can be administered to 'ignorant and irresponsible' women.

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for DAF-Karnataka,

Gopal Dabade

To

113 medico friend circle bulletin

MAY 1985

4(V)

INJECTABLE CONTRACEPTIVES

Injectable contraceptives (ICs) have been on the pharmaceutical map of the world since the early 'sixties. Ever since then they have been at the storm centre of a controversy that may well be the longest ever on a medical issue. Two countries, USA and UK have appointed public enquiry committees on the matter.

In India, the ICs controversy was of largely academic debate until about six months ago when the government issued a directive permitting the import of NET-EN, one of the ICs. Around the same time it was also decided to introduce the IC as one of the cafeteria methods offered in the government Family Planning Clinics.

The ICs controversy has raised some fundamental issues — the manner in which decisions which affect thousands of people are taken; the ethics of medical research and control and the more fundamental problem of appropriate animal models for the testing of drugs. It also brings into focus once again, the role of the multinational drug companies in pushing potentially harmful drugs in the third world with the active participation of the concerned governments.

ICs are hormonal contraceptives which may be administered in the form of once in 60 or 84 day injections. They are synthetic progestogens. The two currently available ICs are Depot medroxy-progestogen acetate (brand name Depo Provera) and Norethisterone enanthate or NET-EN (brand) name Norigest) While they are both synthetic progestogens they belong to different groups of steriods. These synthetic progestagens inhibit the production of gonadotropin which in turn prevents ovulation. The endometrium and the fallopian tubes are also perhaps affected contributing to a reduction in fertility.

Depo Provera has currently been approved for use in 84 countries whilst NET-EN is 'registered' for use in 25 countries but approved for use in 40. It is neither registered nor used in UK or the US (War on Want, 1984).

The Depo Provera Board of Inquiry in the US has strongly recommended to the FDA that the drug sould not be licensed as a contraceptive. In UK however, the Board of Inquiry has cautiously permitted the use of ICs in cases where other methods are unsuitable. In India Depo Provera is not allowed to be imported. However, it is not banned dither.

Since Depo Provera has been in use much longer, much more research material is available on this than on NET-EN. Although they are different steriods, it is possible to examine some of these findings with reference to NET-EN. Toxicological studies have been carried out in accordance with the requirements of the US FDA. These results have been monitored by the WHO Toxicological Review Panel periodically. The drugs have been tested on rodents, beagle dogs and rhesus monkeys. The Depo Provera animal studies have come in for a lot of criticism. Stephen Minkin a former Nutrition Chief of the UNICEF project in Bangladesh first revealed that Upjohn, Depo Provera's manufacturer had not in fact reported all the findings of their trial on beagle dogs. The 7-year studies on beagle dogs had

shown that mammary gland nodules developed in all those animals which survived beyond the first few years and some of these were malignant. Another finding was acromegaly or an abnormal growth process. Ten-year monkey studies have also been conducted using DP. Again mammary nodules developed in the low-dose groups. Endometrial carcinoma was also observed in some of the monkeys. (WHO, 1982). Minkin further reports that curvature of the spine was also found in experimental animals, which is a possible indicator that Depo Provera inhibits growth hormones.

The NET-EN studies have not however shown the same results. The beagle dog studies have shown that the drug may be inhibiting or affecting carbohydrate metabolism. One case of endometrial cancer was reported in the monkey studies. The WHO Toxicology Review Panel, after a thorough examination of the results came to the following conclusions — (i) that beagle dogs were considered an unsuitable toxicological model for the study of progestogens; (ii) that the tumours in DP administered monkeys arose from a cell type not found in women and so could not be considered to indicate increased risk for cancer. (WHO, 1982).

Late last year the USFDA's Board of Inquiry has categorically countered both these contentions of the WHO Panel. It has stated that "Data from the studies on the rhesus monkey and beagle dogs cannot be dismissed as irrelevant to the human without conclusive evidence to the contrary. Such evidence is not available at this time. Therefore, the fact that malignant neoplasias developed in two species in target organs of sex steriods must be considered as an indication of the potential of progestogens, including DMPA, to promote the development of malignancies in target organs." (Report of Public Board of Inquiry, (1984).

If one were to accept the WHO conclusions on the unsuitability of beagle dogs as toxicological models for progestogens, then obviously the animal studies data becomes invalid. If this is so, on what basis are human trials, which can only follow upon animal trials, being conducted?.

Human Trials

There are volumes of literature on the Depo Provera human trials. One of the 'pioneers' in the use of Depo Provera was E. MacDaniel who tried out the drug on thousands of Thai women. These studies have come in for a lot of criticism. The US Board of Inquiry has stated that the data on humans is insufficient and inadequate to either confirm or refute the animal study results (Report of Board of Inquiry. 1984.) It has pointed out that in a majority of the studies there were no controls, nor is there sufficient background information on which one may decide on the possible carcinogenic risk. Moreover the Thai trials have also been criticised on ethical grounds—'informed consent' was no where practiced.

Depo Provera has been tried out in India, by the ICMR, but reports have never been available. There are two major NET-EN studies — both coordinated by the WHO. The first was a two-year multinational comparative trial of three regimens of DP given at 90 days interval, NET-EN at 60 day intervals, and 84 days interval. Over 3000 women participated in the trials which began with recruitments in 1977 and the final follow-up in 1982 (WHO, 1983). The other multicentre trial was conducted in India by the ICMR in 16 Human Reproduction Research Centres. This study compared two regimens of NET-EN of one 200 mg injection at 60 days and 90 days. Over 2000 women participated in this study which ended its first phase in October 1983. (ICMR, undated).

A common feature of both the studies is the very high drop out rates, most of which were due to menstrual irregulaities. In the 1977 WHO trial the drop out rate per 100 women ranges from 59 to 89 and in the Indian study about 50 per 100. Menstrual irregularities included amenorrhoea, excessive bleeding, and spotting. In the WHO study 40 percent of the women suffered from amenorrhoea of more than 90 days.

The 1982 WHO document has specifically noted that menstrual irregularities are not likely to be a major health problem. There is really no scientific evidence to back this up! Very little is known about the mechanism of bleeding disturbance especially those related to steroid contraceptives (WHO 1982). This being so, it is rather curious that the Indian decision to introduce the IC into the family planning programme should have come after the study results were known. One apparently facetious argument that is being used is that since Indian women are in any case anaemic, amenorrhoea would in fact help them in the long run. A similar argument is forwarded for another of the side effects, weight gain. In the light of how little is known about menstrual irregularities, such

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arguments coming from 'experts' in the field must be roundly condemned as being thoroughly unscientific.

It is also rather disturbing to note that a 24-month study should be deemed sufficient to prove the drug's safety when it is known to be a possible carcinogen. Another area which has been ignored is the possible teratogenic effects of ICs. The child may be exposed to the drug if the mother's pregnancy is undiagnosed when the contraceptive is administered.

Experts have stated that there is a positive and significant association between progestins and birth defects (War on Want, 1984). There have been hardly any well-designed follow-up of children who might have been exposed to the drug. Contraception failure may also lead to exposure of the foetus to progestogens. In the two studies cited contraception failure occured in 0.4 to 1.4 women per 100 women (WHO, 1983). While this seems like a small proportion, the total numbers are likely to be large when ICs are being given through the family planning clinics. Another factor to be considered here is the effect of progestogen's on breast fed infants. According to the WHO report a breast fed infant of a mother on NET-EN would receive about 0.05 per cent of the maternal dose over a two-month interval. (WHO, 1982). It has been reported that even this small amount may prove harmful because (i) the brain is not fully developed and is sensitive to hormones and (ii) the immature liver and the consequent slower elimination may lead to a high accumulation of the hormone in the blood. (War on Want, 1984). When so little is known in this area, is it ethical to introduce this contraceptive in the national family planning programme.

The ICMR has outlined a set of guidelines for family planning clinics regarding the use of ICs (GOI, undated). These are very similar to the WHO guidelines and include criteria for selection, pre-examinations to exclude cancer of the breasts and genital cancers, undiagnosed abnormal uterine bleeding and so on. Given the overcrowded understaffed family planning clinics how much time would the doctor be able to devote to the potential IC user.?

As reported earlier the government has now allowed the import of NET-EN by private practitioners, nursing homes etc. And yet there is no mechanism to ensure that the guidelines are followed. Moreover, ICs have a great potential for misuse. For instance, in UK, women in some hospitals were refused rubella vaccine unless they accepted DP (Campaign against Depo Provera). Closer home in Bhopal, women are not being allowed to have MTPs unless they accept copper T's. This perhaps is the most frightening aspect of the whole situation. Women will loose whatever little control they had over contraception. There is plenty of evidence that even during the trial phase, 'informed consent' was only a myth. When IC's become part of the 'cafeteria' approach, information will be at a greater premium because then there will be no need to 'persuade' the subject so as to get a adequate sample for research. The manner in which ICs have been introduced smacks of indecent haste. For one thing, although the ICMR study was completed by October '83, no report was forthcoming until recently. In fact the first published article seems to have appeared not in an ICMR publication but as an article in a specialised journal to which few non-research oriented institutions have access—**Contraception**. It may of course be argued that since there has never been a tradition of debate on scientific and medical issues in the country, why should ICMR have acted any differently. And that is in fact the major issue here. — that people have a right to decide whether or not they would like to take the risks that are today being thrust upon them.

Padma Prakash, Bombay.

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The E P Case

Mira Shiva

High dose combination of Oestrogen and Progesterone has finally been banned. It is tragic that the public had to fight for 6 long years for getting a hazardous drug combination banned, that too against all odds.

It was the socially conscious health activists and consumers bodies that had initially raised the issue in the first place, when the EP campaign was launched way back in 1982 on Women's Day on 8th March. Due credit goes to the press for keeping the issue alive all these years and supporting the stand of the people.

It was the drug health and consumer groups who protested when on 21st July 1982, the ban order for manufacture was given as December 1982 and ban for sales as June 1983. How could a drug recognized as hazardous be allowed to be manufactured and then sold for almost another one year? It was not surprising when this was misused by the manufacturers to challenge the hazardous nature of the drug, saying that if the drug was hazardous wouldn't it have been banned immediately by the DC authorities and since it wasn't – it was obviously non hazardous!

The Legal Battle

The drug companies were quick enough to find the legal loopholes and the stay order against the ban order *was* obtained from the Calcutta and Bombay High Courts on legal technicalities. The fact that it involved a hazardous drug which could maim and cripple the unborn foetus when consumed by ignorant pregnant women, –did not appear to be a matter worth considering. Even making an attempt to find out the number of women put at risk, with annual sales of Rs. 7 crore worth of drugs (majority of them are consumed for pregnancy tests and for induction of abortion though on paper the indications permitted had been only for secondary amenoorrhea) was not done.

Questions were raised in the Parliament, repeated requests were made to the Health Ministry and Chemical Ministry to make attempts at getting the stay vacated.

In the words of Supreme Court Justice probably the government never wished to vacate the stay; this became obvious because the subsequent events are pointers to scheming.

Again it was due to a writ petition that Supreme Court took up the issue again. Justice Ranganath Mishra's comments on banning of drugs is a telling commentry :

> "This court as early as 11.4.1983 directed issue of notice to the Medical Council of India, The Indian Medical Association, The Drugs Medical Council of India, The Indian Medical Association & The Drugs Control Authorities of the States except that of Kerala, as it was already made a respondent to the writ petition. Obviously such notice was given as in the opinion of the Court, the matter was one of great importance and the Court looked for participation of these authorities in the debate with a view to assisting the Court in the disposal of the matter. We are surprised that the notice from the Court has not evoked response excepting the State of Karnataka. Statutory bodies when called upon by a Court, in particular the apex Court of the Country, are duty-bound to respond and join the proceedings before the Court. These bodies are not litigants and do not have the choice of keeping away from the Court like private parties in ordinary litigations opting to go ex–parte. The present matter is certainly one which is sufficiently important and the stake of the entire nation is high; when the Court *suo moto* extended the opportunity of being heard and invited the named statutory or other authorities to come forward and place their view

points on relevant aspects, an attitude of callous indifference cannot be appreciated. We hope and trust that there would be no repetition of such a situation".

The Public Hearings

It was unfortunate for public that the public litigation case was referred back to the Drug Controller of India. In its Court Order of November 1986 Supreme Court gave direction to hold public hearings to seek the views of consumers and health groups and decision be taken by end of July 1987. The drug companies were shrewed enough to use the professional bodies like FOGSI (Federation of Obstetrics Gynaecology Society of India) to be their spokesman. FOGSI till the very end continued to support the stand of the Drug manufacturers stating that the drug was essential and absolutely safe. Luminaries such as Dr. C. L. Jhaveri, Dr. C. S. Dawn, Dr. B. N. Purandare did their utmost to tilt the balance in favour of the manufacturers. The role of the WHO expert and the Deputy Drug Controller who chaired the Calcutta hearing was not very creditable.

The silence of professional and academic bodies such as IMA, IMC, at such a time was unforgivable. It was only the Indian Academy of Paediatrics that had expressed its deep concern against the continued sales of high dose E. P. drugs. The public hearing in Bombay ably proved that when called upon, the women's organisations can give a bitter fight for a cause. Even the public notices for the public hearings were inserted inconspiciously in the papers, the hearings were stated to be for "formulations of oestrogens and progesterone", in the first public notice and "combination of oestrogen and progesterone" for the second one. The failure to clearly state that the public hearings were being held to decide whether or not to ban combination of high dose Estrogen-Progesterone, was too significant to be overlooked as an unintended-errors. The way the 4 public hearings in Madras, Delhi, Calcutta and Bombay were held on 5th Feb., 10th April, 10th July and 14th July 1987 respectively is a story in itself. Even when the Drug Technical Advisory Board met in May 1988, the minutes of the 4 public hearings were not made available, nor the summary of the arguments for and against the drug ban was sent to Boards members for prior information. The fact that it took 6 long years to issue a Gazette Notification to ban a drug – shows the forces working on it. A drug, which is known to be hazardous – which has been mainly used in pregnancy – a drug which was banned by the Drug Controller of India himself in 1982 – a drug which ICMR strongly recommended to be banned in 1982 as well as in 1987 – a drug which was not allowed to be registered or sold in the parent country Netherlands by Organon Infar, was strongly contested by drug manufacturers and they had the audacity to challenge the DCI's ban order in India.

Enforce the ban immeditely

The EP case involved a drug which the contemporary Gynaecological medical literature does not even mention, as it has no role–and as it is not used by any gynaecologist or a doctor, as safer alternatives exist. Not merely had several drug regulatory authorities banned the drug, but several companies had withdrawn the product themselves. It was due to sheer gist and perseverance of the drug activists, health and consumer groups that the ban order has come now. Should this be counted as success ?

We have learnt from past experience that unenforced drug bans are as bad as no bans. The Gazette Notification was issued on 15th July 1988. Government media of AIR and Doordarshan should have been used to inform the chemists, medical professionals and the ignorant consumers about the drug clearly stating the brands and their manufacturers ! The Drug Control Authorities owe this to the nation. The stocks from the manufacturers and the market should be withdrawn and destroyed.

The Health Ministry has had 6 long years to make available to the medical professionals the recommended alternatives. Safe, low cost simple pregnancy tests, which basic health workers can use, should be easily available as part of Mother and Child Health Programme. Permitting at this stage the manufacturer and sales of high dose EP drugs as single ingredients in the same dose would be ridiculing and sabotaging the ban. The ban has come 6 years too late; now the implementation of the ban must be immediate. The Drug Control Authorities and the manufacturers must be held responsible if these drugs continue to be sold. If this could happen for a drug like high dose EP which the consumers and health groups considered a watertight case–what would be the fate of other many hazardous drugs ? Let the government and Drug Controller of India announce how they are going to make the ban effective. ▣ ▣

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JANUARY 1987

Use and Abuse of Bio-Medical Technology

(Amniocentesis-A Case Study)—Amar Jessani

Prenatal testing to determine sex of foetus has recently created a big uproar in India. Two Bombay based organisations-the Forum Against Sex Determination and Sex Preselection and the Doctors Against Sex Determination and Sex Preselection-with the support of other like-minded women's and health organisations all over India are spearheading the campaign against this nefarious medical service to the extreme patriarchal practice of selecting the male offsprings and eliminating the female ones. In a short time span these organisations have fairly succeeded in creating a sizeable informed public opinion by organising a series of demonstrations, dharanas, meetings, workshops etc. and by writing and giving interviews in the English as well as the vernacular press. Many of the members and sympathisers of the Medico Friend Circle in Bombay are actively participating in these efforts. The pressure created by this campaign has started having its effect even at government level. A private members' bill, sponsored by the opposition as well as the ruling party MLAs has been introduced in the Maharashtra Assembly. The bill is for enacting a new law to comprehensively ban sex determination at the prenatal stage using any medical technique. It does not ask for the ban on the prenatal medical techniques as such but demands that the use of such techniques should be restricted to the detection of medically recognised foetal abnormalities, and even in such use, the sex of the foetus should not be communicated to anybody either directly or indirectly. The Union Govt. has also issued statements saying that it does not approve of female foeticide. And lastly, in response to all such pressures, the Maharashtra Govt. has appointed a committee under the chairpersonship of the State Health Minister to make recommendations to the Government in this matter. Significantly, several members of the Forum and the Doctors are appointed on this committee providing an opportunity to these organisations for proposing comprehensive measures to ban the use of medical technology for prenatal sex determination.

Response of established medical profession:

The established professional bodies of doctors initially pretended to be totally unconcerned about the debate on the doctors' collusion in female foeticide. But the campaign soon made inroads into their domain as it started gathering support of socially conscious doctors. Further, the campaigners, instead of going for sensationalism, came out with well researched information on the extensive use of these techniques not only in the big cities like Bombay, but also in the smaller towns all over Maharashtra and other states. Thus, the spokespersons of these professional bodies were driven into open debate. The points they raised in support of the practices of sex-preselection and sex determination require serious examination as the ideological basis of such arguments, has wider ramifications.

First let us enumerate some of their points: (1) Many doctors feel that it is none of their concern and at best, it is a social issue (2) The techniques employed for sex-determination are less dangerous or hazardous than the danger involved in crossing roads in urban centres. (3) They are catering to the psycho-social needs of people by making known the sex of the child and allowing the people to make their own choice (4) Main culprits are people who go for abortion of the female foetus. That is, society is at fault, not the doctors. (5) Social activists should direct their fire

DRUG ACTION FORUM-KARNATAKA

Kittur 591 115
Bailhongal Taluk
Belgaum District

18 January 1989

Dear

Greetings from Kittur!

You may remember my mentioning to some of you earlier of the need for drug issue to be taken up at the grass root level as an awareness building process as part of the community health and development programme being undertaken by you and your team.

In this connection, I, on behalf of DAF-K, had a discussion with the Community Health Cell team (CHC team) in Bangalore, and I am happy to inform you that they have agreed to give us the necessary technical support to hold a Workshop on Drug Issues in the month of April 1989 in Bangalore.

The CHC team are of the opinion that an effective awareness building process can be initiated only if all those involved are themselves well informed about all aspects of Drugs and Drug Policy Issues and are in touch with the ongoing efforts all over the country. They are willing to put together all the information/resources and facilitate the workshop. However, the CHC team has indicated that it wishes to plan this workshop on a participatory basis and, therefore, we would request you to start the process by filling in the enclosed form. The filled in form may please be sent to:

The Co-ordinator
Drug Workshop
Community Health Cell
No 47/1, St Mark's Road
Bangalore 560 001.

by 5th February 1989.

The venue, duration and the dates of the workshop will be fixed on hearing from you.

With best wishes to you and to your team,

Yours sincerely,
for DAF-Karnataka,

Gopal Dabade

To

at the society, its traditions, customs and values, and not on the medical profession which is making an effort to cater to the needs of the people as cheaply and as safely as possible. (6) Well, it may be a bad thing to do, but people are justified in desiring a son after 3 or 4 daughters. (7) Some crude spokesperson justify it in the name of helping population control programmes of the government. (8) As such women are maltreated, deprived of nourishment, suffer more from diseases and burnt alive for dowry and so on. Not allowing them to come in this world to suffer such indignities is a human service to the women. (9) Lastly, this is more vociferous, the govt. has already legalised foetal killing by liberalising abortions. If such foetal killing is ethical, why not female foeticide? Thus, if sex determination is to be banned, then abortion should be banned, too.

What is interesting to note about these arguments of the established section of medical profession is that all of them, barring one about the hazards of the technique, are socio-political-economic arguments and not medical ones. By medical I mean the rational justification for the use of a therapy or diagnostic procedure based on the medical indications found in the patient concerned. Thus, it is clear from the above that we are not dealing with any controversy surrounding what is called 'medical treatment' and all that goes into determining rational medical treatment for the concerned patient (that includes clinical examination, laboratory investigations, etc.) But we are dealing with another aspect of the medical practice, what is considered the provision of 'medical service'. That is, medical profession providing service to a normal human being in response to his/her need or demand which may not be a medical need or demand.

Readers should recognise here that I am using these terms 'medical treatment' and 'medical service' in a very narrow sense. In doing so I have no intention of granting unlimited paternalistic privilege to the physicians for taking arbitrary decisions in the 'medical treatment' aspects of their practice. Much is written about ideology in the 'medical treatment' itself and about its commercialisation as well as the question of human rights in it. Therefore, we will not elaborate it here, on the other hand, the 'medical service' which, as we have defined it in the narrow sense, is purely ideological and socio-political.

Ideology of medical paternalism:

As I pointed out earlier, given the type of medical practice involved in sex-determination and sex preselection, the established medical profession is hardly able to produce a single argument strictly from the medical angle. Yet, they do not seem to recognise it precisely because as professionals they directly or indirectly regard themselves quite apart from the society in general. Thus they say that it is society which is at fault and not they. If society allows one practice (here abortion) another will follow (sex determination). Such arguments can, at best, be considered apology for their own mal-practices or at worst, their criminal collusion in supporting the evil practices in society. When taken together, however, it indicates not only simple apology and collusion on their part but a definite self-submission to the ideology of patriarchy. This only adds to the fact that the values of the medical profession, when examined in the context of their practice and not merely in their code of ethics, are the values of the society at that point of time. And therefore, the medical profession is neither apart from the society nor their codes of practice is given once for all. This view, I know will not be palatable to even many progressive doctors, however. But this is only a generalisation to underline the need to struggle for the better and human code of ethics, a struggle which goes hand-in-hand with the struggle for human liberation in the society at large. In this sense, the success of the campaign against prenatal sex determination will be a gain for the larger struggle.

Now elaborating our earlier points further, the medical professions' attitude of considering itself separate and above society has many implications. In doctor-patient relationship its reflection is simple—the doctor knows better and the patient must ultimately accept the line of treatment prescribed. In many countries this type of paternalism is being challenged and patients have even dragged doctors to court. But in India, the patients are almost absolutely vulnerable to doctors' paternalism. There is no Patients' Bill of Rights in India.

At societal level, this paternalism of medical profession takes oppressive and idelological shape. The professional bodies take care that any critical opinion on the practice of medicine coming from a non-medical person is adequately discredited and suppressed. The professional organisation(s) of doctors are indeed the most powerful organisations almost everywhere in the world. Another aspect of their paternalism is to consider themselves fit to give their opinion on all "non-medical" problems of society. Not only to give opinions, but give a "solution" to the problem being discussed. Therefore, for many of them the pre-natal sex testing is a "medical solution" to the social problem of women's oppression. Thus they put Virchow's famous statement "Politics is nothing more than medicine on a grand scale" upside down.

6. What do you expect will emerge from such a Workshop?

7. Any other relevant/related issues?

Please fill in this form and return it to

The Co-ordinator
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47/1 St Mark's Road
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by 5th February 1989.

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Meaning thereby that for our established medical profession, the long lasting solutions of health problems of people does not rest on the need for deeper political change (as Virchow postulated), but the professionals being part of the established oppressive political nexus, they bring the oppressive communal, casteist, sexist and capitalist politics at smaller scale in their day-to-day medical practice.

In this context one must recall the role physicians played during the Nazi holocaust. It has been firmly established after the famous Nuremberg Trials of the physicians, and the extensive documentation done on the role of physicians, that the German medical profession at that time could no longer escape from its responsibility by saying that it was coerced by the fascist state apparatus to medicalise slaughter of certain races of humanbeings. The fact is that a large section of German physicians willingly accepted the Aryan Supremacy doctrine of fascism and it devised medical means to attain racial health by eliminating the non-Aryans. It was indeed the self-submission of German medicine to fascism that shocked the liberal opinion of the medical world.

Without being unduly pessimistic, what I am trying to point out is that there exists a dangerous trait in the arguments of the established medical profession. These arguments, along-with the actual practice of eliminating female foetuses, seem to be just a beginning of another self-submission of the medical profession, but of generalisation of the sexist, communal and casteist oppression throughout the country. In this generalisation, the lives of "undesired" community, caste or sex seem to have no human value. It is only a matter of time that this dangerous trait, reflected in the killing of minority community persons in the hospital compound, refusal or reluctance to treat minority community caste or community victims of riots, doctors and police collusion in the bride burning cases, doctors' collusion in torture of political and criminal prisoners, doctors' participation in forced sterilisation and so on, become a medical justification, a "medical" solution to society's problems. Fascism made doctors to translate the fascist genocidal theory into the terminology of hygienics (racial hygiene); communalism, casteism, sexism and capitalism have similar potential.

Thus, the fight against sex-determination and female foeticide practices in the medical profession has wider ramification. It should indeed be regarded as the beginning of wider struggles that progressive doctors, women, dalits, minority communities, political activists etc. will have to undertake to fight against oppression at every level, including at the level of medical practice. To all working in the field of health, these dangerous aspects of the ideology of medical paternalism must be made clear so that while making health care available to people they are better equipped to fight against it.

Can the existing code of medical ethics of the Medical Council of India help socially conscious doctors to initiate such a struggle? Or is it too inadequate to help us in bringing some sanity in the medical practice? Or is the "medical service" aspect totally beyond the framework of this or any code of medical ethics? Even if some progressive clauses are there in the code, is it possible to use them for the benefit of the victims of medical profession when the regulatory body (the Medical Council) itself is dominated by the established medical and political interests? Should organisations like the MFC make the existing medical professional bodies also a terrain for their struggles? On this question of pre-natal sex-determination and numerous such other practices how can debates, education campaigns, agitations etc be initiated?

When I thought of writing this article at the time of mid-annual meet, I wanted to give partial answer to these questions, for I believed and still do believe, that the question of pre-natal sex-determination cannot be summed up in a for-or-against position, nor it is as simple as to say that it is just a misuse. On the face of it, it is indeed a misuse of medical technology. But this 'misuse' is deeply rooted in the society and the ideology-and that also concerns the medicos. That is to say that medical ethics are rooted in the social reality. And hence, when I started writing this article, I realised that it is difficult to evaluate medical ethics and the question of human rights in health in one article. While discussing pre-natal sex testing, this article only poses the issue. I hope to continue this discussion and request others to also contribute.

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With best wishes to you and to your team,

Yours sincerely,
for DAF-Karnataka,

Gopal Dabade

To

MPC. B - August - 82

Dear Friend,

As you are probably aware, a writ petition against the injectable contraceptive, Norethisterone enanthate (NET-EN) was filed in the Supreme Court in April 1986. One of our main contentions is that, given the state of the health care facilities in the country especially in the rural areas, the drug should not be introduced into the mass family planning programme, as it requires careful screening, monitoring, and follow-up of the acceptors. In order to strengthen the case against NET-EN, we need to provide evidence that the health services are indeed inadequate to handle this drug. We request you to send us information on the availability of primary health care in your area. This would mean the area and population covered by the Primary Health Centre, staffing, equipment available, immunization coverage and the frequency and the regularity with which the ANMs visit the villages. If you know of any published studies on PHCs and sub centres, and on the abuses of the family planning programme send us a copy or the reference.

(on behalf of the petitioners)
Saheli, Above shop No 105-108,
Under Defence Colony Flyover,
New Delhi-110024.

MFC 131

Review Article

'The Women's Health Movement: Feminist Alternatives to Medical Control', Sheryl Burt Ruzek; 1979, Praeger Publishers, New York.

"With the resurgence of feminism in the late 1960s and early 1970s, female culture was rediscovered. As women met in large and small groups, they soon discovered many common concerns over their health and reproductive lives. Along with their growing criticism of women's subordinate role in every social institution, feminists voiced particular dissatisfaction with the medical care they received. They were outraged at the demeaning manner in which they were treated and critical of the quality of care available regardless of how much they paid. Above all else, they rebelled at the control men had over their bodies and reproductive functions. From the Supreme Court to the examining room, men were making fateful decisions about women's bodies and their reproductive lives". (Ruzek, 1979).

The medical system was seen strategic for women's liberation as it held the key to reproductive freedom in the form of birth control, abortion technologies and the means for safe childbirth. Yet, the medical system was also strategic to women's oppression because, justifications for sexual discrimination in education, in jobs. in public life, ultimately rested on the one thing that differentiated women from men: their bodies. Theories of male superiority ultimately rested on biology (Ehrenreich & English). Thus the question of who should 'control' women's bodies became central to the feminists' struggle for attaining equal rights within the family, in employment, education and politics.

The abortion campaign which aroused mass participation in the US concretized the issue of reproductive freedom into a clear specific demand. Abortion was not always considered deviant, illegal or immoral by the American society. Deliberate termination of pregnancy was made a criminal offence only around the middle of the nineteenth century and was largely due to the efforts of the White, Middle class, 'Regulars' (these were the University trained male physicians who, inorder to distinguish themselves from the other medical practitioners liked to call themselves regulars). It is also significant that the legislation was passed at a time when a growing number of women from the middle and upper classes were resorting to abortion as a means of reproductive control. For the 'regulars', such a high rate of induced abortion (approximately, one abortion was being performed per five live births), especially in the economic class that could afford the doctor's fees, threatened to affect their income as much of it depended upon the number of deliveries conducted by them; neither were they in a position to earn money by performing abortions as they had taken the hippocratic oath (as another mark of distinction) which specifically forbade abortions. In their crusade against abortions, the 'regulars' cited evidence of the declining birth rates as an example of what would happen if a nation's future was left in the hands of women. They played upon the fear that the decline in birth rates among the 'better' classes coupled with the 'proliferation' of the working classes would lead to a reduction in the 'White, native born, American Protestant stock' and eventually result in America being swamped by inferior categories of human beings. Thus the anti-abortion law that was finally passed was classist, racist and sexist and basically in the interests of the 'regular' doctors. But despite the legislation, women continued to get their pregnancies terminated through 'illegal' means. The abortion debate came up for public debate in the early 1960s following the thalidomide tragedy when a woman who had taken thalidomide during pregnancy was refused abortion in the US and later terminated her pregnancy in Sweden. The issue resurfaced once again, after an epidemic of German measles resulted in the birth of over 20,000 seriously deformed children, many to mothers who would've had abortions if it had been legal. Opinion polls taken during this time (1962-1969) were interesting on two accounts: firstly, abortion was most acceptable to the non-catholic, well-educated, establishment-oriented *men;* and the group that found abortion most unacceptable was the counter part of these men., that is the upper class women. These men had much to gain and little to lose by regularising abortion because "they were satisfied with small families and were particularly vulnerable to financial and social responsibility for accidental pregnancies in or outside marriage. In addition, it (was) the women who underwent the procedure" (Ruzek). The upper class women were most opposed to legalising abortion because it was seen to deprive women of a source of income, social status and sense of achievement that comes out of fulfilling their principal career of motherhood.

The feminists entered the debate in 1967 and were against the mere liberalisation of abortions. Instead, their uncompromising stand was "all laws limiting access to contraceptive information and devices be removed from the penal code and that laws governing abortion be repealed". Feminists refused to accept *any* form of reform as it still left the final decision in the hands of men. In addition, accepting reform meant compromising the under lying feminist goal—the right to limit reproduction.

Strategies adopted by the Women's movement in the US included lobbying through established legislative channels to organising under-ground abortion services. What followed was illustrative of the State's interest and power in retaining control over women's reproduction. The State was joined by the Church and Medical Profession in its opposition to repeal of the abortion law. According to Ruzek, "they recognized the revolutionary impact of fertility control. They fear that if women are free to end unwanted pregnancies, they might choose not to have children at all, to remain un-married, or even to love women rather than men. In fact, all traditional role expectations that subordinate women for the convenience of men might be destroyed."

In the US, women's experience following the liberalisation of abortion laws (July 1970) were profoundly radicalising. "Women faced humiliating encounters with the medical personnel. Women were forced to sign 'foetal death certifictes', had machines to record foetal heart beats set next to them, were given bags with a picture of a foetus to be returned to the hospital after aborting at home or were aborted in the same ward as women giving birth. Concern over quality of care quickly became as serious a matter as access to abortion. The situation was shocking to middle and upper class women who usually believed they fared well in the health care system, but found themselves subjected to these conditions. Even *after* abortion law repeal, women were pitted against an un-responsive health system (Ruzek).

The abortion campaign brought women face to face and in direct conflict with the sexist bias in medical and legal establishments. The effect was to add further to the growing conviction among the feminists that it was time that women took back into their own hands what was initially theirs—the care of 'ourselves' and 'our bodies'. The rediscovery of female culture gave ample proof of how the male physicians had usurped the place of the female healers, and in the process had destroyed what was probably a more rational and humane part of healing. History also showed the role that medicine had played as an institution of social control. Documentation of personal experiences (which had till then been considered subjective and therefore 'un-scientific') delving into long forgotten medical literature unearthed sufficient evidence to challenge the myth of the neutrality of science.

It was not sufficient to challenge, gather evidence and spell out what sexism actually meant, rather, it was necessary to build up support systems along with an alternative to the existing health care system. The women's self-help groups and clinics, the Medical Rights Committees to help women in their legal battles against the Medical establishment, consciousness raising programmes to educate and mobilise women were all the necessary outcome of the movement. The 1970s saw a proliferation of nonsexist medical literature in easy to understand, demystified language along with the development of theoretical perspectives on the women's health issues.

Theoretical perspective not withstanding, the movement has not been without its contradictions. For instance, as opposed to biological *determinism*, radical feminists have tried to minimize or totally disregard biological *differences* between the sexes. This disregard has been carried to an extreme at times, by denying nearly all differences between men and women. To them childbirth is degrading and they argue that women can be and should be totally freed of all reproductive functions by resorting to 'test-tube' babies. While, for the others in the movement, pregnancy and childbirth are the peak experiences in a woman's life. Some feminists have argued that menstrual cramps, nausea during pregnancy, post-partum depression and menstrual problems are culturally induced, best treated by consciousness raising while others have disagreed. But as Ehrenreich and English point out, "the real trouble is that whatever women say about their bodily events will be used against them. If women argue menstruation is painful and distressing, women will be barred from certain occupations. If it is believed to be unnoticeable, women may be required to work the same hours and lift the same weights as men, regardless of discomfort. If pregnancy is viewed as an illness, women may be fired early; if defined as a perfectly 'healthy' state, women may be held to overly rigorous work schedules".

Criticisms have been levelled at the self-help groups and women's clinics for concentrating largely on the reproductive functions of women. This is seen to reinforce rather than question the role of women as a reproducer. But feminists assert that it is not really a contradiction but that such a focus on health and body issues is a strategy to subvert the ideology of sexism at its base. The *social* interpretation of sex differences is crucial to attack, for, traditionally biological differences have been used to denigrate women and justify their subjugation and oppression. To counter biological determinism, the feminists argue that their subservient position is socially conditioned and therefore can be redefined. From this perspective, it is only necessary to alter the social *value* of women's biological characteristics in order to alter their overall social position; there is indeed no need to apologise for female anatomy. Thus, the redefinition of the health and body issues

from a feminist viewpoint requires the putting aside of preconceived notions of the value, beauty, and 'importance' of the female body for much of these notions are inextricably part of the patriarchal culture and value systems.

One of the most important and fundamental contradiction within the movement is the race and class composition which conflicts with its egalitarian ideology. There has been little involvement from the working class and the minority communities. This has been largely due to the fact that the health issues that have been taken up by the movement are not directly relevant to the women from the working class. For instance, black women regard many of the issues as trivial compared with the more serious health problems they face such as under-nutrition, inadequate health care, sickle-cell anaemia. Although many feminists believe that sisterhood will unite women of all backgrounds, "the reality is that sisterhood may be powerful, but so are race, class and status in shaping perceptions of what constitute as problems as well as possible solutions". (Sounds familiar?). Feminists to their dismay have also realized that a demand such as the need for more rigorous testing of contraceptives could result in the women from the Third world countries having to bear the greater burden of becom ing guinea pigs for the Multinationals.

There have also been problems related to the internal organizational structure of the women's groups. The idealistic organizational principles based on self-realization, equality, anti-elitism, sisterhood, and the authority of personal experiences, were difficult to implement beyond the small consciousness raising groups. According to the author, some groups compromised and accepted a certain amount of leadership with the leaders performing the function of a facilitator rather than as someone to whom responsibility and authority were delegated, but much of the movement's fragmentations have been over the key issues of maintaining a collectivity and eliminating an internal hierarchy and elitism (familiar?). Finally, although the self-help groups and clinics have created viable and radical alternatives, to the health system, the medical profession still continues to be the legitimate authority of health care and a powerful force to be reckoned with.

The Women's Health movement in the West is important on two accounts: Firstly, it has effectively challenged the 'scientific' substratum of Medicine which till then had been considered unassailable. With this, the 'theory' of biological determinism, on which rested the rationale for subjugation of women has become invalid. As a 'lay' movement, it has been powerful enough to generate academic interest and research which has forced the medical establishment to change some of its concepts about women. Secondly, the movement has been successful in demonstrating that radical alternatives based on a more egalitarian principles are possible.

"The Women's Health Movement—Feminist alternative to Medical Control" by Ruzek describes the evolution of the women's health movement in the US and its impact on the medical profession. The book is interesting and written in a simple non-jargonish manner but the author confines herself to a description rather than an analysis of the movement. Wherever an analysis is attempted, it is sketchy and at times faulty. She classifies this movement with the other consumer movements that are becoming a powerful force in the West today. By making such a statement and that too in the first chapter, the author misses the fundamental difference between the two: consumer movements attempt to reverse the power structure with the clients on the top, while the women's movement views the struggle as an effort to bring about change in the *content* and the *social organization* of medicine. The title is also misleading as the description is mostly confined to the US, although it is suggestive of something broader, perhaps an indication of the author's ethnocentrism! Since the book was published, several important changes have taken place which has thrown up more contradictions. The possibility of total reproductive freedom through the advances in reproductive technology which was envisaged by the radical feminists, is creating a situation which could very well shift procreation from the home to the 'factory'. A feminist nightmare seems to be unfolding with the setting up of sperm banks and the blatant advertisements for surrogate mothers. As had happened during the Industrial Revolution, when the home was stripped of all its economic function, if today women are going to be stripped of their reproductive functions as well, the only role left for them seems to be to function as sex objects for the sole pleasure of men. As a reaction to this there is a revival of 'romantic love', 'romantic motherhood', 'romantic fidelity' often supported by the earlier 'firebrand' feminists as the desirable feminist goal. Have we come a full circle?

Although the book under review was published eight years age, several chapters in the book are relevant to what appears to be the emerging movement on women and health today in India. Initially concepts and stands were often borrowed from the

(*Contd. on page 8*)

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(*Contd. from page 6*)

Western feminist thinking, but over the years, it has become clear that the issues are very different and at times even appear contradictory. For instance, in the current campaign against the sex determination tests, one of the demands has been to make the abortion law (which was 'granted' to us without a blow being exchanged, as it were!) more 'rigid', so that women and their families do not take recourse to the loopholes in the law. There has also been an 'appeal' to the doctors that withholding of such facilities, even if the demand comes from the woman herself, would amount to the practice of medical ethics. These two strategies seem to be in direct contrast to the earlier Western feminist stand that neither the court, nor the State, or the medical profession have the right to withhold such technologies and that the doctor is merely a technician with no right of his own to deny such skills to women who demand them. Similarly criticism has been levelled at the women's groups for their stand against the supposedly easier to administer contraceptives such as the anti-fertility vaccine and Sub-dermaeimplants. The contradiction that is pointed out is women's groups comprising mainly of middle and upper class women and who are certainly not the target of the population control programme, are making the 'choice' that these contraceptives should not be available in the Indian market on behalf of the women from the lower classes who are the targets. My point is only this: In the heat of strategising and getting things done and expressing one's millitancy, we neither have the time to look at the issues critically nor the honesty to state contradictions openly for, haven't we all experienced the way these are used against us?

Sathyamala

References:

Ehrenreich and English, Comlaints and disorders: The sexual politics of sickness.

Recently, while discussing 'body politics' with a few women's organizations, I came to know that as a strategy to counter taboos imposed on women during menstruation, intercourse during menstruation was being advocated. This was considered perfectly alright and some felt that it should infact be encouraged because this was the relatively infertile period of the menstrual cycle. While I do agree that menstrual taboo generally demean women's sexuality, I feel concerned about advocating such a strategy. Despite the fact that the menstrual blood contains a large number of WBCs, in the case of menorrhagia the blood clots formed are potentially a good medium for bacterial growth. I am not a gynaecologist and can only speculate that intercourse during menstruation could possibly lead to something like the toxic shock syndrome (its association with the use of tampons is well documented). This together

(*Contd on page 3*)

with the fact that pelvic inflammatory disease and sexually transmitted disease are very common in slum communities raises questions in my mind about indiscriminately encouraging women to have sex during menstruation. I feel that as feminists we need to be careful that the information we give is also scientifically accurate.

Will some gynaecologist please comment on the points I have raised

Bharati Patel, Ahmedabad.

MFC-Bulletin No 146, December 1988 4(viii)

Sex Determination and Female Foeticide In Baroda

(A Report by Garbha Parikshan Virodhi Manch)

Following the passage of the bill banning the use of prenatal diagnostic techniques for sex determination in the Maharashtra Assembly in March this year. The *Garbh Parikshan Virodhi Manch,* a front formed by the progressive organisations, doctors and other concerned citizens in Baroda (Gujarat), decided to conduct a survey to find out the misuse of such techniques in Baroda city and to roughly estimate the extent of their misuse for female foeticide. The *Manch* interviewed 1) 30 doctors 2) some pathologists 3) some women who have undergone the test 4) some women who are against such test and refusing to undergo despite having one or more daughters and under social pressure 5) individuals from various economic, social and cultural stratas.

FINDINGS

A. *Prevalence of Pre-natal Diagnostic Techinques.*

1 In Baroda mainly two pre-natal diagnostic techniques are used for sex-determination, viz. Amniocentesis and Chorion-villi-biopsy (CVB). Of these two, the Amniocentesis is much more prevalent as it is comparatively cheap.

2 Except very few gynaecologists in Baroda, almost all do amniocentesis.

3 Of those who are doing the test, except one, all said that personally they do not favour the test.

4 More than 70% of them admitted that the amniocentesis could be harmful to the mother and the foetus. Sometimes it leads to spontaneous abortion and sterility.

5 The *Manch* also came to know that some doctors were doing amniocentesis with inadequate precaution and facility and thus endangering the lives of the mother and the child.

6 Women from all castes, religion and economic classes go for this test. Many of them have taken loan to pay for the test.

7 A common view that parents with two or more daughters go for such test was proved to be incorrect. We found couples going for test at first conception. We also found couplesa already having one son (the only child) going for the test as they wanted son second time too.

B. *The extent of Misuse :*

1 According to one information, a well known laboratory in Baroda has tested 20,000 samples of amniotic fluid in last 10 years.

2 In 1987, in Baroda city alone estimated 2400 tests.

3 We came to know that a sizeable number of women go to Anand city to undergo the test. the real number of women undergoing this test must be much higher than estimated by us.

C. *Some other findings :*

Following are some qualitative findings based on case studies and observations.

1 Although doctors did admit the possible harmful effect of amniocentesis on mother and child, and risk of abortion, sterility etc, none of them maintain any record about the harmful effect observed by them.

2 Some doctors said that sex-determination and the female foeticide should be encouraged as a part of family planning programme.

3 Many doctors said that they will stop doing this test if government bans it. But till then cannot say no as other doctors continue to do this test and that will adversely affect their income.

4 Some doctors said that they are new in the business, they have just started their practice "let us earn a lot for while; After sometime, we will stop doing this test."

5 Only one doctor believed that this test should be offered to all couples with two daughters. According to that doctor, as long as daughters are unwanted in the world they have no right to take birth.

6 Only three doctors condemned the test and said that it violates medical ethics and the medical profession should take initiative to banish it.

7 Except these three doctors, the others, though did not favour the test at personal level, blamed the society for its spread. They believed that doctors give what the customers demand. They completely absolved doctors from any responsibility regarding the test and the female foeticide.

8 People believe that banning prenatal sex determination tests will not radically change the situation. After such ban, the test will become constlier.

(Translators' note for the MFC Bulletin : These findings are taken from a mimeographed report of the Manch in Gujarati. The presentation is changed for stylistic reasons. On reading the Manch's report it was clear to me that the Manch has done more of an investigative report rather than a scientific survey. However, this does not minimise the seriousness of the problem they have painfully highlighted. The findings are startling. The hypocracy of the commercialised medlcal profession is fully exposed. We hope that some more systematic research will be conducted on this subject so that an effort can be made at national level to banish such inhuman medical practice). ■ ■

DIALOGUE

Abortion

Arun Gadre

It was a great battle everybody fought to legalise abortion in India. It was considered as a progressive step in the liberation of women. By legalising abortion, it was thought that, i) unwanted pregnancies would no longer be hindrance in the progress of a woman's life, ii) MTP would offer a permanent solution to the problem of unmarried pregnancies; and iii) abortion could be taken out of province of quacks into the safer hands of an expert.

None of these objectives, I am afraid, have been fully realised. I identify four main problems :

Firstly quacks are still having a field day and are openly practicing abortion in rural areas, slums and even in cities. With Legal control over medica practice being what it is, quacks continue to enjoy scot-free status and are fully exploiting the situation. It is a pity that qualifieid specialists in Gynaelogy are not permitted to offer facilities for MTP rural centres on the ground that their clinics are staffed and do not have adequate blood bank cilities. It is different matter that with the same nd of set-up they can do, and indeed they do, esarean section.

Secondly, I strongly object to abortion being nsidered an extended form of contraception. ith the sword of unwanted pregnancy no longer nging over their head, young weds have become ry casual in their overall aporoach to family plaing. Thus the husband discards barrier contracepves and the wife conveniently forgets pills. Since portion is no longer a taboo in the modern society, ven if pregancy is discovered in the first year of arried life, 'wiser councel prevails' and abortion is nsidered a practical solution to the 'unwanted nd unforeseen' problem.

Thirdly, abortion in the minds of naive coules is 'just another procedure.' They attach no more nportance to abortion than the procedure of say, raining an abscess. But than it is not a simple proedure and carries with it all the risks and complicaons of surgery. Women are not aware that abortion an lead to infection, bleeding and rupture of uterus nd can also leave behind the legacy of blocked ubes. One can easily imagine the plight of a woman etting her first pregnancy terminated, only to delop intractable sterility for the rest of her life.

Fourthly and lastly carnal pleasures and human omforts have started taking precedence over the aditional mother child relationship. Since a couple vants to enjoy the marital bliss and a baby is conidered as an unwanted intruder, it no longer hesiates in getting an unborn off. May be our sensiivity to this issue has become blunted, may be an bortion no longer kindles subtle emotions in such ouples, but the fact remains that an abortion has ecome an in-thing in the first year of married life.

We must fight the misue of abortion. It will e a difficult battle. Abortion is destructive, dehumanizing and disturbing. The earlier we take up this issue, the better.

■ ■

MFC-Bulletin No. 146, December 1988
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Victim Blaming Is Not The Solution

Amar Jesani

One important negative off-shoot of the anti-sex-determination campaign is the stirring of anti—abortionists. I remember that during the campaign the members of the Forum Against Sex Determination had to argue vociferously to distance their campaign from the supporters of right-to-life, certain religious organizations and the doctors who saw problem of ethics in the MTP and the female foeticide (MTP) following amniocentesis as identical. The latter arguments might appeal to those who take a kind of moralist standpoint against the misuse and overuse of any technology. This note is to examine the problem of misuse and overuse of MTP from different angle and to point out certain lacunae in these arguments.

Let us start with the enactment of the MTP Act. It is wrong to say that the MTP Act was formulated in response to the woman's movement's demand. If it was, it should have been called, say, Woman's Right to Abortion Act and there wouldn't have been any need to keep so-called medical indications for performing the MTP. It is know that the feminists stand for the unconditional right to abortion. The MTP Act does not give any such unconditional right. And what was the strength of feminist movement in the early 1970s? Thus, we have to look for elsewhere to find out real reasons for government to pass this Act.

I submit that MTP Act is not an act for strengthening women's right (although as a by-product women do get some facilities for less restrictive abortion) but it is an act to regulate medical profession. It was brought in to strengthen dominance of allopathic doctors in the Medical profession. It was passed to confer near monopoly to perform MTP to the allopathic doctors. It is immaterial that quacks were and are bad. What is important is the net effect. Can anybody argue that the MTP Act did not help modern doctors to get the most benefit from it? Most of the doctors doing MTP are more concerned about the government's inability to stringently apply it so that the competition from the quack is eliminated. But this is true in all aspects of medicine practice, why to single out abortion only?

It is dangerous to link up lack of health education in the MTP seeker woman with the 'misuse' of the MTP. There is nothing like misuse of the MTP because I believe that woman should have unconditional right to have it. One can punish a pregnant woman (by forcing her to take baby full-term) because she is less educated, or husband is less educated about contraception, or they are lazy or, woman has no authority in the sexual relationship and in the family in general. Pregnancy is a fact, a physical reality and to deny her right to abort is to compound one oppression with another. And medical profession is well known for victim blaming.

Nobody will dispute concern for the plight of the women who has no option but to undergo MTP as she is a powerless person in the family, But the solution is not in denying her even this escape. Nobody will disagree with the plea for providing sex education and education on contraception to the woman and the man; and also plea to empower women in the society. But this has to be done by expanding the frontiers of women's right and power and not by restricting whatever right she has (for example that of abortion under the MTP Act).

Firstly, can woman say 'no' to husband when she understands that she will conceive? Is there any law empowering woman to do so? Is marital rape considered a criminal offence? It is not sufficient to give sermon to the woman that she should not allow a sexual relationship which makes her conceive at a time when she does not want pregnancy. What is important is to make right to say no to unsafe sex a fundamental right under law for women and to create social support system all over the country to implement such a law. The latter is more important than the former because we do not want an empty law like untouchability and many many others. Are doctors who are so concerned about the misuse of MTP ready to be part of such an effort?

Let me assume that doctors would like to contribute in such an effort. However, for such contribution they will have to first break their mental barrier and prejudice against women's movement however painful they might feel as a man in doing so. For whatever effort that is being made in this country to empower women is being done by the women's organisations only. Such docotrs will have to establish links with them rather than blaming them for the ills within the medical profession.

This brings me to my last point, what does doctor do when he or she notices a women undergoing repeated MTPs? Denying her the MTP would

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be, I believe, not only in human but also unethical. The only way the doctor can help to 'cure' this problem is by patiently finding out the problem and then "to step out of medical confines" and "enter the socio-political field." This has to be done because there is no "medical solution" to such problem. One has to follow up such cases in the social fields by taking support of women's and health organizations, and by breaking the complacency of medical or doctor's organisations. The acid test is how many such doctors will be ready to demonstrate in support of such women ? To make such a movement strong may take sometime, but that is the real solution, or that has some possibility of taking us nearer to the solution. ▣ ▣

One Daughter Family : Fact or Fancy ?

To promote the concept of 'One Daughter Family' the Government of Maharashtra has introduced a novel award of Rs. 10,000 for couples undergoing permanent sterilization after one daughter but without a son. (sic) The award christened as Pt Jawaharlal Nehru Balkalyan Award was annouced on 14 November 1988 to coincide with birth centenary celebrations of Pt Nehru.

Strange as it may seem, this announcement comes close on the heels of Raj Chengappa's article in *India Today* (October 31) in which the author has exposed the limitations and hollow claims of the Government's family planning programmes in a threadbare analysis. He denounced these programmes as a big hoax and dismissed the popular slogan, *'Beti ho ya Bete. Bacche do hi acchhe.* as a worn-out cliche. That the Government has paid no attention to this article is obvious. For consider these reactions which Chengappa has chosen as representative of people's general out look at family planning. These explain why people-atleast from rural background-still long for a male child. A farmer, for instance said 'I need two sons. Otherwise who will light my pyre, who will carry on the family name, who will help me on the fields, who will look after me in my old age ? Another farmer from Rajasthan spelled out reasons for aspiring for as many as five children : 'One to look after my cows. Another to tend to my sheep. One to help me on the field. One to help my wife at home. Even a population expert agreed entirely: 'People are fanatical about having two living sons. It is as sacred as religion to them.'

That our first Prime Minister was endeared by children all over the world as Chacha Nehru, that he loved children as much as the rose on his jacket, that he had only one daughter and no son and that this award should therefore be named after him to ensure equal rights to women *a la* Nehru ervisaged- all these things are admittedly true and might appeal to the reason. But what surprises one most is the Government's naive assumption that a carrot worth Rs. 10000 will lure many a couple to stop after one daughter. This approach takes no cognizance of the stark social realities. One can not help feeling pity at this logic-or rather lack of it. How many couples will accept this idea and stop after first daughter *voluntarily* ? And will 'X' or 'Y' really make no difference to the *hoi polloi* ?

These are indeed Ten Thousand Rupees Qs !

UN Jajoo & SP Kalantri

Publishers ▣ ▣

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MFC Bulletin NO 107, November 1984

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A letter to the Drug controller

Sir,

We would like to draw your attention to certain measures which you can take up to curb misuse of drugs in diarrhoea and foster oral rehydration in diarrhoea.

As you may be aware, it is estimated that between 1 to 4 million children die every year in India due to diarrhoea. Recent research has created possibilities of saving these lives since it has definitively established that:

(a) in majority of cases of diarrhoea, use of antibiotics plays no positive role;
(b) most of the deaths due to diarrhoea are not due to toxaemia but due to dehydration;
(c) most of the cases of dehydration can be very well treated with oral rehydration;
(d) out of a plethora of antibiotics available, in vigorous scientific studies, only six have been proved to be definitively useful and safe.

Dr. Shirish Datar of the medico friend circle has in a earlier paper summarized the scientific evidence about treatment in diarrhoea and has also shown that out of 48 antidiarrhoeal preparations listed in the January 1983 issue of the MIMS, only four are fully scientifically justified.

We feel that the production, promotion and marketing of anti-diarrhoeal agents should be brought in line with these recent developments. We suggest that your office can take the following steps to help to achieve this aim:

1. Banning of the irrational, unscientific preparations sold as antidiarrhoeal agents. To start with, banning of preparations containing a combination of Chloramphenicol and Streptomycin, since this unscientific combination is the most frequently used 'antidiarrhoeal' agent.

2. Making it mandatory for all producers of antimicrobials used in diarrhoea to print in a prominent way the following statutory recommendation on the covering package: *"Medicine, even when useful, is not enough in treating diarrhoea. Drinking oral rehydration solution is atleast equally important in all diarrhoeas."*

   and to print and insert inside the package a detailed pictorial instruction sheet explaining how to prepare and consume oral rehydration solution at home by using ordinary sugar, salt and baking soda. The printing should be done in Hindi and English and regional language as is done in the case of preparations like Licel, Diazone, Fleet etc.

On our part, we have launched an educational campaign on diarrhoea, misuse of drugs in diarrhoea and the importance of oral rehydration in diarrhoea. If your office takes up initiative and takes definitive steps as suggested above, such steps would go a long way in promoting a rational approach to the management of diarrhoea; save millions of rupees of the poor people now being spent on unnecessary drugs and save lakhs of poor children who would otherwise die due to dehydration in diarrhoea. We hope you would give due consideration to our appeal.

Thanking you,

Yours faithfully,
A. R. PHADKE
Convenor

Oct. 1983

National Executive Committee, mf

P.S.: This letter was sent almost a year back, but th Drug Controller's office did not bother to re. pond to it as yet.

(The latest position about antidiarrhoeals highlighted in the same issue. Refer lead article-Ed

10th February, 1992

MEDICAL EDUCATORS REVIEW MEETING - JUNE 1992

TENTATIVE LIST OF PARTICIPANTS

01. Dr. Abraham Joseph, CMC-Vellore
02. Dr. Prem Pais, SJMC, Bangalore
03. Dr. Alex Zachariah, CMC-Ludhiana
04. Dr. Cherian Thomas, CMC-Miraj
05. Dr. D.K. Srinivasa, NTTC, JIPMER, Pondicherry.
06. Dr. Asha, JIPMER, Pondicherry
07. Dr. Kartikeya Nanavathi, NHLMC, Ahmedabad
08. CMET, AIIMS, New Delhi (Representative)
09. Dr. B. Ekbal, Medical College, Calicut
10. Dr. Ulhas Jajoo, MGIMS, Sevagram
11. Dr. Siddarth Das, KGMC, Lucknow
12. Dr. M.K. Vasundhra, BMC, Bangalore
13. Dr. N.H. Antia, FRCH, Bombay (Special Invitee)
14. Dr. Palitha Abeykoon, WHO-SEARO, New Delhi (Special Invitee)
15. Dr. C.M. Francis, Bangalore
16. Dr. P. Zachariah, Vellore
17. Dr. V. Benjamin, Bangalore
18. Dr. George Joseph, Madras

\- Advisers, Medical Education Project

19. Dr. Ravi Narayan, Bangalore
20. Dr. Thelma Narayan, Bangalore
21. Dr. Shirdi Prasad Tekur, Bangalore
22. Dr. Mohan K. Isaac, Bangalore
23. Dr. M.J. Thomas, Bangalore

\- CHC Team

IN ADDITION

-- One additional participant each from the 4 CMC's to be nominated by the Director/Principal (a faculty member who is involved in Medical Education Reform) and whose costs may be met by Institutional fund.

-- One nominee each from CHAI, CMAI and VHAI whose costs may be met by the associations themselves.

*rn/mk

Sathyamala

MEC 103 MFC Bulletin NO 103, July 1984

RN. 27565/76 6(i) mic bulletin: JULY 1984 Regd. No. L/NP/KRNU/202

Editorial

THE ICMR/ICSSR report on 'Health for All' has warned that "eternal vigilance is required to ensure that the health care system does not get medicalised, that the doctor-drug producer axis does not exploit the people and that the abundance of drugs does not become a vested interest in ill-health[1]". The Drug Action Network which has come together in the last two years is symbolic of this vigilance, which is growing in India. The memorandum drawn up by the participating organisations, which is featured in this issue highlights the diverse aspects of drug policy towards which this vigilance has to be directed.

THE banning of a wide range of commonly used drugs for arthritis in U.K., in recent weeks (article on Drugs alert) raises questions about the complexities of this vigilance. In countries like U. K. and U.S.A. in spite of drug safety committees, comprehensive drug laws, efficient drug control authorities, active consumer groups and socially sensitive elements in the profession — drugs continue to slip through and get used for years before their dangers get known and bans are instituted.[2] How much more difficult will it be in our country where all these elements of 'vigilance' are still only in the process of evolving?

William Osler's exhortation that one of the first duties of the physician is to educate the masses not to take medicine[3] is particulaly relevant in today's drug situation. The role of doctors in acting as watchdogs is primary — laws, controls and authorities notwithstanding. Are doctors prepared adequately for this role in India? Medical education stresses the minutiae in pharmacology and medicine without stressing the factors of cost, safety and social relevance. It also does not consciously immunize the doctors against the half-truths of persuasive medical advertising[4]. In the absence of programmes of continuing education in the country, practicing doctors continue to be informed only by the profit oriented pharmaceutical industry, thus worsening the situation.

UNLESS there is a growing realisation among medical students, young doctors, teachers, health workers, professional associations, consumer education groups and science movements that this problem needs to be tackled in the form of an organized movement very little change can be expected in the present situation. Satchidanandan's critique presents an analytical framework and background against which such a movement would have to evolve. His suggestions for a multi-dimensional campaign of demystification, conscientization, study, curriculum change and deprofessionalization could well be initiated taking drug issues as the focal point. It would, however, be important to keep in mind that over seventy five percent of the people in India have little or no access to health care. Hence an action programme only on drug matters would be cut off from the needs and aspirations of the majority[5]. However, if this became part of a wider people's movement for socio-political change, the drugs problem would be tackled at its very roots.

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NOVEMBER 1984

EDITORIAL

Drugs — Awareness and Action

"One of the most distressing aspects of the present health situation in India is the habit of doctors to over prescribe or to prescribe glamourous and costly drugs with limited medical potential. It is also unfortunate that the drug producers always try to push doctors into using their products by all means — fair or foul . . . . . If the medical profession could be made to be more discriminating in its prescribing habits, there would be no market for irrational and unnecessary medicines."

— ICMR/ICSSR, Health for All Report

Among the many challenges that face the All India Drug Action Network in its campaigns in the future, one of the key issues will be to make the doctors in India more 'discriminating' in their prescription practices. Any pressure on policy makers to evolve a rational drug policy will fail if the medical profession does not support it and accept self-imposed controls. This is possible only through relevant professional education, continuous dialogue and discussion in our professional meetings and associations and a meaningful continuing education. Who will initiate this?

The All India Drug Action Network at its Wardha meeting decided to take a dozen drugs in their initial campaign against 'irrational and unnecessary medicines'. These broadly divide into two groups:

The first is up for banning. These include Analgin (singly or in combination); EP Forte drugs, Chloromycetin and Streptomycin combinations; Lomotil in children and fixed dose combinations of steroids. Enough is known about them and only action is awaited.

The second group is up for a concerted consumer-doctor alert. These include Anabolic steroids, Antidiarrhoeals, Analgesic combinations, Clioquinols, Oxyphenbutazone and phenylbutazone, Haematinics, Tonics and Streptomycin-Penicillin combinations. Here the dangers and irrationality are known but there is lack of awareness in the professional and lay public. Awareness must precede action.

In this special issue one of our members presents his recent study of antidiarrhoeals. We also feature a summary of the study done by the International Organization of Consumer Unions on Anabolic Steroids. The joint study on drug utilization pattern by NIN/CERC highlight the problem of self-prescribing. The letters from the People's Science Movement in Maharashtra and the mfc Rational Drug Policy Cell, are symbolic of what we can do to initiate a 'discriminating prescribing practice'.

The challenge is a four-fold attack on the present situation — Rational Drug Policy, Public interest legislation, Consumer awareness and Rational therapeutics. Strange as it may seem, the need for regulating the prescribing practices of doctors is not new. Centuries ago the Koutilya Arthashastra had this to say —

"The physician who sets about to treat a disease without knowing anything about it is to be punished even if he is a qualified physician; if he does not give proper treatment, he is to be punished more severely; and if by his treatment the vital functions of the patient are impaired, he must be punished most severely."

Is the medical profession in India today waiting for such corrective action?

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Fighting for A People's Drug Policy

— The KSSP Experience

Dr. B. Ekbal *

The Kerala Sastra Sahitya Parishad, the People's Science Movement in Kerala intervenes in areas like Health, Education, Ecology and Problems of War and Peace. In the field of health, KSSP is very strongly questioning the relevance of the present day health delivery system which is curative oriented, individualised, institutionalised and highly costly and catering to the needs of only a wealthy minority. KSSP feels that a People's Health Movement alone can change the health delivery system in favour of the rural poor. KSSP has been striving for the last few years by various means to initiate such a movement in our country. With this purpose KSSP is at present organising health camps, health education classes, people's theatre forms and audiovisual campaigns and field studies on an extensive scale.

Although granting that drugs and hospitals have only a minimal role to play in achieving a healthy living for the poor, we felt that exposing and fighting the anti-people and exploitative tactics of the drug companies should play a major role in the campaign for a People's Health Policy for our country. The aim is twofold, on the one hand we should demystify pharmaceutical products as far as the people at large are concerned and on the other hand this can be used as an entry point into the medical profession so as to conscientise the doctors and medical students on the wider health issues.

KSSP started its campaign for a Peoples Drug Policy from the World Health Day, April 7th, 1984. With 1½ years intense campaign we could make the drug issue a subject of public debate, make people aware of the unethical marketing practices of drug companies and also could identify and organise a number of doctors and medical students who are socially conscious and are ready to wage a fight for a People's Drug Policy.

We started the campaign with a few major demands. These are demands for the production and distribution of essential drugs, banning of non essential, irrational and dangerous drugs, better quality control of drugs and implementation of the Hathi Committee Recommendations like, nationalisation of the drug industry, strengthening of the public sector, introduction of generic names and updating of the national formulary. Through the campaign these demands are explained in detail to

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the people with the help of documented facts, figures and authentic governmental and non governmental resource materials.

The campaign started by conducting seminars simultaneously in all the 14 districts of Kerala on the World Health Day. The theme paper was presented by a KSSP activist doctor. Representatives of doctors organisations, medical representatives and pharmacist organisations and eminent personalities took part in the discussion. Later 45 zonal conferences were organised taking the campaign still further forwards. By the end of the year, most of the 600 units of KSSP evenly distributed throughout Kerala organised seminars attended by hundreds of doctors and thousands of people.

Apart from lectures and seminars a number of articles on the various aspects of the drug issue were published both in KSSP journals and in other popular magazines. Two books were published and the studies done by Medico Friends Circle on Analgesics and Antidiarrhoeals were reprinted and popularised among doctors. We are at present summarising the Hathi Committee Report which will be published by the end of December 1985. Through the Rural Science Forums of KSSP, about 2000, wall news papers explaining the various aspects of the drug issue were displayed in the rural areas. Thus the message was communicated to the rural people.

The Science Cultural Programme organised by KSSP is a powerful medium for the popularisation of ideas on various issues. Every year Science Cultural March will be organised from one end of Kerala to the other end taking the message of science to the people in a big way. A few items on health issues including drugs were included in the last two *jathas* which attracted the attention of the people.

KSSP units are at present functioning in the Medical Colleges also. With the help of these units seminars and discussions are regularly conducted in the medical colleges. A number of articles have already appeared on the drug issue in the medical college magazines. Recently the Trivandrum Medical College students opened Dr. Olle Hanson corner to sell books on drug issues at the All India Paediatric Conference conducted in the Medical College campus. KSSP activist doctors who are also members of professional bodies like Indian Medical Association and Kerala Government Medical College Teachers Association and Kerala Government Medical Officers Association and Medical Students Organisation have made the drug issue a live subject of discussion in these bodies and could make their professional bodies take a positive stand on this issue on many occasions.

We coupled our campaign on the Bhopal Genocide with the Drug campaign effectively. Bhopal as the inevitable out-come of the multinational exploitation of the MNCs including that in the pharmaceutical sector could be focussed during the Bhopal campaign.

We are at present organising an All India Seminar on 'Drug Industry: A decade after Hathi Committee' to mark the occasion of the 10th Anniversary of the publication of Hathi Committee Recommendations. Since we have a public sector pharmaceutical company in Kerala (Kerala State Drugs and Pharmaceutical Industry) supplying about 45% drugs to the Kerala Health Service a call to strengthen KSDP is already made so as to make it capable of producing all the essential drugs for the Health Services. With this end in view a seminar on 'A Drug Policy for Kerala' will be organised in January 1986.

What are the concrete results of the KSSP campaign so far?

1. The drug issue has been already developed into a subject of public debate.
2. People from all walks of life are now aware of the various issues involved, like essential versus irrational and dangerous drugs, exploitative tactics of the MNCs and the indifference on the part of the Government in implementing the Hathi Committee recommendations.
3. A number of doctors and medical students sympathetic with our views are identified and organised.
4. The prescription habits of doctors are slowly but definitely changing.
5. The sale of irrational and dangerous drugs is coming down.

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* President, Kerala Sastra Sahitya Parishad

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The New Drug Price Control Order

—A mockery of rational planning.

Anant R S

So finally the crunch has come ! Something which some of us who have been lobbying for a pro-people rational drug policy, were hoping would not happen. But with the declaration of the New Drug Policy in December, 1986, the writing was there on the wall for everybody to see—two things were definite after the declaration of the NDP—the basket of price-control was to be drastically reduced and the mark-up on the price-controlled drug was also to be substantially jacked up almost doubled. What remained to be seen was the precise extent of this price-decontrol and the precise list of the drugs to be under price-control. These two details have now been announced on 26th August. In analysing this new Drug Price Control Order, one finds that the list of drugs included in this new DPCO is not based on any consistent principle or a set of criteria. Secondly, there is no mention of implementing other recommendations of the Kelkar Committee's report on whose recommendations this new DPCO has supposedly taken a final shape. Thirdly, there is no sign of any mechanism to eliminate irrational and hazardous drugs, contrary to the promise made in the policy-announcement on 18th December, 1986. The result is that the drug-industry has got the best of all the worlds—comparatively very few price-controlled drugs; almost doubling in the mark-up on price-controlled drugs and no obstacles to the production of irrational and hazardous drugs or their combinations.

Shameless omissions :

The NDP of 18th December, 1986 had said that the drugs under price-control would now be in two new categories—Category-I would consist of drugs required for the National Health Programmes. The Maximum Allowable Post-manufacturing Expenses (MAPE, a new name for mark-up)—for this category is to be 75%, as compared to 40% allowed for the erstwhile category-I consisting of life-saving drugs—of the DPCO of 1970.

To begin with, it is highly questionable as to why life-saving drugs have now been shifted from the old Category-I (40% mark-up allowed) to the new Category-II (100% mark-up allowed). The Government could have atleast retained them in the new category-I (75% mark-up). This new categorisation would lead to a sudden jump in the prices of most of the life-saving drugs by more than 40%. Critics have pointed out that this increase in the mark-up is based on a study funded by the OPPI (which represents the interests of MNCs) though conducted by the National Council of Applied Economic Research. Unless the cost-data supplied by the drug-companies are available for independent scrutiny, such studies cannot be taken as representing the true state of affairs. That is why this increase in mark-up has been criticized by many analysts. Secondly, the idea of removing the life-saving drugs from category-I shows that the government cares little for the life of the people and is 'bold' enough to take such a shameless step.

It reflects on the efficiency of "the Government that works faster," that it took eight months to decide as to which drugs belong to this new category-I. There are about a dozen National Health Programmes, atleast on paper, and it has been reported that the officials of the Health-ministry prepared a list of 150 drugs to be included in this category. But it is not the Health-ministry which has a major say in the drug-policy, but it is the Ministry of Chemicals and Petrochemicals which holds the reins. These gentlemen quietly kept aside this list, and instead, a list of a mere 27 drugs was included in Category-I.

This list has many shocking omissions. The most glaring omissions from category-I are the vaccines. This happens in a period when so much is being talked about "the biggest ever vaccination programme" to be executed in India as a part of the strategy of 'Health for All by 2000 A.D.' Drugs used for prevention of diseases should be given top priority in Health-planning and hence their prices should be kept as low as possible; but since the drug policy is not seen primarily as a part of health-policy, this elementary consideration has not been taken into account. Exclusion of Vitamin-A from Category-I occurs when 40,000 children go blind every year due to vitamin A deficiency and when the Government has declared a war on this national shame, with the help of a National Programme for the prevention of blindness. Other National programmes have been formulated because they seek to prevent millions of

illnesses and deaths. But the list declared on 26th August takes care of only Tuberculosis, Leprosy, Trachoma, Malaria, Filaria and includes oral Rehydration salt for 'prevention of dehydration.' It does not include even the oral contracetive pill which is used in the Government's pet programme of family-planning. In the drugs for malaria, Primaquin-the second-most important drug is missing whereas paracetamol (available under the brand-names like: Crocin, Metcacin.. etc.) a drug used in ordinary fevers, and which is not used for treatment of malaria finds a place ! Such queer selection can only be called hair-brained ; and such gross omission of a whole set of drugs required for many National Programmes can only be called shameless.

Category-II Drugs :

The Category-II drugs are supposed to contain 'other-essential drugs.' It appears that this list of 139 drugs as announced by the government is a truncated version of the Kelkar-committee's list of 154 drugs. If we compare this list with the guideline list of essential drugs recommended by the WHO, we find many glaring omissions in the government's list. Except lignocaine, which is used for local anaesthesia, none of the drugs used for anaesthesia-ether, halothane, Nitrous oxide, oxygen, thiopental, scoline, neostigmine, atropine.. etc. have been included. These drugs were not included in the Kelkar-committee's recommendations under the imbecile, bureaucratic pretext that these drugs are not "directly consumed by human users." Morphine and pethidine, routinely used in surgery are also missing. The second-important class of drugs not included in Category-II are Anti Rabies vaccine, Polyvalent antisnake venom serum (for treatment of snake-bite), diphtheria and tetanus anti-toxin, all of which are classical life-saving drugs; and are required in large quantities in our country. Thirdly, many of the skin-preparations (neither Benzoic plus salicylic acid-the classical ointment for fungal infection of skin, nor the new antifungal agents like miconazole, nystatin) find a place in this list even though fungal infections are quite rampant in our country. What is most surprising is the exclusion of the lotions used for the treatment of scabies—Benzyl Benzoate and gamma benzene hexachloride (BHC or lindane) even though scabies is typically a very common skin-infestation in the poorer communities and when the current prices of these drugs are already beyond the reach of poor people. Mebendazole, the drug of first choice for treatment of worms, is also missing. Ferrous sulfate which is being distributed to millions and millions of pregnant anaemic women and anaemic children, is missing in this list, so is the case with calcium-gluconate, which is required in hundreds of tons to be given to poor pregnant women whose bones get depleted with repeated pregnancies.

It has been argued that drugs whose annual total consumption in India is less than Rs. 50 lac have been excluded; otherwise the practical work of controlling prices of all and sundry becomes too much to handle. It is difficult to take this argument seriously in the world of computerization. But even if one accepts this argument, the omission of these common drugs which are required on a huge scale cannot be defended. ANOTHER criteria that has been put forward is that of 'encouraging the indigenous producers.' Obviously minerals like ferrous sulfate and calcium gluconate do not require sophisticated technology, so is the case with many skin-preparations. Production of Sera is also not a new technology at all in India. What is so peculiar about the technology for the production of morphine, pethidine, codein for them to be exempted for price-control, when so many drugs produced by the Indian sector by using complicated technology have been included in category II ?

One has to conclude that in making this list, none of the criteria have been consistently adhered to. The most important consideration that seems to have been applied is to make this list as small as possible and to please the big-shots in the industry. The strangest thing that defies any logic is the inclusion of a few drugs which are not in the WHO essential drug-list and which are therapeutically not important in the Indian context either or are even obsolete. These are : Baralgan, Ketone, Bephenium, Cyproheptadine, (health-groups have asked for a ban on this drug !) Levamisole, Piroxicam (a dangerous drug) Tetramisole and fifteen more such drugs. Instead of these drugs, the really essential drugs mentioned above could have been included without lengthening the list, (if that is to be accepted as a cons traint).

To offset the sharp price-rise in these essential drugs due to this new DPCO, the Kelkar committee had recommended the abolition of all taxes on them. If the Government accepts this recommendation, there would not be a steep rise in drug-prices but the Government's income would come down to that extent; to be made good by fresh taxes on other items or higher budgetary deficit

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in the next budget : Ultimately, the consumer will have to pay in one way or the other for the increased profitability of the drug-industry.

The ultimate result of this new DPCO is that instead of 347 drugs under price-control as of now, there will be only 156 drugs under price control and even in this category, the mark-up has been almost doubled from 40 and 55 per cent to 75 and 100 per cent for category-I and II respectively. The result of this mockery of the concept of rational planning will be experienced by all of us in a few days.

The production of certain essential drugs currently under short supply is likely to increase because the Government has now almost doubled the mark-up on these drugs. Now that the Government has responded to the drug-industry's black-mail by conceding a much higher rate of profit, the companies will now utilize the capacities kept idle as part of their black-mailing strategy. But so long as there is no ban on irrational drugs nor any control on their profitability, the drug industry would continue to focus on these production of these non-essential but highly profitable drugs.

There is a way out :

The text of the New Drug Policy released on the 18th December, 1986, had said that A National Drug and Pharmaceutical Authority will be created and "Among other things, it would go into the question of rationalization of existing formulations in the market including the banning of formulations of harmful nature." But since then, there has not been any effective action in this regard. Banning irrational drug-combinations is important from purely price-aspect also. If only rational drugs and their rational combinations are allowed, the drug-bill of the consumer would be more than halved ! For example, most of the anti-diarrhoeal mixtures contain one rational antimicrobial agent and three to five useless or otherwise irrational ingredients. In cough-mixtures, it is difficult to find even a single really useful ingredient recommended by standard medical textbooks. So called tonics, as is wellknown, abound in irrationalities and overdosages of water-soluble vitamins whose only function is to enrich the sewerage and the drug companies. If only rational combinations are allowed, the drug-prices would come down drastically due to the deletion of unnecessary ingredients.

If it is proved by independent study open to public scrutiny, that the earlier 40% and 55% mark-up was really less compared to other industries and hence in need of an increase, such increase in mark-up should be accompanied by a ban on all irrational drugs and irrational combinations. Let the drug-industry get an adequate rate of profit without cheating the people. Then increased profits can be coupled with decreased prices of drugs : But even this simple demand is not being granted. Apparently, for the power that be, modernization and march towards the TWENTYFIRST CENTURY does not mean adopting modern, scientific planning !!

There is only one slender hope of forcing the issue of controlling the prices of many drug-combination. This can be done by putting a finger on the definiton of Category I and Category II formulations as given in this new DPCO. These definitions specify category I and II formulations as containing any bulk-drug either individually or in combination, specified for either category-I or Category-II formulations. If we strictly follow this definition, it would mean that *any* combination containing any of the drugs in Category-I and II would be under price-control. For exampl,e if a company manufactures a combination containing say theophylline (a Category-II drug) and 2-3 non-essential or useless drugs, this combination would come under Category-II and would be under price-control. In this manner, hundreds of drug-combinations would be under price-control. The Drug industry would, of course resist such interpretation but it is possible to force the government to take its own declaration seriously.

But the above is only to extract something out of a hopeless situation. The real scientific way to get out of the present muddle is to allow only those drugs and their combinations which have been recommended by medical text books and by National Medical Authorities; to disallow all other products and to give a uniform, adequate rate of profit to all such essential drugs. There is no need to make different categories within the category of rational drugs and to allow differential rate of profit for different categories. (The only exception would be research-products.) If this simple scientific demand is conceded, instead of 40-60 thousand formulations, to be controlled, or monitored, there would be at the most a thousand rational formulations made out of all the 250 essential drugs and say a hundred more second-line drugs. Let the drug-industry accept this simple demand of making a good business without cheating the people !

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Scientific Medicine

Whenever there is a discussion on the different pathies, I am confused by the profusion of terms to describe the system of medicine that I use in my practice. Allopathy, western medicine, modern medicine, and scientific medicine are all terms used to distinguish our system of medicine from the others — ayurveda, siddha, unani, shamanism and homeopathy. Perhaps this confusion and profusion of terms comes from muddled thinking.

The word 'allopathy' is outdated and should never be used by us; we should not define our system of medicine in terms of someone else's incorrect perception of our system. Several mfc members have pointed out that allopathy is a misnomer. The aims of most of our treatments is not to produce an opposite effect to the disease at all. If homeopaths want to continue to use the word to distinguish their system from ours, let them do so.

Western medicine is another popular term, but it is a bit limiting. It fails to distinguish our medicine from the 19th century pseudoscience homeopathy. The practice of unani also originated in the west. Besides lending an unnecessary foreign name to our medical system, it no longer describes the practice as it exists in India.

The term modern medicine is also used. Although most of the knowledge used by us is new, it is not the distinguishing characteristic of this knowledge. Two hundred years have passed since digitalis was first used for dropsy. Modern is a better emotive term than a descriptive one.

The best term to use is scientific medicine. This contrasts our practice with the traditional systems of ayurveda, siddha, unani, shamanism; and even homeopathy.

Scientific medicine includes all aspects of healing that are proven (by scientific method) to do more good than harm. This scientific method includes the powerful experimental tool of the clinical trial. The use of steamed, sterile banana leaves as dressings for burns is not western, modern, nor allopathic. It is scientific medicine employing the scientific principle of antisepsis and proven by clinical trial to do more good than harm. The use of Rauwolfia serpentina for high blood pressure is also described in ayurvedic practice, but has become part of our present practice of scientific medicine only as reserpine has been proven to lower blood pressure, and treating high blood pressure has been shown to do more good than harm. Openminded practitioners of scientific medicine will have no difficulty integrating proven methods from the traditional systems into scientific practice.

If we think clearly, perhaps we will begin to talk more clearly. We will begin to hear less of the other pathies and will begin to hear more of the most important pathy in the healing arts — empathy.

Jamie Uhrig — Mitraniketan

MFC Bulletin NO 145. November, 1988

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Medical Technology : neither glitter, nor gold

What happens if you rely on robtos ? You lose the use of faculties that you need for their maintenance and replacement, so you can't rely on them. (1)

'Good servants but bad masters !' Maurice King has chosen only five words to show what modern technology is upto. If one goes through the recent ads appearing in our national newspapers, one can not help feel ng that modern technology—its razzle dazzle and all that—has hit the third world countries as well. And so we have lithotripsy machines which 'leave no stone unturned,' MRI Scans which 'can see almost anything', annual health check-up programmes which 'discover disease even before it has started' and so on... With our doctors also deciding to play with exotic and expensive toys—our euphemism for advanced technology—the threat that medical technology is now posing is not *de minimis*—small enough to be ignored. Maurice king's warning could not have come at a more appropriate time :

'Should we allow ourselves to be seduced by the irrestible technological imperative, the seductive *non Sequitar* that because some expensive and sophisticated procedure is done in Detroit or San Diego, it must also be done in Dacca, Delhi or Dares-Salaam, then not only is frustration likely to follow, but there will be less money to spend in Tubvan and the millions of villages like it, all over the developing world, (2)

While the *idee fixe* of the general public that technology can offer infinite solutions to the patient's problems can be understood, what is alarming is the abysmal ignorance and blind faith of medical community in technology. Worse still, as Gajanan Ambulkar shows so well in his cartoon (page 4), even the traditional patient—physician relationship has undergone painful mechanical metamarphosis.

Manu Kothari and Lopa Mehta in their characterstic iconoclastic approach attack the myth perpetuated by medical industry and show that modern medicine is a farce. Many of us may not share their views on modern medicine, but the sheer logic behind their trans-technique approach and the evidence they have so painstakingly gathered to support the hypothesis, is indeed thought-provoking.

Kabra's article possesses the punch of an eye opener. The diagnostic X-ray units, the way they are operating without safety measures, the way they are proliferating—putting even that wild weed *Parthenium* (gajarghas) to shame—is indeed a matter of great concern. With some 160 million Indians undergoing radiography each year, and considering the miserable state most of our X-ray Clinics are in, the number of reported—and unreported—cases of X-ray associated cancer must indeed be staggering one. In fact Evans et al (3) have recently shown that 267 cases of blood cancer (1 per cent) and 788 cases of breast cancer (0.7 per cent) that occur annually In US may be attributable to diagnostic radiology. Kabra was, and still is, concerned, rather angry, about the indiscriminate way in which X-ray is being exploited to day. His plea to check this hazard in his own state—Rajasthan—fell on deaf ears of the health authorities. Kabra then went a step ahead, and filed a writ In the high court requesting, among other things, a state-wise checkup of X-ray clinics. More power to his muscles !

That brings us to the last article. We do not deny that radiography has not benefited the society. Far from it. We owe a lot of debt to Roentgen. But unless this technology is properly used, the mass popularity of Roentgen's rays will suceed only in creating its own Frankenstein's monster. It is in this regard that the WHO expert committee's report (4) on rational use of radiology needs in-depth study. It has shown that rational radiography can be productive and cost-effective without in any way compromising the quality of medical care.

Which is what precisely should medical technology be all about !

UN JAJOO & SP KALANTRI
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Clinical Perspective : Chest Radiography

SP KALANTRI

A modern medical student, born and brought up in era of increasing radiological sophistication has started turning a Nelson's eye to the traditional bedside methods of making a diagnosis. Perhaps he should not be blamed. The current culture in the academic institutions and private practice is steadily reducing his confidence on the utility of bedside signs. Even quite a few postgraduate teachers have seriously been toying with an idea of providing chest X-rays to the examinees in their long and short cases. Patients are also sharing the belief that short of being radiographed, their examination is highly incomplete. This overuse of diagnostic radiology, almost global now, the undue popularity of the Roentgen's rays and a gradual erosion of faith on the Laennec's tubes should call for concern.

I made an attempt to go through the available literature and to put the chest X-ray in its proper perspective so far as chest diagnosis is concerned. In this task I have greatly been helped by a technical report series published by WHO in 1983; (1) its basic theme centres on the rational use of radiology in all disciplines of medicine. In the preparation of this article, this report has extensively been referred to. The questions to which I sought answers were :

(i) Is routine CXR helpful in screening asymptomatic subjects ?

(ii) What is the utility of CXR in the overall assessment of respiratory diseases ?

(iii) Why chest X-rays are being overutilized ?

The criticisms that appear in parenthesis after some of the recommendation of WHO Expert Committee are my own.

Routine Chest X-ray in asymptomatic population

1. Rontine chest X-ray on admission to the hospital :

Feingold (2) surveyed 39000 hospital admissions, the majority of patients were elderly, chronically ill, poor and came from a population with a high incidence of tuberculosis. He concluded that if were no symptoms referable to chest and no fever, no tuberculosis was found. There were few other significant abnormalities that could have been detected by clinical examination.

2. Routine chest X-ray in pregnant women :

The WHO Expert Committee thinks that unless there is high incidence of clinically silent chest disease, routine CXR has no role whatsoever in pregnant women. In support, it quotes a massive study of 12000 women by Bonebrake, (3) in which not one patient with clinically unsuspected disease could be detected.

3. Preoperative chest X-ray :

Do preoperative chest X-rays, as is commonly believed, affect the decision to operate, change the type of anaesthesia, and provide a useful baseline film before operation ? Yes, says Sane, (4) who studied a series of children and found that in 3.8% the results of preoperative chest radiography changed either the anaesthesia or the type of treatment. Milne also considers them essential for comparison with a postoperative film if a patient develops a postoperative complication. There are, however, some large studies, which do not share this belief. The Royal College of Radiologists, (6) in a survey carried out in England, Wales and Scotland concluded that CXR should be used as an adjuvant to careful clinical evaluation of the patient and should only be done when it is thought that they will provide additional useful information.

Lloyd Rucker recently did a study (7) where patients were drawn from almost all major surgical specialities. He proposed that certain risk factors would increase the likelihood that a patient's

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preoperative CXR would demonstrate a serious abnormality. These were: history of cardiac or lung disease, cancer at any site, smoking, asbestos exposure, fumes, dusts, serious systemic disease, recent thoracic surgery, abnormal physical findings in the chest, heart, abdomen and age older than 60 years.

(Unfortunately these recommendations are so comprehensive and cover so many aspects that virtually every patient needing surgery might end up with a chest X-ray. Though a number of other studies have failed to find usefulness of preoperative chest X-ray independent of complete clinical evaluation, the more recent and widely read surgical texts have avoided the issue entirely, making no specific recommendation.)

Mass Chest X-ray survey of unselected population:

The following are the recommendations from the WHO Expert Committee on Tuberculosis (1974) (8):

> "Mass miniature radiography is very expensive screening procedure for tuberculosis, even when the prevalence is high. Other disadvantages of MMR are as follows: (1) it contributes only to a small proportion of cases found; (2) it has no significant effect on the occurrence of subsequent smear positive cases, as they usually develop so rapidly that they arise between the rounds of mass radiography examinations ; (3) it requires the services of highly qualified technicians and medical staff, who could be better used in the other health service disciplines; (4) the apparatus and the vehicle used to transport it, are often out of service the committee concluded that the policy of indiscriminate tuberculosis case finding should now be abandoned."

Routine Chest X-ray survey of selected population:

The Expert Committee opined that the chest X-ray is only justified in :

(i) Subjects occupationally exposed to respiratory hazards.

(ii) Countries or areas where there is high prevalence of tuberculosis and similar infections.

(What about Bhopal population then? Should every subject with respiratory symptom be radiographed there, or will pulmonary function testing be a suitable alternative ? And should every subject from endemic zones of tuberculosis be radiographed, irrespective of physical signs ?)

Chest X-ray in disease

1. Tuberculosis :

The WHO Expert Committee suggested three criteria for doing CXR in patients of tuberculosis:

(i) During chemotherapy. Periodic CXR at intervals that should be dependant on the clinical condition and diagnostic assessment.

(ii) Treatment completed. Periodic CXR only if clinically indicated.

(iii) Defaulter. Further CXR if patient has failed to complete drug therapy.

(These guidelines are rather vague and it is difficult to interprete them exactly. Our criticisms are: (i) How precisely do we define clinical condition: based on symptoms or appearance of new signs; either or neither ? (ii) if structural damage caused by tuberculosis can be picked up by physicai examination, be it cavity or fibrosis, effusion or pneumothorax, how will CXR help in the ultimate management? (iii) In defaulters, CXR is useless in differentiating an active from a healed lesion. (iv) In defaulters the rational approach should be to stop the previously used drugs and start fresh chemotherapy with atleast three new drugs. Won't further CXRs add to the cost of chemotherapy ?)

2. Chronic obstructive pulmonary disease :

The Expert Committee considers clinical evaluation better than CXR in periodic assessment of COPD. In childhood asthma, however, it sounds a note of caution and tells us that severe asthma and repeated attacks, may be an indication for chest radiography, even in the absence of other clinical findings. A recent study published in 1987 (9) also confirms that routine spirogram and chest films ha-

ttle role in the management of clinically stable ents.

Lung Cancer :

) A number of studies have proved that CXR is useless in picking up asymptomatic lung cancer and offers no benefit in early detection of lung cancer.

(ii) Routine follow up CXR for patients with lung cancer should only be dictated by clinical evaluation and natural history of cancer.

4. *Systemic Disease :*

The Expert Committee suggests that if there is no fever and clinical evidence of chest disease, CXR ofters no benefit in the clinical evaluation (Two situations, we feel, defy this generalisation. In patients with miliary tuberculosis and meningitis where fever could be absent due to low immunity and the chest signs are minimum, CXR is an important diagnostic tool. Similarly in patients with persistent weight loss without fever and chest symptoms/signs, CXR often uncovers an hitherto unsuspected tuberculosis).

5. *Repeated chest radiography for acute pneumonia :*

Harrison's magnum opus on medicine sees no point in doing serial CXRs to know whether the shadow has disappeared. WHO report agrees entirely. The later regards clinical deterioration as the only inpication for further CXRs in pneumonia.

(How about this idea : If history and bedside physical signs strongly suggest community acquired pneumonia why not do away even with an initial CXR ? More cost-effective approach should be to treat the patient with penicillin, reserving CXR only if the patient does not respond).

Overutilisation of chest X-rays

Overutilization of X-rays has been defined as excessive radiation per film, excessive films per exposure and excessive examinations per patient. (10) Since the first two factors depend basically on the over use of radiology, I decided to find out why X-rays are being overused. The reasons could be grouped under three broad categories: physician's role, patient's contribution and social/economical/legal factors.

I The Physician's role :

1 Lack of knowledge: 'Every patient with chest pain needs a CXR'.

2 Undue dependance: How else can I follow my patient of pneumonia, tuberculosis or lung cancer ?

3 Powerless Radiologist: 'How can I stop a Physician getting his patient's chest X-ray ?

4 Striving for perfection: 'The medical record should look complete.' 'I should not miss anything.'

5 CXR as a gold standard: 'I know it's pneumonia, but am I right ?

6 Busy OPD; No time to think: 'I had better buy time. CXR first, physical examination can wait.'

7 Peer pressure: 'If they corner me in hospital death meeting..'

II The patient's contribution :

1 Undue demands: 'I ought to have a CXR for my annual check up.'

2. Reimbursement policies: 'But I am not paying from my pockets .'

3 Reassurance: 'There is something deep within my chest, why not rule it out ?'

4 Irrational Hope: 'I need CXR to get cured'.

III Social/Economic/Legal factors :

1 Institutional requirement: 'Every patient admitted in medical service must be radiographed.'

2 Defensive Medicine : 'If someone pulls me up in the court of law?'

3 Money matters : 'I scratch your back, you scratch mine'; reminiscent of the link-cum-cut practice.'

4 Cultural influence: 'When everybody around is doing the same thing, why shouldn't I ?'

5. Down to earth logic: I invested 5 lacs in this machine, how else can I recover its cost?'

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for various reasons (age, etc) are not expected to have children are not considered to part of the genetic pool, and their radiation osure is neglected as a component of genetic ation exposure" (WHO manual on Radiation tection).

Gene mutations, because of their serious eterious effects on the next and subsequent nerations are, therefore, the matter of "highest blic concern".

o Dose is Safe

X-rays, as they pass through living cells, roduce radicals that act as strong oxidising or educing substances. "Thus even small doses of radiation disturb the delicate biochemical equilibrium of living tissues and must be considered damaging".

The conclusions here are plain and unambiguous. "In the present state of knowledge it must be assumed that the point mutations produced by radiation have a linear dose/effect relationship, without threshold, recovery, or 'tolerance dose', and with unrestricted accumulation of all doses, even very small ones, received by the genetic pool".

The *severity* of X-ray damage, viz. carcinogenesis and gene mutation, is not dose dependent. Even very low doses carry the same risk. However, the magnitude of the risk increases with the dose, and the effect of every subsequent dose is cumulative.

The benefits of diagnostic X-rays are undisputed. The potential for harm from ionising radiation and the serious consequences of their improper use are equally well established. Health authorities neglect the latter to the peril of the general public. The state governments are expected and required to appoint appropriate Radiation Protection Committees to monitor and supervise the functioning of diagnostic X-ray units in the state. There has to be a Radiation Safety Officer (RSO) for *every diagnostic X-ray unit under the mandatory provisions of the Radiation Protection Rules (1971)*. The AERB Safety Code lays down the qualifications, certifications, duties and responsibilities of the RSO.

At an informal gathering of press persons and interested members of the public in Jaipur recently the problem of X-ray units operating in an uncontrolled manner was discussed. The response was varied- from curiosity to outright horror. Nevertheless, this meeting did help to publicise, to some extent, the magnitude of the problem. The consumer, as it were, can be excused for not immediately sensing the gravity of the situation and his ignorance of *his right to safe medical diagnosis and treatment*. After all, X-rays cannot be seen and there are never any immediate side effects; the chances of tissue damage are small so that, in all probability, he will never be affected. This is a most unfortunate and incorrect attitude. Damage occurs years later, when the memory of an earlier X-ray examination is lost so that the X-ray itself is unlikely to be incriminated as the culprit. Going even further, it would be a difficult task, indeed, for congenital defects in future generations to be ascribed to "that X-ray that my great great grandfather had". The villain in the Bhopal tragedy was easy to pin down and the Indian public still smells blood *because* methyl isocyanate's awesome effects were there for all to see. X-rays may be silent but they are no less lethal.

What can you, the public, do ?

1. Do not suggest an X–ray to your doctor. Let him decide.
2. Whenever you are asked to have an X-ray carried out yourself, ask your doctor the reason for the same. Ask for a safer alternative. An ultrasound of the kidneys. for example, often provides as much or sometimes even more information than an intravenous pyelogram.
3. If you are pregnant, do not allow yourself to be X–rayed unless there are very, very strong grounds for it. If your abdomen is to be X–rayed. then have this done within 10 days of your period so that an early pregnancy is not inadvertantly jeopardised. Males should insist that a lead shield be provided to cover their external genitals when their abdomen is being X–rayed.
4. Shop around for what you have heard is a reliable X-ray centre. If the attending radiographer or radiologist does not carry a film badge in full view, he can't be careful for his safety, much less yours. (A film badge is a small rectangular multi-coloured item that measures the total amount of radiation received by X-ray persennel. It Is monitored regularly by BARC to ensure that personnel who are working with ionising radiation receive doses well within prescribed limits.)
5. Do not accompany your relatives into the X-ray cubicle. An X–ray unit is expected to have staff for purposes of supporting the patient, though on occasions it does become necessary for a parent to accompany a small child who is obviously scared stiff. Under no circumstances should you enter if you are pregnant, even to help out. Let someone else do so. If you have to be present with the patient in the X–ray cubicle, insist upon being provided a lead apron to wear.
6. Do not loiter outside X-ray units, Scattered rays can also kill.
7. Find out if the X-ray unit has a Radiation Safety Officer (RSO) on its rolls. They are required to, under the Atomic Energy Act, 1962. If there is no RSO covering the unit, a complaint can be made in this regard to the health authorities and the State Government.

The report says: "in short, the unawareness of radiation hazards, inadequate plan of installation, poor performance standards of the equipment, lack of necessary protective devices, and above all a commercialization of the use of X-rays for medical diagnosis and consequent indiscriminate use" are some of the major factors leading to unwanted exposures.

The RESULTS of the prevalent improper use of diagnostic X-rays are:—

1. Excessive radiation dose to the individual to be X-rayed.

2. Radiation of parts of the body other than those required to be exposed to X-rays.

3. Radiation to persons other than the patient.

The "WHO Manual of Radiation Protection in Hospitals and General Practice" prescribes clear-cut guidelines for X-ray personnel (appendix) and these norms have also been prescribed by the AERB in its safety booklet for diagnostic X-ray units (AERB Code No: SC/MED-2, Safety Code for Medical Diagnostic X-ray Equipment and Installations).

These safety measures are almost universally ignored in India. Though the flouting of these basic safety norms is so open and obvious, it is most unfortunate that it does not attract the attention of the health authorities.

Scattered X-ray Hazards to the General Public

When an individual is being X-rayed, a significant part of the beam is scattered in all directions. These scattered rays affect not only every individual inside the room but pass out of the room because of their great penetrating power, and affect every individual outside and in the vicinity of the unit, unless the scattered X-rays are prevented from escaping the room by thick masonary walls and lead-lined closed doors and windows. Under the prevalent conditions and work culture in the X-ray units of the country, *many more individuals than the patients X-rayed* are exposed to ionising radiation escaping from these units. Every one who accompanies the patient receives small doses of radiation many times during their stay inside or in the vicinity of the X-ray room.

Because of scattered radiation, for 9 crore patients X-rayed every year in the country, there would be, at least, 18 crore others were exposed to radiation unnecessarily. The risk of cancers and congenital anomalies to the unnecessarily exposed health people are similar to that of the patients. The continuing proliferation of "X-ray shops" in busy markets and public places are highly hazardous to say the least. Their potential danger and resulting harm should not be underestimated or, worse still, overlooked.

Fantastic Risk from Bad Units

The genetic risk from an improperly operated X-ray unit when compared to a properly managed one is colossal. To quote a WHO document " The conclusion to be drawn from these results is quite fantastic; they imply that a single examination performed on person using a bad technique has the same genetic consequences as the same examination performed using a good technique on 22,000 persons of the same sex and life expectancy."

Genetic Hazards

The genetic effects of X-rays are randomly distributed and their clinical consequences are late in occurrence. The changes they produce in germ cells (sperms and ova) are either chromosome mutation or gene mutation. While chromosomal mutations are mostly lethal for the germ cells, their only effect is a reduced birth rate. However, some of these of chromosome mutations lead to very serious hereditary diseases in the first generation.

Gene mutations or point mutations are "microscopically invisible changes in the structure of DNA, the chemical substance responsible for heredity. The majority of point mutations are recessive, and a hereditary diseass connected with such a mutation will become evident only when two germ cells (a male and a female) bearing similar mutations unite by chance. The chance of this event obviously depends on the mutations present in the 'gentic pool' rather than the mutations in the germ cells of an individual person. The genetic pool includes germ cells of all individuals in the population who have a given probability of becoming parents. Persons

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BEWARE OF X-RAYS
THE DANGEROUS DIMENSIONS OF DIAGNOSTIC X-RAYS.
X-RAYS ARE HIGHLY HAZARDOUS : HANDLE THEM WITH CARE.
IMPROPERLY USED X-RAYS ARE DEATH RAYS

Dr. S. G. KABRA

It is plain to even the most casual observer that "Diagnostic Clinics" or "X-ray Clinics" pepper the streets of urban, and a good deal of semi-urban, India. More often than not, these clinics are independent of hospitals and have made X-ray facilities as readily available as photocopying services. In fact, there has been a phenomenal increase in the number of diagnostic X-ray units in the country. From an estimated 10,400 units in 1975, the number now exceeds 30,000, according to a report of the Bhabha Atomic Research Centre (BARC). This proliferation of X-ray services is apt to be regarded as "a sign of progress" and public awareness of X-rays is such that an X-ray examination offers a tremendous psychological boost to a patient much the same way as an injection would. It is not infrequent for a patient himself to suggest to his treating physician that he be X-rayed and the compliance of the physician in this respect assures the patient that his problem is receiving serious attention !

What is not generally known is that diagnostic X-rays today constitute, as a whole, the biggest man-made source of ionising radiation, whose potential for harm equals that of ionising radiation emanating from a nuclear explosion. Judiciously and safely used X-rays are, of course, of immense value in modern medicine. Used otherwise, X-rays cause more harm than good not only to patients, but also to the public at large *and their future generations.* Ionising radiation *in any form and in any dose* increases the risk, in exposed persons, of developing cancer and their progeny of being born malformed.

Risk Estimates from Diagnostic X-rays

For estimating such, the population X-rayed in *ONE YEAR* is taken into account. It is presumed that these persons will receive X-rays only once in their lifetime.

Only individuals in the younger age groups are considered since the effects of radiation are manifest only decades after exposure. Of the 9 crore persons X-rayed in the country in any given year, roughly 55% or 5 crore are 30 years of age or less.

★ Estimated number of diagnosti X-ray units in India : 30,000

★ Presumed (for the sake of calculation) that the number of patients X-rayed per day per unit : 10

★ Number of patients X-rayed per day : 30,000 x 10 — 300,000

★ Number of working days in a year : 300

★ Number of patients X-rayed per year : 300,000 x 300 — 90,000,000

★ Number of such patients aged 30 yrs or less : 55% of 90,000,000 — 50,000,000

Below are the estimates of cancers and congenital anomalies that would occur in these 5 crore persons in their lifetime and their progeny respectively over and above what would have occurred had they not been X-rayed. Since the risks vary according to the type of X-ray and the part of the body exposed, the different types of X-rays that would have been carried out on these 5 crore people are also presumed in these calculations.

Type or Diagnostic X-ray	No : Persons X-rayed (lakhs)	No : who will develop cancer Bone Marrow	Breast (Women)	Lung	Additional No : Hereditary Defects via Mother	Father
Plain Chest and Ribs	130	10	39	26	10	10
Plain Abdomen	120	72	12	10	576	288
Barium Meal	30	39	15	2	120	15
Barium Enema	30	45	6	24	162	51
Oral Cholecystography	40	12	4	3	10	2
IVP	50	25	135	7	500	200
Hip and Femur	50	25	3	3	220	900
Lumbar Spine	50	40	30	7	380	120
TOTAL	500	268	244	82	1978	1586

Additional Cancers : 594
Additional Hereditary Defects : 3586

Note : These estimates are based on the following sources :

(I) UN Scientific Committee on the Effects of Atomic Radiation, Report to the General Assembly. United Nations, NY, 1977

(II) Diagnostic Radiography : What are the risks ? Drug and Therapeutics Bulletin 1980; 18.49-50

The above estimates are for X-ray machines which are properly maintained and monitored, and operated with all the prescribed safety precautions. The situation in our country, however, is quite the opposite, according to a report of the Division of Radiological Protection (DRP) of BARC.

The DRP, entrusted with the task of surveying X-ray units in the country to detect, and advise about, radiation hazards, found it impossible to keep up with the explosive increase in the number of these units.

Though started in 1957, DRP had, till 1976, surveyed only 9%, i. e. 946, of the estimated 10,400 X-ray units in existence at that time. The situation has only worsened over the year.

The Atomic Energy Regulatory Board (AERB) constituted by the Government of India in November 1983 is now estrused with the responsibility of developing and implementing appropriate regulatory measures aimed at ensuring radiation safety in all applications involving ionising radiations envisaged in the Atomic Energy Act, 1962.

The status of radiological protection in small hospitals and clinics that constitute 95% of the total diagnostic units in the country "is so poor that most of the excessive exposure cases are reported from them" says the survey report of DRP.

The causes of excessive exposures detected are improper layout of these installations (85% of the small hospitals and clinics surveyed and and 60% of the large hospitals), and lack of protection measures in 25% to 90% of the small units.

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Emerging Medical Culture — I

Too Many Investigations:

Open up any text book of modern medicine, and you find a growing, rapidly enlarging, list of investigations. Take any disease from common cold to cancer and you see a physician ordering a battery of investigations. Being trained in the traditional western style of medical education, a young medico lends a deaf ear to the patient's history, turns a blind eye to the vital examination and relies entirely on complex investigations as if they would, like Aladdin's lamp, always solve the clinical problems, With computers having already made a significant dent in medical technology a day is not far off when blue chips would replace human grey matter. Let us start with a simple investigation—an electrocardiogram. A basic investigation for recognising various heart diseases. 'We must not forget however, that an electro-cardiogram does not solve all the problem', writes J. Willis Hurst in his magnum opus of cardiology.' and **that many problems may be created by its use'**. (emphasis my own). Nothing can be more of an eye-opener than the view of Frank Wilson, father of modern electrocardiogaphy who writing the preface of his son-in-law's book in 1951 warns:

'In the last two decades, there has been a tremendous growth of interest in the ECG diagnosis and the number and varieties of ECG in use. In 1914, there was only one instrument of this kind in the state of Michigan and this was not in operation; there were no more than a dozen ECG machines in the whole United States. Now there is one or more in about every village of any size, and there are comparatively fewer people who are not in danger of having their peace and happiness destroyed by an erroneous diagnosis of cardiac abnormality based on faulty interpretation of an EGG than of being injured or killed by an atomic bomb.'

Frank Wilson's prophecy is certainly sounding true in 1984. An ECG strip, innocent and impressive though it appears, is capable of stripping the poor man's money, happiness and tranquility. Roentgen rays are no longer the rays of hope to a diseased patient. The indiscriminate use of Roentgenology may offset the very advantages it offers. Come what may, an X-ray occupies the numero uno position in diagnostic work up of a busy practitioner, who believes more in Roentgen's tubes than on Laennec's stethoscope.

'Look before you leap to a lab' should be the most candid advise to a busy practitioner. The phenomenal rise in laboratory investigations in the last decade reflects the blind faith of doctors in' the numbers game.' The sufferer is the ordinary man. In his vain hope to get rid of sufferings, he spends his hard-earned money over unnecessary investigations which do not have a bearing on his treatment. Simple investigations which provide important clues to the diagnosis are ignored while costly investigations are advised. Thus compared to sputum acid fast tubercular bacillus, X-ray chest gets a positive nod for investigating tuberculosis of lungs; blood sugar estimation is considered more sophisticated than simple urine sugar examination; blood urea gets an upper hand for diagnosis of kidney disorders when compared with urine albumin and microscopy and urine bilirubin and urobilinogen are seldom considered important when compared to a battery of biochmical liver function tests.

Too often investigations are advised without close scrutiny of the outcome that one expects out of them. For a case of head injury X-ray skull is quite often advised to judge brain injury, while scientific data suggests that bedside examination is a better guide and contribution offered by an observable fracture of the skull in management of a patient is nil. X-ray cervical spine is invariably advised for suspected case of cervical spondylosis, while it is the clinical examination which alone dictates the mode of treatment. And so on.

Out of a battery of tests available for proper diagnosis in a given patient, the clinician has to select the accurate, safe and cheap procedure. He must be aware of the inherent limitations of each test i.e., the sensitivity of an investigative procedure to pick up the disease and specificity of the procedure for a definitive diagnosis of the same disease.

Pathological investigations, like planned advertising campaigns, often create wasteful wants. A doctor can earn much more from them than what he can earn through a simple consultation. Ring practice-in the current commercial medical jargon-is acquiring new significance it had never assumed before. A patient in the ring is just a defenceless pawn—too meek to make a move — as he passes through the check-posts of specialists, each squeezing his hardearned money.

The human body is treated like a machine. The human element in treatment of the patient is fast vanishing. We have learned to look at the heart, kidney, liver..... and have forgotten the human being who harbours all of them.

How relevant are those immortal words of Sir Robert Hutchinson in this context:

From inability to let well alone;
From too much zeal for what is new
And contempt for what is old.
From putting knowledge before wisdom
Science before an art, and cleverness before common sense;
From treating patients as cases;
and from making the cure of the disease more grievous than its endurance
Good Lord deliver us!

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(Extracted from an article written by the author for creating awarencss in the lay media. The article is entitled— The Emerging Medical Culture).