KARNATAKA

TOWARDS EQUITY, INTEGRITY AND QUALITY IN HEALTH

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Primary Health Care
and
Public Health

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TASK FORCE ON HEALTH AND FAMILY WELFARE
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GOVERNMENT OF KARNATAKA

TASK FORCE ON HEALTH AND FAMILY WELFARE

A Commissioned Research Study

HEALTH EXPENDITURES IN THE STATE BUDGET

By

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The Health Budget in Karnataka

A Preliminary Study

Final Report

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Butch, the worst of human ills
[Poor Tottles found] are "little Bills"!
And, with no balance in the Bank,
What wonder that his spirits sank?
Still, as the money flowed away,
He wondered how on earth she spent it.
"You cost me twenty pounds a day,
At least*! Cried Tottles [and he meant it].*

She sighed. "Those drawing Rooms, you know!
I really never thought about it:
Mamma declared we ought to go—
We should be nobodies without it.
That diamond-circlet for my brow—
I quite believed that she had sent it,
Until the Bill came in just now—"
"Viper*!" cried Tottles [and he meant it].*

Poor Mrs. T. could bear no more,
But fainted flat upon the floor.
Mamma-in-law, with anguish wild,
Seeks, all in vain, to rouse her child.
"Quick! Take this box of smelling-salts!
Don't scold her, James, or you'll repent it,
She's a dear *girl, with all her faults—"*
"She is!" groaned Tottles [and he meant it].

"I was a donkey", Tottles cried,
"To choose your daughter for my bride!
'Twas you *that bid us cut a dash!*
'Tis you *have brought us to this smash!*
You don't suggest one single thing
That can in any way prevent it—"
"Then what's the use of arguing?"
"Shut up*!" cried Tottles [and he meant it].*

Lewis Carroll

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Acknowledgements

This is a revised version of a study undertaken for the Task Force on Health and Family Welfare set up by the Government of Karnataka. A section dealing with foreign loans for the health sector has been dropped, as, with the available data, the links between loans and health expenditures were not at all clear. The paper incorporates changes suggested by the Task Force on the draft submitted earlier. We hope this report will be useful to all those concerned with health planning in Karnataka.

We are grateful to all who helped us. In particular, we would like to thank Dr H Sudarshan, Dr CM Francis, Dr Thelma Narayan, Shri P Padmanabha, Shri Sanjay Kaul and several other officials in the Health and Finance Departments for taking time out to discuss issues and provide help in accessing data. Comments by Sunil Nandraj of CEHAT in Bombay were especially helpful. Our colleagues in CBPS worked very hard amidst frustrations of power failures and data corruption. But none of them is responsible for errors of fact and opinion that remain.

The Health Budget in Karnataka

A Preliminary Study

1. Introduction

This monograph is organised as follows. In section 2, the budget system, concepts, and limitations are discussed. In section 3, the results emerging from an analysis of the available data in Karnataka are presented. Section 4 is a brief conclusion.

Health, it has often been said, is not just the absence of disease, but a positive state of well-being for an individual and for a community. And this is essential in all aspects of life, be it the health of the people or the health of the finances which are a crucial input into the governing system. Health of all is primarily a state's responsibility. The Directive Principles of State Policy in the Indian Constitution [Part 4] make this clear.

The UNDP has given the health status of the population an important place in its Human Development Reports. It also has an important place in the Planning Department's Human Development in Karnataka [1999]. The overall picture emerging from the state HDR is one of deprivation in health matters. There is also great variation across the districts of the state. There is much to be done. In appointing the Task Force on Health and Family Welfare with a distinguished membership, the state government has sought expert advise in dealing with health matters in a professional manner. This is to be welcomed, and this small effort of ours should be seen as part of this overall exercise.

Much has been done in terms of focussing on preventive and public health, and encouraging public participation in the provision of health services. The private sector in different forms has played a major role in service provision, and individuals have spent considerable amounts on health matters. In spite of this, the state's role in the overall administration and implementation to cover the whole population in health matters cannot be ignored. Rather, the state has a key role to play in ensuring that health services of adequate standard are available to citizens. In the process, it may use private parties for certain functions, but that does not absolve the state of its overall responsibility. It is in this background that we look at health finances.

Health is a subject in the state list in the Indian constitution: the primary responsibility for health services provision lies with the state government. The union does have a role, but it is in providing guidance and resources for matters of national priority. The state of Karnataka has so far been providing these services through the Ministry of Health, which is responsible for policy matters, and the Directorate of Health and Family

Welfare, which is responsible for implementing these policies in the state[1]. For this purpose, it has an elaborate set up at state, district and lower levels. This set up is well established in the state governmental system.

In 1993, the Constitution was amended to bring in a third tier of local self government, and health is a subject that is also in the list of subjects that states' may place in the purview of these bodies. In rural areas there are three levels of panchayats--zilla, taluk and gram panchayats[2]. These panchayats are the local manifestation of the state[3]. All of the department employees at the district level have been deputed to the zilla panchayats in Karnataka—and they are to implement the various schemes, state, central and centrally sponsored. There is today some tension between the departmental employees and the newly established political local panchayats[4]. This is not surprising at a time of structural change.

In this transition from a political system that consisted of two levels—union and state—to one of three levels, union, state and panchayat—several problems have arisen. These will undoubtedly be sorted out in time[5]. However the major responsibility of financing the health sector still rests with the State government—and it will continue to do so. The zilla panchayat so far only acts as a conduit for the transfer of funds. It can take on more responsibility, but the fiscal responsibilities of the GOK will remain.

Health is today set in a complex context of multiple levels of government action. In Karnataka, which has been a pioneer in panchayati Raj experiments[6], this is especially true. The department is manned by doctors, administrators, para-medical staff, health inspectors, etc. And the form of implementation, which was completely departmental, has changed [to a small extent] to provide a role for panchayats. Elected representatives now make demands upon the staff of the health department in the local areas. This has led to controversy and differences of opinion: by and large, the department is not convinced that transferring responsibility to the panchayats will serve a positive long term goal[7]. They would like to limit the role of panchayats, at least where health issues are concerned. This is the background for the present study.

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[1] There is also the Department of Medical Education, dealing with higher education in the field, that we exclude from this study.

[2] The health situation in urban areas deserves an independent study. This is a limitation of this study to be noted at the outset.

[3] A point that is often not realised, or contested. See Vinod Vyasulu, Decentralisation from Above, CBPS, Bangalore March 2000.

[4] D.Rajasekhar, Sashikala Sitaram and Vinod Vyasulu, "Decentralisation in Karnataka" paper prepared for the World Bank, June 2000. Also, discussions with the officials while conducting the study.

[5] Vinod Vyasulu, "Decentralisation, Democratisation, Finances and the Constitution," Paper prepared for the Panel on Decentralisation of the National Commission to Review the Working of the Constitution, Bangalore, November 2000.

[6] For an overview, see D Rajasekhar et al, op cit. Also Vinod Vyasulu, Decentralisation from Above, CBPS, Bangalore March 2000, op cit.

[7] This has been a major area of debate in the Task Force.

The present study looks at the following issues: (1) the expenditures of medical and public health and (2) the expenditures of health-related sectors at the state level.

Ideally this should include the following:

a. analysis of expenditures of medical and public health – urban health services (UHS), rural health services (RHS) and public health services (PHS) for the revenue, capital, and loan accounts and
b. analysis of expenditures of related sectors, viz., (I) water supply and sanitation; (ii)social security and welfare; (iii) nutrition; (iv) family welfare

To study the above, the data that we have used are as follows:

1. The Research and Statistics Wing of the Finance Department of the Government of Karnataka (GoK) has collated information on the expenditure patterns (head of account wise) for the period 1960- 1990. We have taken the major head-wise expenditures for M&PH; WSS; Nutrition; General education; and Family Welfare for revenue, capital, loan accounts, wherever possible – 1960-61 to 1989-90 from this document.
2. The Finance Department, GoK has an Accounts Reckoner[8] for 1990-2001. This gives the major headwise data for the 1990s. This has been used to get the figures for revenue expenditures, capital outlay and loan receipts and disbursements[9].

Both these sources present data at the state level—district-wise break-ups at local levels are not available. Moreover with the data it is still not possible to do (a) breakup between UHS, RHS and PHS and (b) to say what proportion of loan is towards health per se from the larger division between central schemes, centrally sponsored and state sponsored schemes. It is understood that the loans from the Government of India come in different forms for the central schemes, centrally sponsored and state sponsored schemes. The breakup is 70:30, meaning, 70% of the funds come as loans and rest 30% comes as grants-in-aid. Even where funding from donors abroad is concerned, it reaches the state government in this form. For the state, 70% is a loan to be repaid to the union. The state is not concerned in repayments abroad, and the risk from exchange rate fluctuations—rupee depreciation—is borne by the union of India[10].

The first data is from 1960-1993, the second source is only for the 1990s decade. The base for the calculation of deflators has been changed in 1993-94, the cut-off point in the first data set. But both data-sets come from the Finance Department of the GOK. Hence what we have done is to

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[8] This is an internal document of the Finance Department meant for the use of officials, which was kindly shared with us.

[9] The codes in the budget documents are 2210 and 4210 for medical and public health, and for health related sectors they are 2211, 2215, 2225, 2235, 2236. For capital account it starts with 4.

[10] The union budget may have some information on this aspect—in this study we have not ventured into this analysis. It has to be undertaken for a complete picture.

calculate the growth rates separately for both the data-sets. There are large gaps in the earlier period of 1960-90 for some heads, namely social security and welfare, nutrition, etc. It has not been possible to examine whether the two data sets are comparable and represent a continuous series. Hence it would not be justified to link them and draw a trend line.

Before proceeding further, it may be helpful to recall a few facts to provide a context. These are taken from the Government of Karnataka's 1999 report Human Development in Karnataka. While the social sector expenditure of the state has been hovering around 38% of total revenue expenditure, the average annual expenditure on health-related items of expenditure accounts for 25.7% of the total expenditure on social services. This is second only to the share of the education sector of 53%. There is also considerable private expenditure, but that is outside the scope of this paper.

2. The Budget System

Each year, in February or March, the finance minister of the state presents a budget to the state assembly, under Article 202 of the constitution. This lists the revenues available with the state, and the manner in which they are to be spent. This is in an essential sense, the major policy statement of the government, concretely listing its priorities. This budget must be approved before the start of the next financial year—April 1. The budget shows in detail what the government plans to do over the coming financial year. It also presents revised estimates of what has been accomplished in the current year and actual figures for the year past. An analysis of the budget then represents what the government has actually done, as opposed to what it claims in other forums. Hence the importance of ongoing budget analysis.

Apart from the well known Revenue and Capital accounts, Government accounts in India are divided into two categories, "plan" and "non-plan". Plan figures represent new initiatives, while non-plan figures are in the nature of expenditures on past commitments. At the end of a plan period—five years—plan programmes are to be transferred to the non-plan category.

The budget allocates money to "schemes". Schemes are specific proposals for spending money. An example would be a scheme for the eradication of leprosy—a worthy cause. The scheme would then define how leprosy is to be identified, how its magnitude is to be assessed, and how, given certain parameters, the scheme is to be implemented. A scheme brings with it a set of rules and guidelines on how it is to be implemented, and it provides no scope for modifications[11]. It would specify how much of the allocation may be used in salaries for nurses, how much for the purchase of

[11] Given that it is designed by bureaucrats in the capital—of the union or the state—it is designed to meet the requirements of the "average district". No district, is however, average in this sense: each has specific features of its own. Thus it is difficult to implement a scheme at the ground level. But although this is known funds are not given on a broad programmatic basis, such as eradication of chronic diseases, but on clear cut schemes.

medicine—in some cases, which medicine also. These schemes are locally implemented by the departmental machinery.

Sometimes it is not possible to transfer a plan scheme of one plan to the non-plan account of the succeeding plan, for a number of reasons—usually a shortage of funds. In such cases, these schemes are carried on under the plan head. This means that salary and other routine payments are paid from plan funds meant to finance new schemes. This has two implications: funds for new and innovative ideas get squeezed, and salary and other routine expenditures make their appearance in the plan account. Thus, for recent years and plans, it cannot be assumed that plan expenditures represent new schemes or investments. In fact, as a plan progresses, the salary component of the plan account increases, so that it often only in the first or second year of a five year plan that investment can take place. The usefulness of the 'plan' and non-plan' categorisation has been questioned for such reasons.

Each of the major departments of the state government—of which Health is one—prepare a budget estimate, based on the priorities of the government, and send it to the Finance Department in the second half of the financial year. This forms the basis on which the Finance Minister makes allocation decisions for the various ministries in the government—there is of course a great deal of discussion that precedes the decision. Once approved by the Assembly, it becomes the programme that the ministry will implement in the coming year.

Decisions about plan expenditures at the local level are made in the Planning Department of the state government. The system works as follows:

Based on the allocations for schemes in the current year, and actual expenditure patterns, and the 'target' for the district indicated by the Planning Department, the district officers prepare a draft budget for the next year[12]. This, after formal approval in the zilla panchayat, is referred to the Planning Department. The Planning Department, in consultation with the Finance Department, has a tentative figure within which the year's expenditure must be kept.

Once the estimates are received from the districts, discussions take place between the district officials and the Planning Department officials in the Planning Department, at the end of which a decision is reached about the level of expenditure on plan subjects in each district. This, after consultations with the Finance Department, becomes part of the state budget. Once the budget has been passed by the Assembly, the moneys are transferred to the districts and can be spent. This is the theory.

In reality, the releases of funds approved to the districts depends on many factors—the Ways and Means position of the state, for example. It is not uncommon for small sums due from a government department to be

[12] In practice, they take the figure for the year past, increase it by 10%, and forward it to their departmental heads. There is little by way of zero base budgeting and the like.

held up for such reasons. Those who are to receive the money are often in the dark about the reasons for the delay. In recent years, with the deterioration in the state of government finances, this problem has become more acute. Thus, the budget figures speak of *intentions*, but cannot be taken as a firm basis for decisions involving spending because of this problem of delayed releases. It adds an unnecessary element of uncertainty into the local system. Programme and scheme implementation then suffers.

Across districts in the State, many of these activities are co-ordinated by the Rural Development and Panchayati Raj Department, under whose control the Chief Executive Officer of the zilla panchayat works. At the local level, the CEO must work in co-ordination with the elected president of the ZP.

It is possible that several departments are undertaking expenditure that pertains to health. For example, the Department of Disabled Welfare may have an item on, say special hospitals for handicapped people. There could be others of this type. Such items, should rightly be included in a study of health expenditures. But it is a tedious task that cannot be easily undertaken without access to the detailed budget documents. They are *not* taken into consideration in this study. This limitation should be noted at the outset.

The link documents provide information on the amounts allocated to each district under different major and minor heads. It must be noted that actual expenditures may differ from these allocations. Thus, these figures may be seen as representing the stated goals of the government. There may be a difference with what actually happens[13]—this has to be studied separately by looking at the district level expenditures. Such figures are not available in the state capital in detail—collecting them from each district is a tedious and time consuming task.

The state government can only spend money on the basis of approvals by the Assembly, and the procedures that have evolved over the years are rigid and time consuming. For one reason or another, no government has made any attempt to modify these procedures. Thus, even after approval in the Assembly, there are a large number of rules and regulations that make the spending of money by government departments slow and time consuming. Often this results in the objective of the exercise being lost in a morass of paper work.

Recognising this rigidity in the financial system, many states resorted to the method of setting up "autonomous" societies under the Registration of Societies Act, to undertake important projects. These societies were designed to function under the Minister and Secretary of the concerned Department, with a specially appointed Project Director to run the society which enjoys considerable financial autonomy[14]. But it must be noted that they led to

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[13] A. Indira: A study of zilla panchayat budgets in two districts, CBPS, Bangalore March 2000. Also, Vinod Vyasulu and A Indira, "Education Finances; A District Level Study in Karnataka" CBPS, April 2001, unpublished.

[14] We wonder if the KHSDP is such a body?

greater centralisation at the state level, for they by-pass local governments—and they also did not come under detailed legislative scrutiny[15]. Many of these societies also created a parallel local structure for their work, thus bloating the bureaucracy[16].

The funds available came from different sources. There were the own revenues of the state—what it collected from taxes in its jurisdiction. There were the transfers of the state's share of union taxes, shared with the states' on the basis of the recommendations of the Finance Commissions. And then there were transfers from the Planning Commission[17]. These were union finances that it passed on to the states in programmes of national importance, on soft terms[18].

But the releases to local areas[19] depended, increasingly so in recent years, upon the ways and means position of the state government. Thus, even after budget approval, funds were often not made available because of cash crunches in the state. It is therefore important, to understand the expenditure process at local levels, to distinguish between *allocations approved*, and *releases made* to local bodies. Money allocated may be released in February—then it will be difficult to spend it effectively. To fully appreciate the complexities involved, a study of releases is also necessary. In this study however we have not taken into consideration releases but actual expenditures at the state level as these are the audited figures placed in the House. At the district level, we deal with allocations only. Further work is needed to confirm or reject these findings on an empirical basis. This is only a "first-cut" analysis.

3. The Results at the State Level

We present below the results of a simple analysis of the data available under the heads of health, and health related finances at the state government level.

3.1 Medical and Public Health:

Here under Medical care is included medical relief, which consists of conventional curative medical facilities such as PHCs and sub-centres, hospitals and dispensaries; indigenous systems of medicine; health insurance schemes for formal sector employees and their families; medical education and research; direction and administration. Under Public Health

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15 For details, see L.C.Jain and A Indira, "Budget Analysis: For Whose Sake?", Keynote Address at an international conference in Bombay, November 5-9, 2000.

16 Discussed in Vinod Vyasulu Decentralisation from Above, op cit.

17 These transfers include funds from external donors.

18 These have been changing. At present 30% is grant and the rest a loan on varying terms, to be repaid over a long period like 25 years. The exchange risk in the case of hard currency loans is borne by the union government.

19 M. Govinda Rao, in a personal communication, has spoken of the results of his recent research, which shows that, at an all India level, devolutions to local bodies come to 0.04% of the GDP. The local governments cannot be very important!

comes prevention and control of communicable diseases, health education, immunisation and other public health activities.

As a percent of SDP it is seen that the expenditure on health services in the 1960s it was 0.6%, 0.8-1% during 1970s; and from 1 to 1.1% in 1980s and 90s. The per capita expenditure has risen from around Rs.8/- in 1960-61 to Rs.21/- in 1989-90[20]. Whether this is adequate or not needs to be judged with reference to a standard norm—we are not aware of one. Also relevant will be the efficiency with which money is used—how much benefit do we get for each rupee spent? This is another matter requiring careful study.

Table 1: Revenue Expenditure under the major head Medical and Public Health in the period 1960-1990 (Rs. In crores)

Year	P	NP	Total
1960-61	1.63	3.01	4.64
1961-62	1.13	4.03	5.16
1962-63	1.30	6.37	7.67
1963-64	1.29	5.13	6.42
1964-65	1.32	5.40	6.72
1965-66	1.60	5.53	7.13
1966-67	1.58	6.99	8.57
1967-68	2.23	8.03	10.25
1968-69	2.67	9.07	11.73
1969-70	2.33	10.56	12.89
1970-71	3.06	12.88	15.94
1971-72	1.73	13.19	14.92
1972-73	2.93	15.22	18.15
1973-74	2.94	16.25	19.18
1974-75	2.80	19.43	22.22
1975-76	4.02	26.62	30.65
1976-77	4.54	28.50	33.03
1977-78	6.57	28.88	35.45
1978-79	9.14	31.98	41.12
1979-80	7.29	36.93	44.22
1980-81	7.56	44.68	52.23
1981-82	12.21	54.16	66.37
1982-83	15.26	65.48	80.74
1983-84	14.84	63.19	78.03
1984-85	25.30	77.21	102.50
1985-86	18.33	91.54	109.87
1986-87	21.45	106.59	128.04
1987-88	31.67	115.70	147.36
1988-89	42.00	129.15	171.15
1989-90	39.17	144.39	183.56
Average growth	12.78	14.27	13.81

Source: GoK Finance Report

[20] Dr.S.Subramanya, IAS, **Government Health Expenditure in Karnataka since 1960,** KHSDP Paper made available to us by the Task Force.

In the above table 1, the figures are shown at current prices—inflation has not been adjusted for. The real increase then may be much less than these figures suggest. The growth rates at current prices show that the plan head has grown at 12.78%, non-plan at 14.27% and total at 13.81% in the period 1960-90.

In terms of percentage of total state government expenditure it is interesting to note that M&PH has always hovered around 6%.

Table 2: Capital Outlays towards Medical and Public Health in the period 1960-1990 (Rs. In crores)

Year	P	NP	Total
1960-61	0.61	-0.84	-0.23
1961-62		0.13	0.13
1962-63		-1.55	-1.55
1963-64		-0.07	-0.07
1964-65		0.26	0.26
1965-66		-0.06	-0.06
1966-67	0.35		0.35
1967-68	0.68		0.68
1968-69	1.17		1.17
1969-70	1.47		1.47
1970-71		-2.75	-2.75
1971-72		-1.49	-1.49
1972-73		-0.08	-0.08
1973-74	1.36		1.36
1974-75	0.94	0.00	0.94
1975-76	0.96		0.96
1976-77	1.43		1.43
1977-78	1.39		1.39
1978-79	1.36		1.36
1979-80	1.21		1.21
1980-81	0.94		0.94
1981-82	1.50		1.50
1982-83	2.58		2.58
1983-84	3.71		3.71
1984-85	4.52		4.52
1985-86	4.81		4.81
1986-87	5.08		5.08
1987-88	1.23		1.23
1988-89	0.88		0.88
1989-90	1.64		1.64

Source: GoK Finance Report

As can be seen, a great deal of data is missing. The capital outlays on M&PH (Table 2) shows little non-plan expenditure. The plan expenditures have grown at 1.08% for the period 1960-90 at current prices. Capital expenditures are those that are expected to give returns over a term longer than one year. Is the state discounting the future?

We next present the plan and non-plan expenditures incurred on M&PH for the period 1990-91 to 2000-01. We have the [implicit] deflator figures with 1993-94 as the new base till 1998-99 which is used for deflating the expenditures in current terms.

Table 3 Health and Family Welfare Head wise expenditure (plan) (Rs. in Cr.)

Year	Current prices				Constant Prices		
	M&PH	FW	TOTAL	Deflator	M&PH	FW	TOTAL
1990-91	41.68	35.17	76.85	88.94	46.86	39.54	86.41
1991-92	39.39	50.38	89.77	90.25	43.65	55.82	99.47
1992-93	52.92	54.98	107.90	94.33	56.10	58.28	114.39
1993-94	62.60	59.42	122.02	100.00	62.60	59.42	122.02
1994-95	87.29	76.55	163.84	106.98	81.59	71.56	153.15
1995-96	119.54	86.81	206.35	114.80	104.13	75.62	179.75
1996-97	144.26	74.63	218.89	123.43	116.88	60.46	177.34
1997-98	157.72	106.09	263.81	129.62	121.68	81.85	203.53
1998-99	147.47	84.85	232.32	138.46	106.51	61.28	167.79
1999-2000RE	160.04	167.85	327.89				
2000-01BE	177.69	195.21	372.90				
				Avg growth	9.55	4.99	7.65

Source : Finance Department GOK

Table 4 Health and Family Welfare Head wise expenditure (non-plan)(Rs. in Cr.)

Year	Current Prices				Constant prices		
	M&PH	FW	TOTAL	Deflator	M&PH	FW	TOTAL
1990-91	163.06	3.10	166.16	88.94	183.34	3.49	186.82
1991-92	202.12	3.48	205.60	90.25	223.96	3.86	227.81
1992-93	248.56	3.75	252.31	94.33	263.50	3.98	267.48
1993-94	265.60	3.62	269.22	100.00	265.60	3.62	269.22
1994-95	289.27	4.64	293.91	106.98	270.40	4.34	274.73
1995-96	285.44	4.67	290.11	114.80	248.64	4.07	252.71
1996-97	300.62	5.58	306.20	123.43	243.56	4.52	248.08
1997-98	354.20	6.35	360.55	129.62	273.26	4.90	278.16
1998-99	468.40	7.68	476.08	138.46	338.29	5.55	343.84
1999-2000RE	564.86	11.03	575.89				
2000-01BE	639.73	10.18	649.91				
				Avg growth	7.04	5.30	7.01

Source : Finance Department GOK

In the period between 1990-91 to 1998-99, medical and public health shows an average growth of 9.55% under plan head as against 7.04% for non-plan head in the same period (Table 3 and 4). Correspondingly for family welfare average growth under plan head is 4.99% and 5.30% for non-plan head. It is seen that the average growth is marginally higher under plan head for total of medical and public health and family welfare at 7.65% as against 7.01% under non-plan head. If the contention that plan figures represent new investment can be taken to be valid today—and this is questioned by economists—then this is an encouraging sign.

Family welfare has largely been under the plan head. It is important to study how family planning is linked to health in the short term. Can it not

be argued that improvements in the health situation will improve the prospects of success in family planning? If so, are these the right priorities?

3.2 Health related sectors

Under this can be included the following heads[21].

a. Family Welfare – includes maternal and child health and family planning
b. Water Supply and Sanitation – includes outlays on provision of potable water supplies, sewage and drainage, and waste disposal facilities in rural and urban areas.
c. Nutrition – programs to supplement nutrition for children and pregnant and nursing mothers and the Integrated Child Development Scheme.
d. Social security and Welfare – dealing with the disabled welfare and old age pensions

[21] There is a certain judgement involved in this. Ultimately, every thing is related to everything else—where do we draw the line? For example, should pensions be part of the health-related sector?

Table 5 Revenue Expenditure of Health-related sectors during 1960-90 (Rs. In cr.)

Year	Social Security & Welfare			Nutrition			Family Welfare			Water Supply & Sanitation		
	P	NP	Total	P	NP	Total	P	NP	Total	P	NP	Total
1960-61	0.35	0.76	1.11							0.29	0.01	0.30
1961-62	0.06	1.16	1.22									
1962-63	0.46	2.84	3.30									
1963-64	0.19	3.17	3.36									
1964-65	0.24	3.37	3.60									
1965-66	0.36	3.21	3.57									
1966-67	0.61	3.15	3.76									
1967-68	0.48	4.02	4.50									
1968-69	0.50	3.71	4.21									
1969-70	0.79	6.27	7.07									
1970-71	0.84	5.71	6.55									
1971-72	1.16	6.99	8.15				2.25		2.25			
1972-73	1.17	8.57	9.74				3.85	0.02	3.88			
1973-74	0.94	8.08	9.01				3.27		3.27			
1974-75	1.28	1.02	2.31	0.10	0.05	0.15	5.70		5.70	4.92	2.72	7.65
1975-76	0.68	1.29	1.97	0.20	0.20	0.39	7.28		7.28	5.84	2.63	8.47
1976-77	0.01	7.20	7.21	0.18	0.23	0.40	12.40		12.40	8.89	2.20	11.09
1977-78	1.69	1.57	3.26	0.21	0.27	0.48	6.96		6.96	10.23	1.96	12.18
1978-79	2.74	2.41	5.16	0.23	0.29	0.53	7.70		7.70	6.84	4.93	11.78
1979-80	1.38	5.92	7.30	0.29	0.22	0.51	8.03		8.03	10.85	5.18	16.03
1980-81	2.41	7.07	9.48	0.11	0.12	0.23	8.25		8.25	14.74	3.78	18.53
1981-82	2.97	8.67	11.64	0.09	0.10	0.19	9.64		9.64	22.26	4.53	26.79
1982-83	3.93	10.89	14.83	0.01	0.09	0.10	12.78		12.78	34.71	4.37	39.09
1983-84	5.47	12.19	17.66	0.01	0.05	0.06	16.57		16.57	43.56	2.68	46.25
1984-85	10.47	16.74	27.22		0.03	0.03	21.43		21.43	43.29	7.16	50.45
1985-86	17.29	29.16	46.44		0.02	0.02	28.68		28.68	49.86	7.83	57.69
1986-87	18.48	33.70	52.19		0.02	0.02	28.63		28.63	51.51	10.71	62.22
1987-88	22.04	87.53	109.57	42.71	16.41	59.12	40.95	1.25	42.20	54.97	6.47	61.44
1988-89	18.71	85.02	103.73	40.18	15.23	55.40	34.38	1.71	36.09	44.89	8.03	52.92
1989-90	22.74	91.32	114.05	45.92	17.75	63.67	41.34	1.83	43.17	46.99	7.34	54.34
Avg growth	16.13	16.37	16.30		34.73	30.05	14.5		14.93	31.16	6.74	28.36

Source : Finance Department GOK

Under health-related sectors on the revenue side (Table 5), it is seen that in this state there has been an increase in expenditure from 2% of SDP in 1960-61 to 5.8% in 1989-90. From 1972 onwards there is increased expenditure in health services as well as health-related services[22]. In the period 1960-1974, the cells are blank under the heads of family welfare, Water Supply and Sanitation, and nutrition. Does this mean there has been nearly no expenditure in these areas? This needs to be probed carefully.

As a percent of total revenue expenditure the health-related sectors accounted for 21% in 1960-61 and rose to 30% in 1989-90.

[22] Dr.S.Subramanya, op.cit

It is seen that all health-related sectors have received attention (Table 5). Even so nutrition expenditure has been poor. Family welfare largely a plan expenditure has also grown in the later years. It is quite clear that WSS, FW and nutrition have received more impetus in the latter part of 1980s, that is seventh plan onwards. The figures cannot tell us why this is so—that information has to be sought elsewhere once this fact is established.

It would appear that the state takes 'health related' sectors more seriously than health itself, as health expenditure has hovered around 6% of the total.

Table 6: Capital Outlays on Health-related sectors during 1960-90 (Rs. In crores)

Year	CO on Water Supply & Sanitation			CO on Nutrition			CO on Family Welfare		
	P	NP	Total	P	NP	Total	P	NP	Total
1960-61	0.11		0.11						
1961-62	0.22	0.01	0.23						
1962-63	1.11		1.11						
1963-64	0.62		0.62						
1964-65	0.50		0.50						
1965-66	0.03		0.03						
1966-67		1.25	1.25						
1967-68		-4.27	-4.27						
1968-69		6.02	6.02						
1969-70		-3.91	-3.91						
1970-71	0.94		0.94						
1971-72	0.54		0.54						
1972-73	2.01		2.01						
1973-74		-0.23	-0.23						
1974-75	0.90		0.90						
1975-76	0.33		0.33				0.03		0.03
1976-77	0.01		0.01				0.22		0.22
1977-78	0.00		0.00				0.00		0.00
1978-79	0.07		0.07				0.00		0.00
1979-80	0.05		0.05				0.00		0.00
1980-81	0.02		0.02				0.00		0.00
1981-82	0.06		0.06						
1982-83	0.07		0.07						
1983-84	0.14		0.14						
1984-85	0.26		0.26				1.02		1.02
1985-86	0.43		0.43				7.42		7.42
1986-87	0.21		0.21				11.27		11.27
1987-88					0.60	0.60	7.80		7.80
1988-89				0.03		0.03	6.78		6.78
1989-90							7.36		7.36

Source : Finance Department GOK

The capital outlays however show expenditures only under water supply and sanitation which has received attention under all the plans. There may have been an improvement in the infrastructure – laying of pipes,

etc. But is that alone enough to improve the health status of a community? This is a complex matter that again needs a ground level probe.

We next see how the capital outlays have been in the recent decade of 1990s.

Table 7 Capital Expenditure on health and health-related sectors in the 1990s (Plan) (Rs in crores)

Year	Current					Constant			
	M&PH	FW	WSS	SSW	Deflator	M&PH	FW	WSS	SSW
1990-91	1.67	4.90	0.00	0.98	88.94	1.88	5.51	0.00	1.10
1991-92	2.93	2.35	0.00	3.07	90.25	3.25	2.60	0.00	3.40
1992-93	6.75	0.37	0.00	2.43	94.33	7.16	0.39	0.00	2.58
1993-94	9.99	0.26	0.00	0.68	100.00	9.99	0.26	0.00	0.68
1994-95	10.91	0.21	0.00	1.49	106.98	10.20	0.20	0.00	1.39
1995-96	13.82	3.10	0.00	1.15	114.80	12.04	2.70	0.00	1.00
1996-97	7.93	2.46	0.00	2.00	123.43	6.42	1.99	0.00	1.62
1997-98	68.16	15.53	0.00	2.16	129.62	52.58	11.98	0.00	1.67
1998-99	87.88	22.52	147.93	1.28	138.46	63.47	16.26	106.84	0.92
1999-2000RE	79.78	39.32	159.90	2.39					
2000-01BE	55.38	33.45	107.89	2.34					
					Avg growth	47.87	12.78		-1.93

Source : Finance Department GOK

Capital outlays (table 7) made under the various heads have been small. There is nearly nothing under non-plan and all the expenditures largely remain as plan expenditure. Surprisingly under WSS no expenditures were seen in the early years in the documents for which no plausible explanation can be given. The medical and public health shows an average growth of 118.24% during the period 1990-91 to 1998-99.

Table 8: Revenue expenditure on health and health related sectors in 1990s (Rs. In crores)

Year	Health and FW	WSS	Nutrition
1990-91	494.50	123.80	142.80
1991-92	520.60	142.80	137.30
1992-93	594.80	158.10	50.20
1993-94	599.10	181.50	39.00
1994-95	669.60	225.60	51.40
1995-96	743.10	296.10	75.50
1996-97	619.20	301.00	89.10
1997-98	709.10	359.70	87.40
1998-99	873.60	257.60	82.50
1999-2000RE	940.80	268.40	83.70

Source: Expenditure Pattern of the Health Sector in Karnataka, Subramanya and P.H.Reddy, Southern Economist, 1997

The revenue expenditure on the health-related sectors is given in table 8. The annual compound growth rates for health and family welfare is 7.4%. It is 8.9% for WSS and 5.8% for nutrition. The expenditure on each component has increased at different rates. Health and family welfare increased from 15.8% to 16.9%, that of WSS increased from 3 to 4%. The share of nutrition declined from 5.1% to 1.5% during the nine-year period of

1990-91 to 1998-99[23]. Is this because the nutrition status has improved? That view may not be supported by the data in the state HDR.

We now look at the trend in expenditure on health related items[24].

Table 9: Trend in expenditure on health related items

Year	Per capita exp. On health related services at current prices Rs.	Per capita exp. On health and FW services at current prices Rs.	Exp. On health related items as % of state's revenue exp.	Exp. On health and FW as % of state's revenue exp.	Exp. On health related items as % of SDP	Exp. On health and FW as % of SDP
1990-91	526.10	110.50	29.10	6.10	5.60	1.20
1991-92	548.80	114.70	28.50	6.00	5.30	1.10
1992-93	562.10	128.90	28.10	6.40	5.40	1.20
1993-94	583.10	127.90	28.70	6.30	5.30	1.20
1994-95	611.90	132.30	29.10	6.30	5.40	1.20
1995-96	666.80	134.50	29.00	5.90	5.70	1.10
1996-97	674.70	126.60	27.40	5.10	5.60	1.00
1997-98	730.40	143.10	29.30	5.70	5.70	1.00
1998-99	808.50	174.10	28.10	6.00		
1999-2000RE	863.10	185.10	28.50	6.10		

The per capita expenditure on health related activity in 1999-00 is Rs.863 and that on health and FW component Rs.185. The health related activities account for 28.5% of total revenue expenditure of the state and the health and FW account for 6.1% of state revenue expenditure. The expenditure on health related activities formed 5.7% of SNDP in 1997-98 and on health and family welfare was 1.1%. Experts have to say on the basis of accepted norms if this is adequate—the figures do not, cannot, speak for themselves.

It would be useful at this point for us to look at the various loan components of the funds that the state receives. Most of the loans come under three well-defined schemes: central schemes, centrally sponsored and the state-sponsored schemes.

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[23] Dr.S.Subramanya, op.cit

[24] Source: Expenditure Pattern of the Health Sector in Karnataka, Subramanya and P.H.Reddy, Southern Economist, 1997.

Table 10: Centrally sponsored schemes (revenue a/c) – current prices

Year	M&PH	FW	WSS	SSW	Nutrition	Total
1990-91	379.30	3050.45	2068.87	111.19	---	6263.12
1991-92	392.92	1909.97	2274.19	144.25	0.94	5165.04
1992-93	621.59	4143.76	2250.82	24.79	19.01	7348.87
1993-94	609.42	5317.39	3465.23	26.44	3.42	9640.96
1994-95	879.82	2769.22	4579.24	19.62	---	8599.43
1995-96	793.07	2323.21	6408.71	90.99	---	9925.06
1996-97	899.34	1052.60	6579.28	23.84	---	9010.74
1997-98	983.97	2134.53	10273.67	35.10	---	14044.98
1998-99 A/C	1017.85	1999.45	11541.58	24.80	---	15019.15
1999-2000 –RE	1535.21	8346.08	11397.08	40.00	---	23064.98
2000-01-BE	864.26	9577.24	12494.60	45.00	---	23755.66

Source : Finance Department , GOK

Table 11:Centrally sponsored schemes(revenue a/c(Rs. In Lakhs)–constant prices

Years	Deflator	M&PH	FW	WSS	SSW	Nutrition	Total
1990-91	88.94	426.47	3429.78	2326.14	125.02		7041.96
1991-92	90.25	435.37	2116.31	2519.88	159.83	1.04	5723.04
1992-93	94.33	658.95	4392.83	2386.11	26.28	20.15	7790.60
1993-94	100.00	609.42	5317.39	3465.23	26.44	3.42	9640.96
1994-95	106.98	822.42	2588.54	4280.46	18.34		8038.35
1995-96	114.80	690.83	2023.70	5582.50	79.26		8645.52
1996-97	123.43	728.62	852.79	5330.37	19.31		7300.28
1997-98	129.62	759.12	1646.76	7925.99	27.08		10835.50
1998-99	138.46	735.12	1444.06	8335.68	17.91		10847.28
Avg growth		6.24	-9.16	15.24	-19.42		4.92

Source : Finance Department , GOK

Under the centrally sponsored loans – revenue account (table 10 & 11) we see that the total moneys have increased over the period 1990-91 to 2000-01 under M&PH and WSS. There is however nothing allocated towards nutrition under the head social security and welfare. Family welfare also shows a gradual decrease in the same period. As far as family welfare is concerned it is largely under the plan head. Health per se is still a small portion of overall expenditure.

Table 12: Centrally sponsored schemes (capital a/c) (Rs. in Lakhs)

Years	Current				Constant		
	M&PH	FW	TOTAL	Deflator	M&PH	FW	TOTAL
1990-91	1430.80	456.89	2059.95	88.94	1608.72	513.71	2316.11
1991-92	239.39	214.68	817.35	90.25	265.25	237.87	905.65
1992-93	656.53	14.89	1245.70	94.33	695.99	15.79	1320.58
1993-94	981.09	0.02	1887.55	100.00	981.09	0.02	1887.55
1994-95	1021.21	0	2071.08	106.98	954.58	0.00	1935.95
1995-96	1295.22	0	2187.29	114.80	1128.24	0.00	1905.30
1996-97	741.47	20.51	1641.35	123.43	600.72	16.62	1329.78
1997-98	6765.78	141.07	7786.66	129.62	5219.70	108.83	6007.30
1998-99	8739.24	215.41	34523.72	138.46	6311.74	155.58	24934.07
Avg growth					16.40	-12.43	30.22

Source : Finance Department , GOK

Under the centrally sponsored schemes – capital account (table 12) we see that the figures are fluctuating in the period 1990-91 to 2000-01. A large increase is seen in 1997-98 and 1998-99 under M&PH.

Table 13: State sponsored schemes (revenue a/c) – current prices (Rs. In Lakhs)

Year	Medical & Public Health	Family Welfare	Water Supply & Sanitation	Social Security & Welfare	Nutrition	Total
1990-91	3663.64	466.17	2983.26	1297.04	733.34	16587.41
1991-92	3433.61	3128.23	4145.16	1620.30	840.18	22028.22
1992-93	4562.42	1353.96	5751.76	1842.24	890.39	27333.37
1993-94	5585.83	624.35	7232.65	1796.39	884.43	34160.60
1994-95	7766.58	673.75	11733.19	1875.89	1566.30	44290.85
1995-96	11072.93	661.21	13924.69	2699.10	2932.63	63113.59
1996-97	13445.54	379.02	17277.52	4395.12	3535.42	75518.57
1997-98	14669.23	521.78	19978.18	3967.98	3431.69	73100.18
1998-99	13689.27	499.55	15118.31	3337.41	3290.68	69813.76
1999-2000 -RE	14348.56	489.11	13904.32	4050.96	3392.51	70183.70
2000-01-BE	16812.30	922.81	14669.66	5340.65	3634.84	83853.39

Source : Finance Department , GOK

Table 14: State sponsored schemes (revenue a/c) – constant prices (Rs. in Lakhs)

Year	Deflator	Medical & Public Health	Family Welfare	Water Supply & Sanitation	Social Security & Welfare	Nutrition	Total
1990-91	88.94	4119.23	524.14	3354.24	1458.33	824.53	18650.11
1991-92	90.25	3804.55	3466.18	4592.98	1795.35	930.95	24408.00
1992-93	94.33	4836.66	1435.34	6097.49	1952.97	943.91	28976.33
1993-94	100.00	5585.83	624.35	7232.65	1796.39	884.43	34160.60
1994-95	106.98	7259.84	629.79	10967.65	1753.50	1464.11	41401.06
1995-96	114.80	9645.41	575.97	12129.52	2351.13	2554.56	54976.99
1996-97	123.43	10893.25	307.07	13997.83	3560.82	2864.31	61183.32
1997-98	129.62	11317.10	402.55	15412.88	3061.24	2647.50	56395.76
1998-99	138.46	9886.80	360.79	10918.90	2410.38	2376.63	50421.61
Avg growth		11.22	-4.06	14.01	5.74	12.48	11.68

Under the state sponsored schemes – revenue account (table 13 &14) we once again see that the moneys expended are rising. However here M&PH shows a comparable rise with WSS. Family welfare has a smaller share as compared to the centrally sponsored schemes. Nutrition has also an increasing share over the years.

Table 15: State sponsored schemes (capital a/c)

Year	Current					Constant			
	M&PH	FW	WSS	Total	Deflator	M&PH	FW	WSS	Total
1990-91	1430.80	456.89	0.00	2059.95	88.94	1608.72	513.71	0.00	2316.11
1991-92	239.39	214.68	0.00	817.35	90.25	265.25	237.87	0.00	905.65
1992-93	656.53	14.89	0.32	1245.70	94.33	695.99	15.79	0.34	1320.58
1993-94	981.09	0.02	0.00	1887.55	100.00	981.09	0.02	0.00	1887.55
1994-95	1021.21	0.00	0.00	2071.08	106.98	954.58	0.00	0.00	1935.95
1995-96	1295.22	0.00	0.00	2187.29	114.80	1128.24	0.00	0.00	1905.30
1996-97	741.47	20.51	0.00	1641.35	123.43	600.72	16.62	0.00	1329.78
1997-98	6765.78	141.07	0.00	7786.66	129.62	5219.70	108.83	0.00	6007.30
1998-99 A/C	8739.24	215.41	14792.79	34523.72	138.46	6311.74	155.58	10683.80	24934.07
1999-00 –RE	7950.00	300.00	15990.00	24840.98					
2000-01-BE	5538.00	245.00	10789.00	16876.00					
Avg growth						16.40	-12.43		30.22

Capital account figures for state sponsored schemes (table 15) again shows a large rise in M&PH while smaller or negligible rises in FW and WSS.

Table 16: State sponsored schemes (loan a/c)

Years	Current			Constant	
	WSS	Total	Deflator	WSS	Total
1990-91	1361.05	1361.05	88.94	1530.30	1530.30
1991-92	6847.00	6847.00	90.25	7586.70	7586.70
1992-93	3696.02	3696.02	94.33	3918.18	3918.18
1993-94	3376.00	3406.00	100.00	3376.00	3406.00
1994-95	3288.00	3318.00	106.98	3073.47	3101.51
1995-96	4452.00	4682.00	114.80	3878.05	4078.39
1996-97	5897.00	5907.00	123.43	4777.60	4785.71
1997-98	1682.96	1682.96	129.62	1298.38	1298.38
1998-99	7843.86	7843.86	138.46	5665.07	5665.07

Source : Finance Department , GOK

The loans under state sponsored schemes (table 16) show that the loans were allotted only towards WSS. It is likely that these were also grants/loans to the GOI from agencies like the world Bank and other bilateral donors. This can be followed up separately.

Table 17: Central plan schemes (Rs. In Crores)

Years	Current			Constant	
	WSS	M&PH FW	Deflator	WSS	M&PH,FW
1990-91	2.00	1.49	88.94	2.25	1.68
1991-92	3.00	1.30	90.25	3.32	1.44
1992-93	3.00	1.26	94.33	3.18	1.34
1993-94	3.00	0.82	100.00	3.00	0.82
1994-95	5.00	43.61	106.98	4.67	40.76
1995-96	0.00	58.71	114.80	0.00	51.14
1996-97	0.00	61.65	123.43	0.00	49.95
1997-98	0.00	81.22	129.62	0.00	62.66
1998-99	0.00	60.75	138.46	0.00	43.88
Avg growth					43.74

Source : Finance Department , GOK

The central plan (table 17) also shows a similar feature with small increase over the period till 1994-95 under M&PH head, and then shooting up in the last five years from 1995-96 to 2000-01. WSS has had no moneys expended under this scheme in the last five years while it is more or less fluctuating and in smaller measure for MPH and FW.

These are funds made available through the budgets. This paper has not gone into the issue of the efficacy of these allocations—that is an important, but distinct question that must still be examined.

6. By Way of Conclusion

Such studies of local budgets are essential if the public is to take part in informed debate on matters of health policy. But it is difficult because the data are out of reach of the ordinary citizen. This is a study we had undertaken for the GoK which set up the Task Force on Health and Family Welfare. We were assured that the data required would be made available.

No one said that data would not be given. Yet, few were in a position to actually give the data needed for the analysis. The state has passed a Freedom of Information Act: thus our freedom to get this data is not an issue. Yet, access is a big problem. Finance data, for example the past budget documents of the state government, are not available on the website [www.kar.nic.in], nor in any book shops. Even when they are supposed to be priced publications—and few are—it is difficult to get them. The largest percentage of our time in this study was in chasing the chimera called data.

One reason we could not get data was probably because it was not available. This we found hard to believe in the beginning. But after a meeting in the office of the Commissioner for Health and Family Welfare, attended by concerned officials from the relevant departments, we had no option but to accept this harsh reality. *Much of the required data simply does not exist*[25]. Perhaps nobody outside had made a demand[26] for it before!

It is therefore essential that databases on these matters be created, not only in the concerned departments, but in research institutions as well.

This quick look at some aspects of the finances of the health sector in Karnataka has shown that there has been an increase in expenditures on allied sectors of health—water supply etc. This increase in health related expenditures has taken place in the context of a relatively stable level of expenditure of 6% of total expenditure on medical and public health. Is such stability adequate given the requirements of the population for health services? An analysis of finances alone cannot answer this question. To see if

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[25] How the department decides upon priorities in this situation remains a mystery that needs to be clarified. Could we argue that decisions have been arbitrary? If that is the working hypothesis, then how would the department go about refuting it?

[26] Here Karnataka has much to learn from the way the Right to Information demand has become a movement in Rajasthan—seen as a more backward state—through the *jan sunwais* held there.

this level of expenditure is adequate, one needs an acceptable norm. This we do not have.

The devolution of finances to local bodies needs to be examined as well. The accounts we have seen do not take into account the local tier of government following the 73rd and 74th amendments—because there are, in any true sense, none. Today, there are expenditures in the district by the state government agencies—but these are not expenditures of the local governments—except perhaps in an accounting sense as these bodies may have passed resolutions to incur the expenditure[27].

Table 18: proportion of district outlays to state receipts (in % terms)

Details	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
Proportion of district outlays to total revenue receipts of the State	12.36	12.54	13.92	12.88	12.65	12.85
Proportion of district outlays to total revenue expenditure of the State	11.98	12.78	13.35	12.97	11.93	12.53
Proportion of district outlays to total receipts (capital and revenue) of the State	9.08	8.27	9.32	10.38	9.33	10.81
Proportion of district health allocations to total health expenditure in the state	35.78	39.71	34.04	26.87	21.50	17.21

Source: compiled from Finance Accounts, GoK

We have calculated the proportions at constant prices for the district outlays as given in the Link documents for the last six years. From the second data set, giving data for the decade of 1990s, the revenue receipts, revenue expenditures and total receipts of the state was taken.

It is seen from the above table that the proportion of total district outlays to the total revenue receipts of the state is hovering around 12.3 to 13%, with no substantial rise over the years.

Similarly, the proportion of total district outlays to the total revenue expenditures of the state also shows a figure of around 11 to 12%. As a proportion of district outlays to total receipts of the state shows a lower figure of around 9% over the years.

The more worrying figure comes with the proportions of district health allocations to the total health expenditures made at the state level. It is seen that a share of nearly 35% in 1992-93 has steadily fallen over the years to a low of 17% in 1997-98. These were the years in which decentralisation was supposed to be gaining momentum in the country. Where health is

[27] When we look at the proportion of expenditure in the district to total departmental expenditure, there is a big difference between the health and education departments. A far larger share of education expenditure takes place at the district level than in the health department. There is much scope to decentralise in the health department.

concerned, in Karnataka, these figures suggest that decentralisation was being rolled back, if these numbers are any indication.

Considering that health as a proportion in total social services sector has only a small share, as seen earlier, the above figures are to be taken seriously to understand how much of the money is really flowing down to the districts for the improvement of the health sector.

The priorities are not set by the local governments, and the power to approve does not vest with them. They simply pass resolutions to justify what the state government departments have decided to do. It is thus not possible to make any statements about their relative efficiency or effectiveness in the absence of actual experience of devolution of fiscal responsibilities. But a system that keeps these bodies out of health care is likely to be a system that will fail—and the existing top down one has failed. Why not try a truly decentralised system?

Loans have been an increasing part of the financing of all programmes in the state, not just health. The loan burden is increasing, but it has not been possible to calculate the health sector's exact share in this loan burden.

The finance data also suggest that the state, in financial terms, is becoming increasingly more susceptible to financial stress. The CAG's civil report no 3 of 1999 shows this clearly.

Much of this is tentative. In depth studies of the integrity of the budget process—for example, to what extent do allocations differ from expenditures, at what level and by what processes are decisions made and so on, are essential for a deeper understanding of health—and other developmental—finances.

And such a debate must involve large parts of our population—not just bureaucrats and economists, but the people themselves. People's representatives, especially those from the depressed classes and women, who now have a presence in these bodies, must be involved in such debates. They have an electoral responsibility, and must be given all the support needed to take part in this important debate. How this is to be made possible will be an interesting question—and challenge.

The budget analysis presented in this monograph—tentative though it is—presents a base for such discussion. It is when questions are asked, when people demand answers and solutions, that such analysis can begin to make an input to policy. Till then, it will remain in solitary and splendid isolation from reality. What we can claim then, is to have made a beginning, to have cut the Gordian knot where such debate is concerned. We look forward to where this will take us.

GOVERNMENT OF KARNATAKA

TASK FORCE ON HEALTH AND FAMILY WELFARE

A Commissioned Research Study

PEOPLES PERCEPTION OF PUBLIC HEALTH CARE SYSTEM IN KARNATAKA

—

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The research team of the Centre For Social Development worked hard to collect and analyse data in a very short period and deserve all appreciation for the good work.

It is hoped that the report would be found useful by all those interested in improving Public Health Care Services in the State.

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PEOPLES PERCEPTION OF PUBLIC HEALTH CARE SYSTEM IN KARNATAKA

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Background

India had a rich traditional health care system during pre-colonial period known as `Ayurveda'. It enjoyed superiority over folk lore and tribal medicine due to its scientific approach and research system. Ayurveda also dominated over unani and homeopathy the two foreign medical systems that prevailed then because of its wider societal acceptance.

The Unani system of medicine entered India along with the Moghuls and enjoyed their royal patronage while homeopathy entered India through travellers from Europe during pre-colonial period. Perhaps, there existed stable relation between the local level investment in health care and the size of the local community. This investment was probably limited to training of skilled man power to sustain the health care services profession to the future generations.

During the colonial period the British, the French and the Portuguese brought with them new systems of medicine primarily for their own use. It was the East India Company that first initiated the process of establishing the modern Allopathic health care system in India by utilising the services of their army doctors which also often catered to the needs of the native elites. Patronage and promotion of Allopathy by the Britishers and then by the native rulers resulted in gradual transformation of the attitude of the people who considered the imported health care system accepted by the rulers as superior to indigenous medical system. This attitudinal change among the people might have gradually diminished the importance of Ayurveda in India. The States controlled by the native rulers under the influence of the foreign powers or controlled by the foreign powers themselves allocated increasing public resources to health care which were mainly directed to Allopathy and Homeopathy. This brought in the transition from traditional indigenous system to modern imported system of

medicine. The transition, however, was mainly confined to urban area and better off section within urban area.

Independent India essentially pursued the same policy of the colonial rulers. The Allopathy system needs heavy investments in the buildings, medical-surgical instruments, in pharmaceutical industry and in training of medical and para medical personnel required. Since the focus of planning and development of the modern health care system was concentrated on building of sophisticated medical schools and hospitals, was of little help to revive Indian System of Medicine. This has led to greater emphasis on curative-clinical services and their concentration in urban areas. The urban services are better equipped with sophisticated technology and are mainly serving the better off sections. The globalisation process is gradually unfolding and is indicated by the state of the art corporate hospitals that are being established mostly in the metros that further increased the wide gap of accessibility to health care services to common man particularly more in rural areas where about 70 per cent of population live. It is sad reflection on the earlier policy not to bother about modernising and mainstreaming Ayurveda, Unani or folklore practitioners who were serving the vast rural population by licensing them.

There was profound impact of Chinese experiments with `barefoot doctors' concept on Indian thinking. Srivastava Committee Report in 1975 laid emphasis on rural public health. It suggested the deployment of semi professional health workers similar to Chinese barefoot doctors. It also suggested the development of a referral system through a hierarchical system of urban specialised facilities catering to the needs of rural population on referral. There was also pressure on the government to improve the health status of largest segments of the population who are poor and are in rural areas. The key indicators of health like Infant Mortality Rate (IMR) and Crude Death Rate (CDR) clearly revealed the impact of this policy. For example, in 1970 the estimated IMR (SRS) was about 130 for the country but it was higher in rural (136) as compared to only 90 in urban areas. In 1978 IMR for India declined to 123 but hovered around 130 in rural areas while urban area witnessed a sharp decline to

69. The IMR estimates for Karnataka at this period, were 90 for rural areas, 58 for urban and 82 for the State as a whole.

The World Assembly at Alma Ata in 1978 declared that health is a fundamental human right and provision of Primary Health Care to all should be the strategy to reach the goal `Health For All by 2000 AD'. The declaration to which India was a signatory gave new thrust to the process of health care planning in India. It became imperative to think of an alternative strategy to ensure Health For All by 2000 AD.

The National Health Policy

The National Health Policy 1983 announced in this background recommended that IMR should be brought down from 120 to 60, CDR from 15 to 9 by the year 2000 AD. The policy statement talked about `heritage' but pulls the rug from under by stating "however, the allopathic system of medicine, in a relatively short time, has made a major impact on the entire approach to health care and pattern of development of the health services infrastructure in the country". Section 7 and 18 of the policy dealing with medical research and education does not mention other systems of medicine. Similarly it also is silent on the need to train and license the village medical practitioners of indigenous system and the need for integrating traditional systems with modern.

However, it is noteworthy, that several health indicators after Alma-Ata conference in 1978 have shown remarkable improvements. The disease specific interventions have brought sharp fall in Crude Death Rate from an estimated 28 during 1941-51 to only 9 during late 90s. Planned development in the country also made significant contribution towards reduction in death rate. The Expectation of Life at Birth, as a consequence of decline in CDR and IMR has increased from about 40 years in fifties to over 60 in the nineties. The achievement, though impressive considering the level of other development indicators like levels of living in the country, look pale compared to many other less developed countries who started reforms in health sector along with India. The World Assembly in 1978 was to basically address to the wide disparities

observed between more developed and less developed countries and desired to bridge them by 2000 AD when the goal Health For All was to be achieved. Despite improvements in health indicators differentials have persisted. (Table 1).

Table 1 : Global Disparities in Health in Selected Countries: 1997

Country	Mean population growth (%)	CBR per 1000	CDR per 1000	IMR	Life Exp. At Birth (years)	
					M	F
China	1.0	17	7	31	69	72
Indonesia	1.7	24	8	66	62	64
Myanmar	1.9	31	12	49	56	62
Bangladesh	2.0	31	11	77	55	58
Pakistan	2.8	39	11	91	59	61
INDIA	1.9	29	10	75	60	59
Japan	0.2	10	7	4	76	83
Rep.of Korea	0.9	15	6	11	69	77
Thailand	1.1	18	7	32	66	72
Nepal	2.3	35	12	79	54	54
Sri Lanka	1.5	20	5	17	70	74
MDC	0.1	11	10	9	71	78
LDC	1.8	27	9	64	62	65
World	1.5	24	9	59	64	68

Source: Family Welfare Programme in India : Year Book, 1996-97.

Disparities in Health Indicators

The disparities observed among different countries indicate the extent of success achieved in health sector. As mentioned, though there are remarkable improvements in health in India over time, compared to many countries like China, it looks less impressive. Within the country there are more pronounced differentials in health indicators across the states (Table 2) and within each state there are wide differentials by rural/urban residence by gender and social class even though reliable estimates are difficult to obtain.

Table 2: Health Situation in India and Selected States

State	IMR 1996			CDR 1996			Maternal mortality ratio 1986	Sex Ratio 1991	CBR 1996
	R	U	T	R	U	T			
India	77	46	72	9.7	6.5	9.0	580	927	27.5
AP	73	38	65	9.2	5.9	8.4	394	972	22.8
Karnataka	63	25	53	8.6	5.4	7.6	439	960	23.0
Kerala	13	16	14	6.3	6.0	6.2	247	1036	18.0
Tamil Nadu	60	39	53	8.7	6.6	8.0	372	974	19.5
UP	88	67	85	10.7	8.2	10.3	920	879	34.0
Rajasthan	90	60	85	9.6	7.1	9.1	627	910	32.4
MP	102	61	97	11.8	7.6	11.1	507	931	32.3
Bihar	73	54	71	10.6	6.9	10.2	813	911	32.1
Orissa	99	65	96	11.2	7.5	10.8	844	971	27.0
Maharashtra	58	31	48	8.7	5.4	7.4	439	934	23.4
Gujarat	68	46	61	8.3	6.2	7.6	373	934	25.7

Source: 1. Family Welfare Programme in India, 1996-97, Government of India.
2. Mari Bhat P.N., 1995.

However, estimates on IMR in Karnataka vary between 29 reported for Dakshina Kannada to 79 for Bellary. The persisting disparities indicate that there is enormous scope to improve accessibility to Primary Health Care among all sections of the society at district level. Further improvements will be, to a large extent, determined by the efforts made by the States to bring in equity in health care services and enhance accessibility to these services.

The declining sex ratio observed in Karnataka is a more complex issue entangled with social, economic and cultural factors in the society. But there are broad indicators to suggest that they emerge from neglect of health care to women in general, right from the infancy to old age. The latest data set available

in National Family Health Survey - NFHS II reveal for example while IMR among females is lower, under five mortality of girls is much higher than it is among boys - 36.7 and 24.9 respectively. Maternal mortality is still unacceptably high in India and Karnataka also and about 42 per cent of women suffer from anemia of different kinds. Nutritional supplements - Iron and Folic Acid tablets (IFA) are supplied for 3 months to all pregnant women in the state to improve their nutritional level and improve the weight of the baby to be born. The NFHS II data also show that about 70 per cent of Children aged 6 - 35 months suffer from anemia of varied forms.

These few findings are distressing and raise the question of accessibility of health care services and family welfare services provided by the state. There is an impressive expansion in health infrastructure – there is a Primary Health Centre for every 21,548 population in rural Karnataka and there is a Sub-Centre manned by female health worker known as ANM for every 4,237 population, If they are effectively catering to the public, health status of rural women and children who are primary targets should have been much better than what is reflected in NFHS II survey. The findings reveal that about 83 per cent of women respondents reported that no health or family planning worker had visited their home during last year (12 months preceding the survey) that says a lot about accessibility and the quality of health care that the state boasts of providing. It also may indicate that female health workers may be concentrating their visits to potential acceptors of contraception sterilisation, in particular. In other words health care services are biased towards contraceptive services.

In brief, what emerges from this background discussion so far is that over the years allopathic system has become predominant system that has received maximum support of public policy and resources. Though there is an effort to revive the Indian System of Medicines not much is seriously done to improve its outreach in rural areas where there is an urgent need. The disparities observed across states in India, as noted, certainly indicate extent of efforts made to reach the set goal in health sector. The disparities also loudly speak of the inadequate outreach and perhaps also the quality of care provided.

Reliable health indicators at district levels in Karnataka as in many other states are scarce. But available information suggest that Coastal Hilly districts like Dakshina Kannada, Coorg and Uttara Kannada districts have performed relatively better as compared to some of the Northern-Southern maidan districts like Bellary, Gulbarga, Raichoor, Bidar, Kolar and Tumkur. The recent Rapid Household Survey conducted in Karnataka to improve understanding of Reproductive and Child Health Survey at district level provide valuable insights into the pattern of delivery of Public Health Care Services to the rural population in particular. For example, the grass-root level health workers who are supposed to visit every household in their allotted area to enquire/provide a variety of services on a regular basis had visited only about 36 per cent of households in the State (Kanbargi, et.al., 1998). In other words, a large majority of households were deprived of these services. An examination of this data by districts revealed that in Gulbarga only 13 per cent, in Bidar 18 per cent and in Raichur 18.3 per cent of the households were able to receive the services of grassroot health workers at their door steps and on the other hand it was 87 percent in Kodagu, about 50 per cent in Dakshina Kannada and 60 percent in Mandya districts.

The Present Study

Public Health Care Services in Karnataka are provided through a well organised health Centres established in rural areas. According to Human Development Report, Karnataka - 1999, for every 21,548 population there is a Primary health Centre (PHC). Each PHC has about 5-6 sub-centres and each sub centre on an average caters to the needs of about 4237 population. In other words there is a health worker for every 4000 population in rural areas who visits all the households in her area (about 88 households) provide ante-natal, natal and post-natal care to women, immunisation to the newly born against preventable diseases, supplement the nutiritional status of pregnant women and children which are designed to improve health status and survival of rural women

and children. She also provides some curative services to people for simple ailments.

In addition to the female health workers (ANMs to LHVs) there are male health workers, health Inspectors at PHC level who have to identify persons suffering from fevers to check whether there is Malaria/Dengue, keep birth/death records, participate in conducting school health programme, educate community on epidemics and improve environment. Looking at the duties assigned to the para medical staff one may wonder how many of the assigned responsibilities are appropriately carried out by them. The RCH Survey conducted in Gulbarga district reports that only about 27 per cent of all deliveries were conducted in health institutions and among domiciliary births accounting for 73 per cent of total, a great majority of them 71 per cent were conducted by either village Sulagitti (Untrained Dai) or village elderly women. On the other hand in Dakshina Kannada 77 per cent of all deliveries were conducted in health Institutions. Among the home deliveries (23 per cent) only 33 percent were attended by either untrained dai or some elderly woman of the village. Why this variation in the delivery of health care services across the districts. Whether the quality of care provided make differential demands or people in general do not have much faith in public health care services? Is there any alternative such as indigenous system of medicine that people prefer? To understand widely, differing utilisation of public health care services an effort is made here to assess the peoples' perception of Public Health Care Services and Indigenous System of health care in Karnataka.

Objectives

The following are the main objectives of the study.

1. To study peoples' perceptions regarding public health care services / indigenous health care services available in rural setting.
2. To study the utilisation of health care service pattern among different districts and different social class within district both in respect of public and indigenous health care.

3. To identify the inadequacies in the public health care services that need to be rectified to make them more "people friendly" and more acceptable by all sections of the society.
4. To identify causal factors for poor utilisation and suggest remedial measures.

The Sample

The study was conducted in three districts of the state. The sample selection was based on the following factors:

1) Percent girls dropping out of school during 1st – to 7th standard.
2) Literacy rate of females recorded in 1991 Census.
3) Crude Birth Rate recorded in recent RCH Survey 1998.
4) Infant mortality estimated by Registrar Generals Office.
5) Crude Death Rate estimated for recent years reported in HDR, (K), 1999.

Based on these variables Udupi, Tumkur and Gulbarga Districts were selected.

Table 3 : Sample Selection

Sl No	Variables	State/Districts			
		Udupi	Tumkur	Gulbarga	Karnataka
1	Percent girls dropping out during 1-7 years of schooling	6.07	43.06	61.62	46.28
2	Literacy Rate (females) 1996	78.50	51.10	30.91	52.65
3	Crude Birth Rate (Rural)	21.4	24.7	31.9	24.4
4	Crude Death Rate (R+U)	7.0	8.2	10.7	8.5
5	Infant Mortality Rate (R+U)	29	64	59	74

Source: 1, 2, 4, 5 from Human Development Report, Karnataka, 1999.
3 from Reproductive and Child Health Survey, 1998.

Data and Methodology

Essentially such studies would be based on the data collected from focus group discussion or a household survey covering adequate number of households. Considering the short duration of time available, the present study is based on both-data collected from focus group discussions and supplemented by a representative household survey. In order to make the findings of the study more meaningful relevant information was collected from several health functionaries such as medical officers, para-medical staff and other health authorities like DHO, Joint Directors posted at Divisional head quarters of the State. Information was also collected from some knowledgeable persons like Vice Chancellors of Universities, Academics and Political Leaders like Zilla Panchayat Presidents.

Section I

The Study Area – Some Insights

The three selected districts are situated in three developmental phases – one in advanced stage - Udupi, one in backward stage Gulbarga and one in between these two – Tumkur. It is often argued that regional imbalance in development is a major problem that can be solved to a large extent by holistic approach. Political power is said to play an important role in bridging the gap between the two extremes of development. Gulbarga district has remained backward since the formation of the state despite being politically strong. In the contemporary situation there are five ministers in the state government who hail from Gulbarga and two of them may be considered as heavy weight politicians. Health Minister himself is from this district. Earlier during formation years a Chief Minister was from Gulbarga district who was widely known for his administrative skills and his honesty. Despite such advantages the district has remained educationally, socially and economically backward.

Our discussion with the Vice Chancellor of Gulbarga University and some academicians revealed that one of the major factor for poor progress made in Gulbarga and neighbouring districts – Bidar and Raichur is poor quality of

education imparted which hinders progress in every field. Even few brilliant students would move out as soon as they complete their education and there is hardly anything in this part that will attract outside talent. In fact, if any officer from Bangalore is transferred to Gulbarga, it is considered as a punishment posting.

Our prolonged discussion with Chief Executive Officer of Zilla Panchayat revealed a different story. He reported that the district has some good staff in health department. He often receives representations from public not to transfer the person as he is good with the people and his shifting would cause inconvenience to them. Such representations certainly suggest the cordial relation between the community and health care provider but they are exceptions.

Udupi, on the other hand, presents a different scenario. Educated population with exposure to other cultures. particularly with Mumbai – financial capital of the country has made remarkable impact on the district. Several studies have pointed out that its closeness to Kerala has made it different than other districts in the state. Excellent road and transport facilities, efficient administration and well informed public make an ideal combination to be in the forefront in the state in education, health and gender issues. Most interesting observation in the district is the contribution of private sector in two vital areas education and health that have made the district unique. Though the private sector is often abused as governed by "profit motive" without any social obligation, Udupi presents a different picture. Health and educational services of private sector are accessible to all irrespective of the ability to pay.

Tumkur district presents a moderate picture – neither good nor very bad but within the possible limits for improvement as fast as one wants. The district has some very good health care institutions and some not good ones are situated in the border area of Andhra Pradesh. Nearness to Bangalore has provided good choice to upper class/caste population to better health care whereas majority of rural population 80-90 percent depend on the public health care services. The Medical College Hospital situated at the outskirts of the

District Town caters to people living in the vicinity of the college hospital as revealed in our focus group discussions held in Gubbi Taluk. But in Madhugiri and Kunigal Taluks none mentioned they ever had gone to this college hospital or were adviced to go there by any service providers. Gulbarga also has a medical college but none of our focus group discussants and respondents in our household survey, nor any medical officers/ANM/LHV mentioned of availing the services or referring the sick to the Institution for treatment suggesting its limited outreach.

The presence of private sector health care services and their accessibility to general public at an affordable cost is an important factor in improving the health status of people. The following table provides some idea on the utilisation of private and public sector health care services in selected districts in Karnataka (Rural areas).

Table 4 : Private – Public Health Care Services Utilisation in Selected Districts

Sl No	Treatment sought for	Tumkur		Dakshina Kannada		Gulbarga		Karnataka	
		Pvt.	Public	Pvt.	Public	Pvt.	Public	Pvt.	Public
1	Pregnancy complications	47.8	50.0	67.0	34.0	54.9	39.2	56.8	39.5
2	Delivery and post delivery complications	20.0	49.2	68.5	25.9	56.2	37.5	54.5	34.3
3	Babies with diarrhea	51.3	20.8	50.0	25.0	60.8	19.5	55.4	21.3
4	Babies with pneumonia	64.1	28.2	72.3	23.4	56.5	26.0	70.4	21.6

Source: RCH Survey, 1998.

The information provided in Table 4 for selected three districts in Karnataka show peoples' preference for private sector services even in rural

areas. It is widely known that private health care services are generally concentrated in Towns and Cities and for utilising them one has to visit town or City that will certainly prove more expensive. In addition to travel costs, private health care services are relatively more expensive as they work with profit motive. Even then, if the general public opt for them there must be something wrong with the Public Health Care Services.

The description of some of the Institutions of Public Health Care Services presented below provides a glimpse of the way they function in rural areas of study area.

How Our PHCs Function

> Gulbarga : "We visited a PHC according to pre planned schedule at 10.00 A.M. The PHC was locked. We were shocked to see the locked PHC where it was prominently written - Working Hours – 8 to 12 morning and 3 to 5 evening.
>
> After a wait for half an hour an ANM alighted from a jeep, came to the PHC, took the key from the fixture of the Portico light and opened the door. The whole building – newly built with vast vacant area around, was stinking with smell of the toilet. We were told that the water supply to the PHC has some problem since a week and even though the MO has written to Panchayat office (which is responsible for water supply) no repairs has been carried out. Later, when we met the Village Panchayat Chairman and other members we learnt that they are not aware of it.
>
> The Medical Officer was on leave as he was getting married. Arrangements were made for a substitute to the MO to take care of patients. He came around noon and reported that he is on a contract basis appointment' and as such has no control either over staff of his PHC or over of the incharge PHC staff.
>
> The ANM who opened the door reported that they were informed by DHO about our arrival and the staff was asked to be present at PHC in the morning. When asked at what time the PHC starts every day she said around 10to11 o'clock as it is located at an inconvenient place and getting public transport is very difficult. On an average about 10 to15 out patients come for consultation when PHC remains open. Often people are not sure whether PHC is open and prefer other sources for health care when needed".

The PHC is constructed at a distance of about two kilometers from the village. It was constructed at this place because a resident of the village donated this land for PHC. On completion of the construction the old PHC building in the

midst of the village was shifted to the new building and with this the problems started for the people who needed health care services. The distance from the village to PHC has to be covered by private jeeps that operate in the village. No sick person would prefer to stay or no woman would like to deliver or undergo sterilisation here because of insecure feeling. It is isolated building and scary at night.

The community members reported that the old building was very convenient and the then Medical Officer was staying in the village for long till he was transferred. The new M.O. travels from Gulbarga a distance of about 30 kilometers and often he remains elusive. The number of out patients visiting PHC, as a result, has drastically come down. The location of the PHC is also held responsible by the staff members to be irregular to their work and people are not sure whether the Doctor has come or other para medical staff is present in the hour of their need. Naturally they prefer private health care services that are ensured any time. It was not surprising that during April 2000 to December only 6 deliveries were conducted in the new building and the rest 300 were at home.

The above noted observation is not an isolated case. Out visit to another PHU in Gulbarga district and Community Health Centre and a PHC were similar as depicted below:

> The Research Team reached here by 10 A.M. There was only an Attender and no responsible staff member. The Attender, the only person in the PHC was not aware of our visit nor about reasons for the absence of the I/c MO and other staff. The PHC had conducted Tubectomy Camp two days earlier and there were six sterilised women waiting (who had come from different villages). One of them had developed complications and was advised to go to Gulbarga for consultations by Head Quarters ANM.
>
> The Head Quarter ANM who is supposed to provide care to the sterilised women had gone on leave as her husband seriously took ill and she admitted him in a hospital in Sholapur. The MO had not come to the PHC for a week without any reason nor informed any authority like Taluk Medical Officer. He resides at Gulbarga situated at a distance of about 45 kms. Journey takes about 2 hours because of bad road conditions.
>
> We contacted the DHO and reported the situation who in turn telephoned Taluk Medical Officer who rushed to our place. He expressed

his helplessness as he had warned the MO a couple of times. We also learnt that the local MLA also had warned him to be punctual but of no consequence. In-charge MO was not able to improve his functioning. The Taluk Medical Officer who appeared to be committed and honest also expressed his helplessness regarding the verification of drugs in the PHU as the Pharmacist never met him nor showed the stock during his last three visits.

Our visit to another PHC situated at a distance of about 60 kilometers near Maharashtra border was also disappointing. The PHC building was locked and the only person present there was an Attender who could not explain why the PHC was locked on a working day. The Research Team tried to contact the Taluk Medical Officer on phone but the only phone in the vicinity was not working because of power failure. The exchange functions only if there is power supply as they do not have battery back-up.

The Research Team decided to visit a Community Health Centre situated in a Taluka place about 20 kilometers from the PHC. The CHC was an apology to a health centre. There was no water supply and no toilet. The Medical Officer present reported that he lives in the Quarter of CHC but quarters also do not have water supply nor toilets. He uses the toilet in the inspection bungalow situated near by.

Our prolonged discussion revealed that the CHC has several problems indented drugs are not supplied. The new building constructed to improve the facilities to the clients has remained unused during last five years because of some legal problem. It was reported that there is lot of political interference in posting of staff, their transfers, etc. which is hindering the functioning of CHC. Can this CHC under such circumstances, be considered as first referral hospital?

The Research Team went to another PHU situated in a remote place. One has to cover about 35 kilometers of which about 10 kms distance was to be covered by jeep because of bad road. The PHU was locked and an Attender was sitting outside with some tincture iodine and cotton to treat some wounds of people (for a fee of course) who may visit the PHU. He opened the building – a newly constructed one. The ANM had gone for a shandy to buy few necessities but the Medical Officer had kept a leave letter in the attendance register of the

PHU. In case some visitors like us come there they should know that he is on leave. The MO travels from Gulbarga and naturally he would not like to take the hazardous journey every day. But the village residents told that the MO tells them that he has several villages to visit and he cannot come to this village every day naturally. The Medical Officer and other staff were informed well in advance of our visit.

The poor impression that we had about the Public Health Care institutions in Gulbarga was to some extent changed when the Research Team Visited another PHC having two Lady Medical Officers and a male Medical Officer some thing rare in the district. It was a husband-wife team and supported by another LMO. The PHC was having child immunisation camp in the PHC on the day of our visit - a weekly programme regularly followed. There were some 10 - 15 children who had come from surrounding villages for immunisation.

The MO and his wife are from Mandya district working in the PHC for last 8 years. The staff position is excellent with only one or two vacancies. He has been a committed officer that naturally has lot of impact on para-medical staff. Every week the ANMs send blood smears for testing to the laboratory that keeps the MO informed about their visit to the households in the allotted villages. Surprisingly he was aware of high IMR in his PHC area and was systematically collecting details of each infant death from the ANMs. Based on this information we estimated IMR in the range of 60 - 70. Main reasons reported for IMR was prematurity, pneumonia and low birth weight. The average number of out patients visiting the PHC was in the range of 50 - 60 every day. Since the MO and his wife were residing in the quarters, their services were ensured for 24 hours to the needy people. Our visit to 3 sub centres of this PHC was also valuable as the ANMs were on their routine – one was attending a delivery, another was conducting an Antenatal Care Camp (ANC) in the sub centre village and the third had just returned to her sub centre quarter after completing immunisation camp in a village. The decentralised way of functioning - ANMs immunising children in their village, ANC camp in a sub-centre village itself with a Lady Medical Officer present and attending a delivery case was very surprising in

the background of our experience in other health centres. It reduced the pressure on PHC resources and only emergency care was provided there. There was a resemblance of quality of care and its access was ensured to all. We were told that the local community served by the PHC is very poor and depends only on Public Health Care services. The PHC staff, under the circumstances, thought that they have to discharge their responsibility to the best of their abilities and it was visible. But such PHCs are very few in Gulbarga district.

An effort will be made here to highlight the way Public Health Care Services are delivared in Udupi - an advanced district. Our visits to randomly selected Primary Health Centres, Community Health Centres and Sub-Centres were a contrast to our observation in Gulbarga district.

> "We arrived at this PHC, without prior intimation, at 9.30 A.M. We were surprised that the PHC was busy functioning - MO, Lab Technician and other staff were attending the patients. On an average there are 40 – 50 patients a day. The young MO here is appointed on a contract basis but is very regular to his work and fully committed.
>
> The PHC building though old is very clean. The MO's chamber had privacy for patients. It had a clean wash-basin, running water, soap and a clean towel. The toilet was also clean. All the records were up-to-date and well maintained. There was telephone connection and it was working. The PHC had displayed prominently at the entrance that if any visitor to the PHC had any complaint on its functioning they can get a free post card to write the complaint which they can mail to the concerned authorities whose addresses were mentioned in bold letters.
>
> The MO reported that the drugs supplied to him are of very good quality and adequate. The drugs that private sector hospitals provide to their patients is certainly not of better quality than that of PHCs. Therefore, the visitors to the PHC are happy that the centre works not only very efficiently but also supplies quality drugs. He had only one complaint - that the patients who visit his PHC have simple ailments while he was interested in attending to chronic/serious cases that will enhance his knowledge. For this, he goes to a Private Hospital in the night-not for earning more money but to improve his understanding".

The Research Team's visit to a Community Health Centre in Udupi district was equally pleasant.

> "We reached this Community Health Centre by 10 A.M. The Medical Officer, and his two colleagues LMOs were busy attending the patients. The CHC building was old but well maintained. Regular water supply, clean toilets, telephone and busy staff all indicated the good health of the CHC. There was a solar water heater.
>
> The Medical Officer had joined recently and he informed that as soon as he joined he sent letters to all Panchayat officers in his jurisdiction informing them that he has joined and is staying in the quarters of the CHC and available for consultation 24 hours. Our visit coincided with Christmas and some staff had taken leave for the festival. The M.O. called them on phone and instructed them to reach CHC as soon as possible to meet the visitors. To our surprise those on leave arrived within half an hour indicating the command of respect the MO had on the staff and their attitude to work".

The number of out patients visiting CHC varies between 60-70 a day but only 35 deliveries were conducted at CHC and 6 at home by ANMs during April 2000-December 2000. An important reason for this is plenty of Maternity Homes, Mission Hospitals that have been established in rural areas and evenly distributed in the Taluk that has improved accessibility enormously during last 7-8 years in the area. These services are available either free or at an affordable price.

In order to have some insights in the delivery of Public Health Care Services we visited a village by crossing a river just to see how effective is the outreach services. When we visited the village most of the men folk had gone out for fishing. We enquired with the women how they manage emergency deliveries at night? We were surprised that just a telephone call to Manipal Hospital will ensure an Ambulance, which will take the pregnant woman to their maternity home for safe delivery. During last one year very time they had called the number, had been ensured the service without any delay.

The choice of service and assured service have certainly made a big difference to the health status of people of Udupi district as compared with others. The choice is judiciously made by the educated well-informed public

here. The Public Health Care Services are confronted with the problem of resources required to upgrade their technology to compete effectively with private sector which they find it difficult. But certainly they are serving the poorer sections given the constraints, to the best of their abilities, efficiency and punctuality are part of the public health care services.

Our intensive discussion with ANMs revealed that general public is well informed about health care. They reported that if there was power cut on the previous day to the immunisation day, few mothers would prefer to go to a private doctor for immunising their children doubting the potency of the vaccine. ANMs will have tough time to convince others that the potency of vaccine is well assured in the new type of refrigerators that they have. On the other hand we saw in Gulbarga, the thermometer showing the temperature of the refrigerator was not working for several days, but the medical officer had recorded the appropriate temperature in the diary every day. Neither the public was aware of this nor the authority entrusted with the responsibility of ensuring potency of vaccine bothered about it.

Public Health Care Services in Tumkur district presented a moderate scenario – not comparable to Gulbarga or Udupi. Our visits to several institutions in different parts – Madhugiri, Gubbi and Kunigal revealed the following.

> "We reached this PHC in Tumkur by 9.30 A.M. All the staff including ANMs/LHVs were waiting for us. The Medical Officer was a young man with 8 years of experience in PHC. He was in a neatly pressed white coat and any visitor would recognise him as a Doctor.
>
> The PHC was crowded with patients. But lacked many facilities. There was no running water. Toilets were there but not clean. The PHC did not have a compound wall and in the evening cattle, drunkards squatted in the compound creating scare among inmates (Delivery cases).
>
> All the female health workers complained that they are not supplied with the eligible couple registers for several years, chlorination of wells, spraying of DDT has been stopped since three years. The ointment and paracetemol supplied to them is inadequate – does not last even for 4 months but people demand for at least these minimums during their rounds to the village.

It was surprising with all the problems the PHC was still attracting patients as seen by the large crowd of outpatients. There are 30-40 patients a day on an average visiting the PHC for consultation and treatment".

Our Research Team also visited a Community Health Centre where new building is coming up under KHSDP at a huge cost. The Medical Officer was busy attending patients. His two colleagues Lady Medical Officers were also equally busy in the old building. The CHC does not have a Gynecologist or a Physician. About 40 - 50 deliveries take place and 20 per cent of babies born there are reportedly under weight. CHC has facility to test blood for malaria only. For hemoglobin and RH-ve patients are advised to go to Tumkur or to the Medical College Hospital on way to Tumkur. Rather than being a referral hospital to other PHCs in the Taluk the CHC is just like any other PHCs in terms of facilities, equipment etc. But the Medical Officers were working here for last 10 years. Housing facility to the staff is available. Water supply is limited. However, there was Telephone and it was working. Tuberculosis is a major health problem followed by Asthma and half of the out-patients have been found to being suffering from these two health problems.

The three scenarios presented above reveal several interesting features.

1) People in Gulbarga are placed at a most disadvantaged situation, as they have to depend mainly on public health care services for all their health needs. But public health care services are most unreliable. The doctor may not be there, the PHC may not open the doors because of several factors and resources spent by clients to reach the PHC/CHC – in terms of time and money may be a waste. The private sector is small, not very committed to serve the disadvantaged section of the society (for example a well known private maternity home charges Rs.5,000/- for very poor women for a delivery or for a complicated delivery minimum of Rs.15,000) and does not enjoy public confidence. The results are very clear the district has remained health poor.

2) As a contrast Udupi district has efficient public health care services though uncomparable with private sector in terms of resources, equipment, technology and their social commitment. The community is highly educated and

can make informed choice. The personnel of public health care institutions regularly attend to their responsibilities to the best of their abilities within constraints of the system in which they work. Public is well aware of it and perhaps it was only in Udupi district that we did not hear a single complaint against public health personnel or institutions. In this district people are very fortunate to enjoy health care services of public/ private sector by choice.

3) The public health care services in Tumkur district are not as efficient as in Udupi nor as bad as in Gulbarga. Health care institutions function regularly and provide services often at a price. As we proceed the role of corrupt practices in the delivery of services will be clear. People in rural parts of Tumkur were unhappy with the way PHCs and the sub-centres are functioning that has lead to Mushorroming of quacks every where to exploit the gullible public. But still people can avail some health care services from PHCs, at least prescriptions though not medicines or treatment. Most of the ANMs regularly make rounds of villages, take blood smears for testing and conduct home deliveries. The private sector, though not very prominent in the interior parts of the district has made its presence felt in Tumkur town and to a lesser extent smaller towns. A normal delivery in a well established maternity home for a rural woman will cost about Rs.3000 and a complicated delivery from scissarian section will cost about Rs.10,000 (considerably lower than charges of private nursing homes in Gulbarga). A rough estimate of a normal delivery in Primary Health Centre would cost about Rs.700-1000. Generally it is believed that public health care services are free and the estimate given above was arrived by averaging costs reported by a representative ANMs in the two districts viz. Gulbarga and Tumkur. In this background we will present the outcomes that emerged from the data collected through household. The household survey was conducted in 31 villages selected from the villages covered by the sub-centres presented in Table 5.

Table 5 : Selection of Villages

District	Taluks	PHCs	SCs	FGDs	No.of Village covered in HH Survey
Udupi	2	8	26	6	15
Tumkur	3	6	41	5	8
Gulbarga	3	8	20	5	8
Total	8	22	87	16	31

Section II

The Household Survey

The household survey covered 82 households from 31 villages in 3 districts selected from different sections of the society focussing more on deprived sections like Scheduled Castes Tribes or isolated houses situated on the outskirts of the villages. The number of villages in Udupi is large compared to other two districts because of the unique village settlement pattern in the area. We also made special efforts to identify isolated areas within the jurisdiction of PHC/SC like a village which can be reached by boat only from the nearest road or a poor tribal belt not well connected by road transport etc.

The selected households for the survey of belong to (24 per cent) advanced castes like Bunts, Gowdas, Lingayats, Reddys and one or two Brahmins. Scheduled Castes and Scheduled Tribes (40 percent) and other Backward Castes (OBC) constituted about (27 percent). There were 5 percent Muslim households and 4 percent of the sample belonged to Jains. 12 of these 82 households (15 percent) were headed by females (Table 6).

The questionnaire constructed for the household survey was quite elaborate consisting of 36 questions. It was designed to provide insights on peoples' preferences for different systems of medicine, their belief in village quacks, witchcraft, worship of temple deity, "Harake", Mantra-Tantra and extent of practice in case, there was a reported episode of sickness. There was also an effort made to understand how the preference for a particular system of

medicine is justified or reasons for preference. Whether the decentralised system which is unfolding slowly in the state has tried to improve the health care services? Whether the respondents were able to voice their grievances against poor public health care services in the `Grama Sabha' meetings in their village during last 5 years? Respondents' views – suggestions to improve the health care services, if any, were also elicited. The elaborate questionnaire took almost an hour to administer to respondents.

Table 6 : The Socio-Economic Profile of Respondents

Variable	Districts			Total	
	Udupi	Tumkur	Gulbarga	Number	Percent
Advanced	3	8	9	20	24.4
OB Castes	20	1	1	22	26.8
SC/ST	9	12	12	33	40.2
Other Religions	3	2	2	07	8.6
Total	35	23	24	82	100.0
Owned land	10	19	15	44	54.0
Owned TV	10	11	14	35	43.0
Tap/piped water facility	18	14	15	47	57.3

System of Medicine Preferred for Treatment

The heads of the selected households were asked when there is an episode of sickness in the family where do they generally go for treatment? The responses are given below:

Table 7 : Preference for Treatment by System of Medicine

Sl No	Variable	District			Total	
		Udupi	Tumkur	Gulbarga	Number	Percent
1	Allopathy - Govt.	9	4	2	09	11.0
2	Allopathy - Pvt.	7	2	9	18	22.0
3	Allopathy Govt + Pvt.	10	5	2	17	21.0
4	Quacks	-	4	5	09	11.0
5	Indian system of Medicine	11	1	-	12	14.6
6	Combinations of 1 to 5 and witch craft, etc.	4	7	6	17	20.4
	Total	35	23	24	82	1000

The contents of the Table 6 needs some clarification. Sl.No. 1 shows on exclusive dependence on allopathy medicine at public health care providers, Sl.No.2 on private practitioners of allopathic medicine and Sl.No.3 indicate dependence on allopathy – provided by public and private institutions. Sl.No.4 indicates treatment by unqualified persons in any system but practicing allopathic system like giving pricks for any ailment and treating with other medicines such as tablets or liquids. The patients reported that they are aware that the `Quacks' are not qualified to practice but they are conveniently located and their services are ensured round the clock at an affordable cost. In case there is a chronic disease or serious problem they will not take any risk with the patients but advise them to go to a Private Clinic with which they are familiar or often they may accompany them to the clinic. Indeed not a single person in either focus group discussion or in household survey reported any complaint against the `Quacks' for contributing additional problem to the sick and suffering by wrong treatment. Looking at the small sample size of people availing the services of these unqualified practitioners the outcome should be cautiously interpreted. But what is surprising is the Medical Officers, para-medical staff of Gulbarga and Tumkur districts are quite well aware of the presence of Quacks around them. They just casually mentioned about their presence as if it is not an issue of any consequence. In fact, presence of `quacks' around Public Health Care Institutions itself is a strong indicator of poor accessibility of health care services and also the poor quality of care provided by these institutions.

The data presented in Table 7 fully supports the earlier discussion on the study area. It clearly brings out that 54 percent of the respondents exclusively rely on modern allopathic system for relief when there is a sickness episode in their household. Indian system of medicine which is showing some presence in Metropolitan cities and large towns hardly has any presence in rural areas of the state except in Udupi. It was reported that rural parts of Udupi still have some practicing Ayurvedic Pundits widely known for their curative skills for even chronic ailments. Homeopathy was not found in all the three districts.

The Table also brings out that only 11 percent of respondents reported to have availed Public Health Care services reflecting strongly on the quality of care provided by them. Given the graphic description of how our Public Health Institutions function the findings are not surprising. It also is to be noted here that people in remote villages feel often `resigned to their fate' and resort to witch craft, Yantra-Mantra because of poor accessibility to any health care whether modern or traditional. This was more so in Gulbarga where public health care services are very poor and private services are unreasonably expensive. In Udupi it was revealed that `Bhoota' belief is still prevailing in some pockets in rural areas and after paying to `Bhoots' they go to a health care provider for treatment hoping to be cured fast.

It should be mentioned here how an Ayurvedic Hospital in a village in Kunigal taluk is functioning. It was placed in a rented room in the village and at the time of our visit had remained closed for the last 7 months as the Doctor was transferred and replacement never arrived. What will happen to some medicines stored in the clinic? None in the village were aware. The historical approach to indigenous system in policy and allocation of resources has not only lead to its near disappearance but more importantly deprived the only choice the people in rural areas would have had in times of their need. The late realisation of the loss and urban elites' experience with over drugging and abuse of anti-biotics is reflected in the half hearted efforts made to revive the system. As an excellent piece of research during early seventies showed, even the few indigenous practitioners by then had almost switched over to modern allopathic system in their mode of treatment. This is reflected in 60 percent of respondents saying that modern allopathic system provides quick relief and appropriate diagnosis of the disease, treatment is given by professionally trained personnel and higher chances of relief and cure.

Those 40 percent who 'otherwise' reported that there are harmful side effects and costs involved are high as such poor cannot afford thought that modern health facilities are more easily accessible to rich people. It was interesting to observe this proportion of respondents was very high in Udupi (40

percent) and only 20 - 25 percent in Gulbarga and Tumkur districts. When specifically asked whether the modern health care facilities are within affordable costs of rural poor only 44 percent reported that they are beyond their reach.

We tried to assess respondents' views on indigenous system of medicine specifically. Do they still think it is popular these days? An overwhelming majority answered in negative as the diagnosis is not competent and therefore people are loosing faith in the system. It was also revealed that competent practitioners of indigenous system are not available now. In this background whether the government should support indigenous system of medicine so that rural poor will have accessibility to it? Surprisingly 85 per cent of the respondents said 'no'. Perhaps it is an indication that during last five decades the society has enjoyed the modern system of health care – however inadequate it is or inaccessible it is. People believe it is a good system though costly and why rural poor should have indigenous system for them? Because it is cheaper?

How respondents perceive the role of village quacks? Do they think that quacks are popular in rural areas? Not a single respondent in Udupi said that there are quacks in their district or their vicinity. In Gulbarga 83 percent said that the village quacks are very popular in their area as their services are ensured round the clock, people can afford the cost of their treatment, diagnosis is based on simple methods and the medicine is supplied by them or is available locally and easily. Their diagnosis is based on their past experience.

The presence of Quacks in Gulbarga district is justified on several grounds by the people and we believe the single most important ground is the failure of the public health care services in rural areas where there is no alternative to people in the hour of their need. So naturally they not only justify the presence of Quacks but also appreciate their services.

Similarly in Tumkur 25 percent of respondents noted that Quacks are popular in their area for mostly the same reasons reported in Gulbarga. These views suggest clearly that quality care if made accessible to the public whether in government institutions or in private sector institutions, as it was observed in

Udupi will ensure elimination of Quacks in the area and people look forward always for better services.

In the household survey 82 percent of the respondents reported that the belief in 'witchcraft' is fast eroding while 6 percent said that it is still strong among some section of population in the society and also is practiced by them. But undertaking a pilgrimage, arranging special pujas in the temples or practice of 'harake' as a way of getting relief from a health problem is still there in the society as reported by 48 percent of the respondents. The rest 52 percent reported that with the introduction of modern health care system such practices are slowly disappearing. Few respondents said that such practices are becoming more and more expensive and like health services only rich can afford them. Even a 'puja' in a nearby temple known for providing relief to people will cost minimum of Rs.50 and travel and other cost if added, it becomes very expensive for poor people. It was also revealed that the priests who perform the 'pujas' advise their clients to seek health care services also for quick relief. In other words, still about half the population has faith in healing through worship or prayer and there are indications that often they preceed resorting to modern health care services. The data reveals peoples belief in worship, yantra or mantra in curing neurological problems epilepsy and particularly childhood related diseases such as Balagraha. Similarly it was widely reported that for 'jaundice' traditional herbal medicines and for bone fractures the traditional bone setters are considered the best as compared to the treatment in allopathic medicine.

It is often argued that the concept of germs and infections is still to percolate among the populations in the traditional societies who widely believe that diseases are the outcomes of curse of God or the sins that people commit. Such a belief system often hinders the utilisation of modern health care services or delays opting for them leading to more complications. About 54 percent respondents believed that chronic or incurable diseases afflicting a person are result of his / her sins committed or curse of the God. Such strong beliefs can be eliminated only with quality care made available to all particularly to the deprived sections.

Peoples Perceptions of Public Health Care Services

Respondents were asked whether the female health worker ANM visits their village regularly as per her schedule? Only 27 percent reported that she visits their village once a week, 34 percent said she comes once a month or twice a month and 30 percent reported that she never visits their village. About 9 percent reported that she comes occasionally and Enquirer how they are? The general impression is that ANMs who are considered as back-bone of rural health delivery system are not able to perform their job because of several factors like inadequate housing facilities for them in the village, poor transport or bad roads etc. It would be in order to examine the role of these important personnel to ensure full utilisation of their services to the benefit of rural population.

If the ANM visits the village does she visit all households irrespective of caste, community or prefers visiting selected households who are dominant in the village? 55 percent of the households reported that generally she visits all households indicating that there is preferential areas where she invariably pays a visit and poorer sections like SC/ST dominant areas are visited occasionally.

The questionnaire had a list of services the ANM is supposed to provide to the village people and respondents were asked to assess ANMs' performance in providing these services.

The data in Table 8 reveals very clearly what was discussed earlier regarding the delivery of public health care services in the study area. The majority of respondents are either somewhat satisfied or not at all satisfied with the poor quality of services. The response in Gulbarga is in conformity with the description of PHCs/Tics presented earlier. Respondents in Udupi who are used to avail private health care services, still think that public health care services delivared through ANMs are rated relatively better than the other two districts.

Table 8 : Peoples Assessment of ANMs Work : Fully Satisfied

Sl No	Services	Udupi (No)	Tumkur (No)	Gulbarga (No)	Total	
					Number	Per-cent
1	Pregnancy care	20	10	1	31	40.2
2	Attending delivery	17	7	2	26	33.8
3	Immunisation of children	20	12	3	35	45.4
4	Family Planning Services	11	11	1	23	30.0
5	Motivation for Family Planning	5	6	1	12	15.6
6	Treating minor ailments	14	3	2	19	24.7
7	Attending emergency calls	14	4	1	19	24.7
8	Educating on hygiene	3	6	1	10	13.0
9	Treating diarrhea	3	4	1	08	10.4
10	Treating RCH problems	4	4	1	09	11.7
11	Educating on STI/AIDS	4	3	1	08	10.4
12	Referring to PHC/CHC	6	7	2	15	19.5
13	Giving simple medicines like Aspirin	15	4	1	20	26.0
	Total	32	21	24	77	

The household survey was conducted in the villages served by the sub-centre. While sub-centre was located within a distance of 7-8 kilometers on an average PHC was situated at a longer distance. The respondents were asked whether they have easy accessibility to PHC in terms of its distance and transport facilities? About 73 percent of all respondents reported that it is easily accessible – 91 percent in Tumkur, 74 percent in Udupi and only 54 percent in Gulbarga. As reported earlier our selection of tribal belt in Udupi with poor roads and transport facilities and villages to be reached by boat around the coast are the only places that have some problem in the district. But village surrounded by water can call private health facilities on phone and reach the road by crossing the water to avail the needed services. There is problem in Gulbarga with roads and public transport that hinder accessibility.

During past 3 months to the survey 40 percent of households reported that some one in their family had visited a public health care facility and 40 percent of those visited were fully satisfied with the services. The proportion reporting fully

satisfied was 64 percent in Udupi 48 percent in Tumkur and only 4 percent in Gulbarga.

The survey also tried to assess peoples satisfaction regarding the functioning of the PHC situated nearest to their village specifically regarding regular availability of Doctors, Para medical staff, availability of specialist services and availability of drugs as presented in Table 9.

Table 9 : Assessment of Functioning of PHCs: Percent Fully Satisfied

Sl No		Udupi	Tumkur	Gulbarga	Total Number
1	Regular availability of Doctors	78.5	52.6	-	45.0
2	Availability of infrastructure facility	7.1	10.5	-	5.6
3	Staff co-operation	75.0	68.4	4.2	48.0
4	Specialist treatment availability	7.1	26.3	-	9.9
5	Treatment is effective	60.7	52.6	4.2	39.4
6	Privacy to patients	57.1	47.4	16.7	40.8
7	Attending emergency care	50.0	21.0	-	25.3
8	Adequate drugs available	50.0	10.0	12.7	22.5

The responses noted in Table 9 are self explaining. The proportion of respondents fully satisfied with availability of Medical Officers' services, effective treatment, staff co-operation with patients, privacy to patients is relatively high in Udupi as repeatedly pointed out earlier followed by Tumkur. Not a single respondent in Gulbarga reported the availability of Medical Officers' services, availability of specialists treatment and emergency care that needs serious attention and fully supports the reported observations presented earlier.

It was surprising that 50 percent of respondents in Tumkur and Gulbarga said that public health institutions staff expects money for any service they provide particularly from poor people. But in Udupi district not a single respondent complained against the staff being corrupt on the other hand they had sympathy towards them as they perform their job with several constraints to the best of their abilities.

Section III

The Focus Group Discussion and their Outcomes

The Focus Group Discussion (FGD) is a technique that is found valuable in developing insights in any problem area where the survey methodology fails. It helps in identifying existing social norms and practices because views expressed openly and supported openly by majority is generally expected to be more representative and legitimate from a public point of view than those expressed in individual interviews. However, it is to be noted that the data collected through FGD need qualitative analysis – a characteristic of anthropological methodology, in other words, it is mainly descriptive.

Generally FGD are conducted in sessions where a small number of persons – 5 to 6 discuss about topics of relevance under the guidance of one or more moderators. Generally there will be a sheet of guidelines with the moderator who will initiate and lead the discussion. In such situation one has to ensure that one group does not dominate and force their view on other group not so influential. The quality of analysis will depend heavily upon the unbiased use of information and verbatim at appropriate places to highlight an important issue.

The present study was conducted in 3 districts of Karnataka. Specific data was collected from 22 primary health centres selected from the three districts. For conducting FGDs it was decided to visit villages distributed in such a way that half of them are situated closer to the PHC and other half at a longer distance. Totally 16 FGDs were conducted. Our plan of having smaller selected groups of women belonging to Scheduled Castes and other advanced castes to elicit their views on the functioning of the Public health care system often met with problems. Generally our FGDs soon turned out to be street corner meetings and some time 'mini gram Sabha' attracting large crowds of 50 - 60 persons.

The major issues listed in the agenda was some societal factors related with general health of the people – particularly age at marriage, early motherhood, breast feeding habits particularly providing cholostrum milk to the baby and taboos on food during pregnancy and why in the interest of their daughter/daughter-in-laws' health they should change the age old practices?

The societal factors are directly linked to the ANMs and PHCs function that flow through IEC activities, mothers meetings, educating adolescent girls and motivating for adopting spacing methods that by itself would improve women's health and survival and also the way people perceive the need for rethinking based on their observations.

The last part was concerned with the delivery of health care services by the pivotal institutions of public health care – PHC. Are they able to get relief in their pains and sufferings in emergency?

The outcomes will be presented first by districts that have wide differentials as shown earlier and their perceptions in the community that emerged clearly during the FGDs.

FGDs in Gulbarga

There were five FGDs in one was exclusively arranged for Scheduled Caste women in their colony which included 10 women and the rest were group of men as large as 25–30 persons of different age groups and caste compositions.

As noted marriage is a complex social and economic issue which is more complicated by the arrival of dowry system. While marriages within kinship is common in rural Karnataka, relationship has not helped to reduce the costs involved in marriages. People reported that even when the would be bride groom is known, marriage will be pre-poned or postponed depending on the harvest. Even those who do not own any land will be economically relatively better off during good harvest period. The least important factor in deciding the marriage is the age of the girl. It was revealed by all irrespective of caste affiliations and for them marrying off the daughter is important. Only change that has taken place is that most of the marriages now are post puberty marriages. Very small proportion of people in Gulbarga are aware of the existing legal provisions regarding marriage of girls or boys.

The marriage is consumated soon and the parents in-laws expect that their daughter-in-law will soon bear a child to prove her fertility. If she fails for 2-3

years there will be talk of another marriage for the boy. They have neither resources for the medical examination of the boy or girl for their failure but easy solution is ready to accept. There will be proposals. What about the health of the young girl if she is mother at 16-17 years? The opinion was for generations it is continuing and that itself is an indication of poor policy interventions.

Similarly there was strong opposition to give just born babies cholostrum milk which the baby cannot digest easily and will develop 'stomach problem'. If breast milk is fed after 3 days babies will be growing healthy.

As reported by the ANMs they find it difficult to change the age old practices deeply entrenched in the society. But their efforts can be intensified to be more effective. During the discussion there was interest among the group to understand the intricate relation between marriage, pregnancy, child birth and survival of woman and child. Generally ANMs talk to eligible women regarding these issues but decisions are often taken by the elderly in the family or in the neighbourhood who is well versed with traditional practices. There is, therefore need to enhance the quality of IEC and direct it to the community as a whole rather than only to eligible women-currently married in child bearing ages as it is observed now.

The FGDs voiced their anguish at the way public health care service delivery is carried out in their area. ANMs visits are very rare – on the contrary they have to run after ANM requesting them to attend a delivery. There were some good words also for them but were rare. Even the poorest of the poor try to present something in return to the ANM on a birth in the family. But there is no assured service that result in calling the village untrained dai who fortunately is available any time. Why do they not go to PHC? People were surprised at the question. There is no body in the evening or night and even during day we have to visit a couple of times to consult the Doctor. They say that we have to bring the medicine from a particular shop only that creates problem even if we have arranged for the money. Our family will be dislocated if delivery is conducted away in PHC. There seems to be a major problem to solve this riddle. The PHCs

should be able to create confidence among the people that they can take care of child birth to improve the situation.

The peoples' perception regarding home visits to be carried out by the ANM is worth noting. In a FGD a village Panchayat Chairman and a large group of village residents were surprised when asked about their ANM visiting their homes to enquire about health of members. It was revealed that ANM is also like a Medical Officer and the needy have to meet her rather than she visiting every household in her sub-centre jurisdiction. The Village Panchayat Chairman, a muslim woman, innocently asked "who should tell her about her responsibilities? She thinks she is a big officer and we have to beg her if her services are required and unless we pay she will not conduct any delivery. But immunisation of children is free and occasionally pregnant women get some injections".

Scheduled Caste women had special grievance. They brought out during the discussion that even when they request for injection (TT) or tablets (IFA) they get if they are available with her. Their request to the ANM often receives arrogant stock answers like "I do not have now" or "come to PHC to meet the Doctor".

Gulbarga FGDs also brought out the irregular attendance of Doctors to PHCs and PHUs. One FGD in a remote village which we could reach by a jeep only resulted in collecting 6 patients suffering from jaundice which has become endemic in the village. In the absence of Doctor and lack of resources to go to Gulbarga for treatment, they have found a traditional cure for their problem. It is reported that they "grind some herbs, put it in a Kambli (woolen rug) and make the patient forcibly smell it for three days. It will result in sneezing for two days and there will be green discharge through the nose. This should continue for 3 weeks. The patients will either get cured or will have to be admitted to hospital because in 3 weeks any strong man will become week after continuous sneezing. Similarly there is some medicine for snake bite and those lucky ones will be cured with this herbal treatment". The whole crowd looked sick to us. The village had a PHU that opens occasionally and if there is stock of drugs patients get treatment. It was shocking that villagers consider the staff as 'Danda-

pindagalu' title of a popular serial in a TV where the characters are a heavy burden on parents.

The group expressed their unhappiness with the way immunisation programme including 'pulse polio' are conducted. Those who want can take their children and many do not bother as there is hardly any effort to ensure immunisation of all children.

The five FGDs in Gulbarga had simple suggestions to improve the health care services which are complicated in implementing.

1) Medical Officers should be regular to PHC during at least fixed hours.
2) There should be a Lady Medical Officer in some central PHC that can cater to other PHCs.
3) Drugs should be stored in PHC as there is no alternative but to travel a long distance for a pharmacy, often to Gulbarga to get the medicine prescribed.
4) ANMs should be more active and provide them information.

Focus Group Discussions in Tumkur

The societal factors affecting the health of the women and children though similar in Tumkur are not that intensive. The five FGDs were clearly divided in two groups - one small that argued that if postponing the marriage of daughters is going to help improve their health it should be postponed. The other group arguing that as it is marriage of daughters is becoming more and more difficult because of rising costs. The age at marriage is going up any way and may cross even the legal age at marriage of boys and girls. It is observed that educated girls are marrying late and as education increases automatically marriage age will rise.

In order to reduce the risks associated with early mother hood the discussion centred around their past experience. "So far we were told to have two or three children and opt for female sterilisation. The health workers rarely talk to our women about spacing methods and we are hearing the advantages

first time". Community will accept good advise of ANMs if effectively communicated.

But the problem arose when discussion reached the issue of PHC functioning. The small groups initially participating sent a word to several people who had some health problem and were not treated well even when they paid – little less than what was demanded. One middle aged man who was suffering from a wound reported that the PHC doctor took Rs.40/- for dressing it. He spent during last week over Rs.100/- but still not cured properly. The discussion also brought out that the PHC Medical Officer is continuing here for the last 12 years. The newly appointed Lady Medical Officer came for one day and disappeared not to be seen as the MO ensures that no Lady Medical Officer joins here which will reduce his income. He charges Rs.500 for his services to conduct a delivery and additional Rs.500 for 'drugs'. So a minimum of Rs.1000/- is needed for a delivery to be conducted in PHC.

The FGD also brought out the good things about Private practitioners in the Taluka place. Dr R cured an old man of 70 years (brought during the discussion) in just Rs.20/- which was not cured by PHC doctor who took Rs.400 and said that he is too old to cure and will die any way. The old man's wife who narrated this in the FGD said that "every house in the village has a terrible story to tell about the MO of their PHC. Unless he is sent out people cannot live happily". The group also reported that Medical Officer prescribes more medicines than needed and more expensive medicines that few can afford. He also insists that medicines have to be purchased from only one shop that charges more money from illiterates.

While many things discussed could not be verified for truth but it was felt that participants were not trying to 'make-believe-stories". They were serious and looked honest in saying whatever they wanted to. While the FGDs in Gulbarga suggested with one voice every where that government ensure Medical Officer in the PHC during fixed working hours Tumkur presented a totally different scenario. Many Medical Officers were regular, staying in the quarters but their services were accessible to only those who paid for it. The community

was found helpless as the Medical Officers had very good relation with the Chairman of the Village Panchayat and police as there are many medico-legal cases and need full co-operation of each to benefit from them.

There were, however, 2 FGDs that appreciated the Medical Officers for his social concern, his competence and co-operative nature. On the whole there was objective assessment by the people who said that their needs are simple and government is spending resources which should be utilised properly. Who should do it and how? Don't they have responsibility? They were ignorant about their rights and the avenues that exist for reddressal.

But Quacks who are found easily in every village were serving the helpless poor who unfortunately have no access to public health care.

For example, 'Shiva Shakti' clinic which is in a village for last 6 years provides health care services for just Rs.5/- and that too an 'injection'. Many Medical Officers insist that clients should bring their disposable needle and injection and pay Rs.10/- for his service charges. Compare this with the quacks' service? Whether his care cures or creates more problem only time will tell. But experience is that so far no untoward has happened either from Shiva Shakti or two others in the same village.

Focus Group Discussions in Udupi

FGDs in Udupi did not attract large crowd like it was in Gulbarga and Tumkur districts. But out comes of FGD were more appreciative of public health services. There was not a single complaint raised in any meeting as a total contrast. On the other hand there were examples of Medical Officer of a PHC taking a young tribal man who was suffering from TB to a well equipped special hospital at his own cost and ensuring his full cure. The father of the boy reported that "the Medical Officer must have spent about Rs.5,000 during last 6 months'. People have realised that government has no resources to provide high-tech health care services that private sector provides and they are available at reasonable costs and poor can avail freely. So why blame public health services? They were happy that with all constraints the ANMs, MOs are doing

their best. But the people would expect that PHCs should have X Ray facility, services of specialists services like ENT, Physician and LMO / Gynecologists. That would make the public health institutions more competent than what they are now. Even if a person goes to PHC for treatment he may have to go to private sector for some tests. So why not go to one place where you get fully treated?

But the AIDs is spreading in the district very fast and there is need to organise the services from private and public sector. The ANMs in Udupi and districts like Dakshina Kannada, or Coorg where deliveries are mostly institutional, should be trained to educate people in preventing the spread of AIDs. The FGDs fully reflected these ideas.

Section IV

Summary of the Findings and Conclusions

The present study was conducted to understand peoples perceptions regarding public health care services and indigenous health system in Karnataka. For this three districts in the state viz., Udupi, Tumkur and Gulbarga that represent three stages of development in peoples health – advanced, medium and backward were selected. Further 8 taluks, 23 PHCs and 31 villages served by those PHCs were selected for data collection.

The data was collected through a household survey in the selected 31 villages through a structured questionnaire. The hard data was supplemented by qualitative data gathered in Focus Group Discussions conducted in the study area. The analysis of the data is presented in three sections. The first, presents the way our public health institutions function in the rural areas, second, the findings from the household survey and last, the outcome of focus group discussions. Before presenting the findings there is a brief background of the health policy pressed in India since historical period.

Indigenous system of health care did not receive any attention during colonial period. After independence India persued essentially the British policy

and the neglect of Indian system of medicine continued. But half-hearted efforts to revive the Indian system and integrate them with modern system of medicine are continuing.

The modern allopathic system of medicine brought in by the Britishers is exorbitantly expensive by nature that many poor countries like India are finding it difficult to manage financially. But the introduction of modern system of medicine Allopathy has brought in enormous gains to the health of people in the beginning the access to allopathic medicine was confined to urban elites and after independence remarkable expansion has taken place to improve its accessibility. The last five decades in India has witnessed impressive health gains as measured by sharp decline in Crude Death Rates and Infant Mortality Rates. The focus to the health of women and children in the strategy has proved beneficial to them.

The wide differentials that exist in health indicators across states and within states across districts by rural/urban residence, gender and social class are alarming because despite all the efforts made to improve accessibility to public health care services they are persisting. The differentials and their persistence raise the question of equity and accessibility. The observed poor indicators of health strongly suggest poor utilisation of public health care services provided free. It can also suggest people are not utilising the public health care services because they prefer other system of medicines provided by private practitioners.

The findings of the present study are :

1) The study area consisted a health poor district Gulbarga, a health rich district Udupi and Tumkur district with medium health status.

2) Public health care services in these three types of districts vary widely and can be classified as good in Udupi, bad in Tumkur and worse in Gulbarga. The graphic description presented provide good insights into the way the public health care services are delivared in these districts and the outcomes measured as Health Indicators.

3) Poor quality of care and poor accessibility to care provided in public health institutions explain to a large extent the existence and sustenance of Quacks – unqualified health care providers who can cause enormous harm to the client and legally they cannot continue their practice. In health poor districts like Gulbarga and Tumkur they not only are thriving but also increasing in numbers over time while in health rich districts they do not exist.

4) The health policy persued for long has proved detrimental to the growth and expansion of indigenous health care system in India. People in rural area strongly believe that Allopathy system is better than other systems and prefer it. They also think that "injections" cure faster and insist on it for any ailment.

5) The encouragement given to Indian system of medicine looks is confined to urban particularly in metropolitan cities and towns where the clients have a choice of method. In the vast rural area public health sector is a major provider and the choice is there for few with resources who can opt for private services.

6) In the study area there was only one Ayurvedic Clinic which was closed for past seven months before the survey team reached the remote place. The villagers were not even aware whether it is going to be reopened soon or not. They knew only that the Doctor was transferred and since then it is locked. But people believe in indigenous system for certain types of health problems like `Jaundice' or `Balagraha' etc. However, reliable practitioners in indigenous systems are extremely rare. Udupi is the district where there is presence of indigenous system of medicine. The Research Team heard several names of `Ayurved Pundits' known for their extraordinary curing skills and abilities. In health poor district like Gulbarga they are non-existent.

7) Scheduled Castes and Tribes and population in isolated areas have relatively more problems of accessibility even in health rich districts like Udupi. In other districts the accessibility is still poorer for these populations.

8) People perceive that public health care delivery system is inefficient and to a large extent corrupt. The focus group discussion and the data collected in the household survey bring out these issues clearly. The focus group discussions turned out to be something like `Gram Sabhas' where people vented out their

anguish and sufferings. People who suffered at the hands of the public health personnel were providing details of money demanded, etc. The meetings turned out to be difficult to manage but strongly indicated the disenchantment of people with public health institutions.

9) The poor perception of people is reflected in poor utilisation of services from Public Health Institutions in health poor districts.

10) Public health care institutions suffer from poor infrastructure facilities in health poor districts. In Gulbarga and in Tumkur districts very few institutions have water supply. Toilets are unusably dirty. Even maintenance of the premises is extremely bad. The vast area surrounding PHC or CHC are full of hazardous garbage like blood stained bandages, broken syringes, cotton etc.

11) Health poor districts also have the problem of shortage of personnel at all levels and those personnel who are in position large proportion of them are irregular and have no commitment ultimately resulting in the public suffering.

Recommendations

The health indicators in Karnataka have shown remarkable improvements over last five decades. But what is shocking is the wide differentials across the districts that existed five decades back have sustained till today. Those districts who were at the bottom have remained there. The persisting regional imbalance reflects poorly on the functioning of the public health care service delivery system in the state. The study clearly brings out the urgent need for the following interventions to set things right before it is too late.

1) Health administration at district level needs to be improved. They should be held responsible to play a pivotal role in improving public health by improving health care service delivery and ensuring its equitable distribution.

2) All public health institutions should work regularly during fixed hours and any deviation should be seriously taken for punitive action.

3) Uniform policy intervention and strategy in the state that have widely varying health status is not going to bear results. There is need to consider

districts by their achievements in health such as Health Rich, Health Poor and Health Average districts for different strategies.

Health rich districts like Udupi need upgradation of quality of services to make them competent as Private sector which may be an expensive proposition. But the link that exists between private and public health care services have to be strengthened.

In health poor districts there is an urgent need to make the services reach people. ANMs should visit households, conduct deliveries and improve over the current status in future. Medical Officer should attend PHC regularly and provide service to the needy. There is need to bring the concept of monitoring and supervising the functioning of institutions and the work of personnel that is missing now.

4) The performance of district administrations should be linked with improvement in health indicators and findings of service statistics.

5) One of the important cause for not achieving the goal of "Health for all by 2000" was the casual approach to the concept of `community participation in all health programme. It should be reconsidered and serious efforts to be made to ensure the same.

GOVERNMENT OF KARNATAKA

TASK FORCE ON HEALTH AND FAMILY WELFARE

A Commissioned Research Study

FEASIBILITY AND MODALITIES OF APPLICATION OF PRINCIPLES OF HEALTH PROMOTION AND ITS INTEGRATION WITH HEALTH EDUCATION

By

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INTERNATIONAL UNION FOR HEALTH PROMOTION AND EDUCATION (IUHPE) – SOUTH EAST ASIA REGIONAL BUREAU (SEARB) – KARNATAKA CHAPTER

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International Union for Health Promotion and Education (IUHPE) – South East Asia Regional Bureau (SEARB) – Karnataka Chapter Sincerely thanks and appreciates the gesture of Karnataka Task Force on Health and Family Welfare for having invited the Chapter for conducting an action Research Study on "the feasibility and modalities of application of principles of Health Promotion and its integration with Health Education". The Chapter thanks Dr. H. Sudarshan, Chairman of the Task Force, Dr. C.M. Francis and other Members of the Task Force for their suggestions and guidance in completing the Research Study.

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Dr. K. BASAPPA
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Karnataka Chapter-SEARB-IUHPE

PREFACE

Health promotion is defined as a process of enabling people to increase control over the determinants of diseases and disability and improve their health by their own efforts.

The public policy and health policy in particular should be able to help people to acquire health and sustain it for a long time, so that they remain productive for more number of years and do not add to the burden f diseases and disability. Health promotional policy works in this direction.

The Task Force of Health and Family Welfare of Karnataka Government wanted to apply these principles into the Karnataka State Health Care Service. A rapid assessment of the State of art Health Education process was felt necessary and this report is related to the assessment of the extent and method of implementation of health promotion in Karnataka State Health Care System and to find out the modalities of application of the principles of health promotion with a view to integrate it with health education.

Topic

The topic is to study the "Feasibility and modalities of application of principles of Health Promotion and its integration with Health Education".

The Process

The Research Team after receiving the orders of assignment from the Karnataka Task force on health and Family Welfare to take up rapid assessment of the existing situation with regard to the structure and functions of Health Education Wing of the State Health Department prepared a research proposal and submitted to the Task Force. After approval of the same, the rapid assessment was taken up. The assessment involved:

1. Literature review on health promotion.
2. Field visits to 16 Primary Health Centers in 4 districts to know the state of art of health education activities and to assess the competencies of the health manpower at the district and Primary Health Centre levels and the organization strengths and weaknesses.
3. Obtained the views of senior health experts who were closely associated with the functioning of the Health Sector and present Health Education practitioners in and outside the State.
4. Some data were collected from the Health Directorate and District Health Officers about the structure and performance of the health education wing.
5. The data were analysed and discussed in the Seminar Organised for the purpose.
6. This is the final report of the assignment.

LIST OF TABLES

SECTION – I

A. INTRODUCTION

B. OBJECTIVES

C. METHODS & MATERIALS

Introduction and Objectives of the Study

A. INTRODUCTION

The Task Force on Health and Family Welfare, Government of Karnataka invited the Karnataka Chapter of the South East Asia Regional Bureau of the International Union for Health Promotion and Education to take up a rapid assessment of the "FEASIBILITY AND MODALITIES OF APPLICATION OF PRINCIPLES OF HEALTH PROMOTION AND THEIR INTEGRATION WITH HEALTH EDUCATION."

The Karnataka Chapter accepted the assignment and conducted the study. The following is the report of the study.

B. OBJECTIVES

1. To develop a vision and strategy statement on health promotion for the Karnataka State.
2. To examine the organizational structure and functions of Health Education Bureau of the Directorate of Health and Family Welfare Services.
3. To Make a rapid assessment of capabilities of health staff to undertake health promotional responsibilities with particular reference to competencies of grass root level health staff and their supervisors, block level health educators, District Health Education Officers, Medical Officers of Health of the Primary Health Centres and District Health and Family welfare officers.
4. To assess the existing inter-sectoral coordination related to health promotional activities amongst the different development departments and non-governmental organizations at primary Health Centre, District and State level.

C. MATERIALS AND METHODS

A qualitative assessment was decided upon because of the time constraint imposed by the task Force to complete the study. Though this is a qualitative study and based on focus interviews and observations, care has been taken to see that the interviews of relevant staff and observations have been made by the experienced researchers themselves to ensure credibility and validity of the report.

1. Literature about health promotion published in the International and National journals and WHO documents have been reviewed. It include global strategy for Health for All by the year 2000 and Alma Ata Declaration of 1978 on Health for all (H F A) 2000 and primary health care published by WHO and Ottawa Charter for health promotion (1986). And other documents and reports Reviewed are Report of an International Meeting on public Health (New challenges) and Ninth general Programme of work (9GPW) published by W H O.
2. Information about the structure and function of the Health Education Bureau were collected from the Directorate of Health and Family Welfare Services and the District Health and Family Welfare Offices of four District who are looking after planning and implementation of health programmes in their district. These information have been tabulated and analysed.
3. Date were also collected by interviews and from focus group discussions and field observations of the primary health centre and District Health staff regarding their competencies in health promotional activities.

4. Opinion of the health administrators, health researchers and health teachers on some aspects of health promotion and practice, its importance and feasibility and the competencies and skills required to implement health promotional strategies have been collected by open-ended questionnaire and analysed. Experts from the State of Karnataka and outside the state were included in the study.
5. For field study one district from each of the four revenue divisions of the State was selected. Sixteen Primary Health Centres, 4 from each district were selected for observational study. The district are kolar from Bangalore Division, Bijapur from Belgaum Division, Bellary from Gulbarga Division and Kodagu from Mysore Division.
6. In order to know the existence and extent of intersectoral coordination and cooperation and involvement, representatives of various development departments and non-government organizations were also included in the study.
7. Criteria used for assessing the competencies and skill of the staff of implement health promotional activities and opinion of Public Health Experts.

Criteria Used		**Rank Assigned**	
	KNOWLEDGE		
1.	Has a clear perception of the meaning of health promotion. His/her job responsibility and that of health department	...	High
2.	Has vague perception	...	Moderate
3.	Has no perception	...	Low
	ATTITUDE		
1.	He/she is very eager to promote health promotion work.	...	High
2.	He/she feels that it is worthwhile, but shows indifference and not so enthusiastic about their job.	...	Moderate
3.	He/she feels rather not concerned about his job responsibility and about health promotion or health education	...	Low
4.	OPINION ON STATEMENS		
	Strongly Agree	...	Consenses
	Agree	...	Exist
	Agree with reservation	...	Consenses
	Disagree	...	Does not exist

STATEMENTS MADE ARE RELATED TO THE FOLLOWING.

1. Need for health promotion and Education.
2. Methods of planning health promotional activities.
3. Importance of social mobilisation activities.
4. Need for involving people in the health programmes.
5. Need for inter-action with developmental departments and non-governmental organizations.
6. Need for further training of health staff.
7. Additional training for Medical Officers of Primary Health Centres.
8. Need for re-orientation of syllabus in Community Medicine in MBBS and MD courses.
9. Need for change in the attitude of policy makers towards public health and health promotion.

TABLE – 1

STATEMENT SHOWING THE NUMBER OF RESPONDANTS WITH THEIR DESIGNATION, PLANNED AND CONTACTED

Sl. No.	Designation	Number Planned	No. Contacted
1.	Director of Health and Family Welfare Service	1	1
2.	Additional Directors of Health & FW Services	4	3
3.	Joint Directors of Health of FW Services	6	6
4.	District Health and Family Welfare Services	4	4
5.	District Health Education Officers	4	4
6.	Dy. District Health Education Officers Block Level Health Educates	20	14
7.	Medical Officers of Health of Primary Health Centres	16	12
8.	Health Supervisors, Male and Female	32	28
9.	Health Workers Male and Female (ANMs & Jr. H. Asst.)	64	50
10.	Health experts and senior Health Administrators	98	48
11.	Non-Govt. Organizations	8	6
12.	Other Government Sector representatives		
	1) Education	1	1
	2) Public Health Engineering	1	1
	3) Agriculture	1	1
	4) Horticulture	1	1
	5) Women and Child Welfare	1	1
	6) Information and Publicity	1	1
		262	182

SECTION – II

NEED FOR HEALTH PROMOTION

According to World Health Organization the definition of Health is "a state of complete physical mental and social well-being and not merely the absence of disease". Despite this definition and its widespread usage, all over the world large majority of people view the health in the context of curative medicine, often described perhaps presumptually – as "modern scientific medicine". Apart from this, there is a pervasive misconception among health planners in many countries especially in developing countries that good health is primarily a result of medical intervention and hospital services and there has been a growing morginalisation of public health.

NEW CHALLENGES

But the evidence available is quite the contrary. Mekeown's research has shown that past improvement in health has been due mainly to modification of behaviour and changes in the environment. For example, Mekeown's analysis of mortality trends in U.K. between 1801 – 1971 has shown that mortality from infectious diseases such as Tuberculosis, Bronchitis, Pneumonia, Influenza etc., as well as from water borne and food borne diseases had already begun to decline even before effective treatment became available.(1)

(1) Mckeown suggests that communities and Government should look into factors (behavioural and environment) to bring further advance in health status of their countries.

(2) Studies have also shown that extreme poverty of some $1/5^{th}$ of the world population is the greatest killer and largest cause of human suffering Disparity in health exists between nations and the gap is increasing Healthier countries are becoming more healthier and poor health countries are becoming poorer in health status. Just like rich countries becoming rich and poor countries becoming poor due to imbalance in the economic development.(2)

(3) In addition, grave disparities in health condition remain within the countries, communities and gender. For example poorer and less educated people suffer from higher mortality and morbidity than those who are better educated and have higher income within the country and communities.

Women carry the triple risk of death and disease because of reproductive burden and gender inequality and social injustice in all walks of life. Therefore, people who are relatively poorer, less educated and women living in rural and semiurban and slums of big cities have less access to health care system, suffer more from inequality and social injustice. (2)

(4) The emerging fourth challenge is the resurgence of old diseases like Malaria and Tuberculosis and new diseases like HIV/AIDS and drug resistance of insects and bacteria are all adding to the problem of health of developing countries. (2)

(5) The fifth challenge causing alarming situation both in developing and developed countries is the increased cost of medical care due to social and commercialization of medicine, in the advent of advanced diagnostic and technological knowledge. Inspite of these advances and costly treatment, there has been no improvement of health of the people in relation to expenditure. (2)

(6) The 6^{th} factor causing concern is related to alcoholism, drug addiction, tobacco smoking and tobacco chewing.

In the face of these challenges, the approach and strategy for maintaining and improving the health of the people should concentrate more on the root cause of illhealth and diseases. These root causes or determinants of health and diseases are related to (1) income (2) Education (3) Employment (4) Nutrition (5) Housing (6) Safe Water (7) Sanitation (8) Health environment (9) Health care infrastructure (10) People's participation (11) People's awareness, and level of skill (12) Primary health care (13) Prompt diagnostic and therapeutic services and (14) Rehabilitation services. these are the direct cause. The indirect cause are many and they prevail in all walks of life of governance. Some of them, are public policy health

policy in particular, right to health, access to health care infrastructure and quality of health care providers, equity and social justice etc.

In these circumstances people's health can be improved and sustained only by comprehensive plan of action that cuts all roots and rootlets that cause illhealth. For this to happen, all the people and the concerned government organizations, voluntary organizations and religious organizations, Industries should come together and work at all levels from the top policy makes (political, social and religious leaders) to people's representatives.

HEALTH PROMOTION

What is Health Promotion?

Health Promotion is defined broadly as a process of enabling people to increase control over the determinants of illhealth and improve their health. In essence, health promotion is Social and Political action. It seeks to empower people with knowledge and understanding of health (health education) and creating conditions conducive to healthy living and healthy life style (social support). It reaches and involves people through the context of their every day lives, such as homes, work places (Industries, offices) learning (schools and colleges), and play ground recreation facilities, and eating establishment.

Health promotion takes a developmental approach to health, whereby health is considered as the goal and is a result of the activities of all development sectors like housing, local governments, education, industry, agriculture, transport services etc. Development approach promotes stronger health programmes characterized by greater relevance to various development sectors such as school health, healthy cities, healthy villages, and healthy food markets etc.(3)

In her opening address to the 5th global conference on health promotion in Mexico Dr. Gro Herlem Brundtland, Director General, World Health Organization stated that "Promoting health is about enabling people to keep their minds and bodies in optimal condition for as long as possible. That means, that people know how to keep healthy. It means that they have the power to make healthy decision – within them selves, community, local government and within the State. (4)

The UNICEF "State of Health of World's Children – 2000" (5) presents evidence to show that India is not investing sufficiently in mother and child care despite the fact that infant mortality rate and under 5 mortality rate are not showing any decline in 2000 as compared to 1998-99.

II. OTTAWA CHARTER AND JAKARTA DECLARATION ON HEALTH PROMOTION

Significant features of the Charter

1. Ottawa charter define health promotion as a process of enabling people to increase control over the determinants of illhealth and to improve their health.
2. Health is seen a resource for every day life and not objective of living.
3. Health promotion is not just securing of health, but goes beyond healthy life styles to well-being.
4. Pre-requisite for health are: (1) income (2) food (3)shelter (4) sustainable resources (5) social justice (6) equity (7) water supply and sanitation(8) education. Improvement in health requires a solid and secure foundation in all these basic needs.
5. Political, economic, social, cultural, environmental, behavioural and biological factors can all favour health or may be harmful to it. Health promotion action aims at making these conditions favourable to health through advocacy.
6. Health improvements require secure foundation in (1) a supportive environment (2) access to information (3) development of life skills and opportunities for making healthy choices (4) equal opportunities for all segment of the population with free access to health and related

services irrespective of class, creed and gender difference. Health promotion aims at enabling people to take control of those things which derermine health.

7. Health pre-requites and health supportive accessories cannot be ensured by health sector alone. It demands coordinated action by all concerned, by governments, health and other social and economic sectors, by non-governmental and voluntary organizations, by local authorities, local communities, families and individuals. Health promotion action aims at bringing coordination between various sections and media, between differing intersts in society for the pursuit of health.

Based on the above principles, the Ottawa Charter suggested the following action.

1. Build Healthy Public Policy

The health promotion agenda of the makers in all sectors, at all levels of government and society directs them to be aware of consequences of their decisions and accept their responsibility towards health. Health promotion policy combines diverse, but complementary approaches like (1) legislation (2) fiscal measures (3) taxation and (4) organizational changes. It is the coordinated action that increases income, foster greater equity and social justice to individual family that counts to improve health. The health promotion policy requires the identification of obstacles to the adoption of healthy public policy in both health and non-health sectors and finds ways and means to remove them and thus helps policy makers to make healthier choice.

2. Create supporitive environment

Creation of an environment supportive and sustainable is a prerequisite for health. Intricate links exist between people's health and their environment and this is the basis of socio-ecological approach to health. While conservation of natural resources should be encouraged through out the world as a global responsibility, the modification and creation of sustainable new resources for health should be the responsibility of every nation and every community.

Supportive environment consists of two components. One is the physical environment and the second is the social environment. As for as physical environment is concerned, that every person and family must have work and minimum income to possess and utilize the infrastructure. The way society organizes work would help to create a healthy environment. Health promotion should generate living and working conditions that are safe, stimulating, satisfying and enjoyable.

Social environment is concerned with changing old behavior pattern or adoption of new behavior pattern is of course possible only when man or woman is motivated and committed to behavior change. But the process of motivation and commitment can be made easier and quicker by creating social environment which creates critical mass in the community. That is the opinion of family, peer groups, formal and informal leaders and religious groups should support a particular behaviour. It may be about small family norm, giving up tobacco and alcohol, extramarital sex or age at marriage ect.

These health promotion activities help to create and sustain such social pressure. The concept of supportive environment implies that action is oriented towards determinants of the health of the population. This is used to build bridges between sectors and professions, between theoretical concepts and practical action for an improved countries.

Achieving supportive environment will require a new awareness of the possibilities for improving health through environmental change. It will also require a strong future orientation that links public health to sustainable development and consequently require a new emphasis on strategic planning and development of management skills to facilitate cooperation between sectors.

3. Strengthen community action

Community action play a very significant role in making people believe in what they do and how they do and behave. It cements their belief. Therefore, community action programme, where they plan, take decisions, implement them, mobilizing their own resources and take control over and won them should be encouraged. Community development draws on existing human and material resources in the community to enhance self help and social support and to develop flexible systems for strengthening public participation and direction of health matters. This requires, full and continuous access to information, learning opportunities for health as well as funding support.

4. Develop personal skills

Education for health and enhancing life skill development are important, because they increase the options available for them to exercise more control over their own health and their environment, which sustains health. Enabling people to learn through out their lives, to prepare them for all stages of life and cope with the illness and injuries are essential. This has to be facilitated in schools (school health) home, work place (occupational health) and community setting. Health promotional activities extends to these areas through educational, professional commercial and voluntary bodies,

5. Reorient health services

Health sector and health professionals remains the sheet anchor of health promotion. they must plan efficient system of primary health care service through out the country from villages to metropolitan cities. They must involve local governments and people to take control of them. They must move increasingly in a health promotional direction beyond clinical and curative services. Health sector and health professional need to embrace and expand the mandate which is sensitive and respects cultural needs. This mandate should support the needs of the individual and communities for a healthier life and open channels of communication between the health sector and broader social, political, economic and environment components. The health sector and other sector of government, voluntary health organizations and other groups in the community must work together and contribute to the pursuit of health.

Jakarta Declaration on Health Promotion into the 21st century.

The Jakarta Declaration on health promotion offers a vision and focus for health promotion into the 21st century. Its main emphasis is to tackle health determinants and for this, it draws upon widest range of resources from all sides. The declaration recognizes that health promotion is an essential element for health development. Health promotion, through its investments and actions on determinants of health, contributes significantly for the reduction f inequalities in health, ensure human rights and build social capital which is so important for health and well-being of people . The ultimate goal of health promotion, as envisaged in the declaration is to increase in the health expectancy and to narrow the gap in health expectancy.

The Jakarta declaration endorses all the five Ottawa Charter Strategies

Charter strategies:

- Build healthy public policy
- Create supportive environment
- Strengthen community action
- Develop personal skills
- Reorient health services

In addition, the following five priorities for health promotion have been suggested.

- Promote social responsibility for health of decision makers.
- Increase investments for health development
- Consolidate and expand partnership for health
- Increase community capacity and empower the individual
- Secure an infrastructure for health promotion.

The Declaration calls for action to speed up progress towards health promotion giving priorities for the following:

1. Raising awareness about the changing determinants of health.
2. Supporting the development of collaboration and networks for health development.
3. Mobilisation of resources for health promotion.
4. Accumulating knowledge on best practices.
5. Enabling shared learning.
6. Promoting solidarity in action.
7. Festering transparency and public accountability in health promotion.

Jakarta declaration called on W.H.O. to take the lead in building a global health promotion alliance and enabling its member States to implement the action programmes. A key part of this role is for W.H.O. to engage governments, non-governmental organizations, development banks, U.N. agencies, inter-regional bodies, bilateral agencies, the labour movement and cooperative as well as private sector in advancing the action priorities for health promotion.

III. HEALTH EDUCATION

The widely used definition of health education is "Health Education is a process which affects change in the health practices of people and in the knowledge and attitudes related to such changes". (6). This definition implies that health education is a process, it involves series of steps, it is concerned with establishing changes in knowledge, attitude and behavior and also involves efforts by the people. Aims of health education as formulated by W.H.O. (7) is to (1) ensure that health as a valued asset to the community (2) equip people with skills, knowledge and attitude to enable them solve their health problems by their own efforts and (3) to promote the development and proper use of health services.

Health education in the context of health promotion concept.

According to a position paper on health education jointly prepared by International Union for Hygiene Education and division of health education W.H.O. Geneva – with support from Centre for communicable diseases Control U.S.A. (8), health education is the combination of planned social action and learning experiences designed to enable people to gain control over the determinants of health and health behaviors and the health status of others.

Planning

1. Planning must be based on the consideration of relevant information. This information must provide multiple factors that influence the behavior and health related outcomes of interest and must account for the needs of interests of the target people.
2. The people who use this data must be knowledgeable in isolating those factors that affect health and also must possess skills to determine the relative importance of these factors.
3. To ensure the needs and interest of the target population, they must be involved in the planning process.
4. People's participation assures that there is a rapport with people and a basis for pursuing mutual efforts and partnership. It should be characterized as doing something "with" rather than "to" the people.

5. Health programmes are more successful when target population perceive the problem and solution in question to be the most important and appropriate respectively. People are found to act on issues they judge to be important them.
6. Creating demand for health is an important responsibility of health education. For example, people may not judge a given problem or issue to be important simply because they are unaware of its magnitude or prospective and long-term effects.

Learning experiences

1. Numerous factors influence the learning process including literacy, access to services and media resources, readiness for change health beliefs, environmental and social barriers and social reinforcement. Therefore, the health education programme planning must take into consideration not only for technical education barriers such as illiteracy, but also for social and economic barriers.
2. There are difference in the way people receive, process and act on information. So health education programme must be prepared to offer a variety of learning methods and strategies to maximize the probability of attaining the desired educational and behavioral outcomes and necessary social change.
3. Combination of health education methods are important in effective communication. This depends upon the characteristics of the target population, active involvement of collaborating organizations and representatives of the community as partners, availability of resources and competence of the persons conducting the health education programme.
4. There is no single model or method that holds universal superiority, health education specialists, must understand a variety of educational, behavioral and social sciences theories.
5. Those who plan health education programmes must be capable of adopting educational strategies for various sub populations of the community of the basis of characteristics that may be practically identified, such as age, sex, neighborhood, ethnic and cultural identity
6. Therefore, the older concept of health education is not sufficient to meet the needs of health promotional goals. It should strive to enable people to identify the determinants of health and take action to nullify their effects on health and take control over the measures to protect, preserve and promote health. The task of improving health is not only confined to health sector, health professionals and health communicators, but to all developmental sectors of government and non-government organizations, religious leaders, traders, industrialists, politicians and all those concerned with governance of the county and who matters for running the country towards development, progress, and happiness.

Health sector, health professionals and health communicators have a special role to play. They should act as coordinators, advocates and facilitators of health promotion.

Action required for individual countries or states with in the countries for health promotion.

In order to provide action plan for promotion of health in developing countries, W.H.O. Working Group on Health Promotion convened a meeting of senior health administrators in the region in 1989. The group identified the following areas for action.

1. Enhancing health knowledge and understanding is the first essential step in health supportive action by people.
2. Creating conditions – (social and environmental) that are conductive for health is another essential requirement.
3. These can become a reality when there is high level of awareness for health among policy makers, politicians, economic planners Health Researches, and the public people.

When the awareness is transferred into policies and legislative support, favorable resource allocation for health would follow. Thus full mobilization of all social forces for health will be needed for health promotion. In order to achieve these goals, three fold strategies are recommended. They are (1) Advocacy (2) Social and Environmental support for health and (3) Empowerment of people for health.

Brief description of Advocacy Social Support and empowerment.

1. Advocacy:

Advocacy is the process of providing evidence based knowledge to people so that they become convinced and committed and take appropriate decision in favor of the action required. Thus Advocacy is helpful in generating public demand and bring about health issues in every day activities. It helps policy makers and elected representatives to make right kind of decisions in the allocation of financial resources for community health. It helps religious leaders to become more committed and convinced and help spread scientific way of life to the people. It convinces political leaders to realize the need for support people's wishes and try to reorient health system. Advocacy to professional people helps in creating motivation and interest in researching problems that affect people's health and find scientifically based strategies to solve health problems. Finally Advocacy helps create critical mass of interest and support positive health and makes people to take healthier decisions.

Social support for health

Social support means creating and mobilizing favourable public opinion in favour of health behaviour. This helps in legitimization of a particular action. It may be small family norm, giving up smoking or giving unhealthy habits and take decision to build a sanitary latrine in the house. Public organizations and institutions like, Youth Clubs, Mahila Madals, Panchayats and other social groups, are very usefull in these matter.

Building health infrastructure in villages and towns and cities is another social support system. Health infrastructure like (1) protected water supply (2) sanitation and sewerage system (3) building health centers and hospitals within the easy reach of the people and (4) provision of good roads and transport etc.

Empowerment of people for better health

Empowerment of people means, providing health literacy and spread of knowledge to all and motivate and create interest in them so that every body become self-supporting in health. Inculcation of knowledge and helping people to develop required skill and capacity to acquire positive health and maintain it. It includes suitable employment to every body equitable access to health, infrastructure and health advise and health care services.

Thus favourable decisions of policy makers and those who allocate resources at the State and Central levels are crucial. Followed by proper planning, strategy, development for health promotional activities at State and District level are essential. Directorate of Public Health must have adequate manpower and resources to implement the programmes effectively and monitor and evaluate and provide feedback to the programme managers. In addition, the people should participate in planning, implementation and management of health programmes at participate in planning, implementation and management of health programmes at grass root level in every village, town and city if health promotion is to become a reality.

Factors which determine health status of the population and main actors responsible – An Overview

1. Individuals, Family and the Communities.
2. Local, District and State level government health Organization.
3. Sectors other than health.
4. Central Government.

HEALTH DETERMINANTS THAT NEED ATTENTION

1.	Individuals Family and Community	While genetics cannot be changed, the person's awareness, knowledge, skill life style play an important role. Family decides the way of living, nutrition standards, home environment. Family also decides about education, how many children are wanted, handle family conflicts, how to care for disabled members. The community influence the health of its members through safe water supply, sanitation, education, shelter, handling violence and un-employment.
2.	Health Ministry (State) Health System Services, Health research community.	Health Ministry and health professionals are responsible for: a. Health legislation. b. Health policies and budgeting. c. Health education. d. Provide primary and secondary health care. e. Make available minimum health care facility accessible for all. f. Administer and manage health care facility so that the services are actually rendered on day to day basis. g. Develop and maintain research health planning, monitoring health programme, implementation and determining health impact of health programmes and to provide needed evidence to the policy makers and allocation of health resources. h. Training and maintaining pool of medical and health personal of various levels of expertise, health administration etc.
3.	Sectors other than health 1. Government Sector. 2. Non-Govt. Sectors.	Almost all sectors of economic activity have an impact on health status of the community through national or regional policies and decisions. For example Farm and Food Policies have a direct impact on health so also water supply and sanitation and primary education, environmental pollution and degradation due to uncontrolled industrial pollution have indirect impact. Social security system for working people and senior citizens, level of employment, control of criminality and violence have indirect effect. Rural and urban development, housing industry, energy and transport sectors have both direct and indirect effect on health the effectiveness and efficiency of administration and also measures to limit corruption have additional impact on community health.
4.	Central Government	Although Central Government is far away from health situation of the individual, the macro economic policies of the government and principles of good governance in general both have a direct impact on health. Economic policies and the allocation of budget between the various ministries, the degree of commitment of the ministries for their missions, the efficiency and effectiveness of administration and the research policies pursued by the government have all impact on health problems.

Health Promotion and its benefits

A. Benefits from the Control of ENVIRONMENT

Experience of the western countries is striking to demonstrate the vast benefits of health promotional activities (action on the root causes) that accrue to mankind. These countries brought down infant mortality rate from 200/1000 in 1880 to about 70 by 1930. The morbidity and morality due to gastro-intestinal disease came down markedly during the same period 60 to 70% of these improvements are attributable to safe water supply and provision of sanitation, good housing Nutrition, education and behaviour changes like personal hygiene and practice of small family norm by majority of the people in those countries.

India missed Industrial Revolution so also Sanitary revolution that brought vast improvements in the standards of health of Western Countries. India under the foreign rule for over 200 years, with its deep entrenchment in tradition, superstition etc. is still even in the wake of 21st century and independence is experiencing the vary high preventable mortality, morbidity and disability. This is because, very little attempts have been made, to act on the root causes of illhealth. Even in the 21st century, nearly 40 to 45% of people do not have water supply (70% do not have safe water supply) 65% do not have toilet facilities, 40% of women between 15-49 years suffer from preventable anemia and 35 to 38% of women have body mass index below 18.5 kg/m, and 44% of children under 3 years are underweight. These are the examples to show how the country's health system is neglecting the health promotion activities. The experience of the western countries who are implementing some of the health promotional programmes in their communities against chronic and behaviour related disease shown substantial improvements in health of the population besides brining down the burden of disease and social costs.

The evidence that health promotional policies and actions yield substantial health benefits is being accumulated.

B. Benefits from behaviour modifications

1. School Health

School health programmes for promoting better health show clear evidence of achieving higher literacy levels, reductions in dropout rates, cassation of smoking, reduction in substance abuse, reduction in social consequences of teenage pregnancy. School health promotional programmes can be effective in transmitting knowledge, developing skill and supporting positive health choices. The evidence indicate that greatest effectiveness lies when programmes are comprehensive and "holistic" liking the school with health services, and where adequate attention is given for teachers training. Health promotion in schools has emerged very strongly in the last decade in Europe and is spreading to the whole world as a mechanism to combine a variety of elements achieving maximum health outcomes.

2. Cardiovascular disease (CVD) and Cancer.

There is clear cut evidence that cardiovascular diseases came down significantly when health promotional activities like campaign against smoking change in dietary habits, encouraging physical exercise are implemented. For example in Finland, cardiovascular mortality has reduced by 73% since 1972 and all causes mortality has been reduced by 50% in working age population over the same period. In a similar way, North Caroline experienced 71% reduction in lung cancer mortality and 44% from all other cancers.

Other studies show that programmes aimed at changing lifestyle habits bring very positive health benefits. For example, WHO collaborative study in Belgium for CVD prevention resulted in 25% reduction in CVD mortality. Programmes aimed at lowering serum cholesterol through healthy diet produced an average reduction of 15% serum levels of cholesterol among school children. 1% reduction in serum cholesterol through dietary knowledge would bring a 2 to 3% reduction in coronary heart diseases. This was evident Netherlands campaign launched by super markets.

3. Reduction of smoking benefits

The World Bank estimates that economic burden from smoking including health costs and loss of productive capacity by disability or death is around 200 billion US $ annually. 50% of all smokers loose 20 years of life expectancy. Besides smokers pollute the atmosphere in their homes and public places. Smoking habits can be brought down by variety of health promotional measures like pricing cigarettes and legislation. There is evidence that 10% increase in the price of cigarettes (through taxation) leads on average to a 5% decrease in the quantity smoked and the decrease in 15% among young people. Legislation restricting smoking in working sites in Finland led 2.4% smokers quitting smoking and 14.3% reducing the quantity consumed.

Further, smoking cessation programme in schools have resulted in 30 to 50% fewer smokers, especially in peer groups. However, there is also evidence to show that without follow up with multiple strategies of action, these rates do not hold. Smoking cessation programmes over a 20 year period have yielded 13% less mortality from coronary heart diseases, 11% less from cancer mortality. Among pregnant women smokers cessation of smoking has resulted in lowering the risk of low birth weight and reduction of obstetric complications. Smoking cessation is found to most cost effective programme. The cost per life year gained from such programmes ranged from 2000 to 5700 US $, where as the cost per year gained from treatment for mild hypertension is up to 8600, and the cost of extensive drug treatment per life year gained is more than 192,000 US $.

4. Mental Health and health promotional activities.

There is significant evidence to show that mental health promotion strategies have reduced depression, reduced suicide rates and reduced behavioural problems. Swedish Educational Programme have shown very positive results. For example, there was reduction of suicide rates for 19.7 cases/100000 population to 7.1 cases after 3 years of programme implementation. Besides there was economic benefit, the number of inpatient days reduced by 70% and there was also savings in the amount of tranquilizers and anti-depressant drugs used. Other mental health promotional programmes have reduced teenage pregnancy HIV infections, 75% reduction in pre-term delivery, reduction in low birth weight babies and babies with brain damage.

5. Healthy Ageing

The real key to healthy ageing is to begin health promotion early in life. However, there is evidence to show that application of health promotional activities like, physical activity even at the age of 50 can bring down substantially cardiovascular mortality and risk of falls and enhances cognitive function of the mind. The impact on society is seen in keeping the elderly population active and therefore productive for a longer period, reducing health and social costs. The available evidence show that maintaining healthy life styles in old age is directly associated with health gain.

6. Healthy Equity

Equity in health is gaining ground in recent years. WHO describes equity as a fair opportunity provided for all people to enjoy health to their fullest potential. It does not mean equal health status for every one, but it means reduction of differences between people's health as much as possible through equal opportunity for health.

There is evidence to show that socio-economic conditions related to income, education and employment are at the root causes of illhealth. Even in Europe, substantial number of people (57 million in 1993) lived in 23 million poor households. Even in rich countries, people with means live several years longer and have fewer diseases and disability than people without resources.

Relative deprivation has show to have profound effect on healthy rather than absolute poverty. Relative deprivation can have poorer education, low skill development, higher unemployment and lower capacity to deal with information and lower material resources. There is strong evidence to show that relative poverty is closely linked to poorer health. Many equity interventions for health are found to have impact at community level. People can gain increases ability to solve their problems at every stage of participation or involvement at the local community level.

Healthy cities concept of WHO's Health for All strategy with hundreds of people participating provides a strong multi-agency framework for development. Such programmes have shown evidence of effectiveness including generating increased income, through work opportunities improved community support with counseling services and better community involvement etc.

Data also show that health and education are most important and powerful forces for economic development in poorer countries. Basic investment in health and education can produce positive economic outcomes. This kind of investment in Trinidad, Cuba, Chile and Cost Rica has reduced poverty to less than 10% of the population.

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SECTION – III

Health Education Bureau

1. Introduction and objectives
2. Structure of Section I
3. Structure of Section II
4. Functions of Section I
5. Functions of Section II
6. Recommendations

I. HEALTH EDUCATION BUREAU

1. Introduction and objectives

The State Health Education Bureau (SHEB) was started in the Directorates of Health and Family Welfare Services in the year 1930. The Bureau was reorganised in 1965 with the assistance of Government of India, W.H.O., UNICEF. and Dr. V. Ramakrishna and others played a significant role in bringing about the establishment of the SHEB in the Department of Public Health in the Mysore State. It was nurtured and enriched by many eminent Directors of Public Health of Mysore State and latter Karnataka State ever since. World Health Organization, Rocke-feller Foundation and other International Health Organisations also helped the growth of the State Health Education Bureau.

The Bureau developed a sound health education policy for the state and exerted its influence in improving the health status THROUGH HEALTH EDUCATION. The Bureau laid down long term and short term objectives, structure and functions needed to reach those objectives.

A. Long term objectives

a. To help people to achieve health by their own actions and efforts.
b. To obtain people's active support and participation for public health programmes and policies.
c. To assist people to shoulder the responsibility for health.
d. To encourage people to demand more and better health services.

B. Short term objectives

a. To collect baseline data of the prevailing health conditions, health attitude, beliefs and values etc.
b. To educate the people on health matters by various methods and evaluate the relative effectiveness of the methods and channels of communication.
c. To provide in-service training in health education for all categories of health staff.
d. To produce health education materials and reproduce them wherever needed.

To reach the above objectives, the Bureau laid down the following activities.

1. Planning, organising and directing State-wide health education activities.
2. Conducting studies regarding baseline data, health educational needs, resources, priorities etc.
3. Determine the appropriate channels of communication and develop effective methods and materials for their use.
4. Training of the personnel of health and family Welfare Department on health education methods.
5. Assisting, organising and conducting of seminars conferences, family group teaching etc.
6. Fostering cordial intra and inter-departmental coordination and building group relationship with non-governmental organizations.
7. Dissemination of scientific information for people, through various channels of communication.

II. STRUCTURE AND FUNCTIONS

A. STRUCTURE OF THE HEALTH BUREAU – I

The State Health Education Bureau consists of two Divisions. First Division is headed by the Project Director, Reproductive and Child Health Services and Second Division is headed by the Additional Director, Health Education and Training. Functionally also the first Division is concentrating on health and family welfare and the second Division is concentrating on School Health, Training Nutrition etc.

Sl. No.	Categories	Sanctioned	Working
	At State Level		
1.	Joint Director	1	1
2.	Deputy Director	2	1
3.	Field Publicity Officer	1	--
4.	Editor	1	1
5.	Assistant Editors	2	--
6.	Health Education Officer	1	1
7.	Health Educator	1	--
8.	Social Scientist	1	--
	At the District Level		
1.	District Primary Health Centre Level	31	7
2.	Dy. Dist. Health Education Officers	104	78
	At the Primary Health Centre Level		
1.	Block Health Educators	782	517

Health Educators with Diploma in Health Education (DHE)

	No. with DHE	No. without DHE	Total
State Level	10	--	10
District Level	130	5	135
Pry. Health Centre	51	466	517
Teaching Staff	26	--	26
Total	217	471	688

Comments

The strength of the staff and their qualifications at the State Level is adequate, but the vacant posts should be filled up.

At the district level, 104 posts have been sanctioned for 27 districts at the rate of more than 3 per district. Whereas, only 782 posts of Block level Health Educators have been sanctioned for 1685 Primary Health Centres. At the rate of one Block Level Health Educator per primary Health Centre, still 903 posts are to be created. This is very difficult to achieve in the near future, because, it involves heavy expenditure and no trained and qualified Health Educators are available for recruitment.

Besides, taluka level health officer posts are sanctioned recently to strengthen the administration and management of health programmes in rural areas. This is a good development and this taluk level health office should be strengthened with posts of Health educators. Therefore, there is need to reorganise the distribution of available Block Level Health Educators between talukas and PHCs.

STRUCTURE OF THE HEALTH EDUCATION BUREAU – II

This action of State Health Education Bureau consists of the following staff.

Sl No.	Category	Sanctioned	Working
1.	Additional Director	1	1
2.	Joint Director	1	(vacant)
3.	Training Unit		
	1. Training Officer	1	1
	2. Health Supervisor	1	1
4.	Student Health Education Unit		
	1. Deputy Director	1	1
	2. Assistant Director	1	v
	3. Dist. Nursing Officer	1	1
5.	Audio-Visual Unit		
	1. Technical Officer	1	v
	2. Artist cum-photographer	1	v
	3. Artist	1	v
	4. Sub-Editor	1	1
	5. Projectionist	1	1
	6. Craftsman	1	v
	7. Silk-Screen Technician	1	v
6.	Field Study & Demonstration Unit		
	1. Technical Officer	1	v
	2. Health Supervisor	1	v
	3. Public Health Nurse	1	1
	4. Home Science Assistant	1	1
	5. Social Scientist	1	1
	6. Teacher	1	1
7.	Exhibition Unit		
	1. Technical Officer	1	v

FUNCTIONS

A. INTRODUCTION

The main function of the Division I of Health Education Bureau is to plan, implement and monitor health education activities pertaining to family welfare in rural areas of the State. These activities are implemented and monitored through the District Health and Family Welfare Officer at the District level and Medical Officers of Health at the Primary Health Centre level under the over all supervision and control of respective Zilla Panchayats. The bulk of the work is carried out by the grass root level workers and Health Supervisers. Block level local non-government organisations and public people. He also guides Health Workers and Supervisers and monitors the health education activities.

At the district level, the District Health Education Officer prepares a district plan of IEC activities. He supervises and monitors all health education activities throughout the district. He under takes tours and meet and discuss the health education issues with other developmental sectors of the government and local non-government organizations. He is also resource person for local Non-Government Organisations for health education activities.

B. OBJECTIVES, STRATEGIES AND METHODS USED FOR THE IEC ACTIVITIES.

a. Objectives:

1. Promotion of higher age at marriage.
2. Promotion of spacing methods.
3. Promotion of terminal methods for those who are having more than two children.
4. Involving people in IEC activities.
5. Motivating people to demand Reproductive and child health services.
6. Encouraging people's participation.
7. Discouraging gender discrimination with respect to conception and child care.
8. Encouraging 100% ante-natal registration and care.
9. Motivating and encouraging parents to care for infants and under 5 children especially in the matter of nutrition and immunization.

b. Strategies used for IEC activities

Most of the IEC activities are 100% centrally funded and sponsored. They are planned at the State level as per guidelines given by the Government of India and given to the districts for implementation, monitoring and reporting. The number of activities and methods to be used are fixed depending upon the total grants received. At the district level, the number of IEC activities are divided among several Primary Health Centres in the district and given to the Medical Officers of Health for implementation.

c. Method used

All the standard methods of health education are used. They are:

a. Mass media, Door Darshan, Radio, Press, Video Films.
b. Folk media – Dramas and street plays.
c. Exhibition.
d. Personal communication by grass root level workers.
e. Group discussions:

    1. Mother Swasthya Sangha (MSS)
    2. Atte Sose Samvada
    3. Village Health Committee
    4. Village Panchayat
    5. Local S.H.G. and youth and Yuvathi Mandals

TABLE – 2

Number of IEC activities by conducted in the last 3 years

		Targeted & achievement during the last 3 years 1997, 1998 & 1999		
Sl No.	**IEC activity**	**Target**	**Achievement**	**% of achievement**
1.	Film Shows	14400	6198	43
2.	Film Strips	40500	40204	99
3.	TV & VCB	4050	2500	99
4.	Folk media programme	2700	2500	90
5.	Multi-media campign	-Nil-	169	--
6.	Press advertisements	-Nil-	979	--
7.	Press release	-Nil-	4273	--
8.	Exhibition – major	14400	5390	37.3
9.	Dramas	--	32	--
10.	Healthy Baby shows	10735	9222	86
11.	Mahila Vichara Vinimaya	12615	9770	77
12.	Mother-in-law and Daughter-in-law program	8545	6921	81
13.	Mahila Dinacharini	6320	5073	80
14.	MSS Workshops: Taluka	175	160	90
	District	9	9	100
15.	Folk Artist Workshop (1997)	19	8	
16.	Village level MSS Trng. programme (1997)	3215	2920	90

C. BUDGET MADE AVAILABLE FOR IEC ACTIVITIES

Sl No.	Year	Budget
1.	1997-98	75.01 lakhs
2.	1998-99	90.86 lakhs
3.	1990-200	61.48 lakhs

D. REMARKS OF THE DIRECTOR, R.C.H.

Though IEC is the base for creating demand generation for Family Welfare and Maternity and Child Health Services, the inadequacy of funds has become a major barrier in the implementation of IEC strategy. On an average, Rs. 70 lakhs are being spent on IEC per year under FW & MCH for a population of more than 5 crores in the State. This is a very meagre amount. However, there are various thrust areas under FW & MCH which are not effectively covered.

With the introduction of Panchayathraj System in Karnataka, implementation of IEC at district level has become very difficult. It is observed that a major portion of amount earmarked for district levels activities

remains unspent as the amount is either released very late or not released to District Health and Family Welfare Officer by Zilla Panchayats.

Many posts of health education personnel are remaining vacant at all levels. Many Primary Health Centres do not have sanctioned post of Block Health Educators and even sanctioned, posts are not filled. 255 posts are vacant for 782 sanctioned posts of Block Health Educators. With all these constraints, IEC activities have played a vital role in popularising FW & MCH programme in Karnataka.

Inference on the data presented above and on the remarks of the Director.

IEC activities are planned depending upon the budget made available for health education by the Central and State Governments. The budget allotted is too small compared to the need. With so many eligible couple living in 27066 villages spread over 1.92 lakh square kilometers it is impossible to reach them and create awareness and motivate them. In fact, the progress made under RCH care especially in promoting spacing methods is very low and so also increasing the age at marriage. Percentage achieved under film show and exhibition is only 43% and 37% respectively. This is not encouraging.

The progress achieved so far in brining down birth rate and increasing the couple protection rate (58.6%) cannot be attributed solely for these IEC activities. Most of the awareness about family limitation may be cumulative effect of all the formal and informal health education activities and public opinion and social pressure that were going on in the State over the years. The people in the State seems to have realised that small family norm is best for their well-being and women in particular are coming forward for permanent method even with one girl child. However, the present progress in couple protection rate is entirely due to permanent method, that too female sterilization. Therefore, efforts should be made to remove the unmet needs of nearly 11.5% of eligible couples and popularise and motivate people to accept spacing methods to improve their health as well as reducing the infant and under 5 years childrens morbidity and mortality. This will also help to bring down maternal mortality and morbidity. The male participation is also important in the community. Another crucial and important health promotional measure is increasing the age at marriage of girls. This is important in the long run. Both these measures are necessary to bring about sustainable behaviour of people for small family norm.

Further, progress in RCH is possible only by health promotional strategies of advocacy, social support and empowerment. Therefore, the State Health Education Bureau should gear up to the task in coming years,

Functions of H.E.B. II

The functioning of this section of Health Education Bureau is very important to reach the long term goals set by the Bureau. However, the functioning of this section is not very satisfactory. This Section consists of 5 State level units with technical and non-technical staff. These units are (1) Audio-visual Unit (2) Field Study and Demonstration Unit (3) School Health Unit (4) Exhibition unit and (5) Training Unit. Some units are not working because of posts sanctioned are vacant for a long time and sufficient grants are not made available for effective functioning. Each of these have a definite function to perform.

For example (1) The Audio-visual unit is concerned with (a) training different categories of health personnel in audio-visual education and preparation of A.V. aids (b) Designing, production and procurement of A.V. aids and other educational materials of use in the field (c) assisting in the evaluation of A.V. aids produced in the Bureau. This section is not functioning because most of the key posts are vacant for a long time.

(2) Functions of Field Study and Demonstration units are (a) To find out most suitable, and cost-effective methods and media of health education (b) planning, organising and implementing and demonstrating research-cum-action programmes (c) investigation of various health education issues that may arise from time to time and assist in solving them. Thus this unit is very essential for supporting health education activities. This unit also is not functioning because of the absence of the key staff for a very long time. The

existing staff do carry out some in the field demonstration unit, but it is negligible and not based on scientifically planned studies.

Therefore, the staff for both these units should be found as early as possible and these units should be energized, Both these units are very important to plan and bring out scientifically based evidence for health promotional activities and materials they produce and use and also to bring out relative cost effectiveness of several media they use.

(3)Exhibition unit which is very important for planning health exhibitions for the State. It is not functioning properly because of the absence of the key staff over a long time.

(4) Student School Health Education Unit and Training Units are however functioning. Their performance is given below.

SCHOOL HEALTH EDUCATION PROGRAMME

School health programme is a State plan scheme and started in the 3rd 5 year plan period. The objectives and goals were laid down as per recommendations of Smt. Renuka Ray Committee Report in 1965. The school health programme first covered 30 primary Health Centres in 1965 and extended gradually to cover 35 Primary Health Centres in 1969, 103 Primary Health Centres in 1973, additional 300 Primary Health Centres in 1980, 90 Primary Health Centres in 1985, 100 Primary Health Centres in 1985, 122 Primary Health Cnetres in 1987, 465 Primary Health Centres in 1998 and thus by 1989, 1245 Primary Health Centres, out of the present 1686.

Goals and objectives.

Goals: To enhance and Promote health education of school children in every possible manner to enable them to adopt measures to achieve and remain healthy and develop in them a self reliance and social responsibility and better quality of life not only as children of today, but also as adults of tomorrow.

Objectives

1. Promotion of positive health.
2. Prevention of diseases.
3. Early diagnosis, treatment and follow up of defects.
4. Awakening health consciousness in children.
5. Provision of healthful school environment.

Activities

To reach the above goals and objectives, the following activities were planned to be implemented.

1. Health appraisal of school children.
2. Remedial resources and following up.
3. Prevention of communicable diseases including vaccine preventable diseases.
4. Healthful school environment.
5. Nutritional services.
6. Mental Health and Dental Health and Eye Health.
7. Health Education.
8. Health Education of the handicapped Children.
9. Teachers training.
10. Proper maintenance and use of school health record.

Organisation for implementing the school health scheme

School health service is one of the basic responsibility of State Health services and it is incorporated in the functioning of primary health Centre throughout the State. Therefore, the entire State health organization from sub-centre at the grass root level to the head of the Health Education Section at the State level are responsible for implementing the scheme. The primary health centre staff plan and implement the school health programme in their areas, district health supervisery staff (District Nursing superviser) and give guidance and monitors the progress.

The District Health and Family Welfare Officer reports to the head of the Health Education and Training section of the State Health Education Bureau at the State level. The District Health Education Officer plans and implements the health education activity through the Block Level Health Educator. The Medical Officer of Health of the Primary Health Centre is responsible for medical examination and follow up of the health of the school children with the help and assistance of Health Workers under his/her control.

Performance.

	Activities	**Extent of Coverage**
1.	Health appraisal	Only medical examination is carried out.
2.	Remedial measures and follow up	Done very superficially
3.	Prevention of communicable diseases including vaccine preventable diseases	Only immunization services given to 1, 4, 7th standard children. No other communicable diseases is detected or treated.
4.	Nutritional services	No programme.
5.	Health Education	Not carried out systematically
6.	Teacher training	Carried out, but not sufficient.
7.	Maintenance of school health record	Not done systematically
8.	School environment, water supply and sanitation	Nothing is done

As shown above, the performance is patchy and all activities are not carried out except the medical examination and immunisation of 1, 4 7th standard children Teachers training is also not sufficient and the progress is not satisfactory. No attempt is made to take up any activity under school environment and sanitation in schools. The follow up service is very unsatisfactory. Only activity that is carried out under the school health service is medical examination and teachers training which is given below.

TABLE – 3

Showing performance is some activities of school health service during 1999-2000

	Activities	Percentage of target achieved 1999, 2000	
1.	Medical examination of school children	...	80%
2.	Immunisation		
	➢ 1st standard	...	83%
	➢ 7th standard	...	100%
	➢ 10th standard	...	73.54%
3.	Teachers training	...	69.55%
4.	Medical defective found	...	17.63%

As per the records furnished by the Health Education and Training (HET) of the State Health Education Bureau, only school medical examination, teachers training and immunization services are monitored at the State level. The performance of each district is scrutinised and progress noted. The district which lag behind are noted and remarks sent to the respective District Health and Family Welfare Officers. Though the physical targets achieved are above 80%, the quality of service appears to be very poor. During out visit to about 8 Primary Health Centres in 4 districts, we had a chance to look into the school health records and to discuss the matter with school head masters. Medical examination is done mostly by Health Assistants and not by the Medical Officers except in Kodagu District. There is no follow up services. The quality of training of teachers is not satisfactory according to most of the teachers. Teachers also feel that it is an additional job and many of them are burdened with other school regular curricular activities. Health education in schools is not carried out regularly and it is very unsatisfactory.

Recommendations

School health service is one of the most important health promotional activity. Though it is a regular activity of the Health Department and Medical Officer of Health of Primary Health Centre is responsible for a least medical examination of school children, it is not done properly.
Medical Officers of Health should be activated to take up school medical examinations seriously and the performance monitored by the District Health and Family Welfare Officers and the MOHs who are lagging behind should be reprimanded.

Health Education activity should be planned and every school in the Primary Health Centre area should be covered. The Health Supervisers at the PHC level must be made responsible and the District Nursing Superviser and the District Health Education Officers should monitor the programme and report to the District Health and Family Welfare Officers.

There is no attempt to improve school environment Water supply and toilet facilities should be provided to every school. This should be taken up as a priority. This involves substantial investment and efforts should be made to raise donations in the villages by giving equal contribution from the Government. This may be taken up a phased manner.

Teacher training should be intensified and quality of training improved. There should be at least one trained teacher in every school in the State by the end of 2002.

The furniture, flooring in most of the schools is very poor and should be improved.

Though this programme a combined responsibility of Health and Education Departments, the Education Deptt., is not evincing sufficient interest in the programme. District Health and Family Welfare Officers must start advocacy programme for District Education Officers and Zilla Panchayat President and the District Executive Officer. The Additional Director of Health and Family Welfare Services should meet his counter part at the State level and bring pressure on the District Education Officers. The District School Health Councils and State Health Councils should meet periodically and hold discussion on the performance of school health activities.

The government and Zilla Panchayats should be persuaded to invest in providing toilet facilities in all schools in the State.

The vacant posts in Field Study and Demonstration Unit, Audio-Visual Unit, Exhibition Unit should be filled up urgently and these units should be made functional and energised.

Question of brining all IEC activities under the Health Education Bureau should be closely examined because the health education work in there programmes should not suffer when it is most needed. The programme directors know when they should launch health education campaign and where. It is his responsibility to achieve completion of the control programme. (Disease/Epidemic).

The routine health education programme covering all the areas of public health should be the responsibility of State Health Education Bureau and special health education campaign should be left to the respective programme Directors.

Recommendations on repositioning of Health Educators.

Ideally every PHC should have one Health Educator. Due to financial stringency this may not be possible for the next few years. There fore one Health Educator may be attached two PHC and stationed at taluka Health Office under the supervision guidnes and control of taluka Health Officer

All the BLHEs should be deputed to acquire DHE qualification at the rate of at least 50 every year.

At the District level one District Health Education Officer and one Deputy District Health Education Officer may be retained.

At the Taluka level there is need for one senior Health Educator to coordinate the work of PHC level Health Educators. This will strengthen the taluka level health organization and enables them to plan and carry out effectively IEC activities

The Health Task Force may suggest to the Govt. to allocate at least 5 to 10% of the health budget for health education purposes as approved by Central Health Council.

SECTION –IV

1. Grass Root Level Workers
2. Health supervisors
3. Health Educators
4. Interaction with other Health Related Departments
5. Interaction with Non-Government Organisations
6. Interaction with people

1. GRASS ROOT LEVEL WORKERS

Total of 50 workers from 4 Districts posted to 16 Primary Health Centers were interviewed and they were questioned about their knowledge and practice of health education and observed their attitude towards the subject of health education.

Competency

Most of them are aware of their responsibility (80%) and felt that health education is one of their most important and frequently undertaken job. most of them (85%) showed strong positive attitude towards the job. in fact many expressed, they are able to do their job because of their health knowledge and their ability to talk to them and convince them about the health benefits of their action. About 75% of them know various methods of health education and social mobilization techniques. However , they are not making any efforts to get the cooperation of the Village Health Committee and local people. The people's participation in conducting health programme at the grass root level is not much appreciated by the field workers and their efforts to involve them is almost absent. Participation by members of the Mother Swasthya Sangha (MSS) is however appreciated by all the workers. Most of the m are expressed they must have frequent meeting involving mother-in-laws and daughter-in-laws and other elders, where they can discuss common health problems and remove some doubts and misunderstanding, superstition about child birth and child care.

Interaction with other Sectors

Grass root level workers get the maximum cooperation and help from the Community Development Departments through Anganwadi workers. Inter-sectoral cooperation from other sectors is not appreciable except Revenue Department from whom they get pregnancy allowance sanctioned to their clients.

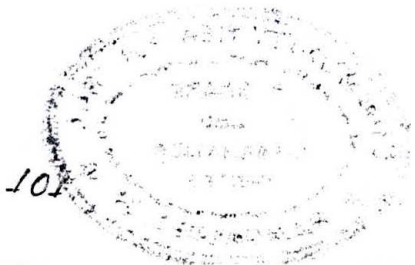

TABLE – 4

Grass root level workers, their level of knowledge and attitude on various aspects of Health Promotion and Education Interviewed

Sl No.	Percentage	High	Moderate	Low	Total Number Responded
1.	Awareness of job responsibility	80	16	4	50
2.	Knowledge	80	12	4	50
3.	Attitude	75	14	6	50
4.	Need assessment capacity	76	14	10	50
5.	Knowledge about health Education method	80	12	8	50
6.	Social mobilisation tactics	60	30	10	50
7.	Knowledge about the State of people and N.G.O participation	70	10	20	50
8.	Need for Inter-sectoral Coordination	80	16	4	50
9.	Methods to be used in Health promotion				
	Advocacy	20	40	40	50
	Social support	10	30	60	50
	Empowerment	10	20	70	50

Inference and recommendations

The knowledge, attitude and practice of grass root level workers with regard to health education as one of their prime duties and its importance in implementing any health programme is satisfactory. However, they are not in a position to appreciate and involve the local people in their planning or implementing health programme in the villages. Though they understands the need and advantage of involving local leaders in conducting health programmes, they do not have the skill to do so. Therefore, there is a great need for training the grass root level workers in development of skill as to how to involve the local people in the health programme. People participation in health activities under the primary health care strategy is one of

the main function of the Primary Health Centre as recommended by the Alma Ata Declaration. It has also been realized throughout the world both in developed and developing countries that people's participation is sine qua non for the success of any health programme, and it (people's participation) should assumes greater significance in health promotion strategy.

Mother Swasthya Sangha (M.S.S) activities were appreciated by all. This progrmme should be strengthened and frequently arranged, but such programmes will have to be monitored and supervised by the Health supervisors. These meetings and contacts are conducted only once in a way or whenever the money for it is released. This should not be the case. The programme should be a routine duty of health workers. Health Workers male and female in every sub-centre should plan their contact meeting every month in every village.

IEC activities in each village should be planned and conducted by making use of local school children, teachers, retired people and other public spirited social workers. Both male and female people should be encouraged to participate. Organised community activities have better impact in creating awareness.

2. Health Supervisers

A total of 28 health superviser staff from 4 districts were interviewed. As shown in table 5 all of them are aware of their over all responsibilities and they know that health education is one of their duties. Conversation with them revealed that they have good knowledge about supervision and guidance. They undertake frequent tours of their area and help the grass root, health workers is difficult cases of refusals of advice and resistant cases towards family limitation. Their knowledge of supervision and guidance is only with reference to normal, routine personal health education to the individuals. However, they also participate in group education like M.S.S activities and jathas and video shows and baby shows. In many places, Health Supervisors are resource personal for local NGO for their education campaign. However they need training in health promotion strategies.

Problems of Health Supervisors

Many of them are quite senior people with 15 to 20 years of service. They do not have promotional opportunities, because only few of them get a district Supervisory position. This aspect has led them to feel frustrated and have become less enthusiastic in their job. This should be halted by appropriate remedy. Most of the health work at the grass root level is carried out by the grass root level workers and their supervisors. The department is illoffered to neglect their services, especially in the field of health education. In fact, in many PHCs, it is the senior health supervisor who manages the PHC activities because the Medical Officer of Health is either absent or attends only to clinical work.

TABLE – 5

Health Supervisors, their level of knowledge ,attitude on various aspects of health promotion.

Sl No.	Percentage	High	Moderate	Low	Total Number Responded
1.	Awareness of job responsibility	80	15	5	28
2.	Knowledge	70	20	2	28
3.	Attitude	80	16	4	28
4.	Knowledge and ability in need assessment	80	10	10	28
5.	Ability to supervise and guide	78	12	10	28
6.	Social mobilisation capacity	75	15	10	28
7.	Knowledge about the need and role of peoples participation	80	18	2	28
8.	Inter-sectoral Coordination	65	15	20	28
9.	Knowledge on Health promotional strategies				
	Advocacy	20	60	20	28
	Social support	18	70	12	28
	Empowerment	15	60	25	28

Inference

Though Health Supervisors are important at PHCs level, for health education programmes , there seem to be complacency in their attitude and practice. This may be due to the (1) presence of Block Level Health Educator, who is responsible for implementing the organized health education or IEC activities at the PHC level and (2) also the Medical Officers of Health are not taking any interest in administrative affairs of the PHC and leave everything to the Health Supervisors. Health Education as an activity at PHC level is suffering from these two constraints. Both these Constraints must be attended to by Medical Officers. They must be made to take more interest in administration and management of health programmes including health education at the PHC level.

There is need for proper supervision and monitoring of PHC performance from the District Health Officers

Recommendations

The Health Supervisors must be made responsible for all health education activities at the PHC level. The administration should activate these people more particularly the Medical Officer of health must be made to take interest in administration and management. This is possible by frequents visit of the District Health and Family Welfare Officers to the PHCs and arranging seminars and symposium at District level for all Medical Officers of health.

Block level Health Educators, District Health Education Officers and Deputy District Health Education Officers

14 Block level Health Educators working at the Primary Health Centres, 4 districts Health Education Officers and 4 Deputy District Health Education Officers working at District level were interviewed and participated in focus group discussions.

Competency

Health Educator is a facilitator for Health Promotion at grass root level. He has to plan and organize Health promotion programmes and implement them through the grass root level workers.

As shown in table 6 most of them aware of their job responsibilities and know the job well. They have the right kind of attitude and appeared enthusiastic in their job. They have sufficient skill to develop education programmes. However, they are not making use of their skill in social mobilisation work and involving people in health education activities. For Example, 90% of them have sufficient knowledge about the need for inter-sectoral co-ordination and N.G.O involvement, but only 30% of them are making efforts. When asked why it was so, many of them expressed that they are neglected lot. There contribution is not recognized by superior officers. Only 50% of them have right kind of communication skill and 40% of them are capable of talking to people on any subject. Their knowledge about advocacy is satisfactory, but their ability to practice is doubtful. They do not have sufficient knowledge about social support and empowerment. Except few District Health Education Officers, all others need intensive training in the principles and strategies of health promotion.

Recommendations

Long Term

The Health Educator at the taluk and primary Health Centre Level and the district Health Education Officers and the Deputy District Health Education Officers at the District level are the key persons for planning and implementing IEC activities. They should have sufficient knowledge about the community and community leaders and should be enthusiastic and committed for the task of spreading scientific knowledge to people and involve them in health programme. In fact part of the reason for tardy progress of health programmes is attributable to non-involvement and half hearted participation of people. This is the case in all health programmes. It may be improper Malaria eradication, poor Tuberculosis control low couple protection rate etc. Therefore, training and retraining of the health educators in social mobilisation methods and in various modern communication technology is urgently required. Most of them take their job very casually and do things very slowly. This may be due to lack of administrative pressure from districts, which may be strengthen.

Short term

Immediately, there is a great need to arrange training programme for all health Educators on health Promotion. A programme of reorientation for District Health Education Officers and Deputy District health Education Officers and those possessing DHE qualification may be organized at the state level in two or three batches. The course may be of one week duration.

For those BLHEs without DHE qualification, a two week training programme may be organized at the Divisional level so that all the Health Educators are trained and equipped with skills to plan and implement IEC activities under health promotion strategies as recommended by the Ottawa Conference on Health promotion. **More specifically they need training in group dynamics, motivation, communication, interpersonal relationship, intersectoral coordination and social mobilization. They should also be trained in modern electronic media and utilization of computers.**

TABLE - 6

Block Level Health Educators. District Health Education Officers and the Deputy District Health Education Officers their level of knowledge and attitude and ability

Sl. No.		Percentages		
		High	Medium	Low
1.	Awareness of job responsibility	80	15	5
2.	Knowledge	90	7	3
3.	Attitude	95	4	1
4.	skill of collecting and analyzing health need assessment	65	20	15
5.	Knowledge of health education methods	80	10	10
6.	Social mobilisation tactics	70	20	10
7.	Knowledge about the local leaders , religious groups and need to involve them in health education activities	60	25	15
8.	Need for inter-sectoral co-operation and NGO involvement			
	Knowledge	90	5	5
	Practice	30	30	40
9.	Communication ability	50	25	40
10.	Ability to write, press release and talk to lay people	40	40	20
11.	Knowledge about health promotional activities	40	40	20
12.	Knowledge about advocacy	40	45	15
	Practice of advocacy	20	20	60
13.	Knowledge about social support practice of social support	60	30	10
		20	30	50
14.	Knowledge about empowerment practice of empowerment measures	40	30	30
		20	40	40

MEDICAL OFFICERS OF HEALTH

Twelve Medical officers of Health from 4 Districts participated in the discussions. Opinion and their response to various issues is given below. Many of them know the importance of health education and the need for extensive health education efforts. They also know that health education is one of their duties, but they did not show any enthusiasm and interest in health education activities. Those who do not have much clinical practice do well in all health programme including health education and those having good clinical work say that they do not have enough time to do so much of non clinical work including health education. in fact, medical officers who have good clinical practice take help of health workers to assist him. Doing clinical work is good for the people, because many patient need not go for distant places for primary medical care. **Therefore, the clinical practice should not be disturbed. the principle of integrating clinical practice with non clinical work like administrating and management of health programme has been a failure. Now Taluk Health Offices have been established and Taluka Health Officers must be made Administrator of Health service in the Taluk and all the Health Workers including Medical Officers of PHCs should come under his administrative control.**

THE MEDICAL OFFICERS WERE QUESTIONED AND THEIR OPINION WAS COLLECTED. THE RESULTS OF THE ANALYSIS IS AS FOLLOWS

Sl No.	AREAS EXAMINED	REMARKS
1.	THE NEED FOR HEALTH PROMOTION.	ALL AGREED VERY STRONGLY.
2.	METHODS OF PLANNING HEALTH PROMOTIONAL ACTIVITIES	ALL AGREED, BUT THEY DO NOT WANT TO TAKE PART, IN PLANNING PROGRAMMES
3.	IMPORTANCE OF SOCIAL MOBILISATION	MANY DO NOT HAVE ANY IDEA OF SOCIAL MOBILISATION STRATEGY
4.	NEED FOR INVOLVING PEOPLE IN HEALTH PROGRAMMES	50% AGREED, BUT ANOTHER 50% SAID PEOPLE DO NOT COOPERATE.
5.	NEED FOR FURTHER TRAINING OF HEALTH STAFF	ALL AGREED THAT HEALTH WORKERS SHOULD BE TRAINED AND NOT THEMSELVES.
6.	QUALIFICATION REQUIRED FOR HEALTH EDUCATORS	ALL AGREED THAT THEY SHOULD HAVE DHE QUALIFICATION
7.	ADDITIONAL TRAINING FOR MEDICAL OFFICERS OF HEALTH	MAY BE USE FULL. ONCE IN 3 YEARS FOR UPDATING THE RECENT ADVANCES
8.	NEED FOR ORIENTATION OF SYLLABUS OF COMMUNITY MEDICINE IN MBBS COURSE	ALL AGREED THAT THEY MUST BE EXPOSED MORE AND MORE TO THE COMMUNITY. AND ALL NATIONAL HEALTH PROGRAMMES SHOULD BE DEMONSTRATED TO THEM IN MORE DETAIL.
9.	NEED FOR CHANGE IN THE ATTITUDE OF POLICY-MAKERS TOWARDS PUBLIC HEALTH	THEY AGREED THAT PUBLIC HEALTH WORK IS NOT APPRECIATED BY MANY DOCTORS IT IS RARELY THAT GOOD HEALTH WORKER (DOCTOR) IS APPRECIATED, WHERE AS GOOD CLINICIAN IS APPRECIATED BY ADMINISTRATORS AND POLITICAL LEADERS, ALIKE

OPINIONS OF PUBLIC HEALTH EXPERTS ON SOME ISSUES OF HEALTH PROMOTION

Health promotion is a part and parcel of public health. In fact the goal of public health is to create the environment conducive, and mould the behaviour of all people favorable to positive health. Health promotion comes even before the primary level of prevention. It is also called primordial prevention. Therefore Health promotion is not something different from the main stream of public Health philosophy and public health Actions

Opinion of public Health experts was sought about some aspect of health promotion. 98 people were approached in and out of the state and 48 people responded. Their opinion is given below. Opinion expressed by experts is overwhelmingly in favour of application of principles of Health Promotion in the Public Health Action Programmes. Most of them also express that public health in recent years in being neglected by policy makers and due status is not given to the Public Health & Public Health experts.

This will have to be over come by appropriate advocacy programme for top-level policy makers.

OPINION OF PUBLIC HEALTH EXPERTS

SL No.	STATEMENTS RELATED TO	AGREED OR NOT (PERCENTAGE) STRONGLY AGREED	AGREED	DISAGREED
1.	THE NEED FOR HEALTH PROMOTIONAL STRATEGIES AND THE RATIONALE AND POSSIBILITIES OF IMPLEMENTING IN DEVELOPING COUNTRIES	20	80	-NIL-
2.	METHODS OF PLANNING AND IMPLEMENTATION	10	90	-NIL-
3.	IMPORTANCE OF SOCIAL MOBILIZATION	5	90	5
4.	NEED FOR INVOLVING PEOPLE IN HEALTH PROMOTION PROGRAMME	3	90	7
5.	NEED FOR TRAINING FOR MEDICAL OFFICERS OF HEALTH, & DISTRICT HEALTH AND FAMILY WELFARE OFFICERS ON HEALTH PROMOTION	10	90	-NIL-
6.	DESIRABILITY OF DHE QUALIFICATION FOR HEALTH EDUCATOR AND DPH QUALIFICATION FOR HEALTH &FAMILY WELFARE OFFICERS	5	90	5
7.	NEED FOR STRENGTHENING SYLLABUS IN COMMUNITY MEDICINE FOR MBBS AND DPH	3	90	7
8.	NEED FOR CHANGE IN THE ATTITUDE OF POLICY MAKERS, POLITICIANS TOWARDS PUBLIC HEALTH	3	95	2

OPINION ON SOME OF THE IMPORTANT STATEMENTS ON PUBLIC HEALTH POLICY

Sl No.	STATEMENTS	PERCENTAGES	
		AGREED	DISAGREED
1.	THE CONCEPT, PRACTICE AND IMPORTANCE GIVEN FOR PUBLIC HEALTH BY HIGHEST DECISION MAKING PEOPLE ARE FOR IMPLEMENTATION OF HEALTH PROMOTIONAL STRATEGIES.	100%	-NIL-
2.	ONE OF THE MAJOR BARRIERS FOR IMPLEMENTING OF THE HEALTH PROMOTIONAL STRATEGIES IS THE LACK OF PROPERLY TRAINED PUBLIC HEALTH EXPERTS AT THE HIGHEST DECISION MAKING LEVEL AND AT THE MIDDLE PLANNING AND IMPLEMENTING LEVEL	98%	2%
3.	PUBLIC HEALTH RESERCH IS NOT MAKING THE NECESSARY CONTRIBUTION TO PUBLIC POLICY, BECAUSE OF ITS TENDANCY TO WANT TO BE SEEN AS EXCELLENT RATHER THAN ANY RELEVANCE TO THE NEEDS OF PUBLIC POLICY	70%	30%
4.	MOST PUBLIC HEALTH PROFESSIONAL AND CLINICAL PROFESSIONALS WORKING IN PUBLIC HEALTH POSITIONS IN THE COUNTRYHAVE LITTLE TRAINING IN WIDER ASPECTS OF HEALTH. THEIR EXPOSURE TO RELEVANT SOCIAL SCIENCES AND HAVE HAD LITTLE OPPORTUNITY TO LEARN FROM ROLE MODEL HOW TO ADDRESS THE SOCIAL, ECONOMIC AND POLITICAL FORCES AFFECTING HEALTH	60%	40%
5.	POLICY MAKERS IN PUBLIC HEALTH AND HEALTH PROFESSIONAL SHOULD MEET REGULARLY TO REVIEW THE HEALTH PROBLEMS AND RESERCH EVIDENCE AVAILABLE FOR THEIR DECISION MAKING	100%	-NIL-
6.	IN ADDITION, THE PUBLIC HEALTH SPECIALIST NEEDS SKILLS IN COMMUNICATION, PUBLIC POLICY ANALYSIS AND DEVELOPMENT	90%	10%
7.	SOCIAL PROGRAMMES (THIS INCLUDING HEALTH) ARE OPERATING UNDER EVER TIGHTER RESOURCE CONSTRAINTS. THEREFORE, THE CONTRIBUTION OF GOOD HEALTH TO SOCIO-ECONOMIC DEVELOPMENT MUST BE CONVINCINGLY DEMONSTRATED IF ADEQUATE AND SUSTAINABLE RESOURCES ARE TO FLOW TO THE HEALTH SECTOR	100%	-NIL-
8.	RESOURCE ALLOCATION FOR PUBLIC HEALTH MUST BE MORE EQUITABLE CONSISTENT WITH ITS CONTRIBUTION TO SOCIAL DEVELOPMENT AND NEW RESOURCES SHOULD BE MOBILIZED	100%	-NIL-
9.	THE GOVERNMENT SHOULD FIND WAYS AND MEANS TO ENHANCE THE STATUS AND IMAGE OF PUBLIC HEALTH CARE PROFESSIONALS CONSISTENT WITH THEIR CRUCIAL ROLE IN HEALTH OF THE NATION.	100%	-NIL-

Recommendations

First of all there is need to educate other departments to impress on them, that health of the people is their concern also and if there is cooperation and coordination, the health promotional programme can be implemented smoothly and quickly. Moreover, the proper and successful implementation of health programmes would also help other non health related programme substainlly, because people take more and keen interest if the programme is health related. Therefore, there is need for organizing advocacy programme for managers and policy makers of other development departments at the State level, they should be identified and educated. A programme for people can be effectively and efficiently implemented, if all departments extends support and participate for example, the success of family Welfare programme to some extent is due to the extensive intersectoral coordination and cooperation. The benefits that flow from intersectoral coordination is much more than the benefits that accrue when departments work separately.

This is the fruit of interaction and this does not cost any thing more 'instead' strengthens interpersonal bonds and Interdepartmental bonds and help cohesion and purpose in government institutions. This is very important because people are loosing confidence in government run programme.

4. Interaction with other health related departments

Findings

Intersectoral coordination of all development departments of the government is important for speedier and effective implementation of health promotional programme. In this connection, the representatives of the following departments were contacted and information collected by using structured questionnaire. They are Education, public Health Engineering, Information and broadcasting, Agriculture and Horticulture departments. **Most of them agreed that there is need for cooperation and coordination between health Departments. and their departments but expect that the health department to take initiative in the matter because health is the business and concern of health sector. Many of them are not happy about the attitude of doctors towards them.**

5. Interaction with Non-Governmental Organisations

Eight non-government organization in 4 districts implementing some health education activities were contacted. All of them are very much enthusiastic to do health work and help people to improve their health. But most of them are dependent on government for funds and projects. The projects managed by the NGOs are better organized and people are satisfied by the services. Some of them engage full time staff. These workers seem to be more serious about their responsibility and duty and they have better rapport with the local people performance of NGO seems to better than government organization but the budget of NGO seems to be better than government organization.

In the long run it may be better to involve more and more NGOs and try to encourage them. Unless socially spirited people come forward to manage non-government organization and if they are allowed to work only with full time employees and work like any other profit oriented organizations, they would become very soon as government run institutions. Therefore carefull verification of non-government organization and the staff composition and the background of people who run such organisationis required before entrusting any health related projects to them.

6. Interaction with the people

It was possible to meet some people in village in all the 8 primary Health Centres of 4 Districts Both men and women in their homes and in public places were interacted to understand whether they know the health education and other health programmes and whether they are getting adequate information about health.

Findings

Most of the respondents showed indifference to our questions on Probing further, they reveled that the health worker come and talk to them on health matters sometimes on family planning and antenatal care. Mothers expressed that ANMs are advising them on diet and child care. They are not aware of any other Health Education Campaign on other Health activities Except Aids/HIVs.

Many village are not satisfied by the services they receive when they go for the Primary Health Centre for Treatment, except immunization services.

Nevertheless, it is surprising to know that many of the villagers have understood the rationale of small family norm and they do not have much gender discrimination and coming to sterilization camps even with one girl child. But many are not for male sterilization.

Most people want water supply at their doors through taps and some of them are also willing to bear the expenditure on it, but they do not know why they want piped water supply. They do not know the importance of sanitation and are not interest to have toilet facilities in their homes.

Recommendations

Therefore, there is need to launch health education programme systematically and continuously by the government. The television media and radio should be used more frequently to reach large number of needy people. The messages should be transmitted instead of scholarly talks through media. Prime time should be chosen for telecasting messages and slogans. These programmes should be supplemented by health workers in the field by way of clarification etc.

SECTION – V

1. **Vision and Strategy Statement**
2. **Summary of the findings discussion and recommendations.**

1. A vision strategy statement for improving the health status of Karnataka State in 21st Century

India including Karnataka State is facing a triple burden of diseases and disability even after 50 years of development after attaining political independence. The first burden is that many preventable disease and disability still persist as public health problems. This is due to partly, to administrative and technical problems in the control of infectious and nutritional diseases and partly due to failure in public health policy.

In addition, due to demographic transition and increase in expectation of life, people are surviving longer. Unfortunately they survive to suffer from costly diagnostic facilities, costly drugs and longer hospital stay. Relatively, more health budget is being spent on elderly people than young and working people. This is the 2nd burden.

The third burden is the emergence of new diseases like HIV/AIDS, Alcoholism, and Drug abuse.

These challenges together with higher infant mortality rate (70/1000), higher proportion, low birth weight babies (30%) and higher mortality among under 5 children all pose a formidable disease burden to the state

In the face of these challenges, the health care system in the state is not that efficient as revealed by slowing down of decline of IMR and under 5 year mortality (1999-2000). In recent years incidence of malaria, tuberculosis and HIV/AIDS have also shown increasing tendency.

Therefore, there is a clear indication that the present and past public health policies and strategies are not sufficient to lesson the burden of disease and disability in karnataka. This situation has lead the state to spend more and more for curative services and get less and less in terms of health gain to the population. The experiences of western countries from 1801 to 1971 has shown a similar trend.

Ottawa charter after considering all the above factors, has suggested to all countries to apply the principles of health Promotion in their health policy. The Karnataka State would do well to implement these strategies to achieve the maximum benefits in terms of improved health. These strategies would help the people and government to reach the determinants of illhealth and destroy the roots. Even though this is a long, arduous and expensive task, it is the only way left for reducing the burden of disease and disability, and to promote the health of the state.

The 5 strategies suggested by the Character are:

1. Build healthy public policy
2. Create supportive environment
3. Strengthen community action
4. Develop personal skills
5. Reorient health services

Major areas of concern that should be adequately addressed are:

- ❖ Development of human resource
- ❖ Sustained action to build supportive environment for all people
- ❖ Fostering intersectoral action for health
- ❖ Forging partnership between non-government organisation and government health sector.

With the application of principles of health promotion and hopefully improved, health administration, the state may hope to improve health status of people of Karnataka, sufficient enough to live a healthy, useful and procedure lives at least by 2015 in 21st century.

2. Summary of the Findings, Discussion and Recommendations.

The study reveals that the Karnataka state Health Department has required organizational infrastructure, manpower and skill to launch Health promotional activities in the direction as suggested by the world health Organization's 9th General programme of work. However, some minor deficiencies and week linkages have been found in the study and they are discussed below and remedial measures suggested in the way of recommendations.

A. ORGANIZATIONAL STRUCTURE

The existing organizational structure in the state to take up the health promotional activities at the State, District, Taluka and primary Health care center level is adequate and no additions or modifications are required. The name of the state Health Education Bureau. Should be changed as Health Promotion and Education Bureau. All the Health Education staff may be brought under one division.

B. MANPOWER

State level

Some posts of Technical Officers of the Health education Bureau at the state level are vacant for a long time. This has led to the disfunctioning of these units and State health Education Bureau is very much handicapped without these Units. For Example, the Audio visual Unit is essential for pre–testing all IEC materials before they are produced in large numbers to be cost effective. Likewise the field study and demonstration Unit is essential because the health promotional activities are field tested for their applicability to the population and the cost effectiveness is determined before they are applied to a larger area.

Therefore the vacant posts in Audio-visual, field demonstration and Exhibition units may be filled up urgently.

District level

At the district level, no addition is required. The posts of the District Health Education officer and one Deputy District Health Education officer may be continued.

Both of them should have DHE qualification (the state has sufficient number of DHE qualified Health Educators). Their designation may be changed as District Health promotion and Education Officer and Deputy District Health Promotion and Education Officer.

Taluka Level

At Taluka level, there is no Health educator post are sanctioned at present. Therefore, one Health Educator post may be sanctioned for every taluka. The State has sufficient number of health educator for 175 talukas these post must be filled with D.H.E qualified Health Educators.

Primary Health Centre Level

The State has 1685 Primary Health Centres (this may go up also) and there are 782 Health Educators. Therefore, there is shortage of nearly 900 posts. It is very necessary that each Primary Health Centre should have one Health Educator and therefore additional posts may be created in a phased manner at the rate of 200 per year for the next 5 years.

C. TRAINING AND PROFESSIONAL EDUCATION

Training

The Study reveals that the Health Educators and Medical Officers need training in the health promotional aspect. Short term training courses may be arranged for District Health Education Officers, Deputy District Health Education Officers and the Medical Officers of health of all Primary Health Centres at the State level and at Divisional level. The training may be of one week duration.

The Health Educators, without DHE qualification may be sent for acquiring DHE qualification at Gandhigram in a phased manner.

Professional Education

The Medical Offices of Health of Primary Health Centre or Health Administrators at District and State level should have right kind of attitude and interest in health promotion, because they are the kingpins in health care delivery system. Therefore, their attitude and interest in health promotional activities are important and essentional.

Since the medical students are molded in the philosophy of medical and health practice and service at graduate level and it is here they form attitude and learn and develop skills, for right kind of attitude and practices. The syllabus in Community Medicine in MBBS and DPH and MD courses must be adjusted to include Health Promotional aspect of health care in a substantial way. The Community Medicine Department must have infrastructure to demonstrate the operational aspect of Health Promotional activities. The Rajeev Gandhi University of Health Sciences may be requested at issue guidelines and modify the syllabus in Community Medicine for both at undergraduate, diploma and degree courses.

FUNCTIONS

IEC activities

Information, Education and Communication activities are very important and essential for creating awareness of health and its importance in the minds of people. This is the 1st essential step in any health education programme to enable people to take control of determinants of illhealth in the community. At the present moment, there are no sufficient routine IEC activities in the State except centrally funded programmes. The State health sector should plan and carryout Health Education Programmes as a routine function of the Department and sufficient resources sould be earmarked for this in the annual health budget. Sponsored programmes are also very few and they will not reach the people and their impact is negligible.

School Health Programmes

This programme is very important in inculcating the health knowledge, moulding childrens health attitude and develop right kind of healthy life style favorable for healthy living. A comprehensive health programme which is already in existence should be implemented in all schools in the State. Therefore, the Government may be requested to issue orders to activate interdepartmental committee and implement comprehensive school health programme. This programme should include (1) health appraisal and follow up including medical examination (2) teachers training (3) providing good, clean and well ventilated class rooms (4) safe drinking water and toilet facilities to all schools and colleges in the state.

Further a comprehensive health education curriculum may be framed and taught covering all aspects of health promotion in a graded manner to the 1st Standard to X Standard students as is being done in Europe, Australia and USA. The curriculum should include environment, air pollution, green house gases, which are causes of illhealth. Healthy life style, population elements, family welfare and sex education HIV/AIDS etc. Health promotional measures required to be cultivated and practiced by the individual, family and community. Their social responsibility towards the health of others is very essential, for health promotion of the population.

The Subject of health promotion may be made a compulsory curricular subject in schools and appropriate educational material may be produced by State Health Education Bureau in collaboration with Health, Health Education and Educational Experts.

D. ETHICS, ADVOCACY, HEALTH RESEARCH AND PARTNERSHIP FOR HEALTH PROMOTION.

a. Ethics

Bioethics cannot be limited to medical practice and organ transplant. Bioethics is, in broader sense, includes all interventions upon human being whether in a group setting or individual. Health Promotion and Health Education are to produce a undoubtedly a type of intervention, to produce a modified life style, attitudes, and desires, wishes and way of life. Health promotion also covers inequity and injustice meted out to some section of society. In fact the rationale of application of health promotional measures is to uphold the dignity of human being, affirmation of human right and the freedom to empower himself to protect and promote health. So ethically also the health promotional principles are sound and the human right demands the application of these measures in civil society.

b. Advocacy:

For successful implementation of health promotional policies and activities, the health sector should develop strategies for Advocacy at various levels. It should be armed with solid evidence that health promotion works and is worthwile. The health department should have a strong support and useful partnership with industry and other non-government organizations.

Advocacy is required at all levels of governance. At the top level to policy makers, legislature and decision makers (specially resource allocators). Health administrators at the top level must be able to take strong leadership and plead with policy makers and exert pressure on them to change the directions of policy wherever it is not favourable for health promotion. For this to succeed, the health administrators should have solid and convincing evidence.

c. Health Research and Partnership

How and where convincing evidence is available? The scientific evidence can come only by health research. The State has vast potential for collaborative research in health field. There are 23 medical colleges with well equipped fully staffed, community medicine departments. The Government should foster partnership between Medical Colleges and the District Health Administrators for producing scientific

evidence about the benefits of health, Promotional activities. Collaborative action research is chapter and more usefull because it gives feed back to the health programme manager to change the directions it required. This is a highly potential area to develop and the Government can insist upon this while handing over 3 PHCs to the Medical Colleges as contemplated recently.

d. Funds

The funds for IEC activities, Advocacy programmes and social mobilisation programmes should be granted by the Government. It should be remembered that money spent on health promotion activities can bring 10 times more dividend than the money spent on drugs and purchase of sophisticated equipment. The Government should proceed in the direction of allocating more and more taxfunds for attacking root causes of diseases than treating diseases for cosmetic purposes.

The Central Health Council has already given guidelines to allot 5 to 10% of health budget for health promotion. This should exclude the investment on water supply and sanitation.

E. Intersectoral coordination

It is very clear and apparent from the literature and a decade of experience that health promotional areas overlap between many developmental departments. And the health promotion is possible only by developmental approach. Moreover, health promotion is essentially a social and political action and therefore, the health promotion goes beyond health sector and embraces all other developmental sector of Government. Therefore, intersectoral cooperation and coordination between departments becomes very necessary and crucial for successfull implementation of health promotional activities. Many case studies and opinion of experts show that comprehensive multi-disciplinary health promotional programme yield better results than programmes by single sector.

The study reveals that there is no strong linkage between health sector and other development sectors both at the top and at the bottom levels. Therefore, modalities should be found out and experimented to secure firm coordination and cooperation amongst all developmental departments at the Ministerial, Secretary, Directors level at the District level and at the grass root level. Health promotional committee may be formed with the State Health Council with the Chief Secretary as the Chairman to oversee the policy directions, and matters of intersectoral cooperation between various sectors. Developmental sectors which are very important and whose activities comprises many health promotional components are the following:

- Education Department.
- Information and Broadcasting Department.
- Community Development Department.
- Agriculture Department.
- Department of Industry.
- Social Welfare Department and
- Public Health Engineering Department.

1. Education Department.

The study reveals that there is no strong linkage between Health and Education Departments in the State. A close liaison is very much needed between these two Departments because one of the most important health promotional programme in the long run is the School Health Programme (SHP). For successful implementation of School Health Programm very close collaboration is essential. Already existing committees at state & District levels may be given sufficient responsibility & powers and resources.

2. Information & Broadcasting Department

This sector is very much relevant to day than ever before. Because of the explosion of information on health promotion and multitude of media telecasting such information. Many TV Stations in their enthusiasm to make T.V. shows attractive especially to the youths include scenes and actions that actually convey unhealthy life styles. **Therefore, there must be a Watchdog Committee to watch out such shows and bring it to the notice of controlling authority in the State. Such a Committee should include public people also.**

For purposes of telecasting health promotional activities by the governmental media, a plan of telecasts has to be prepared by the Information and Broadcasting Department and the health experts either from the Department of Health or from non-government organizations doing health promotion work to be consulted before **telecasting.**

Health Promotion and Education Bureau should prepare their own TV scripts and request the Information and Broadcasting Department to telecast periodically. Details may be worked out jointly by the two Departments. The Health Department should gather public opinions about the television shows that have health implications and bring the telecasts that gives mis information, wrong information if any to the notice of the information and broadcasting department. Health Department through its health promotion and education wing should identify the health promotional elements in the programmes of these sectors and discuss with the respective authorities.

Similarly, the directions by the Government may be issued to all development oriented Departments to have a close liaison with the Health Sector.

3. Collaboration with non-government organisation

Health promotional activities are carried out mostly at the level of people, in the families, community, villages and slums. Proper understanding and cooperation of local non-government organizations are very useful and essential. At present there is no formal collaboration with the Non-Government Organizations. The Government may issue directions to the health sector to establish firm and sustainable relationship with local non-government organizations for implementation of health promotional activities. These organizations are very essential for social mobilisation, people's contact and people's participation in the programme.

SUMMARY OF RECOMMENDATIONS WITH REASONS AND EXPLANATIONS

Recommendation – 1

It is recommended to change the name of the Health Education Bureau as "Health Promotion and Education Bureau".

Reason:

First of all to conform with the recent advances in the international Health forum and secondly to add additional importance of health promotional efforts of public health. Because the health promotion incorporates other two fields of action in addition to health education. They are social support and empowerment of people for better health. Therefore, the organization that deals with health promotion should have the appropriate name as "Health Promotion and Education Bureau".

Action:

Ministry of Health and Family Welfare can issue an executive order to this effect.

Recommendation – 2

The existing two divisions of Health Education Bureau should be merged and all the health education staff at the Primary Health Centre, District level and at the State level should be brought under the newly named division of "Health Promotion and Education Bureau." This division should be headed by an Additional Director of Health and Family Welfare Services, who will work directly under the Director of Health and Family Welfare Services. However, the District Health Education Officer and Health Educators at Primary Health Centre will work under the control of District Health and Family Welfare Officer, Taluka Health Officers and Medical Officer of Health of Primary Health Centres.

Reason:

Health promotion and education activities need special efforts and attention of the health department. Health promotional strategies and activities will have to be planned, executed and monitored at the State level, District level, Taluka level and Primary Health Centre levels. Unless there are designated personnel at various levels, the programmes cannot be effectively implemented. Secondly, the health promotion and education is becoming a specialised field in view of advances in communication and multi media. Therefore, communication specialists and well trained and skilled specialists are required to understand and interpret various behaviour changes taken place in the community as a result of health promotion and education activities. Further, if all specially trained and qualified staff are working under one direction and control, they would perform better and will be more efficient and more productive because of their combined talents and expertise.

Action:

Ministry of Health and Family Welfare can issue an executive order merging the two divisions of Health Education Bureau into one division of "Health Promotion and Education Bureau".

Recommendation – 3

Every newly created Taluka Health Office should have atleast one qualified Health Educator. His designation should be Taluka Health Promotion and Education Officer. He has to work under the control of Taluka Health Officer and under the technical control of District Health Promotion and Education Officer. He is responsible for planning, implementation and monitoring of all health promotional activities with the help of Health Educators of PHC and grass root level workers and their supervisors at the Primary Health Centre.

Reason:

In the context of supervision and guidance of health promotion and education activities, the existing District Health Education Officer is not efficient because, of the vastness of the district and very large population to be served. Therefore, a supervisory and guidance staff at Taluka level will be good and can be more effective because he can contact the field staff more frequently and the area he has to cover is reduced markedly. He can guide and supervise all the activities in all the PHCs of the Taluka and report to the District Health Education Officer (See also page 39 of the report) These officers will have to be mobile because his/her activity involves mostly touring and therefore they should be given traveling allowance and loan to purchase two wheelers.

Action:

Regular Government order will have to be issued after obtaining clearance from the Finance Department for the creation of 175 Taluka level Health Promotion and Education Officers. Along with this order, the loan for these officers for purchase of two wheelers should also be sanctioned.

Recommendation – 4

Ideally, there must be one Health Promoter and Educator for every PHC. This requires more than 1600 Health Promoters for the whole State. But there are only 782 Health Educators in the state at present. To cover all PHCs with Health Promoters, it is recommended to attach two PHCs per every Health Promoter and Educator. But, he has to be attached to Taluka Health Office and made to work under the control of Taluka Health Promotion and Education Officer. And additional 273 Health Promoters post may be sanctioned to cover all PHCs. This will ensures one Health Promoters or every two PHCs.

Reason – 1:

Now there are 782 sanctioned posts of Health Educators in the State. Of these, 688 people are working and 94 posts are vacant. Of 688 persons who are working, 217 people have DHE qualification and the remaining 471 people do not have DHE qualification. These people may be posted as Health Promoter and Educator and two PHCs may be attached to each person, thus 942 PHCs can have Health Educators. The vacant posts of 94 may be filled up as soon as possible, so that another 198 PHCs can be covered. Still 545 PHCs will go without Health Promoter and Educator and to cover these PHCs 273 additional posts required to be sanctioned.

Reason – 2:

All India staffing pattern for PHC includes Health Educator. In addition, there must be some person at the grass root level to initiate and take leadership in a very vital area of public

health. Health promotion is a process of enabling people to increase their control over the Health determinants. It involves people and host of other public persons. He/she should be in constant touch with village formal and informal leaders to secure their co-operation and use their influence in order to bring about critical social pressure on general public to change their behaviour. People will have to participate in a big and sustainable way to bring about this revolutionary change in the human health behaviour and practice. He is a grass root level worker at the PHC in health promotion and education and a facilitator and an organizer. Unless there is one person with sociology background with mass communication skill, all efforts made from the top in the field of health promotion and education will be of no avail. Therefore, one Health Promoter and Educator per Primary Health Centre is a must and this staffing pattern should be continued and additional posts may be sanctioned, in a phased manner.

Qualification for Health Promoter and Educator

He/she must have a basic (BA or MA) University Degree in sociology and should have undergone training in health promotion and education. (A six weeks training programme may be arranged for all those who have no DHE qualification and for new recruits before they are posted as Health Promoter and Educator)

Recommendation – 5

All vacant posts in Field Study and Demonstration Units, Audiovisual Unit, Exhibition and Student Health Education Unit should be filled up immediately and the above units should be made functional and energized.

Reason:

These units are essential for any health promotion and education organization. It is in these units innovative action programmes are tested before they are employed on a large scale. They act as field laboratory for pre-testing IEC materials and they are research-cum-action units to give feed back in concurrent and terminal evaluation of an educational activity. Therefore, all these units may be retained and vacant posts may be filled up. These units are also important for planning, monitoring and evaluation of health promotion and education activities (see also page 34–35 and 53 of the report for further justification)

Action:

Director of Health and Family Welfare Services in consultation with the Health Commissioner can fill-up all the vacant posts.

Recommendation – 6

Now, the IEC activities are organized by several division like RCH, IPP IX, AIDS, Tuberculosis and Leprosy. It is recommended that all IEC activities should come under the responsibility and control of the Health Promotion and Education Division. This division should implement and monitor all IEC activities.

Reason:

Health promotion and health education is a team activity with special input by Health Promoter both at the implementation level and planning and monitoring level. The division of health promotion and education is staffed with people who have the skill to organise mass

education campaigns and group education programmes involving people and there are Administrators at the taluka and district level to over see all IEC activities and give appropriate guidance. Therefore, all IEC activities of all divisions should be entrusted to the division of Health Promotion and Education to improve efficiency (see also page 55 of the report)

Action:

An executive order from the Health Commissioner is required. Because all programme Directors will have to surrender the funds from their budget to this division for implementation of the health education activities.

Recommendation – 7

Routine health promotion and education programmes should be organized in every PHC covering all villages. All the grass root level workers and their supervisors must be responsible for implementing these activities. These activities must be planned, organised and monitored by the PHC Health Promoter and Educator and supervised by Taluka Health Promotion and Education Officers. Atleast Rs. 5000/- per PHC per annum may be budgeted for health promotion and education.

Reason:

At present there is no organised routine health education activity to perform either by the Health Educator or grass root level health workers except personnel communication to pregnant mothers by ANM and sponsored IEC programmes which are funded by Central or State funds. This is not correct. This appears to be the reason why Health Educator at PHC are used for other odd jobs by the Medical Officers because he has no routine job to do till a sponsored programme is sanctioned and funds released. The health promotion and education should be a routine Primary Health Centre function. It is the duty of Health Promoter and Educator to plan social mobilization programme, group education programme in every village in the PHC and implement the plan with the help of local grass root level workers and their supervisors. Some funds must be made available for the PHC for health promotion and education activities. The Health Promoter at the PHC may be allowed to raise funds from philanthropists for the programmes. But the State should provide some seed money for the purpose. The programmes like M.S.S. and self-help groups, jathas by school children should become a routine activity in every village. Whenever there is a sponsored programmes, it should also be implemented as and when there are sanctioned by the state and central governments.

Action:

The Director of Health and Family Welfare Services should send the proposal to Finance Ministry with the concurrence of Health Commissioner and plead with the budget allocators to make provision of atleast Rs. 5000/- per PHC per annum.

The Director of Health and Family Welfare Services should also issue executive order to make IEC activity as a function of the Primary Health Centre and the planning, implementation and monitoring should be the responsibility of Health Promotion and Education Division. Of course the District Health and Family Welfare Officer and Medical Officers of Health are responsible in their jurisdiction for implementing these IEC activities (see also page 55 of the report for justification)

Recommendation - 8

5 to 10% of the Health Budget of the State may be earmarked for IEC and associated activities in the annual budget. This has been already agreed upon by the Central Health Council a few years ago.

Reason:

IEC activities which involves awareness programme, Advocacy programmes require funds for organization and implementation. These programmes are essential to implement the following suggestions envisaged in the Ottawa and Jakarta Declarations. They are:

1. Raising awareness among the general public about the determinants of diseases and illhealth.
2. Promotion of social responsibility of people about the health of others.
3. Encourage people to participate and take control over the root causes of illhealth.
4. Secure infrastructure for health promotion by motivating people to help build health infrastructure in all villages and towns.
5. Mobilization of resources and public opinion required for health promotion in all cities, towns and villages.
6. Increase community capacity and empower the individual about health promotion and others.

Apart from the above, the health promotional activity involves large number of people and groups and not merely individuals. The health promotional activities are aimed at and deal with apparently healthy people with a view to help them to gain better health and become less susceptible for diseases and thus saving lives, lessen the burden of diseases, and increases productivity. This in the long run help communities to improve their health status, to stabiles the population size by adopting small family norm.

Action:

Health Minister and Health Ministry of the State may be requested to take initiative by putting the proposal before the cabinet and then to Finance Ministry for concurrence.

Recommendation – 9

Advocacy programmes on Health Promotion and Education may be organized throughout the State at various levels. The actors and clienteles is given below. These programmes should be conducted periodically and should become a annual or bi-annual feature of the Health & Family Welfare Department.

They should deal with appropriate health promotion.

Level	Actors	Clienteles
State Level	1. Director of Health & F.W. Services. 2. Additional Director of Health & FW Services of Health Promotion and Education Division. 3. Joint Director of Health Promotion and Education Dvn. 4. Deputy Director, IEC	1. Policy makers 2. Legislatators 3. Finance Ministry Officials 4. Top level Bureaucrats 5. State level religious leaders 6. Health Professionals 7. Health Researchers
District Level	1. Dist. Health and FW Officers. 2. Dist. Health Promotion and Edn. Officers 3. Dy, Dist. Health Promotion & Education Officers.	1. Zilla Panchayat President and Members. 2. Chief Executive Officer. 3. Local Religious Leaders. 4. Local Legislators and MPs.
Taluka Level	1. Taluka Health Officers. 2. Taluka Health Promotion and Education Officers. 3. Health Supervisors.	1. Taluk Panchayat President and Members. 2. Taluka MLA. 3. Religious Leaders. 4. Local Formal Leaders. 5. Local NGO.
Primary Health Centre Level	1. Medical Officer of Health. 2. Health Promoter and Educator. 3. Health Supervisor.	1. Village Panchayat President & Members. 2. Local Teachers. 3. Local NGOs. 4. Self help Group. 5. Village Health Committee.

Reason:

Advocacy and lobbying have become useful mechanisms for motivation and convincing policy makers and decision makers to take rationalistic view and right decision. These programmes are also needed at implementation level (see pages 16-17 and 49 of the report.)

Action:

Health Commissioner should issue direction to Health Department.

Recommendation - 10

A comprehensive School Health programme should be implemented in all primary and secondary schools in the State.

Reason:

Now primary and secondary education is compulsory till the age of 14 for both boys and girls. Therefore there is every possibility of reaching 90 to 95% of children (upto the age of 14) in the schools. School health programme has become one of the most beneficial health promotion activity not only for the present generation of children, but also for the next generation of parents. Many case studies all over the world have accumulated evidence, to show that school health programme is the most cost effective method of health promotion activity. To be effective, it should be comprehensive and cover 90 to 95% of the target groups. (see also pages 17-18 of the report)

Action:

Government order may be issued directing the Health Department to draw up a plan of action for implementing a comprehensive school health programme in consultation with the Education Department. Necessary funds may also be made available. There is no need for special staff for the Health Department for school Health services. The existing staff at the PHC or Taluka level is sufficient. However some more Funds are required for building toilets and water supply facilities in every school, which may be sanctioned by Zilla Panchayat.

The existing State level and District level School Health Review Committees may be activated or fresh Committees may be constituted with Education Commissioner as Chairman at the State level and the Deputy Director as Chairman at the district level. The education department is ready to collaborate, but the Health Department is not responding sufficiently to plan and implement a comprehensive school health programme. Medical officers must be made responsible to implement school health programme.

Recommendation - 11

The syllabus for primary and secondary school education may incorporate health knowledge and health practices topics in the curriculum, so as to include all aspects of health, environment, air pollution, population problem etc., and social responsibility of the individual and of the society for community health, and the need to take into account the equity and social justice to all sections of people.

Reason:

There is great need to add health topics in school curriculum in a graded way from 1st standard to 10th or 12th standards. The knowledge learnt here is important and essential for proper healthy behaviour and develop healthy life style for the entire life span of the individual. It helps children to adopt good health habits and discard bad health habits and practices. Many bad health habits are cultivated in childhood without knowing fully there effects on health. Educated person should know desirable health habits, behaviour and practice them by himself and educate his family. He must be a model to others. Moreover, many personal habits and behaviour associated with good health are formed during childhood, the neglect of which may be the causes of illhealth in adult life or old age.

Therefore, scientific information and rationale behind good healthy life style should be made available to every student then and there, and from the early age. Environment of schools should also be healthfull.

Action:

Education Ministry should give direction to curriculum committees to involve Health promotion and Education Director while making reversion of curriculum for primary and secondary education from 1st to 10th standard. Out line of the proposed curriculum is given in the annexture

Recommendation - 12

Training for District Health and Family welfare Officers and Taluka Health Officers and Medical Officers of Health in health promotion and education may be organised at different levels as follows:

1. State level : Dist. Health & Family welfare Officers
2. Dvnl. level : Taluka Health Officers
3. District level : Primary Health Centres doctors

Duration:	State level	:	2 days
	Divisional level	:	1 week
	District level	:	1 1/2 week

The topics should include all the elements of health promotion and education and rationale behind this movement.

Reason:

District Health and Family Welfare Officers and Medical Officers are the kingpins in the implementation of any public health programmes. Unless they are motivated and takes professional interest in the matter, these programmes cannot be implemented. Therefore, the training of these personnel are very important.

Action:

Health Ministry should issue Government Order and direct the Health Department to plan and implement the training programme as early as possible.

Recommendation - 13

The Government may be recommended to bring about intersectoral coordination and cooperation among all Developmental Sectors of the Government.

Reason:

Health promotion and education is a developmental approach to achieve better health for the people. All developmental programmes have the same goal of achieving better standards of living to all people. Therefore, intersectoral coordination is an essential strategy to achieve health promotion. Further, when more sectors of Government are involved in health programmes the

health message spreads and reaches more people and the programme is more likely to succeed than when it is done by one sector.

How it could be done

A Coordinator preferably Joint Director of Health Promotion and Education may be appointed for this purpose. He will have to identify the areas for discussion and coordination needed in implementing a particular development programme, involving health component. He will then arrange a discussion with the respective Departments and the Additional Director of Health Promotion and Education and other public health experts. (see also page 57-58 of the report)

Recommendation - 14

Government may involve non-government organizations in health promotion and education programmes at all levels

Reason:

Non-Government organizations are another organizational resources available to the government to bring about health promotion of people. The health promotional programmes involves active participation of people, ultimateltely they are the beneficiary of any health programme. The local NGO know the local people better and they can raise additional resources needed for the programme.

Action:

Health Ministry may direct the Health Departments to involve local non-Government organizations to participate in all health programmes in a substantial way.

How it can be done

The concerned Health Department official should give preference to non-government organizations to preside over a function or to inaugurate a group discussion and allow them to talk and discuss the issues and thus encourage them to participate in awareness programmes or advocacy programmes. There must be equal partnership between NGO and government sector and the management of the programmes must be transparent and open. The NGO also will be helpful to raise additional resources whenever needed.

However entrusting, the sole responsibility to NGO for implementation of an health programme without proper control and check may be counter productive in the long run.

Recommendation - 15

Recommended to the government to make public health qualification like DPH or MD (CM) mandatory qualification for appointment as District Health & Family Welfare Officer.

Reason:

Health promotion is a public health activity. It involves people. It is a social and political action. It envisages a planned activity. The health promotional programmes have to be planned, monitored and evaluated scientifically. Besides, the public health expert should be able to exhibit

leadership qualities and should be an efficient manager. To acquire all this knowledge and develop skill one has to undergo additional training and education. A physician after his MBBS degree or with clinical postgraduate degree will have no chance to acquire proper attitude, skill and theoretical knowledge needed to become a technical administrator. Therefore, a public health administrator should have public health qualification.

Action:

Government can change the cadre rules and incorporate the DPH or MD (CM) to be promoted as District Health and Family Welfare Officer.

Recommendation - 16

The syllabus for MBBS course, DPH and MD(CM) may be modified so as to include all the essential principles, strategies and action programme of health promotion and education, so that these professionals should be capable of being community leaders in order to mobilize community participation.

Reason:

The new ideas and new developments in public health and preventive medicine are many and they are increasing every decade. People in the academic field are not so well versed about what is actually happening in the field or community. Community medicine is changing much more than other fields of medicine. Hence, there is need to incorporate these principles in the curriculum of basic doctors and public health experts.

Action:

Rajeev Gandhi University of Medical Sciences Vice Chancellor can direct the Curriculum Committee of the university to consider and incorporate the principles and practicing of health promotion and education in MBBS., MD and DPH courses.

Recommendation – 17

Training for State, District, Taluka and PHC level health education staff should be organized at various levels.

Sl No.	Level	Cadres	Duration
1.	State Level	All State level and District level staff.	3 Days
2.	District Level	All Health Educators in the District with DHE qualification.	1 Week
3.	District Level	For Health Educator without DHE qualification.	6 weeks

Reason:

Health promotion and education process involves more than mere education. The social support and empowerment are additional action programmes that these people will have to undertake to implement health promotion strategies.

Action:

Director of Health and Family Welfare Services can issue order for training of these key officials for health promotion and education.

Recommendation – 18

Health Promotion and Education Division should have the staffing pattern and the top level staff should have qualification and experience as follows:

1. Additional Director of Health and Family Welfare Service

   - Number of posts ... One
   - Status ... Head of the Division of Health Promotion & Education.
   - Qualification ... MBBS., DPH., or MD (CM) should have worked atleast 15-20 years as Health Administrator at the District or State level. Qualification in Communication is desirable.

2. Joint Director of Health and Family Welfare services. One

   - Qualification ... MBBS., DPH., or MD (CM) should have worked atleast 10 years as Health Administrator at the District or State level. Qualification in Communication is desirable.

3. Joint Director of Health Promotion and Education. One

   - Number of Posts ... Appointment should be promotion by selection from among the District
   - ... Health Promotion and Education Cadre. Seniority should be the criteria unless a person has an outstanding achievement in the field.
   - Qualification ... BA or MA in Sociology, DHE and Degree or Diploma in Communication and should have had 10-15 years of experience as District Health Promotion and Education Officer or equivalent post in the Division of

Health Promotion and Education.

4. Deputy Director of Health Promotion and Education.

• Number Of Posts	...	4
•	...	One for RCH Training
		One for School Health
		One for Non-Communicable diseases & AIDS
		One for Communicable Diseases & Research
• Qualification	...	BA or MA in Sociology and DHE and should have not less than 10 years of field experience as District Health Promotion and Education Officer. Diploma or Degree in Communication may be given preference.

5. District Health Promotion and Education Officers

• Number of Posts	...	27 or as many as number of Districts in the State.
•	...	By promotion among the District Deputy Health Promotion & Education Officers.
• Qualifications	...	BA or MA in Sociology and DHE and should have had atleast 5 years of experience as District Officers. Degree or Diploma in Communication may be preferred.

6. Deputy District Health Promotion & Education Officers

• Number of Post	...	27 or as many as number of District in the State
•	...	Appointment by promotion from among Taluka Health Promotion and Education Officers.
• Qualifications	...	BA or MA in Sociology and DHE and atleast 5 years as Taluka Health Promotion and Education Officers

7. Taluka Health Promotion and Education Officers

- Number of Posts ... 175 or as many as number of Taluks in the State
- ... Appointment by promotion from among the Health Promoters and Educators
- Qualifications ... BA or MA in Sociology and DHE and atleast 5 years of experience as Health Promoter and Educator

8. Health Promoter and Educator

- Number of Posts ... 1635 or as many as number of PHCs in the State
- ... Appointment by fresh recruitment from among the applicants.
- Qualifications ... BA or MA in Sociology, DHE qualification or a Diploma or degree in communication may be preferred. Candidates should possess:
  - Good knowledge in Kannada
  - Should possess good communication
  - Should posses good leadership quality
  - Should have good knowledge about the community, group dynamics, Lobbying, negations etc.
  - Preference may be given to people who are living in villages of the respective Districts. The existing Health Educators may be absorbed as Health Promoters & Health Educators and the rest may be recruited

9. Technical Officers

- Number of Posts ... 3

			One for Audiovisual Unit
			One for Field Study & Demonstration Unit
			One for Exhibition Unit
10.	Health Supervisors	...	2
			One of Training Unit
			One for field Study & Demonstration Unit
11.	Nursing Officers/Public Health Nurse	...	2
			One for Training Unit
			One for Field Study & Demonstration Unit
12.	Home Science Asstt.	...	One FS & DU
13.	Social Scientist	...	One FS & DU
14	Teacher	...	One FS & DU
15	Artist-cum-photographer	...	One
16.	Artist	...	One
17.	Sub-Editor	...	One
18.	Projectionist	...	One
19.	Craftsman	...	One
20.	Silk-screen Technician	...	One

Qualification and experience required for the above posts are already existing in the Department, the same may be applied.

The following recommendations have been made to National Governments by a W.H.O. international meeting held in Geneva – 27 - 30 November 1995. They may be considered by the Task Force wherever they are applicable.

- Resource allocation for therapeutic medicine and for public health must be more equitable, and new resources should be mobilized for public health.
- Government should promote, facilitate and support voluntary public health action and community participation in policy development.
- Governments should promote and facilitate intersectoral cooperation in public health. In order to achieve an effective and coherent public health policy, health ministries must recruit the partnership of other departments such as trade, industry, agriculture, housing,

public works and so on, all of which have key roles in the development of the new public health.

- Governments should find ways and means to enhance the status and image of public health care professionals consistent with their crucial role in the health of a nation; such status and image should not be less than that of professionals offering predominantly curative care.
- Governments must seek an integrated approach to health, the environment and socioeconomic development and, in the words of the Saitama declaration, "improve solidarity in a global approach to generate, distribute and utilize public resources for sustainable development, promotion of health and protection of the environment."

EXISTING SYLLABUS ON HEALTH IN PRIMARY AND SECONDARY EDUCATION IN THE STATE

3Rd Standard	Chapter 1.	Parts of the Human Body - Sense Organs – Care of the Sense Organs - Teeth – Types, Growth – Brushing – Bad Breath – Tooth Decay
	Chapter 2.	Food – Common Food Items – Nutrients found in food – Growth and Food – Protective Food – Milk – Complete Food – Cooked Food – Food Eaten Raw – Cooked and Uncooked Food – Washing – Cleaning - Vegetables and Fruits.
4Th Standard	Chapter	Human Body – Nutrients and Health.
	2.1	Functions briefly on respiration and circulation
	2.2	Our Food different Nutrients, sprouted seeds
	2.3	Digestion of food - Digestive Juices – Teeth
	2.4	Food Preservation – Canned Food – Improper serving and spilling result in wastage – Over cooking destroyed certain nutrients
	2.5	Food and Health – Contamination of Food by flies – Food exposed to dust – Food preserved low temperature
	2.6	Water and Health – Drinking water should be free from floating matter and germs – Water should be purified by filtration and storage of water – Wastage of Water should be avoided
	2.7	Health and Hygiene – Surround should be kept clean - Unclean surrounding cause diseases there should be clean drinking water and toilet facility in houses and schools – Breeding of Mosquitoes
5Th Standard	Chapter 6.	Human Skeleton
	Chapter 7.	Physical exercise and good postures
	Chapter 8.	Our Food - Carbohydrates – Proteins – Fats – Vitamins – Minerals – Water – Vitamin deficiencies – Storage of Food – Fried Food – Sprouting Seeds.
	Chapter 9.	Infectious diseases – Communicable diseases – Food Borne – Vector Borne – Prevention Inoculation – Clean Food – Clean Environment
	Chapter 13.	Environment and Pollution – Housing.
	Chapter 19.	Prevent Water and Air Pollution
6th Standard	Chapter 8.	Digestive System - Respiratory – Sense Organs.
	Chapter 10.	Water Pollution
	Chapter 13.	Man and Environment Pollution
7th Standard	Chapter 9.	Water Pollution
	Chapter 10.	Air Pollution
	Chapter 11.	Human Body
	Chapter 12.	Food Health and disease – Nutritious Food – Food habits – Food preservation – Adulterated Food – Habits – Smoking – Drug Addiction – Personal hygiene
8th Standard	Part - II Unit – I	Transmission of microbes from one person to another person – Transmission through water and food – Cholera – Tuberculosis - Tetanus – First Aid – Transmission – Through Animals – Rabies – Immunisation – Pregnant Mother – Infant – Preservation of Food –

		Food Poisoning
	Unit – III	Hormonal plants – Asthma
9th Standard	Part – I	Unit - I : Ways of living
	Chapter 14.	Human eye
	Chapter 15.	Defects of eye
	Chapter 16.	Colour vision
	Part – II	Unit – I
	Chapter 4.	Life Processes – Digestion in man – Respiration – Transport – Excretion – Reproduction
		Unit – II
		The Story of Man – Evolution in Man
10th Standard	Part – II	Unit – II
	Chapter 5.	Environmental Pollution
	Chapter 6.	Constituents of Food C/F/MV/P/F – Mineral Salt deficiency disease – Anaemia – Goitre – Balanced diet – Food Adultration.
	Chapter 10.	Factors affecting human health – Malfuctiong of Body Parts – Genetic Factors – Hormoal Imbalanced – Allergy – Malnutrion – Pathogens – Viruses – AIDS – Leprosy – Malaria – Kala azar

COMMENTS ON THE EXISTING SYLLABUS AND NEED FOR A CHANGE

The existing syllabus starts from 3rd Standard to 10th Standard. First Two standards are left out. This is not correct. Students when they are admitted to First Standard are already 6 Years old and they are capable of understanding some elementary aspects of human body and environment. More over important aspects of living style should be introduced as early as possible so that scientific information is available to the student before he had any chance of imbibing unscientific view of life style. There fore awareness about health should be started from the 1st Standard itself.

The existing syllabus though includes some aspects of health information the health matter is not sufficient and not scientifically arranged from 1st Standard to 10th Standard and the syllabus is not comprehensive. Syllabus do not emphasize the acquisition of skills, it is not sequentially developed and do not reflect the interdependence of students, peers, the family, and the community. Promotion of health and well-being is not adequately treated. Classroom activities are not supplemented by activities and projects at home and in the community that enhance students understanding of the family and social underpinnings of health.

Further the syllabus do not include any thing about the individual, family, and community responsibility for creating health facilities and maintaining community health which is crucial for learning life skills and acquiring healthy habits.

The principles of education is to arrange syllabus from simple things to complicated things gradually and in increasing sophistication. The subject matter must be repeated at periodical intervals. The syllabus must be taught over an extended period of time and it should be incorporated into the daily life activates of the community. The existing syllabus do not conform to the educational principles. Hence there is need for a thorough change in the syllabus.

REFERENCE:

Report of a WHO Expert Committee. WHO Technical Report Series – 870.

THE NEED FOR COMPREHENSIVE SCHOOL HEALTH SERVICE.

EXPERIENCE OF U.S.A.

U.S.A. is implementing comprehensive School Health Education Curricula and they have found by large scale evaluation studies the following benefits over the years.

1. School Health Education Increases students knowledge of healthy behaviour and risk behaviour.
2. Teacher training in health education has a significant effort on successful achievement of health out – comes for children.
3. "Booster Shots" of health education is necessary every 2-3 years.
4. Significant gains in students knowledge can be achieved after 50 hours of instruction and moderate improvement in students health related behaviour can be achieved after 30 hours of instruction in a topic.

Reference: W.H.O. Technical Report Series 870.

PRINCIPLES AND PRIORITIES OF SCHOOL HEALTH SERVICES

Every school should provide a safe learning environment for students and a safe workplace for staff:

To often the school environment itself can threaten physical and emotional health. The school environment should:

- provide safe water and sanitary facilities;
- protect students from infectious diseases;
- protect students from discrimination, harassment, abuse, and violence;
- reject the use of tobacco, alcohol, and illicit drugs.

Every school should enable children and adolescents at all levels to learn critical health and life skills:

- focused, developmentally appropriate, skills-based health education in topics such as infectious diseases, nutrition, preventive health care, and reproductive health;
- comprehensive, integrated, life-skills education that can enable young people to make healthy choices and adopt healthy behaviour throughout their lives;
- health education that enables young people to protect the well-being of the families for which they will eventually become responsible and the communities in which they reside.

Every school should more effectively serve as an entry point for health promotion and a location for health interventions:

- provide safe and nutritious food and micronutrients to combat hunger, prevent disease, and foster growth and development;
- establish prevention programmes to reduce the use of tobacco, alcohol, and illicit drugs, as well as behaviour that promotes the spread of HIV infection;
- treat, when possible, helminth, malarial, skin, and respiratory infections, as well as other infectious diseases;
- identify and treat, when possible, oral health, vision, and hearing problems;
- identify psychological problems and refer those affected for appropriate treatment.

The community and the schools should work together to support health and education:

Families, community members, health service agencies, and other institutions have an important role to play improving the health of young people. At the same time, the school can play an important role in improving the health of the community as a whole. Such roles include:

- advocacy and support by the community for the development of the school as a healthy organization;
- active consultation and collaboration between families, the community, and the school to improve the health of children and adolescents who attend school, as well as those who do not;
- active participation by the school and its students in programmes to improve the health and development of the entire community.

School health programmes should be well designed, monitored, and evaluated to ensure their successful implementation and their desired outcomes:

- developing or adopting in each Member State the most appropriate and affordable methods to collect data about children's health, education, and living conditions, by age-group and sex;
- emphasizing, whenever possible, research that draws on the knowledge and skills of local educators, students, families, and community members;
- developing methods for the rapid analysis, dissemination, and utilization of data at the local level, where they can have the greatest impact.

FOCUS ON SCHOOL HEALTH EDUCATION

1. School Health Education (S.H.E.) will Focus on behaviour and conditions that promote health.
2. Help Children to develop life skills needed to adopt healthy behaviour.
3. Inculcates knowledge, attitudes, believes and values related to the development of healthy behaviour and health promoting conditions.
4. It will provide learning experience that allow students to practice skills and model behaviour.

ECONOMICS OF SCHOOL HEALTH SERVICE

There is ample evidence that school health expenditures result in substantial savings:

- A study in the USA estimated that every US $1.00 invested in schools on effective tobacco education saves US$ 18.80 in the costs of addressing health and non-health problems caused by smoking. The study further estimated that the benefit of every US$ 1.00 spent on education for alcohol and other drug abuse prevention saves US$ 5.69. Furthermore, each US$ 1.00 spent on education to prevent early and unprotected sexual behaviour saves US$ 5.10. On average, the money saved by society for each US$ 1.00 spent on these three forms of health education is approximately US$ 14 (1).
- Spending money on school health programmes can be justified on purely economic grounds; schooling pays off in higher incomes and a healthier workforce. (2).
- A 1993 World Bank analysis (2) estimated that most regions of the world could greatly benefit by implementing an "essential public health package" consisting of the following five central elements:

  - an expanded programme on immunization;
  - school health programmes to treat worm infections and micronutrient deficiencies and to provide health education;
  - programmes to increase public knowledge about family planning and nutrition, about self-care or indications for seeking care, and about vector control and disease surveillance activities;
  - programmes to reduce consumption of tobacco, alcohol, and other drugs;
  - AIDS-prevention programmes with a strong component on other sexually transmitted diseases.

Although school health programmes are explicitly mentioned in only one of the above elements, for a large portion of the world's population, schools could efficiently provide all five elements of the recommended package.

There is ample evidence that better health improves academic performance:

Throughout the world, there are many examples of the school-based treatment of medical problems resulting in improved academic performance. In one, Jamaican children who were treated for moderate whipworm infections raised their test scores, which had lagged by 15% up to the level of uninfected children (2). School food programmes also have a marked effect on attendance and school performance (3).

There is ample evidence that school-based programmes can reach very large populations of school-age children:

- Schools can reach about one billion students worldwide and, through them, their families and communities. As previously noted, "the formal education system is . . . the developing world's broadest and deepest channel for putting information at the disposal of its citizens" (4).
- School health programmes have improved the health of large populations when implemented on a national scale. In the Republic of Korea, for example, the prevalence of intestinal helminthes among children was reduced from 80% to 0.2% over 30 years through a school-community chemotherapy, health education, and sanitation programme.
- Teachers can have an immense impact on young people's health. As reported by UNESCO, there are almost 43 million teachers around the world at the primary and secondary levels (23.9, primary; 18.8, secondary) (2). The size alone of the teacher population is of public health significance.

There is ample evidence that health education and services have far-reaching effects:

- Studies in the USA have documented that carefully designed and implemented comprehensive health education curricula can prevent certain adverse behaviour, including tobacco use, illicit drug use, dietary practices that cause disease, unsafe sexual behaviour, and physical inactivity. Further, such curricula reduce school absences by reducing the impact of disease and drug and alcohol abuse, and the number of injuries and unintended pregnancies; they also improve cognitive performance through proper diet, exercise, sleep, and stress reduction (5).
- Healthy habits learned during early years (e.g. safe food handling) will be applied throughout life (6).
- School-based clinics show evidence of improving students' knowledge about how to be effective consumers of health services, reducing substance abuse, and lowering hospitalization rates (7).
- Health promotion for school staff, one of the least visible elements of school health programmes but one of the most critical, can decrease teachers' absenteeism and improve their morale and the quality of classroom instruction (8). One programme for school staff in the USA demonstrated reductions in body weight, resting pulse rate, serum cholesterol level, and blood pressure (9).

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Strategic Planning of School Health Programmes – from problems to action

Published research on how schools change and accommodate innovation provides convincing evidence that producing change in schools and communities is a long, necessarily local, and evolutionary process that must involve the entire system. So-called "quick fixes" do not work; the implementation and institutionalization of reforms often take 20 years. According to new international study of the process of change in educational reform, successful reform has three main ingredients:

- a well planned and evolving national commitment, made concrete through appropriate management practices and institutional support, sustained over at least 10 years:
- *strong local capacity*;
- coherent linkages between central, district, and local school levels, by means of information, assistance, pressure, and rewards.

The Strategies are:

- To promote public policies for school health that provide resources.
- To foster supportive environments that are the result of assessment and improvement of the physical and psychosocial environment of the school.
- To encourage community action that supports the process of health promotion and the linkages between the school and other relevant institutions.
- To promote personal skills development (through both curriculum and the teaching and learning process) that emphasizes specific health-related behaviour, as well as the skills need to sport health throughout life.
- To reorient health services.

  - ➢ *provide enhanced access to services within the school as well as referral to the external health* system;
  - ➢ identify and implement specific health interventions that are best carried out through the school;
  - ➢ integrate curative and preventive interventions.

TEACHERS TRAINING

Training for school personnel is an important aspect of school health promotion programmes. Studies show that training teachers in the use of a health education curriculum improves their implementation of it (1).1 Teacher training also builds the commitment, understanding, skills, and attitudes that enable teachers to use curricula effectively and confidently. A complete training programme should have the following five broad goals:

- for teachers to have an appropriate understanding of the human organism and causes of disease and injury;
- for them to develop positive attitudes towards and commitment to a comprehensive approach to school health;
- to increase their understanding of the principles of behavioural change that are effective in health education;
- to improve their teaching skills in areas such as class discussion, role playing cooperative group activities, small-group discussion, community-involvement activities, family-communication activities, games, and simulations;
- to prepare teachers to deal with sensitive issues and refer students with additional needs.

Implementation issues

Training for teachers, supervisors, and school administrators can be offered for curriculum development, the provision of school services, and improvement of the school environment, as well as in specific content areas.

Successful teacher training:

- addresses issues of concern identified by teachers;
- is conducted as close as possible to teachers' work plances;
- covers theory and demonstration, includes practice teaching offers feedback on performance, and *emphasizes peer-coaching skills;*
- has the support of both teachers and the school administration;
- enables participants to feel a sense of ownership of the programme;
- uses adult-learning theory;
- is conducted over an extended period of time;
- provides opportunities for reflection and feedback;
- involves a conscious commitment by participants;
- builds specific skills;
- works with groups rather than with individuals.

Strategies

The Expert Committee noted that accepted recommendations for teacher training include the following:

- teacher training should be reviewed and upgraded at pre-service, in-service, and continuing-education levels;
- teacher-training programmes should ensure that student teachers receive field experience;
- routine workshops seminars, and short courses should be carefully designed and implemented;
- health teachers and staff as well as non-teaching school personnel should be trained;
- mechanisms for continuing education and supportive supervision to maintain and enhance the quality *of teaching should be developed (2).*

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RECOMMENDED OUTLINE OF CURRICULUM ON HEALTH FOR PRIMARY AND SECONDARY SCHOOLS – FIRST STANDARD TO TENTH STANDARD.

Goal and Objectives

GOALS

To enhance the promote health knowledge and health practices of school going children in every possible manner to enable to adopt measures to achieve positives health and remain healthy and to develop in them a self reliance and social responsibility and better quality of life not only as children, but also as adults and parents of tomorrow.

OBJECTIVES

1. To create health consciousness and make them understand that health is most precious possession and resources to realize the genetic potentialities of every child.
2. To make them realize, that he, his parents family and community are primarily responsible for his and community health.
3. To help him to acquire healthy habits, healthy behaviours and healthy life style as he grows learns, and develop through out school going years.
4. To inculcate a sound scientific through as to root causes of diseases and disability in man and rational of prevention of diseases and prevention of promotion if health.
5. To make him realize the unnecessary burden of health care expenditure resulting from negligence and not preventing preventable illness and disability.
6. To make him realize his and community responsibility towards the community and need for tearful, and wholehearted cooperation and achieve participation in creating and maintaining health infrastructure in any human settlement.

TOPIC AND AREAS OF STUDY INCLUDED IN THE SYLLABUS

1. Human Biology, Anatomy, Physiology, Growth and Development, Heridity and Genetics.
2. Human Sociology and Psychology, Individual, Family and Community, socialization, Interdependence; Friends; Peer groups; Social behaviour; Psychological factors; and Mental Health.
3. Human Nutrition and Health.
4. Human environment, Physical-Environment, Biological environment and social environment, Role of the individual and community in creating and maintaining health environment.
5. Concept of health, Root causes of illhealth and promotion of health.
6. Concept of diseases, communicable and non-communicable diseases and their control – role of individual and the local community in control and prevention of diseases.
7. Responsibility for health of the individual and the community and family. Community organizations local self government, State and Central Governments. Village and ward Health Committees.
8. Accidents – home accidents, road accidents – Calamities – First Aid.
9. Common illnesses among infants – children – Adolescents and adults – Home Remedies, proper use of common drugs.
10. Reproductive and Child Health and adolescent health.
11. Demography and Population.
12. Health Care System – Health care infrastructure – School Health Service.
13. National Health Programmes.
14. Health and Medical Care Institutions.
15. Voluntary Sector for Health Promotion and protection of community Health.
16. Role of the individual and community in creating and maintaining health facilities and health behaviour of people, in the local area.

STANDARD – I

1. Knowing the external parts of the human body and their functions. Writing their names and functions.
2. Knowing the role of parents in growth and development – writing the Names of parents – Family Tree – peer groups and their functions.
3. Making a list of Teachers and their role in learning and better Health.
4. Making a list of friends and need for interaction with friends and peer groups for better health.
5. Making a list of food articles used at home.
6. Classification of foods – Body building, energy yielding and protective foods.

ACTIVITIES:

1. Teachers weekly observation and Record.
2. Drawing the external parts of the body and labeling them.
3. Health appraisal by Doctor. Every Child should be examined by the doctors only.
4. Maintain Health Records.
5. Question and Answer session at least one per month.
6. Group discussion at least two per year.
7. Role play or drama one per year.

STANDARD – II

1. Method of caring for the external parts of the body – Washing – Bathing - Wearing footwear – Change of Clothing – Use of cleaning agents – Local and Home made materials.
2. Knowing the internal systems and their functions of the body – Skeleton system – Circulatory – Respiratory & Excretory systems.
3. Human being as a social animal – need for family – parents – friends for healthy growth and development.
4. Quantity of food required for different age, sex and occupational groups.
5. Healthy and Protective foods. Hand pounded rice – Germinating Grams – Leafy vegetables – cooking of food to preserve nutrients and safety – Use of left-overs – food poisoning.
6. Physical Environment of Man: Water – Sources – Pollution-diseases transmitted - Purification of Water - Domestic purification – There is no need for bottled mineral water except during tours and excurtion.
7. Biological Environment of man: Rodents – Dogs – Cattle, Housefly and Mosquitoes.
8. External Parasites of man: Louse – Scabies – Mode of Spread and Prevention and personal Hygiene.
9. Good & Bad Health habits & Health behaviours – Avoidance of Alcohol – Smoking – Chewing tobacco.

ACTIVITIES:

1. Writing the Skeleton of Human body and Labeling.
2. Drawing the Circulatory and Respiratory systems and Labeling.
3. Teachers Weekly examination for cleanliness, early symptoms of illness.
4. Daily play and Exercise.
5. Health Appraisal by Health Assistant.
6. Parents report on Health habits and Healthy eating habits.
8. Question and Answer session at least one per month.
9. Group discussion at least two per year.
10. Role play or drama one per year.

STANDARD – III

1. Knowing the digestive and Nervous systems of the body and their functions.
2. Social system and Social life in villages – Wards – Towns and Cities.
3. Quality of food – Balanced diet – uses of Milk, Vegetables – Eggs – Meat.
4. Solid and Liquid waste produced by human activities at home - Disposal from houses – Soak pit – Compost – Garbage disposal.

5. Housefly – Breeding places – Life history - Diseases spread – control.
6. Meaning of Health and Diseases.
7. Factors that determine Health.

ACTIVITIES:

1. Excursion to show the physical environment – Demonstration of Housefly breading places.
2. Weekly Teachers observation and Record.
3. Parents Report.
4. Health Appraisal by Health Assistant and identification of departure from normal growth and development of habits.
5. Cleaning the Class Room.
6. Daily Exercises.
7. Question and Answer session at least one per month.
8. Group discussion at least two per year.
9. Role play or drama one per year.

STANDARD – IV

1. Knowing the various digestive glands and their functions.
2. Socialization – Love – Affection – Hatred, Jealousy.
3. Malnutrition – Grades – Deficiency – Vitamin A and Vitamin C and ways to prevent by using fruits and vegetables – Vitamin A Supplement.
4. Mosquitoes – Breeding Places – Life History – Diseases spread and control.
5. Physical Environment around the school and houses – Drains – Ponds – Water collections and their effect on health.
6. Common communicable diseases in the locality – Method of Spread and prevention.
7. Accidents – Home – Traffic.
8. Primary Treatment for common cold – Fever – Respiratory Tract infections – Diarrhea.

ACTIVITIES:

1. Excursion to show drains – Ponds – Mosquitoes breeding places.
2. Demonstration of Housefly and Mosquitoes and their eggs and Larvae.
3. Teachers observation weekly and scrutiny of parents report.
4. Health appraisal by Health Assistants.
5. Physical Exercise.
6. Question and Answer session at least one per month.
7. Group discussion at least two per year.
8. Role play or drama one per year.

STANDARD – V

1. Coordination between various systems in the body – Functioning of the body as a whole – Refractive Errors – Hearing defects Hormones and their functions.
2. Growth and Development - Physical growth of infants - Toddlers – Adolescent Spurt. – Developmental Mile-Stones.
3. Friends – Relatives – Interaction with them – Behaviours – Society norms – Adjustability – Tolerance – Avoidance of Stress.
4. Healthy eating and Learning habits – Cultivation of good habits and avoidance of bad habits.
5. Use of Vegetables and other nutritive foods. – Avoidance of Chocolates – Other tasty bites which are injurious to health.
6. Domestic Animals – Pet and Street Dogs – Diseases spread by dog bite.
7. Common cold – Fever – Cough – Diarrhea – their management at home.
8. Avoidance of Unnecessary medication. And use of simple bed rest – Aspirin or paracetamol – oral Rehydration for diarrhea.

9. Routine Immunization Schedule for children.
10. Sanitary disposal of Human excreta – Toilets at home – Suitable in villages – Towns – Cities.

ACTIVITIES:

1. Excursion to show the open air defecation – Soil Pollution – How the fecal matter enters the food chain.
2. Writing the Health Needs of the Human being.
3. Teachers observation weekly.
4. Health Appraisal by Doctors.
5. Review of the Health Record by Health Assistant – Report to the Doctor – Doctors Advise and follow-up.
6. Question and Answer session at least one per month.
7. Group discussion at least two per year.
8. Role play or drama one per year.

STANDARD – VI

1. Knowing the Human Reproductive system and function.
2. Primary and Secondary Sexual characters and Health Problems of Adolescent.
3. Social behaviour – Social Values - Role of Individuals in creating and Maintaing community health.
4. Group living – Group Activities – Play – Aggressiveness – Isolation and with drawing behaviour – Courage and boldness. Mental health.
5. Malnutrition – Grades – Iron and Iodine deficiencies – Root causes.
6. Community water supply – Deep wells shallow wells – Ponds and tanks as sources water.
7. Common Non communicable diseases – Diabetes – Hypertension – Cancers – HIV/AIDS.
8. Healthful house minimum requirement for health of a family – Danger of cattle Shed with in the dwelling house.
9. Growth of population and population explosion – Need for limitation of population growth small family norm.
10. Health care System in the village – Primary Health Centre – Sub-Centres and their functions.
11. Ignorance – Superstitions – Rituals – Poojas – Need to know the effects of these on health and the scientific view of the causation of disease .

ACTIVITIES:

1. Visit to primary Health centre or subcentre and learning the uses of doctors and Health assistants in maintaining health.
2. Measurement of Height and Weight of Friends – Keeping their own Health Records.
3. Arranging group discussion and seminars on environment – Food – Water.
4. Teachers observations.
5. Health Appraisal by Health Assistant.
6. Question and Answer session at least one per month.
7. Group discussion at least two per year.
8. Role play or drama one per year.

STANDARD – VII

1. Endocrine glands and their functions.
2. Heredity – Genetics and Genetic disorders.
3. Occupation and Health – Factory – Small Work shops – Hotels – Abuse of child labour.
4. Habits dangerous to Health – Alcoholism – Smoking – Use of Drugs – Chewing Tobacco – Their impact on Health – Social problems.
5. Mental Health Problems – Recognition and counseling – Parents interaction.
6. Air and Noice pollution – Impact on Health.

7. Cardiovascular diseases – Role of Diet – Exercises. – Smoking and stress.
8. Reproductive and Child Health – Age at Marriage – Age at Pregnancy – Child Birth – Safe Delivery – Low Birth Weight babies – Antenatal and Natal Care – Food and Health Care of Mother during pregnancy and lactation.
9. School Environment – Need for Toilets – Separate for boys and Girls – Drinking Water – Sufficient Play Ground.
10. Role of the panchayet – In maintaing Healthy Environment in and around the Villages – Slums – Towns.

ACTIVITIES:

1. Taking part in Health Examination of Lower grade students – Measurement of Height and Weight – Taking Pulse Rate – Eye Sight Examination.
2. Taking part in Health Teaching of Lower Classes – Pupil to Pupil Teaching.
3. Arranging debates on population – HIV/ADIS – Social Behaviour – Moral Restraints – Superstitions – Wrong and dangerous beliefs – Scientific Temper.
4. Health Appraisal by doctors.
5. Review of follow-up measures by health assistance.
6. Parents report on Social Habits and Health Habits and counseling if required.
7. Question and Answer session at least one per month.
8. Group discussion at least two per year.
9. Role play or drama one per year.

STANDARD – VIII

1. S.T.D. HIV/AIDS – Mode of spread and prevention – Moral restraint.
2. Family – Family Norms – Family Controls – Sexual mis behaviour – Crimes – delinquency.
3. Responsible parenthood – Sex education Family Size – Spacing of children.
4. Food Adultration and Food Preservation.
5. Sanitation of Public Places – Temples – Bus & Railway Stations – Jatras – Shandys – Play grounds and schools.
6. Measurement of diseases in the community – Prevalence Survey.
7. Mortality and morbidity rates.
8. Secondary and Tertiary Health Care.
9. Health Needs of Infants – Toddlers – Handicapped – Sick – Old People.

ACTIVITIES:

1. Taking part in teaching Health to lower class children.
2. Helping in conducting school health services by health assistant.
3. Measurement of pulse and blood pressure.
4. Practice of First Aid Activities.
5. Conducting debates, seminars group discussion on health and social issues.
6. Question and Answer session at least one per month.
7. Group discussion at least two per year.
8. Role play or drama one per year.

STANDARD – IX

1. Health Assessment of the Individual.
2. Health Need Assessment of the Community.
3. Important National Health Programmes – Role of the People in implementing them.
4. Village Health – Ward Health Communities.

5. Training of Dais on Safe delivery.
6. Anganawadi Kendars – Their function and management.
7. Family planning – Family Welfare – Family Planning Methods.
8. Role of Men and Women in Family limitation.

ACTIVITIES:

1. Visit to Anganawadi Kendars and Knowing the functions.
2. Visit to Health Centre and Subcentre and Knowing the facilities for safe delivery.
3. Help in Health Teaching.
4. Participating School Health debate, Seminars and group discussion.
5. Health Appraisal by Health Assistant.
6. Question and Answer session at least one per month.
7. Group discussion at least two per year.
8. Role play or drama one per year.

STANDARD – X

1. Voluntary Health Organization – Principles of Voluntary Health work – Social Services – Need for Voluntary Organization for Health Care.
2. Private – Public Health Care Services.
3. Minimum Health Care Facilities in villages – Tows – Diagnostic facilities.
4. Peoples participation in organizing and managing health care services like Immunization – Antenatal care – Health Awareness campaign.
5. Identification and Management of Pulmonary Tuberculosis – Leprosy – Malaria – Diabetes – Hypertension – At home following the doctors consultation.
6. Poverty – Employment – Education and their relationship to health.
7. Equity and Empowerment of Weakers sections of people for better health of the community.
8. Right to health – Constitutional Provision and States Responsibility.

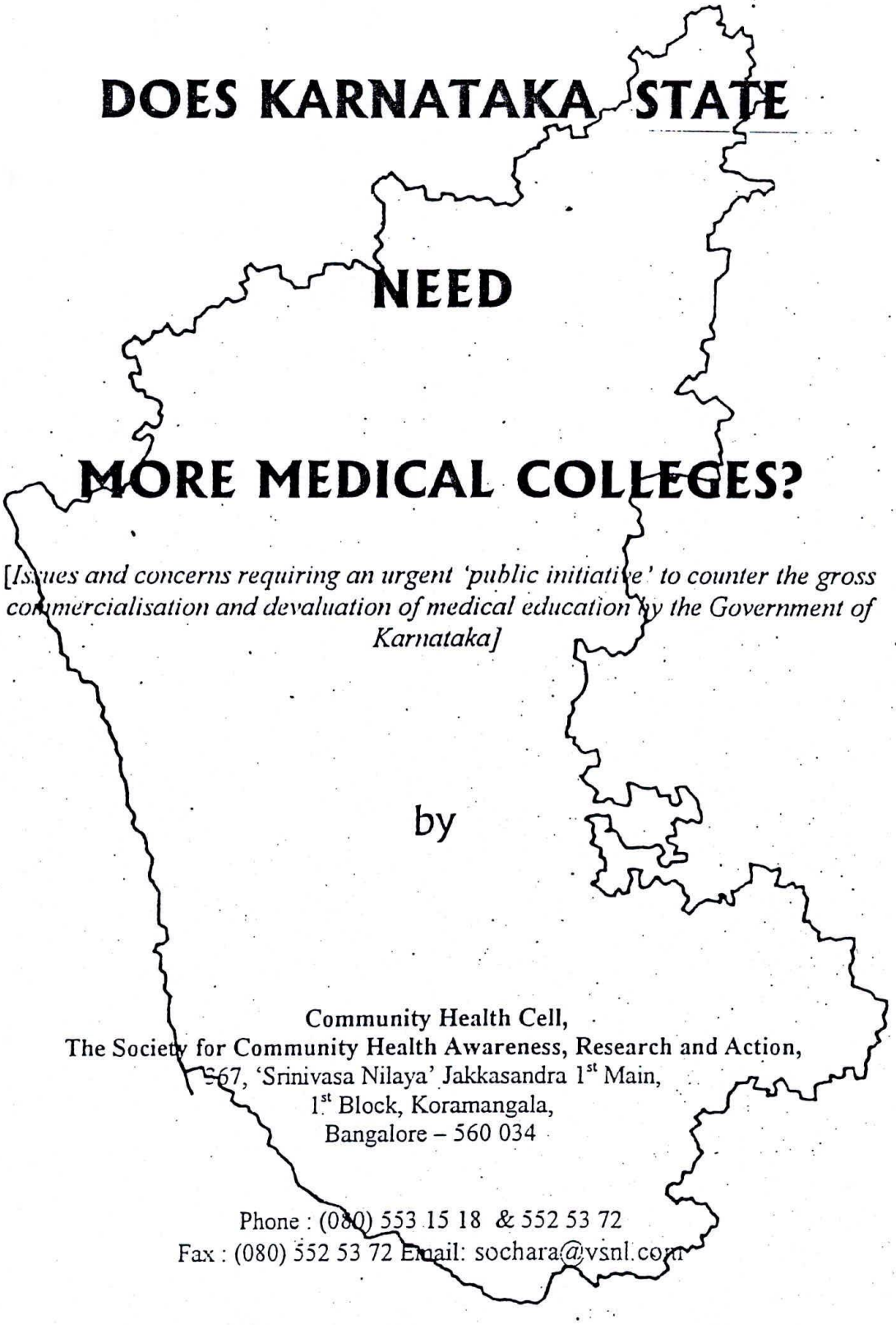
ACTIVITIES:

1. Conducting W.H.O. Day on 7th April.
2. Helping School to conduct seminars, symposia on health.
3. Helping Teachers and Health Assistant to conduct Teachers observation and Health Assessments.
4. Giving Health Talks to Children and Public People.
5. Health Appraisal by Doctors.
6. Review of His/her Health Through School years – Report by Health Assistant.
7. Question and Answer session at least one per month.
8. Group discussion at least two per year.
9. Role play or drama one per year.

ORIGINAL 4.3
LIB.(4)

DOES KARNATAKA STATE NEED MORE MEDICAL COLLEGES?

[Issues and concerns requiring an urgent 'public initiative' to counter the gross commercialisation and devaluation of medical education by the Government of Karnataka]



by

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e. We feel that we should all suggest that the State Government review this 'populist decision' by involving all these expert and professional bodies who would help to ensure that the policy on medical college expansion be **determined by wholistic planning considerations like health manpower needs, quality standards and norms rather than leave it to considerations of populist politics or market driven compulsions.** The Savadatti Report should be reviewed once again by a small expert group. Perhaps the Rajiv Gandhi University of Health Sciences-Karnataka could be requested to set up such a 'think tank'.

f. Your involvement to put public and professional pressure on the State Government is urgently requested. As citizens and concerned persons and professionals, we owe it to the people and to the goal for Health for All.

g. We enclose a short report which has been evolved from a summary of our Society's recent research projects and reports submitted by us to the Independent Commission on Health in India; and to the recently constituted Sub-Committee on Medical Education of the Parliamentary Standing Committee on Human Resource Development. We have tried to address some of the key issues about Medical Education in Karnataka. These are however relevant to other professional institutions as well. Dental, Nursing, Pharmacy - the trends are similar in these groups - perhaps even worse.

d) We invite you to join us in a campaign to ensure that the over medicalisation and commercialisation of Health Care and health human power development in Karnataka does not become **'a vested interest in the abundance of ill health'.**

We remain in solidarity,

Yours sincerely,
for SOCIETY FOR COMMUNITY HEALTH AWARENESS,
RESEARCH AND ACTION

Thelma Narayan V. Benjamin

C.M. Francis Ravi Narayan

The Society for Community Health Awareness, Research and Action (SOCHARA) is a multidisciplinary professional think-tank that among other issues in Health care has been seriously researching the issue of Medical Education in the country and looking at alternative policies and options for Health human power development. Community Health Cell is the functional unit of the Society. In the 1990s, the Society has:

1. *Undertaken an All India Survey of Strategies for Community Orientation and Social Relevance in medical colleges. It identified 30 colleges with some innovative experiments, documented these and then focussed on 6 pacesetter colleges to arrive at strategies for action and factors that promote and or obstruct curriculum innovation (three publications from this study are now available).*

2. *Undertaken a detailed review of Medical Education in India for the Independent Commission on Health in India looking at issues such as : situation analysis, regional distribution, commercialization, norms, qualitative decline in standards, admission requiremens, curriculum development, cost / financing, corruption, PG courses, continuing education and so on. The report also reviewed all the innovative experiments in Medical Education and expert comittee recommendations. It identified 6 issues for further dialogue and evolved a 12 point programme for improving the quality of Medical Education in the country and countering the unhealthy commercialization and decline in standards and quality.*

   This formed a chapter on Perspectives in Medical, Nursing and Para Medical Training and Education in The Report of the Independent Commission on Health in India submitted to the Prime Minister recently.

3. *Participated in some workshops of the newly established Rajiv Gandhi University of Health Sciences in the State in restructuring the curriculum.*

4. *Facilitated a continuing dialogue with a host of medical colleges in the country and in neighbouring countries of Nepal and Bangladesh on evolving mechanisms to operationalise strategies for change.*

5. *Submitted a memorandum to the Sub-Committee on Medical Education of the Parliamentary Standing Committee on Human Resource Development, Parliament House Annexe, New Delhi – 100 001 (on 14th November, 1998).*

The summary of facts and notes are extracts from these publications. Copies of the publication are available on request from the Society.

CONTENTS

State of Medical Education in Karnataka
Facts, Figures and Notes of Concern

A. Growth of Medical Education in India

1. Medical Education in India has shown remarkable growth in numbers since independence (1947-93). From 22 medical colleges in **1947** with an admission of 1983 we have increased to 145 medical colleges with an admission of 16,200 students in **1993**. A 600% expansion in colleges and 800% expansion in admissions (see Appendix A). The estimate of The Medical Council of India in 1996 was 162 medical colleges!

2. The world has a little over 1400 medical schools – so presently India has 10% of the world's medical schools (the data on admissions is not known). Karnataka has 13% of the medical colleges in India and presently 1.3% of the colleges in the world. With the recent decision it could potentially have nearly 23% of the colleges in India.

3. The increase was gradual till 1975 with a predominant increase in 'government run and sponsored medical education' during the earlier phase. Following the **Srivastava Report** 1975, (3) there was a plateau till 1985 and then another phase of expansion till the Presidential Ordinance of 1993 – a phase which was characterised as the 'commercialisation and private sector' phase of medical college expansion.

4. Significantly, three states contributed most to this privatization and commercialisation of medical education – namely Maharashtra, Karnataka and Tamil Nadu, opening 18, 8 and 5 colleges respectively since the 1980s – all the new colleges being in the private sector.

B. Regional Distribution

5. The **Mudaliar Committee** of 1969 (3) recommended the norm of one college with 100 seats per 50 lakh (5 million) population. A review of the present regional distributions of colleges taken against the 1991 census (see Appendix B) show some important trends:

   a) Karnataka, Maharashtra and Tamil Nadu show a number far beyond their entitlement and requirement against this norm :

State / Population	Entitlement	Actual	Excess
Karnataka 45 million	Entitlement 9	Actual 19	Excess 10
Maharashtra & Goa 80.1 million	Entitlement 16	Actual 30	Excess 14
Tamilnadu & Pondicherry 56.7 million	Entitlement 11	Actual 15	Excess 4

b) Karnataka and Maharashtra, the 'commercial medical education belt' in India also have the largest admission ratios thereby proving the economy of scale theory – more admissions, more income and more profits! (2)

c) It is important to note that the **Srivastava report** (1974), had recommended a series of steps for qualitative improvement in medical education rather than further quantitative expansion (3). The special study group set up by the Indian Council of Social Science Research and Indian Council for Medical Research (**Health for All : An alternative Strategy, 1981**) consisting of internationally renowned National Experts had also categorically stated as early as 1980 that :

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

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

d) **The Bajaj Report** which later became the National Education Policy for Health Sciences has also recommended primarily qualitative changes in standards and no further quantitative expansion. (4)

e) A report of the **Medical Council of India in 1996** (5) has noted that "..... *it is evident that there is no shortage of doctors in the country and there is really no need for starting more medical colleges for production of more doctors, except perhaps in certain States which do not have any medical college as yet. With the amendment of the I.M.C. Act, 1956, in 1993, (under the provisions of which no medical college can be established, no new postgraduate course can be started or increase of seats in medical colleges allowed, without the prior permission of the Central Government), it is hoped that the much needed breaks for the mushroom-growth of medical colleges in the country, will be applied".*

C. Commercialization – Beyond Privatization

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

7. In Karnataka, the percentage in the late 1970s was 33% private (2 out of 6) and by 1993, it was 78.9% (15 out of 19).

8. All serious, quality oriented policy makers and professional associations are concerned about the 'commercialised', 'unhealthy trends' that this private sector take over of medical education represents, namely :

a) All the new private medical colleges belong to the 'capitation' fee charging variety of medical colleges with capitation fees rising from 5 lakhs in the 1980s to 35 lakhs in the 1990s.

b) All were initiated by trusts and societies with either caste or communal affiliations or by individuals and groups representing specific sectoral lobbies in agriculture and other areas (sugar barons in Maharashtra, and other pressure groups in Karnataka and Andhra Pradesh), with little or no involvement in higher education and health care.

c) In the 1993-94 Ministry of Health and Family Welfare (Government of India) Annual Report, 26 colleges out of 146 were unrecognised by The Medical Council for shortfall in standards (but recognised by state government and local universities!). All belong to this group of commercial capitation fee colleges.

d) In Karnataka, the power of the commercial medical education lobby has been significant. Some of the policy decisions they had been able to facilitate at state or university level have been

- In the beginning, fixing of the level of capitation fees rather than banning or opposing it, even after banning was on the political election manifestos of all the recent governments (this also meant a permissible fees that had been regularised and not surprisingly, exceeded by irregular and unofficial means);

- contracting out public sector government hospitals to private sector colleges for use of clinical facilities at a fee per bed which was most often not collected; since these medical colleges did not have the necessary clinical facilities to begin with;

- permission to allow government college professors to go on deputation to private medical colleges for varying periods of time with lien on their jobs, thereby losing the services of experienced teachers in a situation where there were not enough teachers.

e) The NRI Quota – the Non-resident Indian quota allowed by the government permitted NRIs to be charged 1,00,000 US$ for a seat in a private college. A few years ago at the instance of a Union Health Minister and to counter growing opposition to the 'commercial medical education lobby' an NRI quota has been suggested even in government colleges with the proposal that the money so collected would be used to upgrade the technological facilities in the government teaching hospitals!

f) There is reason to believe, from an informal survey of examiners, that the 'commercial factor' has also begun to affect examination systems with payment for 'ensuring success' being required at different levels – within the department, or within the institution and/or at the examiner level. While this has been a feature reported sometimes even in government institutions, this is more in the 'commercial colleges' where the availability of resources is greater among the students. Also with the focus on quantity rather than quality there is an increasing phenomena of substandard teaching producing substandard students who are unable to pass exams in the normal way and have to 'purchase' a pass. Alternatively with the availability of monetory resources among these

capitation fee paying students, examiners and institutions are also indulging more in unethical market-economy processes.

This commercialization is contributing to a fall in qualitative standards by allowing money, power and political influences to affect results.

D. Supreme Court Judgment and Thereafter

9. To place the above trends in context, it is important to take note of the Supreme Court Judgement in a special writ petition from Andhra Pradesh on Capitation Fees, which recorded that –

> *Capitation fees as it is practiced today*
>
> *Violates the right to education under the Constitution.... is wholly arbitrary; is unconstitutional according to Article 14 – equality before law;... is evil unreasonable, unfair and unfit... and enables the rich to take admissions whereas the poor have to withdraw due to financial inability... and therefore is not permissible in any form....'*

10. The Supreme Court judgment effectively put a legal brake on this unhealthy trend. State governmentals and state politicians had to come to terms with it and so after much dialogue and lobbying a differential fees scale has now been introduced allowing private ex-capitation fee colleges to charge substantially higher fees for 'paying students', with government quota introduced into all the private colleges as well with some exceptions.

    In a Government Order dated 21-11-96, the Government of Karnataka has now fixed the intake of all colleges and fixed numbers in four quotas – free (merit seats); Karnataka (payment); Non-Karnataka (payment); and NRI/others (See Appendix)

    There is need to review this whole recently evolved fees system. Apart from it being inequitous and very much supporting the market economy in medical education, there is reason to believe that once again it is also being circumvented by unofficial means.

11. The Medical Council of India was also directed by the Supreme Court judgment of 9-8-1996 to evolve a fee structure keeping in mind the student community management and also the location of the colleges. The Executive Committee of MCI gave its recommendations to the Central Government in September 1996. While appearing to rationalise the fees issue this recommendation (see Appendix) has further strengthened the market economy by justifying differential fee structure from 15,000 for free merit seats (for 18 months) to 1.5 lakhs per course for 18 months and $75000 for NRI and foreign students. **The ethics, legality and 'commercialisation' trend generated by this recommendation is still to be reviewed and there is need for a urgent professional / public dialogue on it.**

12. The recent controversy about the 'illegal' expansion of seats in some government and private medical colleges in the state in the 1990s through the permission of the state government against the norms of recognition by the Medical Council of India are well known including the judgement of the Supreme Court, declaring it illegal. This has vindicated the increasing concerns about the nexus between commercial lobby and professional political leadership but has also put a legal impediment to this state sponsored illegality.

13. In the light of the above trends in the market economy driven medical education in Karnataka there is need for an urgent study on the potential nexus between the commercial lobbies and the medical education policy makers and leadership at state / central levels to understand the active and continuation of the trend. In the light of this, the recent announcement of a list of 20 medical colleges being given essentiality certificate by the Government of Karnataka is a matter of serious concern.

E. Implications of Governments Recent Decision

14. In the previous sections, we have utlined the situation, the trends in the development of Medical education, the concerns regarding the growth of 'capitation fees' and commercial medical education culture and the dangers of the 'market economy' related transformation of medical education planning in the state. It is obvious that thedecision to give 'essentiality' certificates to 20 more colleges initiatives will worsen these trends.

However, even if the 'market economy' factors were to be regulated or controlled there are other implications that have just not been given adequate consideration by the State authorities.

15. **Teaching Faculty – from where?**

The Medical Council of India recommendations on teaching faculty for a 100 seat medical college requires a minimum of 100 faculty of varying grades – Professors/Associate/Assistant Professors, Lecturers/Demonstraters, etc. **20 new colleges means 2000 new faculty. Where are these large numbers of adequately trained faculty going to come from?** especially when recent medical council surveys themselves record shortage of faculty all over the country! Such a massive expansion will only lead to recruitment of inadequately qualified staff; movement of qualified staff from existing institutions to the new ones often due to the lure of enhanced salaries; irregularities such as the appointment of part-time staff or the same staff appointment being shown in two different institutions. All these are already taking place and are no longer in the realm of hypothesis!

16. Teaching Hospital Beds – where is this available?

The Medical Council of India recommendation of teaching hospital beds per student is 7 and hence a 100 seat medical college requires 700 hospital beds for recognition purposes . ***For 20 new medical colleges, we need 14,000 hospital beds. Where is this resource available in the state?*** It is important to emphasise that these guidelines are 'minimum' with the proviso that anything less would severely jeopardise the quality of medical education since adequate 'teaching hospital beds' are an important pre-requisite to bed side clinical teaching, which in the training of doctors is absolutely crucial. Any alternative arrangements like showing other government hospitals, private hospitals, district and taluka level hospitals to add up adequate numbers without upgrading facilities and services in these hospitals and making them suitable for 'medical education' will be a disservice not only to the medical students who will become 'guinea pigs' subjected to substandard medical education but also to the state resulting in the production of sub-standard doctors.

17. *Ethos of Higher Education*

Medical Education is a serious professional challenge and trusts, organisations and institutions that are given the essentiality certificate must be (i) those that are capable of understnading the professional complexities of medical education including the essentiality of maintaining quality and standards (ii) have some previous experience of running higher educational initiatives (iii) have the resources and experience in health care – not just financial but in terms of human expertise (iv) have credibility in operationalising social ventures in the public interest and so on. ***Do the 20 organisations in the recently announced list of potential medical colleges meet these requirements? What were the criteria on which the state government gave the essentiality certificate?*** The professionals and general public have a right to know and the state government should be invited to be more transparent and evidence based in its planning.

18. *Complexity of Recognition and Affiliation*

The recent announcement by the State government and its reporting in the media has confused the complexity of recognition and affiliation of Medical Education. Since the Presidential Ordinance of 1993 and the recently updated Medical Council of India Act, the National standardisation and recognition and monitoring of Medical Education has become the responsibility of the Medical Council of India. When the state gives an essentiality certificate, it only authorises an institution / association or trust to apply for permission to MCI. An essentiality certificate cannot a guarantee MCI recognition. However, some of the organisations in the recently announced list of 20 have already announced recruitment of staff (see Appendix) which is rather unusual!

The MCI requires proof of adequate resources including land, access to hospital beds and other facilities. The MCI inspects the institution before giving the green signal. All this taken times and any rush, over confidence, shown by organisations contemplating such a venture can only be based on inadequate understanding of the complexities of the process.

Incidentally, only 5 out of the 20 applicant managements have a teaching hospital.

F. Issues raised in Recent Debate in Media

19. Since the state government announcement there has been a spate of letters to the editors of newspaper and frequent pronouncements by various policy makers especially the Minister of Higher Education of the State that has further confused the issues. Some of these need clarifications (see Appendix)

20. *MCI has a dominant role in the functioning of medical colleges* and the state government is unhappy with in (refer appendix) The Hindu, 29-11-98 – Government seeks more powers on medical admissions.

    The State Government has to realise that it is precisely because of the 'irresponsibility' that previous governments of Karnataka and Maharashtra have shown in the past vis-à-vis promotion and collusion with capitation fee medical colleges and with standards in general, that the Presidential Ordinance and the MCI Act of 92-93 was brought in. The Training of Doctors were seen as too important to be left completely to these forms of state sponsored changes in framework and standards.

21. ***"As per the MCI rules, the intake of under-graduate medical course could not be more than 150".***

    The state government must note that the guidelines on Medical Education standards for colleges, teaching faculty are based on colleges with low seats. Medical Educationists all over the world have come to realise that 50-100 seats in the maximum number to be handled by a college if complex quality / requirements teaching standards have to be maintained. Keeping in mind the Indian situation, there has been some relaxation to 150. However, mass production of doctors is not called for. The previous state governments have already shown their irresponsibility in increasing the intake of students for above this limit in a number of colleges in the state with no increase in teaching faculty or faculties. That the Supreme Court had to intervene to regulate this state sponsored illegality and degradation of medical education in the state is a matter of great concern. It is high time that policy makers stopped making a mockery of the production of doctors as if they were a 'commodity' whose production can be enhanced or reduced according to market demand.

    Another important MCI Guidelines is the enhanced use of small group learning methods. Clinics are supposed to be organised in small group not more than 10 students per teacher. Group discussions are encouraged with not more than 20 students in a group. A 100-150 seat medical college means simultaneously 10-15 clinical units to be involved in teaching or 5-8 simultaneous group discussion. This itself is quite a load. Mega educational effort 150 to 300 make small group work near impossible.

22. "One medical college for every district"

The government has recently justified part of the applications given essentiality certificate on the basis of 'districts where medical college are being established for the first time' – these being Raichur, Bidar, Bangalore Rural, Hassan and Bagalkot.

While 'one medial college per district' may sound a good decentralised proposition especially if the medical college and its teaching hospital was closely involved as an apex referral hospital for other secondary and primary health care centres in the district, this is not a practical proposition in the existing skewed and disparate situation of medical college distribution in the state.

Already, Bangalore has 5, Mysore-2 and Bijapur-2 each. 5 more from Bangalore in the list.

Unless seats are reduced in these colleges further and transferred to new medical colleges in new districts – the college per district lobby will only be a convenient and populist proposition to increase the number of colleges / seats irrationally.

23. There are many more issues of relevance some highlighted in the letters of concern appearing already in the media. These three issues were given as examples to show that the State Government seems to have gone ahead with the matter without any evidence based planning, rational norms of doctor/population ratio, medical college/population ratio, state needs or regional disparities. This is a very sad reflection of the non-serious and adhoc nature of state planning in spite of the presence of a multidisciplinary state planning board and a capital city which is considered the Science capital of the country!!

G. Some Additional Trends and the Relevance of Medical Education Expansion in the State in that Context

24. To understand the context and appropriateness of Medical Education expansion in the state or country four other well established trends need to be understood as well. There are :

a) the continuation of the production of the wrong type of Doctor for India and the State;
b) the problem of Brain drain and student wastage;
c) corruption in Medical Education; and
d) market economy and medical education.

25. **Wrong type of Doctor**

a) It is now well documented that majority of the doctors who graduate from the existing 145 medical coleges In India are not motivated to primary health care, public health or rural service and opt for urban clinical practice and / or furthur specialisation.

The Srivastava Report surveying the Indian scene in 1974 had identified the problem as "stranglehold of the inherited system of medical education, the exclusive orientation towards the teaching hospital (urban), the irrelevance of the training to the health needs of the community, the increasing trend towards specialisation and acquisition of post graduate degrees, the lack of incentives and adequate recognition for work within rural communities and the attraction of the export market for medical manpower".

b) The WHO South East Asia report in 1988 reviewing the medical schools of this region including those in India noted :

"Medical schools in the Region were, for the most part, originally modelled on European-American institutions. They have functioned within a clinical, scientific and administrative system which retains much of its colonial inappropriateness, and aspire to 'international' (i.e., often irrelevant) standards of excellence. Medical students are liable to be selected, formally and informally, for upper middle-class career aspirations, and then trained in high-technology curative biomedicine. They look forward to working alone or with other physicians, in an urban setting, with predominantly middle class patients. The science and values to which they are exposed emphasize the old biology, and it is this, together with the credo of their profession, which shapes their behaviour".

c) A decade later the situation has not charged drastically. While the recently established Rajiv Gandhi University of Health Sciences is trying to restructure curriculum and improve quality, the recent move by the State government may fuel counter productive trends which will worsen the situation drastically.

d) The doctor population estimates used by planners are further skewed by this 'irrelevant doctor' factor. So we have an increasing number of wrong type of doctor concentrating in the urban situation and a continued shortage in rural area. Not surprising the Bajaj Report of 1994 has noted *"The state of Maharashtra which accounts for almost one fifth of the total national outturn of doctors annually, has about one fourth of the sanctioned pasts of doctors at rural PHCs lying vacant as of 1st January of the current year".*

26. 'Braindrain' - Internal and External

Estimates of 'Brain drain' both external (from India to the developed world) and internal (from the public sector to the profit oriented private urban sector) is variable but on the whole have been showing an increasing trend.

- In 1986-87, it is estimated that 5304 doctors representing 30% of the annual output migrated from India. The trend today is similar or slightly increased.

- Studies are beginning to show that the tax-payer supported governmental medical education sector benefits the private sector in the country and the health service sector of the established market economies of the western world, more than the health services of the government and this is probably even more significant in Karnataka and Maharashtra.( )

There is therefore neither a shortage in the country nor any evidence that increase in numbers either in public or private sector will improve the health care in the underserved regions of the state or country.

Any expansion can therefore only be justified as a response to 'market economy forces' not state priorities or peoples health needs.

27. Corruption in Medical Education

Corruption and graft have become the bane of public and private life in India and Medical Education is no exception particularly in Karnataka State. Apart from the commercialisation problem engineered by the 'capitation fee' concept which has now been temporarily regulated by the Supreme Court Judgment and the MCI Recommendations other forms of corrupt practices are becoming quite common.

- Influence of money power and power politics in the selection of medical college admission and postgraduate seats have been rife (recently regulated by centralisation of admission tests and allotments! for undergraduates only)

- Influence of money power and politics at examinations at various levels;

- From anecdotal and often experiential evidence and media reports.

  It is however surprising how reports and studies undertaken by professional researchers and numerous internal and external reviews, fail to highlight or even mention this fall in ethical standards in medical colleges. One wonders whether the 'conspiracy of silence' has a professional / class bias as well;

- Increasing concern that other practices are becoming fairly common;

- Extraneous influences in promotions and transfers of medical college teachers in government colleges;

- Growth of private practice values in patient care in government and private teaching hospitals.

- There is growing evidence that the situation in Karnataka in this area is probably among the worst in the country and at least one contributory factor would have been the growth of the 'capitation fees related commercial medical college culture'.

28. **The Medicine – industrial complex**

Commercialization of Medicine is rampant in India with the country in recent years becoming the 'Mecca' for the medical-industrial complexes of the world especially since the new economic policy has ushered in the triple force of Liberalisation, privatization and Globalisation. Many important trends in the state are symbolic of this new development and the inroads that these market forces are make into existing medical education infrastructure is a cause for concern.

a) Private Practice

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

Under pressure of the Medical profession, who are getting more and more involved with lucrative and competitive practice, more colleges are beginning to reconsider this rule and allow various forms of practice, to the detriment of the medical educator's primary commitment. The 'teachers status' is now becoming a status symbol to help the competition in private practice rather than as a vocation of commitment. This trend is very significant in Karnataka and will be further accentuated by the state Governments promotion of 'commercialised medical education'.

NRI Phenomena

b) The recent phenomena of NRIs from the 'US' promoting High technology Diagnostic Centres in the country is reflective of the MNCs in the 'west' opening new market avenues for high tech gadgets whose sale in the 'west' has shown a slump in recent years. Thus while the NRI process in Health care is often portrayed in the media and policy formulations as an 'altrustic process' in reality it is also a 'market economy process' and is strengthening the commercialisation trend.

There is urgent need to dialogue with NRI groups to share these concerns and ensure that NRI support the social/societal needs/priorities as well.

9.	Adi Chunchanagiri Institute of Medical Sciences, Bellur	100	50	20	15	15
10.	Dr. Ambedkar Medical College, Bangalore.	120	60	24	18	18
11.	J.S.S. Medical College, mysore	100	50	20	15	15
12.	Kempegowda Institute of Medical Sciences, Bangalore	120	60	24	18	18
13.	M.R. Medical College, Gulbarga	100	50	20	15	15
14.	B.L.D.E.A. Medical College, Bijapur	150	75	30	22	23
15.	Siddartha Medical College, Tumkur	130	65	26	19	20
*	TOTAL:	1750	1075	270	200	205

* Nos. in paranthesis excluded

22 – 11 - 96

Sd/-
N.O. Palekar
Under-Secretary to Government
Health and Family Welfare Department

Appendix - 3

Relevant Extract from letter of Secretary, MCI.

To: All the members of the Council.
No. MCI-34(41)/96-Med./18457/Medical Council of India.

Subject : **Evolution of the structure for unaided professional institutions in light of Supreme Court's Judgment delivered on 9-8-1996.**

"..The Executive Committee noted that the Constitutional Bench of the Hon'ble Supreme Court of India in W.P. No. 317/93 dated 9-8-1996 has stated that the Central Govt. and the authorities concerned shall be free to fix fee structure in such an appropriate manner as they think just and equitable to all concerned. Further they have stated that this would be done keeping in mind the student community, management and also the location of the colleges"

The Executive Committee decided to classify the medical institutions under the following heads:-

a) **Institutions with their own hospital**
b) **Institutions utilising the facilities of Govt. as well as their own hospital**
c) **Institutions utilising the facilities completely as provided by Govt. hospitals.**

Taking into consideration the above classification, the following fee structure is recommended:

1. **Rs. 1.5 lakhs per Prof. Course (18 months) per student for medical institutions/medical colleges belonging to category (a).**
2. **Rs. 1.3 lakhs per Prof. Course (18 months) per student for medical institutions/medical colleges belonging to category (b).**
3. **Rs. 1.1 lakhs per Prof. Course (18 months) per student for medical institutions/medical colleges belonging to category (c).**
4. **Rs. 15,000/- for each Prof. Course per student for free seats belonging to medical institutions/medical colleges falling under the categories (a) (b) and (c).**
5. **$75,000/- to be charged from NRI/foreign students for the complete MBBS course.**

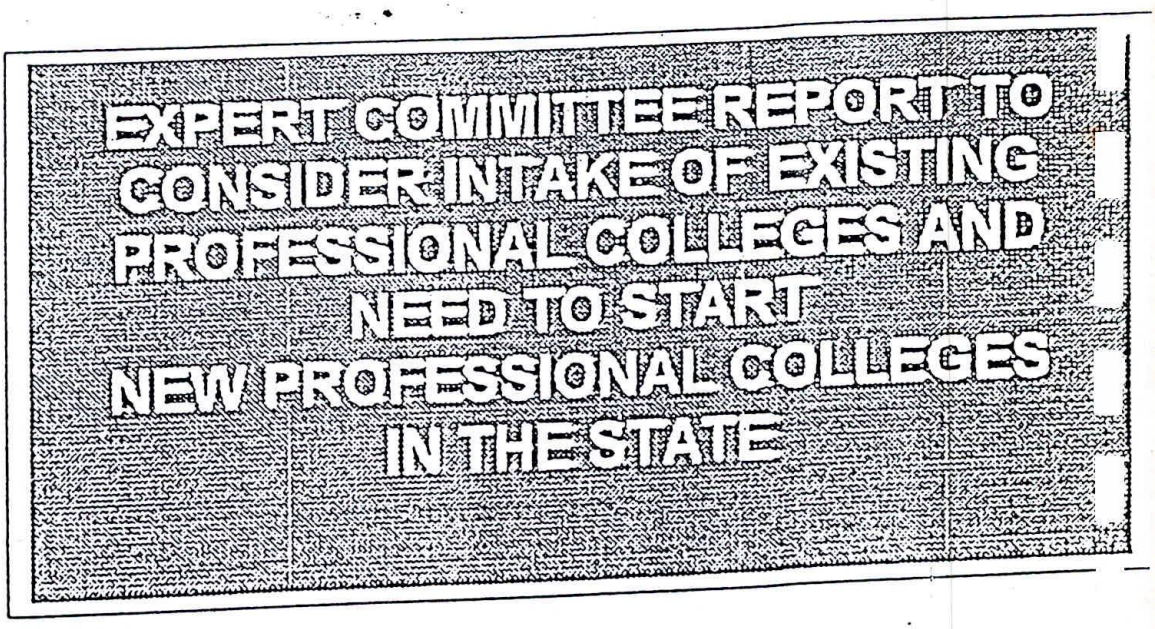
However, the institutions which are running post-graduate courses and admitting more than 50% of the students at their own discretion in clinical specialities and Pathology, 25% relaxation in the fees stated above will be given.

For the following non-clinical courses the institutions will charge no fee – Anatomy, Physiology, Biochemistry, Microbiology, Forensic Medicine, P.S.M. & Pharmacology.

The Executive Committee also recommends that the Govt. Colleges be allowed to admit upto a maximum of 15% of the total seats by NRI/foreign students. The committee was of the firm opinion that the funds collected by these admissions should be utilized for the development of the particular institutions".

Since the Hon'ble Supreme Court directed the authorities concerned to submit its recommendations within 3 months relating to fee structure, the decision of the Executive Committee quoted above was communicated to the Central Govt. vide Council letter dated 18-9-1998 as directed by the President"

Sd/-
Mr. M. Sachdeva,
Secretary.


EXPERT COMMITTEE REPORT TO
CONSIDER INTAKE OF EXISTING
PROFESSIONAL COLLEGES AND
NEED TO START
NEW PROFESSIONAL COLLEGES
IN THE STATE

FOREWORD

The Government appointed this committee to go into the entire issue of professional education in the state keeping in view the man power requirement of the state and also the fact that students from outside Karnataka come to the state for education and some of the students of Karnataka after the completion of education may go out of Karnataka and report on policy decisions for the next ten years. The whole canvas of professional education includes Medical, Engineering, Dental, Pharmacy, Ayurveda, Homeopathy, Nursing and other Paramedical courses, the last one being a cluster of number of subjects.

The committee tried to obtain the man power requirement for the state/country from possible sources. It happens that some systematic data are available for engineering and some data are available for medical and inadequate data exist for Dental, Pharmacy and Nursing and absolutely no dependable data exist for paramedical courses. The job of this committee became more complicated since the norms that were suggested by various committees (National & International) were more in the nature of achievable recommendations rather than scientifically evolved requirements. There is no data system available except for Engineering to know the employment profiles of professionals. A large number of these professionals are either self employed or employed in private establishments wherein it is not feasible to know the remuneration package. Hence the committee had to rely on general indications as to what the people in the field say or what some graduates say. Another very important factor taken into consideration is the quality of the professional education which is badly hurt because of unplanned and rapid expansion.

With this background the committee has endeavored for the last seven months to arrive at the recommendations which are in the best interest of establishing quality institutions. The reason for this emphasis on quality is that institutions without quality are ruining the quality institutions. The

committee appreciates that the Government thought it fit to appoint a committee and to have a serious look at the situation. The committee while appreciating the opportunity given to its members to examine the status of professional education, it hopes that the government would take serious note of the recommendations made in the report.

The committee wishes to place on record the assistance it has received from many sources. It is a pleasure to thank Prof. D.M.Nanjundappa, Chairman, Planning Board and Prof. Ashokchandra, Director, Institute of Applied Man power research, New-Delhi for discussion on man power & perspective planning.

The committee appreciates the support of the member secretary Dr.C.R Thirumalachar, Director of Medical Education and his team particularly Mr. A.N.Vishwanath, Professor of Statistics, Bangalore Medical college and Mr. H ShivaKumaraswamy for putting in efforts beyond the call of duty to see that the committee had adequate editorial and secretarial support. . The departments of Government particularly Health, Planning and Education through their Secretaries and Directors have rendered useful assistance.

The committee wishes to appreciate Mr. R.Shankara, and Mr. L.Shama Sundar of Karnataka Govt. Computer center for their quality design and nice printing o the report

The chairman appreciates the active support of all the members.

(Prof. M.I.SAVADATTI)
Chairman
EXPERT COMMITTEE

Bangalore
September 24,..1997

PART I

MEDICAL COLLEGES

REPORT OF THE EXPERT COMMITTEE TO CONSIDER INTAKE OF EXISTING MEDICAL COLLEGES AND THE NEED TO START NEW MEDICAL COLLEGES IN THE STATE.

The Cabinet sub-committee constituted to look into the question of granting permission for starting new medical, dental, engineering, ayurvedic, homeopathic and unani colleges and determine the intake not only of existing institutions but also of new institutions, set up an expert committee headed by Professor M.I.Savadatti, former Vice Chancellor and member UGC, comprising experts from different related disciplines in Government Order no. HFW350MSF96, dated:7.10.96 with the following terms of reference.

"The Expert Committee should go into all the factors determining the need for medical, paramedical and engineering manpower in different systems of medicine and engineering in the State for the next ten years, keeping in view the fact that many of the students who are trained in the existing institutions do not stay in Karnataka but go elsewhere."

The Committee was requested to give its findings within a period of two months. A list of members of the committee is given below:

1. Prof.M.I.Savadatti Retd. Vice Chancellor.	Chairman
2. Dr.S.Kantha Vice Chancellor Rajiv Gandhi University of Health Sciences	Member
3. Dr.C.M. Gurumurthy Retd. Special officer, Health University	Member

4. Shri.R.N. Shastri Secretary-II, Health and Family Welfare Department.	Member
5. Director, Manpower and Employment Division, Planning Dept.	Member
6 Dr.Renuka Viswanathan Secretary to Government, Planning Department	Member
7 Dr. N.R. Shetty Vice Chancellor, Bangalore University	Member
8 . Dr.Rame Gowda Former Vice Chancellor, Karnataka University	Member
9 .Prof.M.H.Dhananjaya Director,J.T.E. Mysore.	Member
10. Dr Chennabasappa Retd.Prof. of surgery	Member
11. Dr.Thirumalachar C. R. Director. Medical Education	Member Secretary

Expert Committee deliberations:

The Expert Committee met on 7.11.96 and decided to get first hand information about professional colleges, how they are run. their requirements, needs, problems and possible expansion. It was decided to visit three medical Colleges: the Bangalore Medical College (government), J.N.Medical Collage, Belgaum(private), and the Adhichunchanagiri Institute of Medical Sciences, Bellur (private/rural).In the second meeting held on 20.11.96,the committee reviewed data on the number of

graduates passing out from different medical colleges in the State upto 1995. Manpower and Employment Division, Planning Department was requested to help the committee in working out the demand and supply of medical graduates taking into account the government sector, private sector and self-employed professionals. In the 3rd meeting heldon 10.12.96 the methodology, of perspective planning for various sectors with particular reference to the need for medical qraduates was discussed at length and it was agreed that Planning Department should forecast the requirements of doctors taking into accout the estimated needs of the State and the estimated number of students seeking medical education from outside the State and outside the country. It was also agreed that the report of the Planning Department should clearly state the methodology adopted, the assumptions made and the limitation involved taking into account similar studies made at the National level. In the 4th meeting held on 10.1.97 the report of Planning Department was discussed and it was decided that reports submitted by similar committees be studied. At the 5th sitting of 28.1.1997,the recommendations of various reports were discussed and it was decided that a draft report be prepared based on all the above discussions. The Committee decided to take up the assessment of medical and engineering manpower for the next 10 years on top priority and go into the question of the manpower requirements of other professional and paramedical personnel paramedical personnel in the second phase.

Present Status:

The Expert Committee reviewed the present status of medical education in the State in terms of the number of institutions and their intake and the out turn of medical students. Karnataka had only two medical colleges in 1956 with an intake of 200. At present there are 19 medical colleges in the state. Of these 19, two colleges K.M.C., Manipal and K.M.C., Mangalore have become part of MAHE and only 63 seats are available for the state quota. With the remaining seats being filled on all india basis with their own entrance examination. Similarly St.John's Medical College, Bangalore also admits on the basis of its own examination on an All India basis. Therefore in effect the intake for the state is for 16 Colleges plus 63 seats from MAHE. Details of total intake and outurn in these institutions are as below:

Year	Intake			Expected Outturn		
	Total	N K	KAR	Total	NK	KAR
1992-93	2755	730	2025	1820	402	1418
1993-94	3076	694	2382	2049	382	1667
1994-95	2960	801	2159	1952	441	1511
1995-96	2948	790	2158	1946	435	1511
1996-97	2128	587	1541	1402	323	1079

In this table total intake for the state is arrived at by excluding admission in MAHE (except 63 seats given to state by MAHE and in St. John's,. Bangalore)

Many of the Colleges have postgraduate programmes and some have superspecialisation and Phd. Programmes. These colleges attract students from other states and countries and have been by and large providing training as per the norms of the Medical Council of India . Except for four Government Medical

Colleges, they are self-financing. The demand for medical education is high as available seats are filled soon leaving thousands of qualified aspirants disappointed. In the last five years no new medical colleges has been started in the State under the assumption that the number of colleges is Optimum, despite increasing demand for admission to medical Colleges. Many private managements have applied to universities and the state government for permission to start new medical colleges. There are instances of applicants and managements moving the High Court for directions to process such applications. There have been many court cases because of the huge demand for medical education.

Methodological options:

The expert committee did a quick review of a recent study made by the planning department of the requirements of manpower in medical, dental paramedical and pharmacy colleges in the state. The study had assessed the requirement for the 8th plan period on the basis of the end users method. The study was however confined to the period 1992-97, while the cabinet sub-committee wanted an assessment of the next 10 years i.e. 1997-2007.

To assess the requirement of medical manpower, the Expert Committee had to adopt a methodology that would result in a reasonably reliable estimation of public and private sector doctors needed over the period 1997-98 to 2006-07.

Broadly the Expert Committee had the following methodological options available.

1. Methodology based on the incidence of morbidity: According to this methodology, demand for doctors can be estimated on the basis of morbidity patterns, duration of sickness by disease etc.

2. Another approach considered was the end users approach with estimates of demands for doctors in terms of different components public sector, private sector and self-employment requirements.

3. The third methodology that was considered was the normative approach based on the doctor population ratio under which demand for medical doctors is estimated on the basis of the desirable population to be covered per doctor.

The major constraint in selection of methodology was the time factor of two months given for completion of the report. Approaches 1 and 2 require detailed sample surveys based on schedules and can be completed only over at least 6 months. Hence the committee opted for the normative approach of the doctor population ratio hoping to base its findings on any ratio accepted by National level committees, policy makers of International agencies and also make comparisons with the ratios prevailing in other countries.

Report of the Planning Department:

The Expert Committee requested the planning department to prepare the prespective of medical doctors for Karnataka for a period of ten years (1997-98 to 2006-07). It was also suggested that in the demand projections factors such as migration, drop outs and replacement requirements should be taken into consideration. The Committee also suggested that while assessing the requirement of medical doctors, the intake level prescribed by the Medical Council of India for 1996-97 was to be adopted and the exercise restricted to only Karnataka students.

The Director of Medical Education was requested to provide data on the intake and out run of medical students (excluding non-Karnataka students) from 1992-93 and the 1996-97 intake level based on MCI standards. As regards the desirable doctor-population ratio to be adopted, the Expert Committee requested the Director of Medical Education to provide National Health Policy norms if available.

The Planning Department prepared a paper on the health man-power prespective for medical doctors (Allopathic) for Karnataka for the period 1997-98 to 2006-07, utlilising data already available in the department and data furnished by the Director of Medical Education on the intake and out turn of medical students since 1992-93. For the desirable doctor population ratio the ratio as recommended by the various committees was adopted to get a feel for the situation. The expert committee on health man-power popularly known as the Bajaj Committee which is the most recent expert committee on health at the National level 1987 also recommends 1:3000 as the ratio. No report goes into detail about the determination of a ratio. The Bajaj report says, "there is no Universally accepted method of assessing the future requirements of health professionals and para-professionals. The techniques of health manpower forecasting are yet at the stage of infancy. Nonetheless, three methods are available for estimating the projections viz., (1) the normative approach which is the most common method for projecting requirements of doctors and nurses based on norms(2) the medical user approach which takes into consideration the willingness and capacity of people to pay for medical services. Demand in economic sense is realted to price and would generally be limited by the financial resources of the family. There is relationship between family income and expenditure on health services. On the basis of the household

data on common expenditure, the perspective planning division of the planning commission has worked out the income elasticity of household expenditure on medical services to be 2.3. This means that if per capita income goes up by 1 percent, households are inclined to increase their expenditure on health services by 2.3 percent. (3) Finally the third viz., the Component or pragmatic approach for projecting the demand for health professionals requires a clear outline of the development of integrated and comprehensive medical health services in the country over a period of 15 to 20 years".

The Bhore committee of 1946 or the Health Survey and Development Committee with Sir Joseph Bhose as Chairman, had recommended 1: 3000 as the norm of doctors to population. While making this suggestion he mentioned. "the possibility of achieving the target one doctor for 1000 population seems to be very remote". Adopting this norm and projecting population up to 2006-07 using demographic projections made by the Expert Committee on Demographic Projections headed by the Registrar General of Census operations based on the 1991 Census, the following inferences were arrived at.

1. The total number of doctors (active stock) in Karnataka is estimated at 23727 for 1997-98 which gives a doctor population ratio of 1:2110. This is slightly better than all India ratio of 1:2460 for 1990

2. The cumulative stock of doctors for the period ending 2006-07 estimated at 33393 which gives a doctor population ratio of 1:1682.

3. Demand projections show that for 1997-98 the number of doctors required as per the ratio of 1:3000 is 16687 and for 2006-07 shall be 18727.

4. A comparison of supply and demand projections shows that there would be a cumulative surplus of 7040 doctors during 1997-98 and a cumulative surplus of 14666 doctors by 2006-07.

5. The total supply of doctors of the year period (1997-98 and 2006-07) is estimated at 10740 and the total demand for doctors during the period is 2040 leaving a surplus of 8700 doctors.

Doctor-population ratio: how effective is the norm:

There are different views expressed on the doctors-population ratio as a norm to estimate the requirement of doctors. Several organisations such as the World Bank and the Planning commission at the national level have extensively relied on the doctor-population ratio in their publications as macroindicator of health services and as an instrument for estimation of the demand projections of doctors.

The World Development Report 1993- investing in Health, makes a reference to the minimum requirement of number of doctors required per thousand population (refer page 139 of report) it is mentioned in the report that "Public health and minimum esential clinical interventions require about 0.1 physicians per thousand population. There is no optimal level of Physicians per capita."in the same report an International comparision has been made for countries with different levels of economic development and respective ratio per physician. A selected list of countries is given in the following table.

Countries	Per capital Income (In dollars)	Population Per Physician (1990)
Low income economies	350	6760
1. Tanzania	100	24880
2. Nepal	180	17700
3. India	330	2460
4. Nigeria	340	4240
5. Egypt	610	1320
6. Ghana	400	22970
Middle income economies	2480	2060
7. Uzbekistan	1350	280
8. Kirgystan	1550	280
9. Georgia	1640	170
Upper middle Income	3530	640
10. South Africa	2560	1750
11. Korea	6330	1370
High Income:	31050	420
12. Spain	12450	280
13. Singapore	14210	820
14. Italy	18520	210
15. USA	22240	420
16. Sweden:	25110	370
World	4010	3980

Source World Development report 1993. Investing in Health, World Development Indicators, Basic Indicators (page 238 and 239) and health and nutrition (pages 292 and 293)

The above inter-country comparison shows the disparities in health service as reflected in the indicator of population covered per doctor. The ranges in doctor-population ratio for each income group are as below:-

Population covered per physician (1990)		
	Highest	Lowest
Low Income countries	72990	1450
Lower middle income countries	17650	250
Upper middle income countries	5150	210
High income countries	820	210

India falls within the group of low income countries its doctor population ratio is the best within the group after Nicargua. The Indian ratio is equivalent to the average ratio of lower middle income countries.

The Bhore committee norm of 1:3000 population was adopted during the first and second five year plan periods. For the third plan, the guiding factor was the report of the Health Survey and Planning Committee popularly known as the Mudaliar Committee 1961. This Committee recommended a target of one doctor for every 3000/3500 population at the end of the Fourth Plan. A component approach to estimate the demand for doctors was adopted for the fourth and fifth plan periods. The Medical and Health Care Policy for the fifth plan has observed that "in regard to minimum public health facilities, generalised norms such as improvement in doctor population ratio and bed population ratio or per capita expenditure on health are not adequate" (refer report of the Working Group on Medical

Manpower, Employment and Manpower Division, Planning Commission, GOI, September 1973 p.3). The National Health Policy - 1983 Government of India has not set any targets for the country in terms of doctor-population ratio.

Although several organisations both at international and national levels and several expert committees have relied on doctor population ratio both as a health services indicator and as a norm to estimate the requirement of medical personnel, there are views which are against using it as a norm to estimate the requirement of medical personnel.

One criticism is that the doctor-population ratio is a gross figure of medically qualified persons which includes a large number of doctors who are engaged in administration, teaching, family planning etc., and are not providing direct medical services. The doctor population norm does not take into consideration the distribution pattern of doctors According to an IAMR study (IAMR Report on 2/1966 page 20) only 33 per cent of doctors serve 80 percent of the country's population which lives in rural India. This shows that all doctors do not cater to the needs of equal segments of population. Further the number of doctors registered at the Karnataka medical council over the year were:

Year	Number registered (January to December)
till 1985	25571
1985	1020
1986	1028
1987	1206
198	1262
1989	1516
1990	1527
1991	1785
1992	2110
1993	2528
1994	2439
1995	2596
1996	2727

The mean number of doctors registered during the last 5 years works out to 2478 of which if emigration, non karnataka and mortality is taken into consideration (36%) roughly 1586 doctors stay in Karnataka in a year.

Although the doctor-population ratio is a useful tool in the estimation of the requirement of doctors, this ratio by itself is not exhaustive and there are other factors which influence the demand for doctors.

Other Factors which influence demand for doctors:

Demand for medical care and for medical manpower is the net result of a number of factors such as demographic changes, social economic and technological factors. Important among these factors are growth in population and its age and sex composition and economic growth which affects per capita income and standard of living including demand for medical services. According to the Bajaj Committee there is a relationship between family income and expenditure on health services. On the basis of household data on consumer expenditure the Perspective Planning Division of the Planning commission has worked out the income elasticity of household expenditure on medical services to be 2.3 which means that if per capita income goes up by 1 percent household expenditure on health services goes up by 2.3 percent. This shows that as personal income goes up there is more than proportionate increase in demand for health services which creates additional demand for medical personnel.

The Expert Committee felt that factors other than demographic changes which influence demand for medical doctors have to be considered taking into account location development, nearness to similar facilities and possibilities of contribution to education health care and economic and social development of region. These factors can be measured on the basis of data derived from a detailed survey covering users, medical personnel and applicants to medical colleges but at least 6 months would be necessary for conducting the survey and analysing results. Given that the committee is expected to furnish its recommendations within two months, such as detailed study would not be possible.

The following additional factors were also of concern to the exper. committee:-

i) the impact of establishing a medical college on improvement of the health care delivery system in surrounding areas.

ii) the contribution of medical college to the socio-economic and cultural development of an area including indirect development sectors like catering and transport.

iii) the facilities offered by a medical college for jobs and innovative training programmes for medical personnel and others.

iv) the medical college as an instrument for correcting development imbalances.

v) the attraction of quality medical college for students from abroad leading to the export of education and the help these colleges give to our local students.

vi) improvement of accessibility to education and satisfaction of educational and professional aspirations of those who are eager, competent enough to complete medical education and willing and capable of meeting the costs.

vii) the importance of a new medical college not becoming a burden on the State exchequer.

Viii the responsibility of the Medical Council of India for the maintenance of quality.

Feasibility and desirability:

The desirability for a new medical college has to be decid taking into account location, the development of the region, the nearness of similar facilities and the possible contribution of the colle to education, health care and economic and social development of the region.

Feasibility may be based on the possibility of building and sustaining a quality institution in a desirable location and the strength of management that proposes to set it up. The management should have background and experience, adequate financial strength and a time bound programme for implementation of the project. The yardstick should be whether the project is achievable in a given time. These general guidelines have to be applied to individual cases after assessing each case on merit.

With the short time at its disposal, the committee would not be able to quantify the above factors and test its assumptions on empirical data. Nevertheless, if a decision to open fresh colleges is taken the following principles may be adopted to determine location and desirability.

RECOM MEDATIONS

1. From 1946 to 1987 in various expert committee reports the doctor population ratio of 1:3000 is stated as a target/norm. No target has been prepared or suggested by the Govt. of India. Therefore, it is not possible to draw any firm conclusions on what should be the target for the next decade for the State. Further to quantify unemployment amongst doctors is not feasible, because - a) the employment exchange registration is not reliable as many doctors do not register and many doctors do not find job placement through employment exchange: and b) self employment opportunities available for doctors are difficult to asses.

2. In view of these if a decision to open new colleges is taken it should be necessary to have a cell or a committee at State level that would obtain data on the number of doctors, their profiles in employment & such other related economic indicators (essentially

information system for medical practitioners) on a continuing basis so that the exercise would provide inputs for future decisions that may modify the policy in the best interest of health care and economy in the State.

3. In view of what has been said earlier and in view of the uncertainty of data available for employment status, it is difficult to recommend precise intake for the State. However, taking into account the demand and other factors mentioned earlier, it appears reasonable to keep the admission level for the State as 3000 (excluding MAHE & St.John's) this would give a doctor: population ratio of 1:1528 by 2006.

4. It is evident from the report of the committee that visited the medical colleges, that establishment of medical colleges has helped in improving the economy and health care of the area. This strengthens the case for fresh medical colleges in areas where there are no medical colleges at present. Therefore it is desirable not to have a fresh college in Bangalore city and not to encourage new medical colleges in areas already having medical colleges.

5. While giving recommendations for feasibility for additional intake or a fresh college, Government should rigidly adhere to MCI norms.

EXISTING MEDICAL COLLEGES IN THE STATE

excluding Mahe & St. Johns Medical College

			Intake 1996 –97	1995-96
1	BANGALORE	Bangalore Medical College	150	245
2		Kempegowda Inst. of Medical Science	120	120
3		Ambedkar Medical College	120	120
4		MSR Medical College	150	150
5	BELLARY	Govt. Medical College	100	140
6	BELGAUM	JN Medical College	200	195
7	BIJAPUR	Al Ameen Medical College	100	130
8		BLDEA Medical College	150	180
9	DAVANGERE	JJM Medical College	245	328
10.	HUBLI	Karnataka Medical College	50	147
11.	GULBARGA	MR Medical College,	100	185
12.	KOLAR	Devarak Urs Medical College	150	150
13	MYSORE	Mysore Medical College	100	205
14.		JSS Medical College,	100	200
15.	BELLUR	AIMA.	100	195
16	TUMKUR	Siddartha Medical College	130	195
17	MAHE (Mangalore) seats given to state quota		63	63
	TOTAL		2128	2948

A Submission to

The Sub Committee on Medical Education

Of the

Parliamentary Standing Committee on

Human Resource Development

At

Bangalore

On 14th November 1998

By

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Introduction

- The Society for Community Health Awareness, Research and Action is a multidisciplinary resource centre consisting of professionals interested in making health care services, medical and health personnel education, and health research activities in the country

  - more responsive to the needs of all our people, especially the poor and marginalised;
  - more relevant to rural, urban poor and tribal communities; and
  - more sensitive to disadvantaged groups.

- Many members of our Society have worked in medical colleges and teaching institution in various senior capacities.

- Among our many activities has been a longstanding and continued interest in the Reorientation of Medical Education towards greater Social Relevance and Community Orientation.

- In this connection, we have undertaken the following in recent years:

  i) A detailed study of Recommendation on Medical Education from the Bhore Committee (1946) upto the **MCI Curriculum Recommendations** (1997).

  ii) A study of Social Relevance and Community Orientation in Medical Education in the country. We studied initiatives of around 25 medical colleges.

  iii) A study of feedback on the curriculum from young doctors (medical graduates) who have had work experience in peripheral health care institutions in the early 1990s.

  iv) A study of innovative Community Health Training Experiments in the country.

  v) A policy study on "Perspectives in Medical Education" for inclusion in the Report of the Independent Commission on Health in India – recently submitted to the Prime Minister.

  vi) A continuing dialogue with a host of medical colleges in the country and in neighbouring countries of Nepal and Bangladesh on evolving mechanisms to operationalise strategies of change.

Based on these studies and reviews we make a submission to the Sub-Committee on Medical Education (Parliamentary Standing Committee on Human Resource Development).

A. CONCERNS

The following disturbing trends and developments in Medical Education in India are a cause for grave concern.

1. Commercialisation of Medical Education

* Growth of 'Capitation fee' colleges in Maharashtra, Karnataka and Tamil Nadu.

* Mushrooming of institutions based on caste and communal affiliations often sponsored by trusts and lobby groups with little previous credibility or commitment to higher education.

* Commercial growth of high technology secondary and tertiary medical care at the cost of primary health care.

* Increasing involvement of full time medical college teachers in private practice.

* Increasing problem of 'money power' and political interference in selections, examinations, appointments and transfers even in government health services and medical colleges.

2. Overall Fall in Standards of Medical Colleges

* Inability of increasing number of medical colleges in the country to maintain even the minimum requirements for undergraduate and postgraduate medical education as laid down by Medical Council of India especially with regard to:
  - Teaching staff
  - Hospital beds
  - Pedagogical norms.

* Growing dissonance between present selection procedures of medical students and the type of doctors the country needs.

3. The Increasing Erosion of Norms of Medical Ethics

* Increase in medical mal-practice and negligence.
* Growth in doctor-drug producer axis.
* Growth in powerful medical industrial complexes.
* Inadequate response of the medical profession to the societal needs.

Inadequate Social and Community Orientation

4. Inadequate social and community reorientation of Medical Education of all faculties inspite of MCI guidelines, expert committee recommendations and innovative experimentation by pace-setting medical colleges in the country.

AGENDA FOR ACTION

In the report to the Independent Commission on Health in India, which submitted its report to the Prime Minister in May 1998 (recently forwarded by us with some modifications to the sub-committee on Medical Education), we suggest the following agenda for action, reform and governmental initiative:

1. Control of Commercialization Education in Medicine

a) Setting up Health Human power Development Commission consisting of representation of all the professional councils such as MCI, DCI, NCI, etc., professional resource groups and knowledgeable other persons, to plan Health Human power Development including undergraduate and postgraduate medical education on need based and evidence based planning.

b) Review of Financing of Medical Education under both government and private ownership to identify the problems, options and prospects and approaches that are rational, legal and do not allow merit and social justice to be compromised. This should include a review of the concept of Capitation Fee colleges, 'self financing' colleges, free and paying seats, NRI and management quotas and the recently recommended differential fee structure for various categories by MCI, so that the options are decided by people's needs and not market forces.

2. Quality Control and Improvement of Standards

* Ensuring that all the existing medical colleges have adequate infrastructure, teaching faculty, clinical facilities and pedagogical standards and banning quantitative expansion of medical education.
* Strengthening of MCI and Directorates of Medical Education at State level, to ensure quality control and monitoring of standards.
* Evolving mechanisms to include wider societal representation in decision making to ensure greater social relevance.

3. Introduction of short courses in Medical Colleges to improve ethical standards and broaden the horizons.

Ethical standards

* Medical Ethics (Recently introduced by Rajiv Gandhi University of Health Sciences – Ordinance 1998)
* Rational Drug Use and Essential Drugs concept.

Broaden horizons

* Introduce Mental Health Care; Integration of Medical Systems; Management; and Gender sensitivity in Medicine/Health

4. Continued Reorientation of Medical Education to enhance Social Relevance and Community Orientation

   * Universal acceptance and promotion of recent MCI 1997, Regulation on Graduate Medical Education especially institutional goals; skill development, orientation, new internship guidelines, (which have substantial changes since the 1982 guidelines).

   * Proper faculty selection and reorientation towards social/community objectives of medical education, of all faculty.

   * Provision for creative autonomy for a few selected pace setter colleges to experiment with Alternative Track Medical Education – geared more specifically towards Primary Health Care / Family Medicine / General Practice (cf. Kakkar Report to MCI, 1995).

We request the Chairman and Members of the Sub-Committee on Medical Education to consider these recommendations and include them in their report for necessary actions. We would be happy to provide further information, data and resource materials on these and other concerns.

Thank you.

Dr. Ravi Narayan

Dr. C.M. Francis

Dr. Thelma Narayan

On behalf of

Society for Community Health Awareness, Research and Action,
Bangalore.

Dated : 14th November, 1998

THE HINDU 4.9.93

Govt. approves over 20 medical colleges

By S.Rajendran

BANGALORE, Sept. 3.

The State Government, after a gap of about 10 years, has granted approval for the setting up of over 20 medical colleges in the belief that the Union Government would give its final sanction to at least seven medical colleges, thus ensuring that there is at least one medical college in each district.

Under the rules of the Medical Council of India, amended in 1992, the State governments have been deprived of the powers to give outright permission for the establishment of medical colleges. The States, based on the applications received and the necessity for new colleges, may issue an "essentiality certificate". Thereafter, the applicants have to approach the Medical Council of India, which gives a recommendation to the Union Government. The Government decides whether to accept the recommendation or not.

The Chief Minister, Mr. J.H.Patel, now on a fortnight- long official trip to Europe, reportedly accorded permission to the Medical Education Ministry to issue essentiality certificates to 20 of the 60 applicants, according to official sources.

While the applications of some of the influential applicants such as the Dayanandasagar group of educational institutions (which had moved the court and obtained a directive), the MVJ Institutions and the Sringeri Math have been kept on hold, those of some little known educational institutions have been approved.

The Minister of State for Medical Education, Dr. M.Shankarnaik, told *The Hindu* here today that he would not like to go into the details of how approval was granted since the Cabinet had, at a recent meeting, authorised the Chief Minister to take a final decision on the matter. "I stand by the Chief Minister's decision since it is in the interest of the State. The State Government is confident of securing the final approval for at least seven medical colleges and this should suffice for the present," he said.

The districts where medical colleges are proposed to be established for the first time are Raichur, Bidar, Bangalore Rural, Hassan and Bagalkot. Bangalore City, which already has five medical colleges including the St. John's Medical College (a minority institution and consequently out of the purview of the State Government), will have three more medical colleges. While the State Government will open another college in the premises of the Bowring and Lady Curzon Hospital, the Indian Air Force, which runs a major hospital for the personnel of the IAF and their kith and kin, has also received the essentiality certificate. The third college proposed to be established in Bangalore will be managed by members of the Adi Jambhava community.

In the view of Dr. Shankarnaik, the objective of giving approval for starting new colleges is to neutralise the sudden drop in the intake of medical colleges following the Medical Council of India deciding to go by the rule book and the Union Government strictly following the recommendations of the MCI irrespective of the overriding powers vested in it. The four Government medical colleges in the State have been worst hit with their intake reduced from 1,585 to 790. The intake of private colleges has come down. A few years ago, the intake of Davangere college was reduced to 150 from 345. The J.S.S. College at Mysore is perhaps the only college the intake of which has been enhanced.

The State Government is hopeful that the MCI would approve an intake of at least 700 seats in the new colleges. Even if 30 per cent of these go to the respective managements and the non-Karnataka quota, nearly 500 additional seats will be available for the local candidates. The intake of the medical colleges will thus increase to around 2,500 from 1,900.

Most of the applicants for medical colleges have claimed that they are ready with the infrastructure, including a building and hospital. As per information available with the Government, at least six of the applicants are willing to face an inspection by the MCI. The State Government itself will have to get into top gear to prepare the Bowring Hospital for the MCI team's visit.

The Savadatti Committee, which went into the need for new medical and engineering colleges two years ago, had recommended that there was a need for at least 3,000 MBBS seats in the State. The Government thereafter constituted a Cabinet sub-committee under the chairmanship of the Minister for Law, Mr. M.C.Nanaiah, to study the matter and scrutinise the applications. In 1990-91, late Veerendra Patil put a halt to new medical colleges and said they would not be allowed for five years. Successive Governments have conformed to the policy in the last eight years.

DH- 25/6/98

LETTERS

Opening of new medical colleges: To what end?

Sir, This has reference to Karnataka's Minister of State for Medical Education M Shankar Naik about the Government's proposal to start six more medical colleges in the State (DH, June 19). The Government will definitely have an ultimate say in the governance and policy making. But in the changing trends of our democracy, where in the governments and ministers keep changing in months or years, floating half-baked policies for their convenience may have long term harm also.

The ministers will not be in power to share the good and bad results of their actions. The governments cannot tailor-make such policies to suit their convenience and tenure.

Karnataka has 17 medical colleges in Bangalore, Belgaum, Bellary, Bijapur, Gulbarga, Davangere, Hubli, Kolar, Manipal, Mangalore and Mysore. Twelve medical colleges are under constant scrutiny by the Medical Council of India (MCI) for reasons like inadequate staff and poor facilities. Nearly 80 per cent courses offered are not recognised by the MCI. Thousands of medical graduates are without proper job and the Government has no plans to employ them. The position of Government medical colleges are still worse.

There is a need to collect exact figures from all the colleges, analyse them realistically and arrive at an information base. This should be followed by a debate. Such formed opinions only shall be the guiding principles for such policy making and not the desire of those in power who feel no accountability for the future of the State.

The issues in question are: Has the Government worked out the future needs of medical doctors? Can't the present medical colleges be improved instead of starting newer ones? How can the Government take up such issues for short-term gains? Is the Government bypassing the MCI leaving the institutions and graduates high and dry for future years?

DR H R VIVEKANANDA
Medical Superintendent
Karnataka Institute of
Medical Health
DHARWAD

It has become necessary for the people themselves to find out the quality of milk being supplied to them.

Can't some enthusiastic entreprenuers come forward to manufacture lactometers to examine the density of milk supplied to them? This will go a long way in assisting the public to check the quality of milk.

S SUNDARA
Bangalore

Make it need-based

The Karnataka Government's decision on Thursday to forward the list of 20 new medical colleges to the Medical Council of India (MCI) for approval should be seen in the context of the former's professed intentions to ensure at least one medical college in each district. In fact, the Minister of State for Medical Education, Mr Shankar Naik, had hinted in July that the Government was thinking of sanctioning six new medical colleges in the unrepresented and newly-carved out districts. However, before recommending the need for 20 new medical colleges, it is not clear whether the State Cabinet had ascertained the professional requirement in the existing colleges. Whatever the Government's intentions, one cannot overlook the fact that the very policy on sanctioning new medical colleges should be genuinely need-based, related to doctor-patient ratio and other such functional norms, and not based on caste or other considerations.

Even though the State Government will issue "essentiality certificates" to the 20 new colleges, the MCI will take a final decision on the matter and recommend the same to the Union Government for approval. Thus, the MCI needs to play a responsible role in this regard. Before according approval, it has to make a realistic assessment of the potential for infrastructural facilities, quality of equipment, condition of laboratories and the teaching staff in the new institutions in the offing so that they fulfill the statutory norms prescribed by it. The rural areas in the State continue to face a dearth of doctors in government hospitals because of the doctors' reluctance to serve in these areas. To that extent, the proliferation of medical colleges and increase in medical manpower will continue to be a paradox. Most modern-day doctors seem reluctant to go to rural areas. This attitude should change for the better if the rural health care system should be strengthened.

IE

13.9.98

'More medical colleges needed'

EXPRESS NEWS SERVICE

Gulbarga, Sept 12: Medical Education Minister Shankar Nayak has said that Karnataka needs more medical colleges as thousands of students from the State are deprived of medical education.

Speaking to reporters, the minister said only 1,900 students from Karnataka could now get admission to medical colleges while the Savadatti Committee had observed that 3,000 students could afford it. Based on the Savadatti Committee recommendations, the State Government felt the need for recommending more medical colleges, Nayak said.

He said the government would not allow any medical college to admit students in excess of the prescribed quota. "If violation of rules is brought to our notice, we will write to the MCI to derecognise the college," he said.

Nayak justified the issuance of essential certificates by the State Government for starting 20 medical colleges. He said although the State Government had recommended the starting of colleges, the decision rested with the Medical Council of India (MCI). He hoped that the MCI may approve about half a dozen medical colleges.

He denied that the State Government had arbitrarily and indiscriminately issued essential certificates to proposed medical colleges although he agreed that caste and community factors of the promoters of the institutions were considered in some cases.

Asked whether the institutions which had applied for medical colleges had infrastructure as per the MCI norms, Nayak said it was for the MCI to ascertain such factors. He said the government had received about 60 applications for starting medical colleges and after thorough screening, the State had recommended only 20 applications.

He pointed out that although the Andhra Pradesh Government had recommended opening of 17 medical colleges the MCI approved only two.

The minister said most of the applicants would use government hospitals for teaching facilities.

He said the government had no objection for allowing private medical colleges to use government hospitals as it could charge clinical fee.

State finalises list of new medical colleges

DH News Service

BANGALORE, Sept 3

The Government has finalised the list of 20 new medical colleges to be set up and sent the list to Medical Council of India for its approval. Chief Minister J H Patel is learnt to have cleared the new colleges before leaving on his foreign tour last week.

Two colleges to be opened by the Government and one by The Malnad College of Medical Science and Research Education Trust of Shimoga headed by Mr Patel himself also figures in the list.

The cabinet sub-committee recommendations came before the Cabinet meeting on Friday. However, the Cabinet is learnt to have authorised the chief minister to take the appropriate decision.

The other educational institutions whose proposals have been cleared, are: Nitte Educational Trust, Mangalore; Siddaganga Educational Trust, Tumkur; Kaginele Mahasamsthaana Kanaka Gurupeetha Educational Institution, Chikmagalur; Jagadguru Murugarajendra Vidyapeetha, Chitradurga; Islamic Academy of Education, Mangalore; Dharmasthala Educational Trust, Dharwad; Father Muller's Institute of Education and Research Institute, Mangalore; H D Deve Gowda Medical College (Adi Chunchanagiri Educational Trust, Belur); K V G Medical College, Sullia; Karnataka Adi Jambava Social and Educational Trust, Nelamangala; Shantivardhaka Education Society, Bhalki; Khaja Hajarat Bandenawaz Education Society, Gulbarga; Basavalingamma Sanganatha Subedar Trust, Raichur; Government Medical College, Bowring Hospital, Bangalore; Armed Forces Medical Institute, Bangalore; Vijayanagar Education Trust, Bangalore Rural District; Navodaya Education Trust, Raichur; Sanchara Charitable Trust, KGF; and Basaveswara Vidyavardhaka Sangha, Bagalkote.

IE 5.9.93

MCI unlikely to grant new colleges for State

EXPRESS NEWS SERVICE

Bangalore, Sept 4: The Medical Council of India (MCI) is unlikely to grant any new medical college to Karnataka.

Indications to this effect were available from the MCI headquarters in Delhi on Friday. The stand follows the Karnataka Government's reported decision to give 'essentiality' certificates to 20 new colleges. These include – two to be set up by the Government, one named after former Prime Minister H D Deve Gowda and one headed by Chief Minister J H Patel.

The MCI officials told *The Indian Express* that a surprise inspection of the existing 17 medical colleges in Karnataka would lead to many of them being disqualified. Most of them lack in clinical facilities and teaching staff. "No new medical college can manage the required teaching staff overnight. They invariably woo teachers from existing medical colleges causing deficiency there," the officials said.

MCI president Ketan Desai speaking from Gandhinagar in Gujrat said: "The State Government can only give 'desirability' certificate, and recommend the applications to the Union Health Ministry. The Health Department will in turn refer the applications to the Medical Council. If the applications are in order, the Council will send teams to the new colleges for inspection and later take a decision based on their opinion".

The State Government is believed to have cleared the applications of the following colleges, and decided to recommend them to the Centre.

The Malnad College of Medical Science and Research Education Trust at Shimoga headed by J H Patel: Nitte Educational Trust, Mangalore; Siddaganga Educational Trust, Tumkur; Kaginele Mahasamsthana Kanaka Gurupeetha Educational Institution, Chikmagalur; Jagadguru Murugharajendra Vidyapeetha, Chitradurga; Islamic Academy of Education, Mangalore; Dharmasthala Educational Trust, Dharwad; Father Muller's Institute of Education and Research Institute, Mangalore; H D Deve Gowda Medical College (Adichunchanagiri Educational Trust, Bellur); KVG Medical College, Sullia; Karnataka Adi Jambhava Social and Educational Trust, Nelamangala; Shanthivardhaka Educational Society, Bhalki; Khaja Hajarat Dandenawaz Education Society, Gulbarga; Basavalingamma Sanganatha Subedar Trust, Raichur; Government Medical College, Bowring Hospital, Bangalore; Armed Force Medical Institute, Bangalore; Vijayanagar Education Trust, Bangalore rural district; Navodaya Education Trust, Raichur; Sanchara Charitable Trust, KGF and Basaveshwara Vidyavardhaka Sangha, Bagalkot.

Meanwhile, Bangalore-based Rajiv Gandhi University of Health Sciences has already cleared the applications of Kurunji Venkatramana Gowda Medical College, Sullia and Yenepoya Medical College, Mangalore.

IE 14.9.98

Minister wants MCI's wings clipped

EXPRESS NEWS SERVICE

Gulbarga, Sept 13: Medical Education Minister Shankar Nayak has made a strong plea for clipping the wings of the Medical Council of India (MCI) and restoring the power of sanctioning medical colleges to State and Central Governments.

Inaugurating the XII Karnataka State Obstetics and Gynaecological Societies Conference organised jointly by the M R Medical College and Gulbarga Obstretrics and Gynaecological Society, Nayak criticised the MCI for its "dictatorial" and "authoritarian" behaviour in sanctioning new medical colleges, a power vested in it by the Supreme Court.

"MCI should only be a recommendatory body and should not be given powers to overrride the decisions of Governments."

Nayak said the Supreme Court had vested the powers with the MCI but went on with a volley of rhetorical questions: "To whom is the MCI accountable? Is it a dictator? Is it proper to accept whatever MCI does and says?" He urged the Central Government to withdraw these powers from the MCI.

Shankar Nayak, who has taken an active role in issuing essential certificates for 20 medical colleges, said he hoped the MCI would clear at least half a dozen.

There was a shortage of doctors particularly lady doctors in rural Government hospitals. Despite facilities, doctors are unwilling to work in rural areas.

"Doctors want to make fast money. However, they should realise their social responsibility.

"Doctors should develop the tendency to serve the poor and the needy to make their profession meaningful," Nayak said.

Without adequate health care facilities in rural areas, it would not be possible to achieve the goal of "health for all by the year 2000."

Director of Medical Education Shivaratna Savadi inaugurated the scientific session.

Gulbarga University Vice-Chancellor M Muniyamma, who released the souvenir, urged the medical community to organise camps in rural areas to bring about awareness on health and hygiene, particularly among women.

Hyderabad Karnataka Education Society president Basavarj Bhimalli presided over the function.

The three-day conference was attended by about 500 delegates coming from across the length and breadth of Karnataka as well as neighbouring states.

MCI does a volte-face on nod for new colleges

IE-8/10/98

EXPRESS NEWS SERVICE

Bangalore, Oct 7: In a complete turn around from its earlier stand, the Medical Council of India, (MCI), has said it would accord permission to new colleges only if they met the regulations stipulated by them.

Talking to media persons on Wednesday, MCI president Dr Ketan Desai said those institutions which owned 25 acres of land, a 300-bedded hospital and adequate financial support would be given permission.

The State Cabinet had, last month, given essentiality certificates to 21 medical colleges and had forwarded the proposal to the MCI. Dr Desai had, however, reacted by saying that the MCI would not permit any new colleges from coming up in the State.

Justifying the present stand, Dr Desai said if these institutions followed the legalities, there was no way he could deny them permission. He, however said, the MCI had not received any such proposal from the State Government.

The MCI would also consider the requirements of doctors in the State before giving permission to medical colleges, he said.

When asked about the rationale behind granting any new institutions to the State even as the existing ones lacked infrastructure facilities and other requirements, Dr Desai said it was for the State Government to take a decision on the issue.

Commenting on the recent statements of Medical Education Minister Dr M Shankar Naik against the powers of the MCI, Dr Desai said the body was constituted by an Act of Parliament. "If the Minister has any problems, he should take it up with the Centre. There is no need to issue such statements. The Supreme Court verdict has also upheld the powers of the MCI", he said. Earlier, the MCI president said opening of new colleges would only lead to deterioration in the standards of medical education.

"Doctors will then use their bargaining powers as they would be tempted to work in those colleges which offer more salaries. This situation will only lead to a fall in medical standards and ethics", he said.

Desai regretted that there was a "rat race" in Karnataka to open new colleges, either medical or dental. Drawing a comparison between Karnataka and Gujarat, he said while Gujarat had just two dental colleges, Karnataka had the distinction of having 40 dental colleges.

Dr Desai said opening new colleges would not solve the problems if quality teachers were not produced. He urged academicians to indulge in introspection to improve the quality of medical education.

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Politicians control professional colleges

EDUCATION AS COMMERCE

BY K R BALASUBRAMANYAM

Bangalore, Oct 7; At least 45 professional colleges in Karnataka are run with active involvement of politicians.

Of the 20 applications recently floated by the Government, 8 have politicians including Chief Minister J H Patel on the management.

Karnataka has 17 medical colleges, 40 dental colleges and 90 engineering colleges. Of these, only four medical colleges, one dental college an no engineering college are run by the Government.

A rough estimate shows that the Congress party has tacit control over three medical, seven dental and 14 engineering colleges. The Janata Dal has its members in one medical and three engineering colleges. The BJP has at least one medical, two dental and three engineering colleges.

That's not all. Bhanumathi Tambidurai, wife of Union Law Minister M Thambidurai is one of the three trustees of the Bangalore College of Engineering and Technology at Malur in Kolar district. An Andhra Pradesh politician too has set up an engineering college in Bangalore. Evidently Karnataka has some special attraction to those who run education as business.

Patel heads the proposed Malnad College of Medical Science and Research Education Trust in Shimoga. In the same district, former Chief Minister S Bangarappa's son, Kumar Bangarappa, looks after Sharavathi Dental College.

In Hassan, Malnad College of Engineering is headed by senior Congress member Harnahally Ramaswamy. Hassan may soon get a medical college named after H D Deve Gowda.

In Bangalore, former Minister for Information C M Ibrahim of the Janata Dal administers Khwaja Khuthubuddin Bakthiar Kaki College of Engineering while Adult Education Minister R Krishnappa is with Revanasiddeshwara Institute of Technology. One of the old engineering colleges in the City, named after Dayananda Sagar is being run by former Congress Minister Premachandra Sagar.

Two Ministers have got two medical colleges cleared for Raichur district. Textiles Minister M S Patil and the other Religious Endowments Minister Muniyappa Muddappa. Interestingly, some political groups in Raichur have opposed medical colleges with the involvement of Ministers. They want a Government college.

Former Union Minister and senior Congress member M Basavarejeshwari set up Bellary Rural Engineering College at Bellary last year.

Former Sericulture Minister and Congress member G Parameshwar is looking after Siddartha Institute of Technology in Tumkur. His brother looks after Siddartha Medical College there. Last year, former Congress MLA Shafi Ahmed's HMS education trust started an engineering college in Tumkur. In all, Tumkur City has three engineering colleges.

Congress-turned-Dal -turned-Congress leader R L Jalappa heads the Devaraj Urs Medical College in Kolar. Davanagere's Congress MP Shamanur Shivashankarappa is also a 'leading educationist' running Bapuji College of Engineering, Bapuji Dental College and other colleges at Davanagere.

Shanti Vardhaka Education Society at Bhalki in Bidar district involves former Transport Minister and Congress MLC Bheemanna Khandre on its management.

A trust headed by Mysore's former mayor Vasu runs Vidya Vikas Institute of Engineering and Technology, Mysore. Former JD MLA P M Chikkaboraiah started the Vidyavardhaka College of Engineering at Gokulam in Mysore.

■ **Why are politicians, including uneducated ones, profoundly interested in education? Read all about it tomorrow.**

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Govt. seeks more powers on medical admissions

The Hindu 29/11/93

By Our Special Correspondent

BANGALORE, Nov. 28.

The State Government, unhappy with what it calls "the dominant role played by the Medical Council of India in the functioning of medical colleges", has urged the Union Health Minister, Mr. Dalit Ezhimalai, to vest powers with the State Government in the management of private and Government-run medical colleges.

Barring the issue of Essentiality Certificate to managements seeking to set up medical colleges, the State Governments, under the amended MCI Act, have been deprived of any control over admissions. The Union Government, however, has been vested with adequate powers to overrule the MCI recommendations and has the final say with regard to professional colleges.

The Minister for Medical Education, Dr. M. Shankar Naik, told presspersons here today that he had met the Union Health Minister recently and requested that the Centre be more assertive and not be carried away by the recommendations of the MCI, which at times, in the view of the State Government, were questionable. The latter had assured that he would call a meeting of State Health Ministers to discuss the issue. If need be, the Centre would amend the MCI Act, the Union Minister had said.

Dr. Shankar Naik said the States should at least have powers to increase the admission intake into the undergraduate and postgraduate courses in medical colleges and the Union Government and the MCI could have powers to approve new medical colleges. With the orders of the High Courts and the Supreme Court, the State Governments were now virtually deprived of any power.

On the status of the Government medical colleges in the State, he said the four medical colleges and their attached hospitals had been given Rs. five crores each. The funds would be used for upgrading the facilities including equipment and buildings. It had, however, been estimated that the four colleges put together required Rs. 30 crores more for installing the latest medical equipment.

The Minister said the applications for 20 new medical colleges, which were cleared by the State Government a few months ago, were pending with the Centre. It was for the MCI to send an inspection team and the Centre to act on the MCI recommendations. The applicant-managements would have three years to meet the conditions laid down by the MCI though the MCI generally gave its assent only to the colleges which had an attached teaching hospital. Of the 20 applicants, five had attached hospitals. The State Government is an applicant and has sought to establish a medical college at the Bowring Hospital here.

The Government has also urged for increasing intake in the Bellary, Hubli and Mysore medical colleges. For the Hubli college, it has sought 75 seats as against 50 now and for the Mysore and Bellary colleges 150 as against 100 now. As per the MCI rules, the intake for the undergraduate course (MBBS) could not be more than 150. Thus, the intake of the Bangalore Medical College was reduced from 245 to 150 seats.

The Government was yet to decide on the reintroduction of outpatient charges in its hospitals. Collecting outpatient charges would ensure that the patients concerned preserved their outpatient card. It would help in the easy location of the case-sheet of the patient concerned.

Most of the Government teaching hospitals, he said, suffered from poor upkeep and shortage of drinking water. The sinking of five borewells in each hospital had put an end to the water shortage. The Government had ordered that contractors be involved in the upkeep of the institutions and this was found to pay better dividends. The recruitment of class four employees in the Government hospitals has been suspended for several years and the present employees would be retained until their superannuation. The Government had issued directions to all hospitals to issue free medicines to the inpatients in the general wards. Prescriptions should be issued only to the patients in the special wards. The bed charges for the special wards has been raised from Rs. 10 to Rs 20 per day. The charges had been revised for the first time in 30 years.

Comments on the Savadatti Report

NEW MEDICAL COLLEGES

* Dr. C.M. Francis

1. Essentiality Certificate

It is the State Government which should look into the need for new medical colleges or increase in the number of admissions.

The Medical Council of India / Universities are concerned with the maintenance of standards :

Buildings
Equipment
Faculty
Number of admissions
Conduct of examinations.

Even when standards are not kept, there is a hue and cry and political and other pressures are brought on MCI and University and recognition got somehow or other.

Criteria for issuing 'essentiality certificate' should include

- Is it essential to have more medical colleges in the state to meet the requirements for medical graduates in the state?
  - doctor : population ratio
  - medical college : population ratio
  - capacity of people to pay
  - practitioners of other systems of medicine meeting the needs of people.
- Organizations who understand the ethos of higher education and ethics.
- Organizations which can and will maintain standards / quality.
- Experience in conducting institutions of higher education and performance
- Have the resources
  - Human
  - Financial
  - Buildings
  - Equipment
  - Land
  - Hospital beds.

Opening of new medical colleges : will it affect the standards of existing colleges, by drawing off staff from them?

Each medical college will require 100-200 qualified teachers.

2. Is there a need for more medical colleges / increase in admissions?

The stock of doctors qualified in Modern Medicine (Allopathy) in 1997-98 is 23,729. According to Savadatti Report, this works to a doctor : population ratio of 1:2110. With the presently approved intake of students, in 2006-7, the cumulative total will be 33,393. (With a better appreciation of the attrition rate it will be more than 39,000). Assuming the total given by the Savadatti report, the doctor : population ratio will be 1:1682. The desirable ratio is 1:3000. The report puts the cumulative surplus of doctors at 7040 in 1997-98 and 14,666 doctors in 2006-7.

What are the criteria for fixing the number of seats?

- Needs of the state / country
- Demand for MBBS seats.

P31. Intake vs. outturn

Why give 'expected outturn'? The actual intake and outturn could have been obtained from the Universities.

The expected outturn is estimated at less by about 30% than the intake for 4 years and 36% for the year 1996-97. This is not acceptable. For Karnataka students, the intake and output and therefore the deficit has been calculated as follows:

Year	Intake	Outturn	Deficit
1992-93	2025	1418	607
1993-94	2382	1667	715
1994-95	2159	1511	648
1995-96	2158	1511	647
1996-97	1541	1079	562

Very few students drop out completely. Students fail but generally continue and graduate. The attrition due to leaving medical education, migration or death or other reasons may be kept at about 5-7%.

Commercialisation of Medical Education; Ethics

Examination : Examiners :Corruption; Malpractices

There is no equity. The rich get in on payment. When they 'purchase admission', many of them 'purchase class / pass'. There is corruption; values are lost and this will be reflected in the practice of medicine.

Politicians and Medical Education

Politicians belonging various parties are involved in the control of medical colleges (existing and proposed).

Advantages in opening new medical colleges.

Most of the advantages is due to opening of hospitals.

If existing government / private / voluntary hospitals are used for teaching, they will be no increase in the number of hospitals. Among the new medical colleges recommended, one is governmental, to be attached to Bowring Hospital, Bangalore : No advantage;

One is to be attached to Command Hospital, Bangalore : No advantage;

Most of the others will be using existing Government / Private Hospitals : no advantage.

RECOMMENDATION

The committee had suggested that there should be constituted a cell or committee which can obtain relevant data, which are not available. Yet, they have suddenly come out with an adhoc figure of 3000 admissions, without giving any reason, presumably to maintain the large number of admissions which were being made illegally.

NOTE OF DISSENT BY DR.RENUKA VISWANATHAN, SECRETARY, PLANNING, INSTITUTIONAL FINANCE, STATISTICS AND SCIENCE AND TECHNOLOGY (MEMBER, EXPERT COMMITTEE TO LOOK INTO THE REQUIREMENTS OF NEW MEDICAL/DENTAL/ENGINEERING COLLEGES IN THE STATE)

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I, Dr.Renuka Vishwanathan, Member of the above Expert Committee offer my note of dissent on the Second recommendations of the Expert Committee's report to be submitted to the Cabinet sub-committee.

The third item of the recommendation states that "taking in to account demand and other factors mentioned earlier (in take) it appears reasonable to keep the admission level for the State as 3000 (excluding MAHE & St.John's Medical College).

The above recommendation is not based on any rationale or reasoning. The detailed analysis made by the Planning Department on certain para-meters given in the report came to the conclusion that there would be an excess of graduate doctors by the end of 2006-07 and that there would be no justification for increasing the number of seats. It was also recognised by the committee during detailed discussions that certain issues relating to employment potential for medical graduates including that of setting up practice on their own could be ascertained if more time was available by a regular survey of graduates through using schedules. Since, the h Cabinet sub-committee wanted a report within three months, there is no tile for a survey and no reliable data to take a precise view of the employment potentiaal of medical graduates.

In view of the above, there is no rationale for determining the number of additional seats at 3000 as done inthe draft report.

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NOTE

In view of the uncertainity of the data available for the employment status and the degree of unemployment amongst doctors, it is difficult to precisely quantify the optimal intake of medical colleges in the State.

At the same time, the recommendations to keep the admission level at 3000 (excluding MAHE & St.John's Medical Colleges) is not based on any rational reasoning.

As per the available data, there are 23,727 doctors in the State. If the intake is pegged at 2625 (total) and 2128 (excluding MAHE & St.John's) over a period of 10 years 10,740 Karnataka doctors will be available. If the intake is permitted to be raised to 3495 total,(3000 excluding MAHE & St.John's) the output of doctors will be 13059.

Based on the growth of population and other factors, the requirement for the corresponding period woul leave a considrable surplus of 8700 doctors. This is also confirmed by Planning Department figures. Even keeping the intake at 2625 (total) and 2128 excluding MAHE and St.John's, at end of 2006-2007, doctors:population ratio would come to 1:1682, which is more than,

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adequate. Hence, there is no justification for increasing the intake of 1996-97 or restoring the intake of 1995-96 or sanctioning of new colleges for the present. However, the situation may be reviewed after 5 years.

(DR. CHANNABASAPPA)
Member, Expert-Committee.

(Dr.C.R. Thirumalachar),
Member-Secretary, Expert Committee & Director of Medical Education, Bangalore.

: REMARKS OF CHAIRMAN :

(read to all the members present) on the letters received.

Dr.Renuka Vishwanathan, Prof.Channabasappa and Dr.Thirumalachar mention that there is no rationale for suggesting the intake at 3000. The rationale for indicating the intake at 3000 is basedon the following observations:

1) There is no standard norm based on scientific considerations available for determining the requirement of doctors;

2) The desirable norm for doctor:population was suggested because 1:1000 was considered unachievable (Bhore);

3) At 3000 intake for the year 2006 the estimated ratio is about 1:1500, which is still higher than 1:1000 and also that in other countries of the world including Egypt, Korea, European countries;

4) A scope to review the intake is provided when reliable data are available or obtained as suggested in recommendations.

M.I.Sat

(PROF.M.I.SAVADATTI).
Chairman, Expert Committee,
Bangalore.

Encl: Copies of letters received.

GOVERNMENT OF KARNATAKA

TASK FORCE ON HEALTH AND FAMILY WELFARE

INDIAN SYSTEMS OF MEDICINE AND HOMOEOPATHY

By

Dr. Jayaprakash Narayan,
Member
Task Force on Health and Family Welfare

AYURVEDA

Ayurveda, the oldest system of medicine in the world, traces its roots to the vedic period in ancient India. The Vedas contain practical and scientific information on various subjects beneficial to humanity like health, philosophy, engineering, astrology etc.

Ayurveda is a holistic healing science that comprises of two words, Ayu and Veda. Ayu means life and veda means knowledge or science. So the literal meaning of the word Ayurveda is the science of life. Ayurveda is a science dealing not only with treatment of diseases but is a complete way of life.

Ayurveda aims at making a happy, healthy and peaceful society. The two most important aims of Ayurveda are:

- To maintain health in the healthy people
- To cure the diseases of the sick people.

Doctrines of Ayurveda:

Ayurveda is based on certain fundamental doctrines known as the *Darshanas* which encompass all sciences – physical, chemical, biological and spiritual. Ayurveda, born out of intuition and revelation, developed in due course into eight well defined specialized branches as indicated below and two major schools, the School of Physicians (*Atreya sampradaya*) and the School of Surgeons (*Dhanvantri Sampradaya*).

The specialties comprise the following:

1. Internal medicine (*Kayachikitsa*)
2. Paediatrics (*balachikitsa/kaumarabritya*)
3. Psychological medicine (*grahachikitsa*)
4. Otorhinolaryngology and ophthalmology (*urdwangachikitsa/shalakya – tantra*)
5. Surgery (both general and special) (*shalyatantra*)
6. Toxicology (*damshtrachikitsa/agadatantra*).
7. Geriatrics (*jarachikitsa/rasayanatantra*)
8. Science of eugenics and aphrodisiacs (*vrishyachikitsa/vajikarana-tantra*).

The basic theories of Ayurveda arise from the concepts of *Panchamahabhutas* / five primary elements and *Tridosha*, the three primary life forces or humors which embrace the process of creation and evolution of the universe and all laws of life therein. According to Ayurveda the human body and all matter in the universe are composed of *Panchamahabhutas*. So far as the function of the body is concerned this system considers the body, mind and soul as complementary to one another.

Diagnosis and Treatment:
Before starting the treatment the physician examines the patient as a whole and takes a careful note of his internal physiological characteristics and mental disposition. He also studies such other factors as the affected bodily tissues and humors (*dushya* and *dosha*); the individual bodily state (*desha*) and the site in which the disease is located; the strength, resistance and vitality of the patient and the severity of disease in terms of vitiated humors and bodily tissues (*bala*); the time or season of onset of disease or the gravity of the clinical condition (*kala*); the strength of digestion and metabolism (*anala*); individual constitution (*prakriti*); the age of the patient as well as the relation of age with the principal vitiated humour (*vaya*); psychic power (*satva*); the habits of the patient in relation to the vitiated humour (*sathmya*); and dietary habits (*ahara*).

The classics of Ayurveda prescribed two types of examinations – examination of the patient (*rogi pariksha*) and examination of the disease (*roga pariksha*).

Treatment of disease consists in avoiding the causative factors, in advising medicines, suitable diet, activity and regimen that will restore the balanced state of the body, or in surgical procedures. It requires the combined effort of the physician, nurse, patient and medicine. The treatment of disease can be mainly classified as *shamana* / palliative therapy and *shodana* detoxifying therapy.

***Shamana* Therapy:**
Elimination of vitiated *doshas* or humors. The process by which the vitiated *dosha* subsides or returns to normal without creating imbalance or other *doshas* is known as *shamana*. The administration of carminatives (*pachana*), digestive (*deepana*), the creation of hunger (*kshudha*) or thirst (*trishna*), exercise (*vyayama*), the sun's rays (*atapa*) and exposure to sun (*marutha*), etc., come under *shamana* therapy.

***Shodhana* Therapy:**
Emesis (*vamana*), purgation (*virechana*), enemas (*basti*), and blood-letting (*rakta mokshana*) and *nasya* – snuffing are classified under the shodhana type of treatment. They are also called *panchakarma* treatment. Ceremonial washing of the patient (*snehana*) and diaphoresis (*swedana*) are two important techniques of treatment in the above categories.

Surgical Treatment:
Ayurvedic classics also advocate surgical treatment for those diseases that are not curable by medical treatment or in cases where surgical treatment may provide immediate relief. Details of preoperative, operative and postoperative methods are also discussed in the Ayurvedic classics.

Diet:
Ayurveda lays great emphasis on regulation of diet and other regimens as part of the treatment (*pathya-apathya*).

Prevention:
The preventive aspects include personal hygiene, rejuvenation, virilification and Yoga.

(a) Personal hygiene includes daily routine, seasonal regimen and good behaviours.
(b) Rejuvenation called *Rasayana*, includes use of special drugs to improve longevity, delay aging, impart immunity, mental faculties and add vitality and luster to the body.
(c) Virlification called *Vajikarana* – includes aphrodisiacs and fertility improving agents.
(d) Yoga and Meditation.

Drug Sources:
The practitioners of Ayurveda normally prepare the medicines needed for their patients in their own clinics. For simple decoctions, powders etc., the physician often advises patients to prepare them in their own homes from locally available herbal resources. However, in urban area the practitioners give prescriptions to the patient for dispensing by chemists. They also prescribe patent drugs. The large-scale production of Ayurvedic drugs is now undertaken by modern technology. These include patent and proprietary drugs and classical preparations. There are as many as 250 pharmacies that produce these drugs in Karnataka.

Pharmacopoeia:
Ayurvedic scholars have compiled all the available information about the drugs and their therapeutic uses. There are some 70 such books containing about 8000 recipes. Ayurvedic medicines are prepared in the form of distillates (*arka*), fermented preparations (*asava* and *arista*), linctus (*avaleha*), incinerated matter, minerals, shells etc., (*bhasma*), powder (*churna*), ghee (*ghrita*), tablets, pills (*vati gutika*), decoction (*kwatha*), and so on.

Patient-physician relationship:
The ayurvedic practitioners are closely related to the society in which they live and practise, and their advice as elders in the village is much sought after in village activities, whether cultural, social, economic or political. They are accorded great respect by the villagers; the village physician is not merely regarded as a physician but considered as a friend, philosopher and guide by the community. Even today in rural areas these physicians remain the first contact of the villagers in times of illness and difficulties.

For the promotion, prolongation and maintenance of positive health and prevention of disease, Ayurveda prescribes the observation of certain principles: daily routine (*dinacharya*), nightly routine (*ratricharya*), seasonal routine (*ritucharya*) and ethical routine (*sadvrata*), and also emphasizes that one must follow a regulated diet (*ahara*), sleep (*nidra*) and regulated gratification of sex (*brahmacharya*). Thus Ayurveda is not merely medical science but is in fact a way of life.

UNANI

Unani Tibb or Greeco-Arab medicine may be traced to that system of Greek medicine that was developed during the Arab civilization. The Moslems still call it Unani medicine out of adherence to its true historical derivation, whereas European historians would call it Arab medicine. It is now practiced in India as Unani System of Medicine.

Basic concepts of health and disease:

The basic framework consists of the four-humor theory of Hippocrates, which presupposes the presence in the body of four humours: blood, phlegm, yellow bile, and black bile.

The body is regarded as comprising the following:

1) *Arkan* (Elements) comprising the different states of matter and materials entering into and forming a part of everything in the universe.
2) *Mizaj* – the bodily temperament.
3) *Akhlat* – the structural components.
4) *A'da* – the fully developed and mature organs.
5) *Ruh* – the vital force or life-force.
6) *Quwa* – the bodily power
7) *Af'al* – the corporeal functions.

It will be seen that these seven working principles are comprehensive in that the *arkan* include the elementary constituents of the body; the *mizaj*, the physicochemical aspects of the body; the *akhlat*, the bodily humors; *a'da*, the anatomy of the body; *ruh*, the life-force or vital force; *quwa*; energy; and *af'al* the physiology of the body including the biochemical process.

Temperament (*mizaj*) occupies a very important place in Unani Tibb and forms the basis of pathology, diagnosis and treatment. The temperament of the person to be treated is expressed by the Galenic concept of its being sanguine, phlegmatic, choleric or melancholic, according to the respective preponderance of the humors. In other words the temperament of the individual is equal to the uniqueness of the individual or, in modern terminology, the psycho-neuro-endocrinal system with its orientation tempered differently in each individual. Any change in the temperament brings about a change in the person's state of health. Thus disease is an expression of the imbalance of the humors or the disturbance to their harmony and of the failure of one or more parts of the body to eliminate pathogenic waste.

The humors are assigned temperaments, i.e., blood is hot and moist, phlegm is cold and moist, yellow bile is hot and dry, and black bile is cold and dry (in their physical temperaments).

Drugs are also assigned temperaments and there are degrees of these temperaments. The temperament of a given drug is assessed by its action on the temperament of the body itself. Thus a drug said to be hot means that, when it enters the body and interacts with the vital faculties it produces a temperament that is hot. Hence drugs are principally used to correct the abnormal pathological temperament of the body itself or of any particular system or organ.

Concept of Preventive Medicine and Self-care:
The basic philosophy of Unani is that the body, composed of matter and spirit, is taken as a whole because harmonious life is possible only when there is a proper balance between the bodily (Physical) and spiritual functions. Unani Tibb seeks the restoration of the body as a whole to its original state.

A power of self-preservation or adjustment, which strives to restore any disturbance within the limits, prescribed by the constitution or state of the individual has been formulated. This corresponds to the defence mechanism that is called into action in case of injury to the body, the aim of the physician being to help and develop its action. By the use of Unani medicines not only is the system enabled to overcome the present disturbance through its intrinsic power, but it emerges after recovery with a greater power of resistance to future disturbances. Only in case of immediate and imminent danger to life is it considered necessary to resort to drastic methods of treatment.

In time of epidemics, every precaution in maintaining a balance in diet and general health habits is recommended. Unani practitioners recommend inoculation and immunization against diseases. In the classical literature of Tibb, there are certain prescriptions and prophylactic measures along with general preventive measure against the spread of infectious and contagious diseases.

The healer – patient relationship:
The Unani practitioner holds a respectable place in society, particularly in rural communities. In urban areas, hakims (unani doctors) are often consulted for treatment of diseases and in matters relating to the protection of health. The hakims adhere to the traditional moral and social values while treating their patients. This ensures an excellent healer-patient relationship that can be favourably compared to the old-style relationship between general practitioner and patient.

Diagnosis, Treatment and Management of Disease:

Diagnosis is carried out in the following manner:

(1) Body heat is measured by pulse, palpation and thermometer.

(2) Urine gives many indications of disorders in kidney and liver and in the organs of digestion, and plays an important part in the Unani system.

(3) Examination of stools helps in the diagnosis of certain diseases. (Laboratory examinations of urine and stools are made).

(4) Observation, palpation and percussion are used to diagnose diseases of internal organs. Every disease is fully described in Unani literature with its symptoms, points of differential diagnosis, and all its complications. A detailed examination of a patient entails studying the person as a whole. The tongue gives an indication of the condition of the blood and functions of the digestion. The eyes, lips, teeth, throat and tonsils have all indicative signs together with other physical conditions and secretions. Sleep, fear or grief, anger or happiness also provide indicative signs.

The prescriptions are begun with the legend Howash Shafi (God is the Healer), generally in the Persian language. The prescriptions contain detailed instructions about the dosage and the preparations of medicine. The medicine is prescribed initially for three days, the treatment being continued or changed according to the response of the patient. A strict diet is also prescribed.

General features of the pharmacopoeia:
The pharmacopoeia consists of an extremely rich armamentarium of natural drugs, mainly herbal but also including animal, mineral and marine drugs. The drugs can be used singly or as polypharmaceuticals, in the form of decoctions, infusions, tablets, powders, confections, syrups and aquas.

It is true that the Unani pharmacopoeia is lacking in detailed experimental, physicochemical and biomathematical data, but it is nearly always safe. One keynote of Unani medicine is that the drug should not serve as a quick curative and in the end generate serious side-effects such as those sometimes observed with synthetic drugs. Another aspect of its approach is that the physical faculties (temperament) should be allowed to function according to their own nature and at their own speed under the operation of the natural laws, and that their functioning should be given help in every possible way.

NATUROPATHY

Nature cure is the system of man building in harmony with the constructive principles in the nature (Akasha, Vayu, Agni, Ap and Prithvi) on the physical, mental and moral planes of being – Dr. Henry Lindlhar.

The roots of nature and its manifestation are identified from the Sankhya Philosophy. Man learnt the use of nature's principles in curing diseases from the animals. The different drugless treatment methods like fasting therapy, hydrotherapy, sun and chromo therapy, food therapy, etc are also called as "Naturopathy".

Basic Principles of Naturopathy:-

1. Body is made up of five great elements (*Pancha Maha Bhutas – Akasha, Vayu, Agni, Ap & Prithvi*)
2. *Roga-Adwaitha*: *Chikitsadwaitha* ie., unity of disease and unity of treatment.
3. Foreign Matter is the root cause for all diseases (Foreign Matter means unutilised/ unwanted / uneliminated matter occupying the body) – Foreign matter theory.
4. Healing power is within the body itself. If scope is given (by fasting, rest, change of food etc.,) body eliminates foreign matter and cures itself-theory of vital economy.
5. Whenever body is exposed to an exciting factor (cold, heat, stress, stimulants etc.,) acute disease results.

I. ***Akasha Bhuta Chikitsa*** **– Fasting Therapy:**
Patients are subjected to different types of fasting like-water fast, juice fast, fruit fast etc., from one day to few days. The saturation level of foreign matter (excess of fat and metabolic end products) is brought down to physiological level through elimination. Factors like rest, enema, mud packs, water drinking etc., assist during fasting, starting, continuation and breaking of fast is carried according to need of the patient by juices, fruits, raw salads and cooked diet respectively.

II. ***Agni*** **or** ***Taijasa Bhuta Chikitsa*****:- Helio and Chormotherapy:-**
Different methods of using sunlight in treatment is called Helio therapy.
The cells of the body absorb and vibrate their selected colours from the sunlight. The disturbed balance in colours leading to stepping up or lowering frequencies leads to diseases. The supply of required colours by coloured rays, colour charged water, colour charged foods and coloured vegetables and fruits balance the colours and cures the diseases.

III. ***Ap Bhuta Chikitsa*** **– Hydro Therapy:-**
All the activities of the body like assimilation and elimination are going on in water media. Water is used in therapy in 12 different temperatures. Cold water is a tonic agent and produces good action and reaction. Warm water is sedative and hot water is exciting in nature. Hence water is used in the form of drinking, irrigation (cleaning

and culturing the passages) compress and packs (chest pack, abdomen pack, joint pack, full wet sheet pack etc.,), fomentation and vapour baths etc.,

IV. Prithvi Bhuta Chikitsa

a) **Mud Therapy:**
Mud is used in the form of mudpacks, local and general applications to the body. Mud absorbs excess of heat and draws more blood into its place of application. Mud is a strong healing agent.

b) **Diet Therapy:**
Food remedies are used in the form of eliminative, soothing and constructive diets. Sathvic diets are given more importance. Raw juices and diets used in treatments are the healing panacea of naturopathy.

Complementary drugless therapies of naturopathy

a) **Yogic Therapy:**
The disturbance in psycho-somatic balance by *Viksepas* (inborn or acquired factors), *Kleshas* (disturbed tonic rhythms) leads to disease. Improper circulation of blood and lymph and disturbance in the action and reaction of neuro-muscular glandular activities also leads to diseases. Hence, yogic management of disease is to bring good elimination, circulation and psycho-physical balance. *Panchakosha* diseases are (*annamaya kosha*, *pranamaya kosha*, *manomaya kosha*, *vignanamaya kosha* and *anandamaya kosha*) treated with *astanga yoga* (*Yama*, *Niyama*, *Asana*, *Pranayama*, *Prathyahara*, *Dharana*, *Dhyana* and *Samadhi*) to cure diseases and to maintain health.

b) **Massage Therapy:**
Different types of manipulations like stroking, percussions, pressure movements, frictions and vibrations are used to activate blood circulation and elimination from the body using lubricating oils and powders. Osteopathy and Chiropractics are the developed therapies of massage therapy.

c) **Magneto Therapy:**
Imbalanced electro-magnetic potentiality in the body leads to diseases. Proper supply of magnetic power by using high power and low power magnets, magnetised water etc., vitalise the cells and their activity.

d) **Acupressure and Acupuncture:**
All the internal organs are connected with channels of energy called meridians. They emerge out in the skin in certain points. The blockages of energies in these channels are cleared by applying pressure (Acupressure), heat treatment (Moxibustion) or by pricking pins (Acupuncture).

Nature Cure is a way of living. There is no place for addiction, stimulant foods or irregular way of living. People have to be educated about proper usage of five great elements. (*Swastha Swavalambana*-Health Self Sufficiency of Mahatma Gandhiji).

Naturopathic practitioners often use all normal diagnostic techniques including blood and urine tests, palpation, X-rays, observation and so on. Naturopaths prepare careful case histories, paying particular attention to eating and living habits, environment and so on. It is usually during this case note-taking procedure that a clear course of recommended future action for the patient begins to emerge.

After the root causes of disease have been established the patient receives immediate treatment. As it continues the practitioner will offer suggestions on how, through personal hygiene, the patient could alter his way of life, his diet and perhaps even more important, his attitudes in order to improve his health significantly and to stay healthier generally. The element of preventive medicine is ever present in the Naturopath's approach to his patient. Strict naturopathic diets disallow all processed and refined foodstuffs, including all kinds of white flour, white rice and white sugar. Also taboo in an ideal world are rich and concentrated foods, butter, cream, eggs, fatty cheese and animal fats. Dietary reform is the keynote.

Mahatma Gandhi was, of course a firm believer in nature cure and felt strongly that disease came from ignoring the laws of nature. He was convinced that a timely return to those laws could ensure the restoration of health. He also claimed "nature cure treatment brings us nearer to God".

SIDDHA

The Siddha System of Medicine owes its origins to the Dravidian culture that is of the prevedic period and is one of the oldest systems of medicine practised in South India and particularly in Tamilnadu. This system was propagated by the Moola Siddhars right from Agasthiar which dates back to thousands of years. This system of medicine has been recorded in palm leaves, the periods of which is not known. Many of the palm leaves literature have been transcribed and printed into Tamil and other languages and sufficient number of books are now available.

The word "SIDDHA" comes from the word SIDDHI which means an object to be attained or perfection or heavenly bliss. The Siddhars have written not only on medicine, but also stressed the importance of the elixir of Life. A close reading of the literature would reveal a marvelous advancement in chemistry which can be demonstrated by transforming one element into another. It is therefore evident that the Siddhars had attained perfection not only spiritually but also materially.

There is not much difference between Ayurveda and Siddha system of medicine. There are similarities in some approaches like *doshas*, herbomineral preparations, etc. Siddha literature stresses the importance of the binding of the cells in the human body for the sake of longevity and to attain this end they have pointed out certain preparations like the binding of mercury, mercuric sulphide, chloride of mercury, calomel, etc. If the volatile substances are fixed such fixed substances according to Siddhars would bind the cells. Salvation (Mukti) can be attained only after Kayasiddhi (fight against ageing) through fixation of the human body.

The Siddha System of medicine was practised throughout Tamilnadu, Karnataka, Andhrapradesh and Kerala by certain hereditary physicians who are called "Vaidyas". They had their own Gurus who imparted their knowledge in theory and practice to their disciples through the Gurukula system of training. The students firmly believe that their Guru was embodiment of God and later in turn treated the students as their own children. As a result each student has close contact with the Guru and the knowledge he perceived. The literature relating to it was called 'Siddhantam'. They believed that human body is not mere matter only, but is the temple of God.

The Siddha physicians consider their patients as a combination of mind and body and try to treat them together (psychosomatic approach).

In Karnataka it appears that there are about 2500 Siddha practitioners practicing in various parts of the state with hereditary experience and most of them have been registered under Ayurveda – as there is no separate register maintained for Siddha Practitioners. There are a couple of institutionally qualified doctors of Siddha system registered in the Karnataka Ayurveda and Unani practitioners Board.
There are 10 beds reserved for Siddha system of medicine at the Government Ayurveda Hospital attached to the Government Ayurvedic Medical College, but for many years Siddha System doctor has not been appointed.

HOMOEOPATHY

Homoeopathy is a medical discipline whose primary emphasis is on therapeutics. It is a low-cost system employing non-toxic drugs exclusively. It can be used to treat both acute and chronic diseases, but its greatest contribution lies in its successful treatment of chronic illnesses that have become difficult to manage by orthodox methods.

Homoeopathy takes a holistic approach towards the sick individual and treats his disturbances on the physical, emotional, and mental levels. Its aim is to bring back the lost equilibrium of the sick individual on all three levels by stimulating and strengthening his defence mechanism.

What are the basic homeopathic assumptions?

Hahnemann presented his system as a complete scientific method of healing based on demonstrable laws and principles. The basic homoeopathic laws are:

1. The Law of Similars
2. The Law of Direction of Cure
3. The Law of Single Remedy
4. The Law of Minimum Dose

The Law of Similars:

The assumptions that led Hahnemann to formulate this law were:

(1) Every symptom complex or syndrome is not the disease *per se*, but the reaction of the defence mechanism mobilized by the body in order to counteract a morbific influence, be it a specific stress such as bacteria or viruses, or a non-specific stress such as climatic changes, environmental pollution, mental and emotional disturbances, etc.

(2) Symptoms are the best possible reaction of the organism under stress and are the means through which the organism tries to regain its lost balance, its homoeostasis.

(3) In order to help the organism re-establish order, the physician should assist and strengthen these reactions rather than suppress them.

The Law of Direction of Cure:

It was Constantine Herring, a disciple of Hahnemann, who formulated into a law what Hahnemann and his students had earlier observed to take place in a homoeopathic cure. What they actually observed was that the restoration of internal order and consequent return to health of the sick individual follow a predictable pattern. In the progressive movement towards cure it is noted that the principal symptomatology moves from the more vital to the least vital functional centres within the organism, in other words, from the vital organs to the skin and in the larger context of the whole individual, from the mental to the emotional to the physical centres. In the healing process we may also note the brief reappearance of old symptoms as the remnants of previously suppressed disease complexes make their way to the periphery, to be cleared out by the homeopathically strengthened defence mechanism.

As in all holistic and natural systems of healing, the process of cure may involve a slight initial aggravation of symptoms as the patient becomes more capable of producing a strong symptom complex. This permits the defence mechanism effectively to combat the noxious factors that produced the diseased state originally. In a successful homoeopathic treatment the initial eliminative phase with mildly enhanced symptoms is rapidly followed by the amelioration of all symptoms and a return to health. Cure is considered complete when there is a full restoration of vital functioning and expression, free from limitations of freedom in the mental, emotional or physical spheres.

The Law of Single Remedy:
It must have been already understood that the physician who wants to effect a real cure in his patient must find the one and only remedy that has produced in its proving the greatest similitude to the symptom complex existing in the patient. Any other remedy will have no real curative effect as it will not bear the necessary sensitivity towards the peculiar and individualized response of the defence mechanism of the patient and hence will not resonate with his disorder.

The Law of Minimum Dose:
Once the physician has found the indicated remedy it is as if he has found the allergen to which an allergic patient is most sensitive. It is therefore understandable why in homoeopathy the physician has to prescribe a very minute dose in order not to bring about an enormous aggravation of the patient's symptomatology. Giving such a patient a dosage of 1 or 2 mg of the raw substance of the indicated remedy could be a dangerously excessive dose. Hence microdosages of frequently imperceptible amounts of material substance are used in homoeopathy.

Once the initial microdose has acted, it will bring about a curative response through a sequence of predictable internal events, as the strengthened defence mechanism re-establishes order. In this the remedy acts as a triggering and catalytic agent and need not be repeated too frequently. Therefore the pharmaceutical cost of homoeopathic treatment will be minimal.

The initial aggravation of the patient's symptoms followed by a full amelioration, together with the observation of the Law of Cure (such as, for example, the alleviation of a chronic bronchial asthma after a homoeopathic dosage and the subsequent appearance of a skin eruption) is a confirmation that a lasting restoration of health, i.e. a cure, has taken place.

Individualisation:
In addition to its different laws, homoeopathy approaches the problem of illness in another unique way: Individualisation. In homoeopathy every case is treated as peculiar individual. Although the disease for which different patients are consulting the physician may be the same, the indicated homoeopathic remedy may be different for each one. A highly refined individualising process is used. The physician uses the homoeopathic interview to solicit from the patient the unique way in which this patient reacts to his illness. The physician has to consider the whole range of mental, emotional, and physical pathology in order to understand the peculiar ways in which the patient's defence mechanism is reacting. In doing so, he seeks the most suitable remedy to further stimulate these reactions. In this approach he will be particularly cautious not to suppress one or two troublesome symptoms to the detriment of the whole organism.

In homoeopathy the physician's interest is not only the alleviation of the patient's present symptoms but also his long-term well-being. Therefore in the interview the physician has to

probe deeply into the most subtle and unique response of the patient's defence mechanism to varying stresses. The physician needs to spend considerable time with each patient in order to have a really thorough understanding of the totality of the patient's disequilibrium at all levels of both subtle and gross symptomatology.

Homoeopathy in chronic diseases:
Homoeopathy is effective in the treatment of chronic diseases also, especially before tissue changes have taken place. Homoeopathy has been of value in reversing diseases such as diabetes, arthritis, bronchial asthma, epilepsy, skin eruptions, allergic conditions, mental or emotional disorders, especially if applied at the onset of the disease. The long-term benefit of homoeopathy to the patient is that it not only alleviates the presenting symptoms but it re-establishes internal order at the deepest levels and thereby provides a lasting cure.

YOGA

Yoga is a traditional science which helps us to co-ordinate body and mind more effectively. It enables a person to maintain tranquility of mind and greater calmness in the conscious state is perhaps the easiest and the safe method to promote mental health. It can also be used as a preventive and curative technique for the management of various psychic and psychosomatic disorders. Although Yoga had been described in the Book of wisdom – the Veda about 4000 years ago, it was presented by Pathanjali in an abridged form about 2500 years ago. Since then a large number of commentaries and books have been written to explain more clearly how one can promote mental health through the different practices of Yoga.

What is Yoga?
1. Yoga is the total integration of personality .
2. " Samatvam Yogamuchyate" – Maharshi Vyasa. i.e., Balanced way of life is called Yoga.
3. "Yogah chitta vritti Nirodhah" – Maharshi Patanajali i.e., Yoga is the inhabition of Mental modifications. Chitta= Intellect + mind + Ego + Indriyas + Tanmatras.

The integration of personality is disturbed by *VIKSEPAS* (Inborn or Acquired tendencies – Disease, Idleness, Doubt, Charmlessness, Carelessness, Worldliness, Illusion, Lack of Concentration and Unpleasantness) and KLESHAS (Disturbed tonic rhythm – Ignorance, False Ego, Attachment, Aversion, Self projection)

Klesha tendencies give rise to a particular stage called instincts or emotions. The clash between emotions leads to conflict. Conflicts lead to troubles (Diseases).

Yoga teaches us to resolve the conflicts by reasoning, rationalising viveka and tackle the mind and its states.

Maharshi Patanjali enumerates 8 steps of yoga called Astanga yoga. They are
1) *Yama* (self restraint)
2) *Niyama* (Individual discipline)
3) *Asana* (Posture)
4) *Pranayama* (Rhythmic control of breathing)
5) *Prathyahara* (Withdrawal of senses from their respective outside objects)

6) *Dharana* (Concentration)
7) *Dhyana* (Meditation)
8) *Samadhi* (Super consciousness state)

1) **Yama**:
a) *Ahimsa* (Love to entire creation)
b) Satya (external and internal truthfulness)
c) *Astheya* (Non-possessiveness beyond requirement)
d) *Bramha charya* (Control of temptations of lust through words and deeds)
e) A*parigraha* (giving up of hoarding of materials of enjoyment).

2) **Niyamas:**
a) *Shoucha* (internal purity),
b) S*antosha* (Contentment)
c) *Tapa* (Doing sincere efforts to reach the aim of life)
d) *Swadhyaya*- (Study of spiritual books and satsanga)
e) *Iswara Pranidhana* (Complete surrender to God in words, thought and deeds.)

3) ***Asanas*:-** *Asana* means a posture or a stable position of the body . All the *Asanas* are named after living and non-living creations. In the name of animals (Bhujangasana, Shalabasana, Makarasana, Mayurasana, Simhasana etc.,) Few are named in natural objects (Parvathasana, Vrikshasana, etc.,); some are in the name of saints (Matsendrasana, Vasistasana, Marichasana, Viswamithrasana etc.,) some follow postural patterns (Vakrasana, Trikonasana, Chakrasana , Shirshasana etc.) Some are named after Gods (Natarajasana, Hanumanasana, Veera-bhadrasana etc.,)

Asanas are grouped into three types.
a) **Meditative**- *Sukhasana, Swasthikasana*, *Padmasana* and *Siddasana*. These *Asanas* keep the spine erect and prevent compression on adbomen.
b) **Cultural**- *Sarvangasana*, *Matsyasana*, *Bhujangasana*, *Shalabasana*, *Halasana*, *Dhanurasana*, *Paschimothanasana*, *Chakrasana*, *Shirshasana*, etc., *Asanas* maintain gravity- Anti gravity in the body. The circulation to abdomen enhances due to pressure changes. Some asanas work on endocrinal glands (*Sarvangasana*, *Ardha- Matsendrasana*, *Mayurasana*, *Shirshasana* etc.,). *Asanas* increased the forbearence in muscles, joints. They prevent psycho-physiological conflicts if they are practiced in static method.
c) **Relaxing Asanas**:- They are *Shavasana* and *Makarasana*. They release stress and strain if practiced properly.

4) Pranayamas:-
A pause produced either in the deep inhalation or exhalations called *pranayama*. The aim is to control the mind. "The breathing activity is directly proportional to the mental activity". To decrease the tension of mind and body, deep conscious exhalation (Rechaka) is helpful.

Maharshi Patanjali explained as "Dharasachha Manasa Yogyatham" i.e., *Pranayama* increases the concentration of mind. The conscious inhalation is called *puraka*, Retention of breath inside or outside the lungs is kumbhaka and Conscious exhalation is rechaka.

5 ***Prathyahara*:-** The different methods of withdrawal of senses from their respective outside objects are grouped in this category.

6,7 & 8) Dharana, Dhyana and Samadhi are the internal in relation to the preceding ones (*Thrayai Mantharangam Poorvebhyah*)

Shatkriyas:- Shat kriyas are the cleansing processes of yoga. They clean the body, mind and adjust it to seasonal changes. They are –

1) *Neti-* Washing Nasal passages with saline and thread
2) *Dhouti-* Method of cleaning the food pipe and stomach with water (*Kunjala*), Rubber tube Danda Dhouti) & Cloth (Vastra dhouti).
3) *Basti-* cleaning the large intestine by passing the warm water.
4) *Nauli* – Separating the abdominal recti muscles into Left (*vama*) Right (*Dakshina*) and Central (*Madhyama Nauli*) and clock wise and anticlock wise rotation.(*Nauli-chalana*)
5) Kapala Bhati- Expulsion of breath and inhalation by using abdominal muscles.
6) *Trataka-* One pointed gazing in different methods.

Integrated Yoga:-

Among all the methods so far described, the sage Pathanjali's methods of integrated yoga are the most important. These are 1) *Yama* or improvement in our social behaviour 2) *Niyama* or improvement in our personal behaviour 3) Physical postures 4) Breath-holding practices 5) Restraining the sense organs 6) Contemplation 7) Meditation and 8) Attainment of superconsciousness.

1) It has been stated that improvement in social behaviour can be achieved by the following five noble practices: a) non-violence, both physical and psychological b) truthfulness c) non-stealing d) self restraint in every sphere of life and e) non-hoarding.

2) Similarly, our personal behaviour can be improved by : a) maintaining purity of body and mind b) developing a habit of contentment c) practising austerity in every sphere of life d) intensive study of relevant literature and e) daily practice of dedication to God. These are the basic requirements for attaining success in our daily practice of yoga.

3) **Physical postures**:-

A large number of yoga postures have been described by various authors. They are mainly meant to improve the bodily health, especially the functions of the various organs such as heart, lungs, liver and other organs of the gastrointestinal tract, kidneys, endocrine system, etc.,

4) **Breathing exercises**:

This is an important part of yogic exercise in which one inhales fresh air to the maximum capacity through one nostril, holds it for a while, and exhales it through the other nostril, practicing deep expiration.

After the behavioural practices and physical exercises one should continue to practise step by step what maybe called the four mental exercises.

5) **Control of sense organs**: In this procedure we have to restrain the activities of all the sense organs which are the main gate-keepers of our body and mind. This can be achieved by minimizing the chances of having the sense organs stimulated by various external objects, and then by leading as simple a life as possible. It is really hard to restrain the mind, but by constant practice with a definite goal one can restrain the sense organs and thereby the mind to a considerable extent.

6) **Concentration of mind**: In this process one gradually learns how to concentrate on any object by avoiding all distractions. This practice of concentration on an object of one's choice will greatly help to calm any mental excitement and at the same time will induce tranquility and serenity in the mind. In order to succeed we must have tremendous perseverance and willpower.

Prevention of psycho-somatic disorders:

Regular practice of the integrated type of yoga cannot only prevent the development of various psycho-somatic disorders but also improve a person's resistance and ability to endure stressful situations more effectively. Regular practice of yogic postures leads to psychological improvement in the intelligence and memory quotient and a decrease in the pulse rate, blood pressure, respiration and body weight. The bio-chemical examination of the blood has shown decrease in blood sugar and serum cholesteral, and a rise in the serum protein level. A significant improvement in the functioning of the endocrine glands has also been found, as evidence by the increased hormonal level of thyroid, adrenal medulla, adrenal cortex and gonads.

Yoga for treatment of stress disorders:

The integrated type of yoga has been used for the treatment of different stress disorders such as hypertension, anxiety neurosis, mucous colitis, bronchial asthma, diabetes mellitus, thyrotoxicosis, migraine and rheumatic disorders, with gratifying results.

Promotion of mental health:

In addition to the integrated practice of yoga, there are many other methods of yoga that can be used for the promotion of mental health. Among them, the practice of *Kundalini* yoga is the most important one.

Yoga as rehabilitative measure:-

There are a number of yogic measures that can be used for the rehabilitation of persons exposed to stress and strain in life. These include praying through devotional songs daily for 30 minutes or so (*bhakti yoga*), undertaking missionary service to the poor, sick or deprived people (*karma yoga*) and educating people through philosophical lectures (*jnana yoga*). By following one or more of these measures, all those who are passing though intense mental stress and strain can rehabilitate themselves well enough to lead normal lives and render efficient service to people.

Thus, yoga is a truly a very important preventive, curative, promotive and rehabilitative measure for maintaining sound mental health.

LIFE STYLE FOR HEALTHY LIVING

A person wishing to be healthy throughout his or her life has to be healthy every day. Health depends on how one spends each day. Controlled and guided activities of body and mind are essential for maintaining sound health. If one adheres to the rules of healthy living, the *dosha-bio* energies will remain balanced and one will maintain optimum health and well-being, and have long, healthy life. The ideal way in which a healthy person with a well balanced constitution or *sama-prakruti* should spend his day is described as healthy life style.

Time to wake up:
A healthy person should rise early in the morning i.e. 4 *ghatika* or 96 minutes before sunrise. At this time the mind is fresh and the surroundings are calm and quiet. Hence one can concentrate on meditation, prayers or studies. Immediately after getting up one should pray God for acquiring mental strength. This period is called "Brahma muhurta" because this is the best time for meditation. Children, pregnant ladies and aged persons require more sleep. The aged should lie down in bed even if their natural sleep is over, as they require physical rest.

Morning Ablutions:
Bladder and bowels should be emptied regularly after waking up in the morning as the autonomic reflexes are naturally active at this time. This gives a sense of relief and makes one feel more energetic. Regular bowel habits help one to prevent borborygmy, distension and heaviness in the stomach. ***One should never suppress the natural urge to pass urine or stools as it can lead to many diseases.***

Personal Hygiene:
Face and eyes should be washed by medicated cold water, warm decoction or medicated milk prepared by soaking or boiling the bark of the banyan, *ashwattha* (peepal), or *udumbara* (country fig) tree, *lodhra* (Lodhtree) and *amalaka* (goose berry) in water or milk. Persons with thin, delicate, red and warm skin should use medicated cold water or cold milk. Persons with dry, rough skin should use warm medicated milk. Persons with oily or oedematous face should use warm decoction of herbs in water.

Washing the face with herbal decoction helps to get rid of pimples and skin diseases of the face. It prevents any bleeding tendency of facial skin and gives lustre to the face.

One should wash hands whenever one touches another person, after cleaning the discharges from the eyes or nose, after touching trimmed hair or nails, before and after taking meals, after waking up from sleep, before worshipping God and after returning home.

Oral Health:
Animals never clean their teeth. Probably man in ancient times also never cleaned his teeth as his food contained a lot of hard and rough substances that had a natural cleansing action on teeth. With civilisation, man started using more and more cooked food and hence the need to chew food grew less and less. As a result the third molars have become a vestigeal structure in most persons. The cooked food sticking to the dental crevice serves as a good medium for bacterial growth. Therefore it is essential to clean and brush the teeth in the morning after getting up and after lunch and dinner or after eating anything for that matter.

A soft brush can be made by biting and chewing the tips of fresh stems of *arka* (madar), *nyagrodha* (banyan), *khadira* (catechu), *karanja* (Indian beech), *arjuna* or *nimba* (neem). Mastication of stems acts as a good exercise for the teeth and gums. It also causes attrition of biting surfaces that get leveled out.

Nimba (neem) stems should be preferred to others amongst bitter ones. Similarly *khadira* (catechu) leads other astringent stems, *karanja* (Indian beech) the pungent ones and *yestimadhu* (glycerrhiza) the sweet ones.

One should use a thin plate of gold, silver or copper for cleansing the tongue. One may alternatively use a leaf or a thin wooden plate. The tongue cleaner should be soft and smooth, with rounded edges. Its length should be 10 fingers.

Cleansing the tongue helps to get rid of waste products and bad odour of the mouth, improves taste sensation and exerts a tonic effect on the tongue. Cleaning the tongue considerably reduces bacterial flora in the mouth.

Morning Drink:
It is suggested that one should drink water in the morning on empty stomach (300 – 500 ml), which is kept overnight preferably in a copper vessel. Drinking water on empty stomach helps in detoxification and in people with malabsorption, constipation, piles, abdominal disorders and abdominal distention and hyperacidity.

Developing Positive Mind:
Every society and every religion considers a few objects or events as auspicious and others as inauspicious. Curd, ghee, *durva* (grass) used in worship, mustard, *bilwa* (bael) fruit, and *gorochana* are considered auspicious. Similarly looking at priests, cows, sacred fire, gold, ghee, sun, water and the King at the time of meals is auspicious.

The auspiciousness or inauspiciousness depends on the way one is used to looking at a particular object or event and the thoughts associated with them, e.g., when one sees a sacred fire, one immediately thinks of religious people, good events and God. On the other hand when one sees a burning pyre on the cremation ground, one's mind is filled with sorrow and grief. Hence sacred fire and the pyre are considered as auspicious and inauspicious respectively.

Looking at a Mirror:
One should look at self in a mirror as it gives an idea about one's appearance, state of health, happiness and cleanliness.

Care of the special Senses:

Eye Care:
The eye is the most important sense organ in the body. Eyes link man with the entire universe including stars situated miles apart. They are exposed directly to environmental factors such as wind, dust, and frequent temperature changes. During the wakeful state the eyes are at constant work supplying important sensory information. Therefore it is important to take utmost care to maintain this sense organ of vision in the best state of health.

Perception of light is the function of eyes and hence it is important to maintain the clarity and transparency of the eyes. The mucoid conjunctival secretions tend to collect daily in small quantities in the eye. Therefore it is important to use an eye ointment that has both a soothing as well as cleansing action. *Souveera* ointment – i.e. *surma* – prepared from natural antimony compound is used daily in the morning and evening. *Surma* is applied by a thin metal applicator made of copper, iron, silver or gold with a smooth and bulbous end. The applicator should be thin and ten fingers in length. The soothing ointment is applied thrice a day. It is important to maintain the *surma* or any ointment as well as the applicator sterile.

Advantages of daily application of *souveeranjana* ointment are:-

1) Cooling effect on the eyes.
2) Removal of dirt and relief from irritation, burning and pain.
3) Clear vision and lustrous eyes.
4) Resistance to the heat of the sun and wind.
5) Protection against common eye diseases.

Skin Care:
Oil massage, kneading the body with hands and then a bath helps to main the skin healthy. 2 drops of *anutaila* (medicated oil) in each nostril daily prevents wrinkling of facial skin and premature graying of hair.

Ear Care:
Regular instillation of oil drops in the ear is necessary to maintain good hearing, which prevents deafness and tinnitus. The kind of oil drops instilled depends upon the constitution of the person. Generally sesame oil can be used. Drops of sesame til oil put in the ear daily as well as massage of the head with oil is good for eyes.

Nasal Care:
Nose is termed as "Gateway of head". Nose is the sense organ of smell and is exposed to the external environment and is in contact with air which continuously exerts its drying effect on it. It is therefore important to keep the nose healthy and prevent it from drying by regular administration of nasal medicines.

Instillation of medicines in to the nose is called '*Nasya*'. Medicated oil drops are advised. The advantages of *Nasya* are, it helps to keep the nose, eyes and ears clean and healthy, exerts soothening effect, strengthens the joints of head and neck and prevents stiffness of neck. It prevents premature greying and baldness. It also prevents cervical spondylitis, facial palsy, nasal allergy and headache.

Mouth Gargling:
It is important to gargle the mouth after meals, eating any food and after brushing the teeth. One should use cold or hot water, cold milk or sesame oil for gargling.

Gandusha and Kavala:
Gandusha and *kavala* are both variants of gargling. In *gandusha*, one takes such a large quantity of a fluid into mouth that one is unable to move it inside the mouth. In *Kavala* one holds and moves

the semisolid or pasty solution in the mouth. It exerts a soothing and cleansing action in the mouth and prevents caries and oral diseases.

Body Massage: (*Abhyanga*)
Application of oil and massage is to be practiced every day. Fatty substances like oil, ghee or animal fat can be used for massage. However sesame oil being easily available and cheap is advocated for daily regular body massage.

Advantages: Skin becomes soft, strong and its complexion improves. Relieves exhaustion, has tonic effect on all the tissues and the body as a whole and promotes longevity. It induces sound sleep, improves vision, prevents premature greying and falling of hair, prevents arthritis, delays ageing process and promotes longevity. Massage is very good in elderly people as it helps to prevent geriatric problems.

Physical Exercise (Vyayama):
Exercise or *Vyayama* can be defined as a systemic physical activity aimed at increasing strength and stability. Regular exercise keeps the body fit and strong and depletes the extra fat. Ayurveda advocates how much exercise one should do in different age groups and when.

Ethical Life style:
An excellent character and good behaviour themselves act as the best mental and social tonic. All the benefits of rejuvenation and repair can be derived without taking any medicine. A person who wishes to undertake this rasayana should speak the truth, be free from anger, abstain from alcohol and observe celibacy, trust no one without verification, avoid over-strain, always remain calm and composed, speak good about others, be advocated to penance and hold chants, maintain cleanliness, understand and appreciate others view points. Enjoy helping others, be diligent in spiritual endeavours, take delight in revering God, priests, teachers, seminars and elders, be compassionate, moderate and observe non-violence, be regular in sleep and work, take milk and ghee regularly, be conversant with the sciences of medicine and dosage, be devoid of egoism, possess a good moral character, be attached to person who believes in religion and have self-control . Hence moral health is equally important. Charaka says "Diseases do not befall a man in whom thought, words and deed are happily blended, the mind is controlled, the understanding is clear and who is possessed of knowledge, austerity and absorption in yoga"

Seasonal life style:
Just as diurnal and nocturnal schedules of activities are essential for physical fitness and mental alertness, Ayurveda has advocated seasonal regimen that helps to keep us healthy in various seasons. The whole year has been divided into six seasons of 2 months each.

The environmental factors in various seasons result in the accumulation and increase of certain toxins in the body. The appropriate diet and the seasonal regime counteract the effects of seasons on man to a great extent.

Transitional period of between two seasons

The last week of the out going and the first week of the incoming season is called the junction of or the transitional period between the two seasons. During this period the seasonal regimen of the previous season should be gradually omitted and the regimen of the forthcoming season gradually introduced.

If one follows the daily and seasonal life style changes intelligently and religiously he / she will surely enjoy a long, healthy, happy and useful life full of vitality.

PANCHA KARMA

This five-fold purification therapy is a special form of treatment in Ayurveda.These procedures eliminate the basic *doshas* (bio-energies) from the system i,e., cleanses the whole system, makes the body fit to accept and for genuine absorption. The five procedures are

1. *Vamana* - Administration of Emetics
2. *Virechana* -Administration of Purgatives
3. *Nasya Karma* - Installation of nasal drops
4. *Nirooha Basti* - Medicated decoction enema
5. *Anuvasana Basti* -Medicated oil enema.

Acharya Susruta who is the father of surgery includes *Rakta Mokshana* (Venesection /blood letting) as one of the five fold therapies.

The entire group of eliminative procedures is based upon promoting the body's natural methods of eliminating unwanted substances.

Objectives of Pancha Karma:-

1. To maintain health
2. For Treating diseasses
3. As a preparation for R*asayana* (Rejuvenation) and *Vajikarana* (virilification) therapy.

Rejuvenation Therapy:

Old age commences at 60, according to Charaka. However, Sushrutha says that symptoms of degeneration set in after the age of 40. The destruction of tissues exceeds their production. Tissues become feeble, sense organs begin slackening, eyesight and hearing are weakened, intellect is feeble, hands and feet are lax and efficiency gradually falls.

Ayurveda has studied old age in minute detail and has advocated various ways, means and devices to maintain the tissues in optimum condition. Moreover Ayurveda advocates the use of *rasayana* therapy right from youth to perpetuate it.

GOVERNMENT OF KARNATAKA

TASK FORCE ON HEALTH AND FAMILY WELFARE

RATIONAL USE OF DRUGS

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CONTENTS

CHAPTER 1

GUIDELINES FOR DEVELOPING DRUG POLICES FOR RATIONAL DRUG MANAGEMENT

Health sector reform is a process aimed at improving equity, quality & efficiency in the health sector through changes in the organization & financing of health services.

Reform is thought to be the direct response to stimuli which highlight the DEFICIENCIES of existing models in meeting current & future needs. In health care the stimuli are: ageing populations with different health needs; the resurgence of diseases such as tuberculosis & cholera; the appearance of new diseases such as AIDS; increases in inequity to access to health services; the inability of the public funds to cover all basic health needs of the population; the inability of the current financing mechanisms to cope with the higher costs & higher demand for technically advanced interventions. Therefore health care reform is an issue of significant consequence to a developing country & state as for the industrialized countries.

THE ECONOMIC IMPACT OF RATIONAL DRUG MANAGEMENT

Both health and economic reforms will necessarily affect the way drugs are used—which drugs are chosen, how frequently they are used, how many are consumed and for which reasons.

Rational drug use comprises all areas dealing with the proper selection, storage, and use of medications for therapeutic treatment. But in truth, rational drug use begins far before this because it is promoted by all preventive measures which can ensure health and reduce the need for drugs. Fundamental to the appropriate use of drugs is the concept that medicines should not replace the efforts of patients to maintain their health.

Problems in the area of drug use usually arise due to insufficient knowledge, misinformation, lack of confidence in medical advice, forgetfulness, inadequate access to health services and drugs, or some combination of these. The types of issues encountered cover an extensive range: Improper drug selection and prescribing, lack of patient compliance with therapy, drug over utilization, drug underutilization, unintended therapeutic duplication, drug interactions, disease or allergy contraindications, improper storage resulting in reduced efficacy and possible undesirable reactions. At best these problems result in overspending: at worst they lead to serious and undesirable health consequences as well as to an unacceptable and unnecessary loss of resources in fiscally restrained systems.

OBJECTIVES OF RATIONAL DRUG MANAGEMENT

The tri-fold objectives are:

- Equity, which comprises ensuring access to essential health services to the portions of the population at financial and geographical disadvantage.
- Quality, which incorporates the effectiveness of treatment & consumer satisfaction with services

- Efficiency, which includes:

  - Allocative efficiency (which results in the distribution of resources across services so as to maximize health benefits)
  - Administrative efficiency (the management & structure of the health system are designed to promote most efficient use of resources)
  - Technical efficiency (services are provided at the lowest possible cost)

THE COST-BURDEN OF IRRATIONAL DRUG USE

Given the sum of choices which must be correctly made for drugs to be used appropriately, it is not difficult to imagine that irrational drug use is a common problem. A number of studies, highlighting inappropriate prescribing, dispensing, and use of drugs in various countries throughout the world confirm this. Although the nature of the problems and their severity differ, it is fair to say that irrational use is widespread.

Many economic arguments link improved prescribing and compliance with reduced pharmaceutical expenditures. Irrational prescribing can lead to higher pharmaceutical expenditures due to the inclusion of unnecessary or inappropriate products, unnecessarily expensive products, and excessively high doses or long treatment periods. In many developing countries, prescriptions for five or more drugs are not uncommon. Patient noncompliance with therapy also accounts for a significant amount of waste. In industrialized countries, studies have shown that compliance rates may be as low as fifty per cent, and it is difficult to imagine that the situation is better elsewhere.

But a more comprehensive view reveals that, in economic terms, this is only part of the problem. Other expenditures which could have been avoided if the right therapy had been used need to be considered. These include, but are not limited to, increased use of health facilities, increased drug resistance, the spread of disease to other individuals, and lost days of work. The magnitude of these indirect costs frequently exceeds that of the original excessive or wasteful expenditure on the drugs themselves.

Therefore, particularly with the high levels of irrational drug use which appear to prevail, the total costs associated with the improper use of drugs may not be fractions of overall pharmaceutical spending, but rather multiples of it.
When true societal costs are considered, irrational drug use appears to be the largest contributor to waste in the area of pharmaceuticals and may have a notable, negative impact on the overall economy of a country. Since even relatively low degrees of irrational behavior can result in high social costs, efforts to improve the use of drugs should be designated as priorities.

IMPROVING RATIONAL DRUG USE

Spending dedicated to improving rational drug use is a very useful social investment both in terms of health and long-term cost savings. There is urgency in developing and implementing comprehensive strategies in this area, because unless addressed, the problems associated with the improper use of drugs can only increase in scope and negative impact due to growing population figures and the very improvements in affordability and availability which drug polices and health sector reform seek. It is for this reason that the incorporation of interventions to improve rational

drug use within a larger nat[RDM-KSPC]ional drug policy and within the health sector reform process is essential.

STRATEGIC APPROACHES

Irrational drug use is not limited to one area of the health sector, therefore strategies should be designed to cover both the public and private sectors as well as self-medication and prescribing habits. What requires changing is the knowledge and behavioral patterns of the larger societal matrix comprised of individuals, households, communities, health professionals, educational institutions, and industry.

But because financing for interventions is necessarily limited, priority areas need to be identified and targeted. From a health economics perspective, these areas should be those which are expected to yield largest improvement in social benefit (or reduction of unnecessary social costs) for the money invested. The choices will vary from country to country but some possibilities are:

- interventions which make initial product selection more rational (e.g. widespread diffusion of the essential drugs concept, formulary lists, banning of unsafe drugs, clearly visible generic names on all packaging);
- improved access to and education on drugs which, if not used or used incorrectly used, lead to significant health and lost-work costs;
- focus on drugs which are the most misused;
- improved access to and education on drugs to treat serious communicable diseases:
- focus on those groups in society who use the most drugs;
- focus on people influencing the medication decisions of others (depending on the society, mothers may have a significant role here).

Table 1: Tactics for Improving Rational Drug Use

Strategies	Interventions	Examples
Educational	• Formal & Continuing education • Printed material • Face to face contact • Media	• Improved pharmacotherapy training for physicians • Newsletters • One- to- one public health detailing ; group lectures • Radio & television
Managerial	• Selection • Procurement& distribution • Prescribing& dispensing • Financing	• Essential Drugs list • Morbidity – based quantification • Formularies and treatment guidelines; prescribing analysis • Patient cost - sharing
Regulatory	• Promotion controls • Prescribing controls • Dispensing controls	• Advertising spending limits • Banning unsafe drugs and irrational combinations • Limit on number of drugs per patient

RDM-KSPC

In addition to choosing proper activities, it is vital to make the process of implementing them as smooth and as efficient as possible. Dialogue and cooperation of other interested parties such as universities, consumer groups and industry are essential to ensure the complementary nature of activities and to avoid conflicting messages which can res[RDM-KSPC]ult in the nullification of the invested efforts.

RATIONAL DRUG USE AND REFORM

- Rational drug use begins before a drug is even selected, as it is promoted by all preventive health measures which reduce the need for drug consumption.
- Economic incentives exist in liberalized pharmaceutical markets, which can drive overconsumption and inappropriate use of drugs.
- Within health sector reform, the need to maximize the health benefits to society relative to drug expenditures links rational drug use to economic issues.
- Regardless of economic considerations, efforts to improve rational drug use are fully warranted by ethical principles.

IMPROVING RATIONAL DRUG USE

- Spending to improve rational drug use is a necessary social investment which should be incorporated within health sector reform.
- To be effective, efforts to improve the appropriate use of pharmaceuticals must cover the public and private sectors.
- Studies to determine the cost-effectiveness of [RDM-KSPC]specific interventions used to promote rational drug use are urgently required.

RDM-KSPC

RDM-KSPC

CHAPTER 2

DRUG AND COSMETICS ACT, RULES, AMENDMENTS, OTHER LEGISLATION AFFECTING USE OF DRUGS

DRUGS & COSMETICS ACT

The act was passed in 1940 to regulate import, manufacture, distribution & sale of drugs & cosmetics. It is implied that no adulterated, spurious &misbranded drug shall be manufactured in India orimported into India. Similarly no misbranded &spurious cosmetic shall be manufactured in India or imported into the country. The Act also provides for the sale & distribution of drugs only by qualified persons. It also provides for control over manufacture, sale & distribution of Ayurvedic, Siddha, Unani & Homeopathic Drugs. Control over manufacture is exercised by drug inspectors. Analysis of samples is carried out at drugs control laboratory. The licensing authority exercises control over issue of license for manufacture, sale & distribution of drugs.

D & C Act provides for establishment of Drugs Technical Advisory Board (DTAB) to advise central & state governments on technical matters arising out of administration of the act. Drugs Consultative Committee (DCC) aids in securing uniformity in administration of the act through out India. DTAB consists of 18 members with representatives like Director General, Health Services, President, PCI, MCI, IPA, IMA, Directors, CRI, CDRI, IVRI, & nominated & elected members. DCC has one representative from each state.

Schedules: 1. Act:

a) First schedule: List of Ayurvedic, Siddha or Unani Books.
b) Second schedule: Standards to be complied with imported drugs & by drugs manufactured for sale, sold, stocked, exhibited for sale or distributed.

1. Rule: A - List of forms used for making applications for issuing licensees, granting licensees, sending memorandums etc. B - Fees for test or analysis by the Central Drug Laboratory or Government Analyst. C - Biological and special products. C (I) - Other special products (The import, manufacture and sale of schedule C and C (1) drugs governed by special provisions). D - Class of exempted drugs, which are exempted from a certain provisions applicable to import of drugs. E (I) - List of Ayurvedic Siddha and Unani poisonous substances. F - Provisions applicable to Blood Bank requirements and licensing to process Blood Components. F (I) - Provisions applicable to, Vaccines, Antisera and Diagnostic antigens. F (II) - Standards for Surgical Dressings. F (III) - Standards for Umbilical Tapes. FF - Standards for Ophthalmic Preparations. G - List of substances required to be taken only under supervision of a Registered Medical Practitioner. The drugs to be labeled with word caution: It is dangerous to take this preparation except under medical supervision. H - Prescription drugs which are required to be sold by retail only on prescription of a Registered Medical Practitioner. J - List of diseases and ailments which a drug may not claim to prevent or cure. K - List of drugs exempted, from certain provisions applicable to manufacture of drugs. M - Good Manufacturing practices and requirements of factory premises, plant, equipment etc. for the manufacture of drugs. M (I) - Requirement of factory premises, plant, equipment etc. for manufacture of homeopathic drugs. M (II) - Requirement of factory premises, plant, equipment for manufacture of cosmetics. M (III) - Requirement of factory premises, plant, equipment for manufacture of Medical Devices. N - List of minimum equipment for the efficient running of a pharmacy. O - Standards for

disinfectant fluids. P - Life period of Drugs. P(I) - Pack sizes of Drugs. Q - List of coaltar colours permitted to be used in cosmetics and list of colours permitted to be used in soaps. R - Standards for condoms made up of rubber latex intended for single use. S - Standard for cosmetics. T - Requirements for factory premises and hygienic conditions for manufacture of Ayrvedic (including Siddha) and Unani drugs. U - Particulars to be shown in manufacturing and analytical records of drugs U(I) - Particulars to be shown in manufacturing records of cosmetics. V - Standards for patent and proprietary medicines and for patent and proprietary medicines containing vitamins. W - List of drugs which shall be marketed under generic name only. X - List of habit forming, psychotropic and other such drugs. Y - Requirements and guidelines on clinical trials, for import and manufacture of new drugs.

THE DRUGS AND MAGIC REMEDIES (OBJECTIONABLE ADVERTISEMENTS) ACT 1954

1. Object:- To control the advertisements of drugs in certain cases, to prohibit the advertisement for certain purpose of remedies alleged to possess magic qualities.

The objectionable advertisements tend to cause the ignorant and unwary to resort to self-medication or to resort to quacks who indulge in such advertisements for treatments, which cause great harm. It was therefore found necessary in the public interest to put a stop to such undesirable advertisements. The bill intended for this purpose was introduced in the Parliament. The bill contained statement of objects and reasons to the Act.

2. Legislative Background:-

Drug Enquiry Committee: In August 1930, Government of India appointed the Drugs Enquiry Committee with Sir R.N.Chopra as the chairman, to enquire into the extent of quality and strength of drugs imported, manufactured or sold in India and to recommend steps for controlling such imports, manufacture and sale, in the interest of the public. The Chopra Committee in the Appendix to its report had given a list of a number of samples of advertisements of patent and proprietary medicines dealing with cures of all kinds of diseases. The Chopra Committee had also made recommendations for a strict measure of control over proprietary medicines. These recommendations were made on the basis of evidence led before it and after scrutiny of many advertisements and pamphlets in respect of drugs, which showed fraudulent practices and extravagant claims for these drugs.

Bhatia Committee: The Bhatia Committee was set up in February 1953, with an object to look into the control to be exercised over objectionable advertisements. The Bhatia Committee examined large number of witnesses in different town of India, which included representatives of Chemists and Druggists, Medical Practitioners and State Ministers for Health. The Drugs and Magic Remedies (Objectionable Advertisements) Act, was enacted in the year 1954 after examining recommendations of the Bhatia Committee and Drugs Enquiry Committee

3. Prohibited Advertisements:

Prohibition of advertisement of certain drugs/magic remedies for treatment of certain diseases and disorders- Subject to the provisions of this Act, no person shall take any part in the publication of any advertisement referring to any drug in terms which suggest or are calculated to lead to the use of that drug for –

(a) The procurement of miscarriage in women or prevention of conception in women; or
(b) The maintenance or improvement of the capacity of human beings for sexual pleasure or
(c) The correction of menstrual disorder in women or

(d) the diagnosis, cure, mitigation, treatment or prevention of any disease, disorder or condition specified in the Schedule, or any other disease, disorder or condition (by whatsoever name called) which may be specified in the rules made under this Act:

Provided that no such rules shall be made except –

(i) in respect of any disease, disorder or condition which requires timely treatment in consultation with a registered medical practitioner or for which there are normally no accepted remedies, and

(ii) after consultation with the Drugs Technical Advisory Board constituted under the Drugs and Cosmetics Act, 1940 (23 of 1940) and, if the Central Government considers necessary, with such other persons having special knowledge or practical experience in respect of Ayurvedic or Unani systems of medicines as that Government deems fit.

4. Prohibition of misleading advertisements relating to drugs-

Subject to the provisions of this Act, no person shall take any part in the publication of any advertisement relating to a drug if the advertisement contains any matter which

(a) directly or indirectly gives a false impression regarding the true character of the drug; or
(b) make a false claim for the drug; or
(c) is otherwise false or misleading in any material particular.

5. Exemption:

(a) any signboard or notice displayed by a registered medical practitioner on his premises indicating that treatment for any disease, disorder or condition specified in Section 3, the Schedule or the rules made under this Act, is undertaken in those premises; or
(b) any treatise or book dealing with any of the matters specified in Section 3 from a bonafide scientific or social standpoint; or
(c) any advertisement relating to any drug sent confidentially in the manner prescribed under Section 16 only to a registered medical practitioner; or
(d) any advertisement relating to a drug printed or published by the Government; or
(e) any advertisement relating to a drug printed or published by any person with
(f) the previous sanction of the Government granted prior to the commencement of the Drugs and Magic Remedies (Objectionable Advertisement) Amendment Act, 1963 (42 of 1963);

Provided that the Government may, for reasons to be recorded in writing, withdraw the sanction after giving the person an opportunity of showing cause against such withdrawal.

6. Penalty:- Punishment which may extend to six months or with fine or both.

NARCOTIC DRUGS AND PSYCHOTROPIC SUBSTANCES ACT, 1985

Objective:- An Act to consolidate and amend the law relating to Narcotic Drugs, to make stringent provisions for the control and regulation of operations relating to Narcotic Drugs and Psychotropic substances and for matters connected therewith.

PHARMACY ACT 1948

1. Objective:- An Act to regulate the profession of Pharmacy.

CHAPTER 3

DRUGS (PRICE CONTROL) ORDER-1995

1. **Objective**:- To regulate the selling price of bulk drugs and formulations.

2. **Legislative background**:-When the demand exceeds supplies, there will be a tendency to indulge in hoarding and black marketing. During the sixties when Pharmaceutical industry had not progressed and essential drugs were in short supply, the Government of India notified "drug" to be an essential commodity within the meaning of Essential Commodities Act 1955 in order to regulate the price at which they can be bought or sold. That is how Drugs (Price Control) order came to be introduced. The first order was notified in the year 1966. Thereafter, as the Pharmaceutical Industry progressed and keeping in tune with the "Drug Policy" of the Government, the Price Control order has been substituted from time to time. 1966 Order was replaced by 1970 order, 1979 order replaced 1970 order, 1987 order replaced 1979 order and 1995 order replaced 1987 order and is in force with effect from 1.1.95.

3. **Criteria for Price Control**:- In the modified drug policy announced in the year 1994 the criteria for span of Price Control is envisaged as under:
   i) The criterion of including drugs under price control will be the minimum annual turnover of Rs.400 lakhs.
   ii) Drugs of popular use, in which there is a monopoly situation, will be kept under price control. For this purpose, if for any bulk drug, having an annual turnover of Rs.100 lakhs or more there is a single formulator having 90% or more market share in the Retail Trade (as per ORG) a monopoly situation would be considered as existing.
   iii) Drugs in which there is sufficient market competition viz. at least 5 bulk drug producers and at least 10 formulators and none having more than the 40% market share in the Retail Trade (as per ORG) may be kept outside the price control. However, a strict watch would be kept on the movement of prices as it is expected that their prices would be kept in check by the forces of market competition. The Government may determine the ceiling levels beyond which increase in prices would not be permissible.
   iv) Government will keep a close watch on the prices of medicines, which are taken out of price control. In case, the prices of these medicines rise unreasonably, the Government would take appropriate measures, including re-clamping of price control.
   v) For applying the above criteria, to start with, the basis would be the data up to 31st March 1990 collected for the exercise of the Review of the Drug Policy. The up dating of the data will be done by the National Pharmaceutical Pricing Authority.
   vi) Genetically engineered drugs produced by recombinant DNA technology and specific cell/tissue targeted drug formulations will not be under price control for 5 years from the date of manufacture in India.

4. **In pursuance of the drug policy announced** in the year 1994 Drugs (Price Control) order 1995 was introduced with effect from 1.1.95, wherein, 76 (seventy six) bulk drugs identified for price control have been included in the First schedule to the Order and hence these are termed as "Scheduled Bulk Drugs " and formulations based on these bulk drugs are termed as "Scheduled formulations". Basically, the Drugs (Price Control) order –1995 is aimed to control the sale price of "scheduled bulk drugs" and "scheduled formulations".

5. **Government of India has constituted** National Pharmaceutical Pricing Authority (NPPA) for the purpose of Price fixation and related issues.

6. **Fixation of maximum sale price of Bulk Drugs.**
   1. NPPA after making such enquiry as it deems fit, fix from time to time by notification in the Official Gazette maximum sale price at which such bulk drug shall be sold.
   2. While fixing the maximum sale price NPPA shall take into consideration.
      a) Post tax return of 14% on net worth or
      b) A return of 22% on capital employed or
      c) In respect of new plant an internal rate of 12% based on long term marginal costing. or
      d) Where production is from basic stage post tax return of 18% on net worth or a return of 26% on capital employed.

7. **Fixation of retail price of formulations**:
   1. **Formula for calculation of Retail Price.**

R.P.= (M.C.+C.C.+P.M.+P.C.) x (1 + MAPE/100) + ED.

"R.P." means retail price;

"M.C." means material cost and includes the cost of drugs and other pharmaceutical aids used including overages, if any, plus process loss thereon specified as a norm from time to time by notification in the Official Gazette in this behalf;

"C.C." means conversion cost worked out in accordance with established procedures of costing and shall be fixed as a norm every year by notification in the Official Gazette in this behalf;

"P.M." means cost of the packing material used in the packing of concerned formulation, including process loss, and shall be fixed as a norm every year by notification in the Official Gazette in this behalf;

"P.C." means packing charges worked out in accordance with established procedures of costing and shall be fixed as a norm every year by notification in the Official Gazette in this behalf;

"MAPE" (Maximum Allowable Post-manufacturing Expenses) means all costs incurred by a manufacturer from the stage of ex-factory cost to retailing and includes trade margin and margin for the manufacturer and it shall not exceed one hundred per cent for indigenously manufactured Scheduled formulations;

"E.D." means excise duty:

Provided that in the case of an imported formulation, the landed cost shall from the basis for fixing its price along with such margin to cover selling and distribution expenses including interest and importer's profit which shall not exceed fifty per cent of the landed cost.

Explanation:-For the purpose of this proviso, "landed cost" means the cost of import of formulation inclusive of customs duty and clearing charges.

2. Fixation of Ceiling Price:

NPPA has power to fix Ceiling Price of scheduled formulations. Ceiling Price is the price fixed keeping in view the cost or efficiency or both of major manufacturers of such formulations and such price shall operate as the ceiling price for all such packs including those sold under generic name and for every manufacturer of such formulation.

With a view to enable the manufacturers of similar formulations to sell in pack size different to the pack size for which ceiling price has been notified, the manufacturer shall work out the price on pre-rate basis and shall intimate the price of formulation pack to the NPPA and such formulation packs shall be released for sale only after the expiry of sixty days after such intimation. The Government may by order revise the price so intimated, which shall be binding on the manufacturer.

3. Individual price fixation of scheduled formulations.

1. The retail price of a scheduled formulation of a manufacturer shall until the retail price thereof is fixed under the provisions of 1995 order, shall continue to the price fixed under the earlier order.
2. Where the Government fixes or revises the price of any bulk drug and a manufacturer utilizes such bulk drug in his scheduled formulations he shall, within thirty days of such fixation or revision, make an application for the NPPA for price revision.
3. The retail price once fixed shall not be increased by any manufacturer except with prior approval of NPPA.
4. Manufacturers seeking price approval shall apply for NPPA within a period of two months decision by the NPPA has to be taken.
5. No new packs shall be introduced without price approval.
6. Registered small-scale industries are exempted from individual price approval.

4. Miscellaneous provisions:

1. Government of India (NPPA) has power to recover overcharged account.
2. Retail price to be printed on the label of both scheduled and non-scheduled formulations with the words "Retail price not to exceed Rs. ..... Local taxes extra"
3. Every manufacturer, importer or distributor shall issue price list to the dealers, State Drug Controllers and NPPA covering both scheduled and non-scheduled formulations.
4. Refuse to sell without valid reason is the offence.
5. Violation of DPCO is punishable under Essential Commodities Act 1955, the punishment being imprisonment or not less than three months which may extend to seven years and shall also liable to fine. The Court, may, on any account or special reason impose a sentence of imprisonment for a term not less than three months.
6. Government of India has power to fix Ceiling Price of even non-scheduled formulations if it is of the opinion that there is need to fix the price to contain abnormal increase in the price.

CHAPTER 4

GOOD MANUFACTURING PRACTICES

In the drug industry at large, quality management is defined as the aspect of management function that determines and implements the "quality policy", i.e., the overall intentions and direction of an organization regarding quality, as formally expressed and authorized by top management.

The basic elements of quality management are:

- an appropriate infrastructure or "quality system", encompassing the organizational structure, procedures, processes, and resources; and
- systematic actions necessary to ensure adequate confidence that a product (or service) will satisfy given requirements for quality. The totality of these actions is termed **"quality assurance".**

Within an organization, quality assurance serves as a management tool. In contractual situations, quality assurance also serves to generate confidence in the supplier.

In drug manufacture and supply the terminology may differ. In particular, the term "quality system" is rarely used, and it is "quality assurance" that usually embraces such elements as organizational structure, procedures, and processes.

The concepts of quality assurance, GMP, and quality control are interrelated aspects of quality management. They are described here in order to emphasize their relationship and their fundamental importance to the production and control of pharmaceutical products.

Quality assurance

"Quality assurance" is a wide-ranging concept covering all matters that individually or collectively influence the quality of a product. It is the totality of the arrangements made with the object of ensuring that pharmaceutical products are of the quality required for their intended use. Quality assurance therefore incorporates GMP and other factors, including those outside the scope of this guide such as product design and development.

The system of quality assurance appropriate to the manufacture of pharmaceutical products should ensure that:

(a) pharmaceutical products are designed and developed in a way that takes account of the requirements of GMP and other associated codes such as those of good laboratory practice (GLP) and good clinical practice (GCP);
(b) production and control operations are clearly specified in a written form and GMP requirements are adopted;
(c) managerial responsibilities are clearly specified in job descriptions;
(d) arrangements are made for the manufacture, supply, and use of the correct starting and packaging materials;
(e) all necessary controls on starting materials, intermediate products, and bulk products and other in-process controls, calibrations, and validations are carried out;
(f) the finished product is correctly processed and checked, according to the defined procedures;

(g) pharmaceutical products are not sold or supplied before the authorized persons have certified that each production batch has been produced and controlled in accordance with the requirements of the marketing authorization and any other regulations relevant to the production, control and release of pharmaceutical products;
(h) satisfactory arrangements exist to ensure, as far as possible, that the pharmaceutical products are stored by the manufacturer, distributed, and subsequently handled so that quality is maintained throughout their shelf-life;
(i) there is a procedure for self-inspection and/or quality audit that regularly appraises the effectiveness and applicability of the quality assurance system.

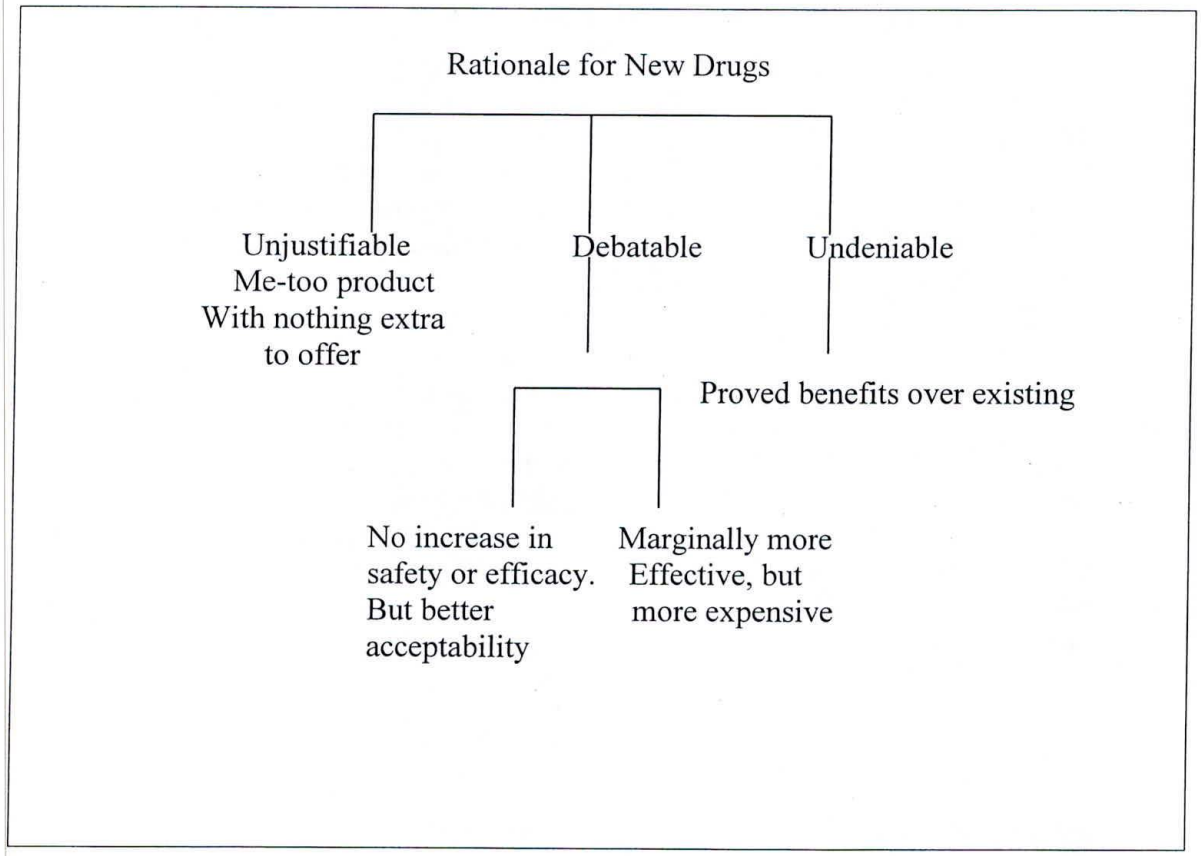
GOOD MANUFACTURING PRACTICES FOR PHARMACEUTICAL PRODUCTS (GMP)

Good manufacturing practice is that part of quality assurance which ensures that products are consistently produced and controlled to the quality standards appropriate to their intended use and as required by the marketing authorization. GMP rules are directed primarily to diminishing the risks, inherent in any pharmaceutical production, that cannot be prevented completely through the testing of final products. Such risks are essentially of two types: cross-contamination (in particular by unexpected contaminants) and mix-ups (confusion) caused by false labels being put on containers. Under GMP:

(a) all manufacturing processes are clearly defined, systematically reviewed in the light of experience, and shown to be capable of consistently manufacturing pharmaceutical products of the required quality that comply with their specifications;
(b) critical steps of manufacturing processes and any significant changes made to the processes are validated;
(c) all necessary facilities are provided, including:
    (i) appropriately qualified and trained personnel;
    (ii) adequate premises and space;
    (iii) suitable equipment and services;
    (iv) correct materials, containers, and labels;
    (v) approved procedures and instructions;
    (vi) suitable storage and transport; and
    (vii) adequate personnel, laboratories, and equipment for in-process controls under the responsibility of the production management;
(d) instructions and procedures are written in clear and unambiguous language, specifically applicable to the facilities provided;
(e) operators are trained to carry out procedures correctly;
(f) records are made (manually and/or by recording instruments) during manufacture to show that all the steps required by the defined procedures and instructions have in fact been taken and that the quantity and quality of the product are as expected; any significant deviations are fully recorded and investigated;
(g) records covering manufacture and distribution, which enable the complete history of a batch to be traced, are retained in a comprehensible and accessible form;
(h) the proper storage and distribution of the products minimizes any risk to their quality;
(i) a system is available to recall any batch of product from sale or supply;
(j) complaints about marketed products are examined, the causes of quality defects investigated, and appropriate measures taken in respect of the defective products and to prevent recurrence.

Quality control

Quality control is the part of GMP concerned with sampling, specifications, and testing and with the organization, documentation, and release procedures which ensure that the necessary and relevant tests are actually carried out and that materials are not released for use, nor products released for sale or supply, until their quality has been judged to be satisfactory. Quality control is not confined to laboratory operations but must be involved in all decisions concerning the quality of the product.



Spurious Drug: Means a drug:

a) Imported/manufactured under a name which belongs to another drug; or
b) Which is an imitation of or is a substitute for another drug or resembles another drug in a manner to deceive or bear upon its label or container the name of another drug unless plainly or conspicuously marked so as to reveal its true character and its lack of identity with such other drugs; or
c) The label or container bears the name of an individual or company purporting to be the manufacturer of drug, which individual or company is fictitious or does not exist; or
d) Which has been substituted wholly or in part by another drug or another substance; or
e) Which purports to be the product of a manufacturer of whom it is not truly a product.

CHAPTER 5

PROCUREMENT, DISTRIBUTION AND STORAGE

Drug supply system management

Procurement is the process of acquiring supplies from private or public suppliers, or through purchases from manufacturers, distributors or international agencies, or through bilateral aid program. Procurement includes most of the decisions, and actions that determine which drugs are obtained and in what quantities, what is paid for them and whether they are of satisfactory quality. Drug procurement policies should be aimed at influencing both the private and public sector.

Distribution and storage covers the activities needed to ensure that drugs arrive in the right place at the right time, in good condition and with minimal wastage of resources. It also includes inventory control and providing the information necessary to forecast drug needs.

The importance of drug supply system as a component of national drug policy

There needs to be good coordination between these central elements of the supply system. Failures at any point of the drug supply system can lead to shortages, or to waste. Both the health and the economic consequences can be serious.

A well-coordinated supply system will ensure that available resources are used effectively to maximize access, to obtain good value for money and to avoid waste. A supply system which works will increase confidence and participation in health services.

Drug supply arrangements vary greatly in the extent to which public and private sectors play a role in financing, distributing and dispensing drugs. It is important that policies serve the needs of both the private and public sectors.

Variations in the needs and capacities of different countries mean that each country will have to select which policies are most appropriate to their needs.

Organizing the drug supply system- Who has responsibility for the supply system and how it should be structured are important choices. There are several options, and which one is chosen will depend on existing structures, the balance between public and private sectors, and other factors.

PROCUREMENT

The pharmaceutical procurement system is a major determinant of drug availability and total health costs.

Expert technical assistance in quantification may be useful in initial phases of the procurement program, with local officials participating to gain an understanding of the methodology.

An effective procurement process ensures the availability of the right drugs in the right quantities, at reasonable prices and at recognized standards of quality. Drugs may be acquired through purchase, donation, or manufacture.

In the public sector, the first step in the procurement process is to prepare estimates of the types and quantities of pharmaceutical products that will be required annually, biannually, or quarterly to satisfy the needs of the health services. Ideally, estimates of types and quantities should be based on up-to-date health information and should take into consideration the available financial resources. In practice, therefore, the estimates are usually based on past drug use, and may be re-evaluated and revised through inventory control and utilization surveys. Drug procurement should be adapted to the needs of the public and the private sectors. The public sector should follow the national essential drugs list.

Procurement should include a quality assurance system covering registration, quality control, control of imports, effective drug inspection and the application of the WHO Certification Scheme on the Quality of Pharmaceutical Products Moving in International Commerce.

The procurement cycle involves the following steps:

- review drug selections
- determine quantities needed
- reconcile needs and funds
- choose procurement method
- locate and select suppliers
- specify contract terms
- monitor order status
- receive and check drugs
- make payment
- distribute drugs
- collect consumption information.

The major procurement methods are open tender , restricted tender, competitive negotiation, and direct procurement, which vary with respect to their effect on price, delivery times, and workload of the procurement office.

Key principles of good pharmaceutical procurement include

- procurement by generic name;
- limitation of procurement to the essential drugs list
- procurement in bulk;
- format supplier qualification and monitoring;
- competitive procurement;
- sole-source commitment;
- order quantities based on reliable estimate of actual need.
- reliable payment and good Financial management;
- transparency and written procedures;
- separation of key functions;
- product quality assurance program;
- annual audit with published results;
- regular reporting of procurement performance indicators.

Alternative systems for supplying drugs to public health systems include the central stores system, autonomous supply agency system, direct delivery system, prime vendor system and private pharmacy system. All involve pharmaceutical procurement.

Procurement may proceed under different models - annual purchasing, scheduled purchasing, or perpetual purchasing. Different combinations of these models may be used at different levels of the system or for different drugs. Whichever combination of supply systems and purchasing model is used, most public-sector drug procurement involves group purchasing, whereby one procurement office, whether public or private, negotiates contracts for members of a group with similar needs and interests.

The focus is on identifying-and controlling excess costs in the selection, procurement, distribution, and use of drugs. Several analytical tools are available that help quantify costs and identify areas where costs can be reduced; the information provided is also essential in designing and monitoring interventions to control costs.

When funds are not available to purchase all the drugs listed in estimates, it is necessary to reduce the list according to health system resources. The following tools, can help with prioritization:

VED (vital, essential, desirable) analysis classifies drugs in two or three categories, according to how critical the drug is for treating commonly encountered diseases. Priority is given to vital drugs.

V: vital drugs are potentially lifesaving, have significant withdrawal side effects (making regular supply mandatory), or are crucial to providing basic health services;

E: essential drugs are effective against less severe but nevertheless significant forms of illness but are not absolutely vital to providing basic health care;

D: desirable drugs are used for minor or self-limited illnesses, are of questionable efficacy, or have a comparatively high cost for a marginal therapeutic advantage

Assignment to the desirable category does not mean that the drug is no longer on the system's formulary or essential drugs list,' in many cases, drugs for minor illnesses are included on the essential drugs list but may be considered a lower priority for procurement than other drugs.

The classification of drugs should not be a one-time exercise. As the national formulary or essential drugs list is updated, and as public health priorities change, the VED categories should be reviewed and updated. Any new drugs added to the list should be categorized appropriately, and category assignments for older drugs should be reviewed and changed if needed)

In EI Salvador, there are three categories in the Cuadro Basico (formulary) for the ministry of health: category 1, essential medicines; category 2, basic medicines; and category 3, complementary medicines.

The main objective is an ongoing system to give priority to essential, lifesaving drugs as opposed to expensive nonessential items.

Therapeutic category analysis applies cost-effectiveness, cost benefit, and/or cost-minimization methods to help select the best drugs for treating common diseases.

ABC analysis assembles data from recent or projected procurements to determine where money is actually being spent, allowing managers to focus first on high-cost items when considering ways to reduce procurement costs.

ABC value analysis examines the annual consumption of drugs and expenditures for procurement by dividing the drugs consumed into three categories. Class A includes 10 to 20 percent of items, which account for 75 to 80 percent of expenditures. Class B items represent 10 to 20 percent of items and 15 to 20 percent of expenditures. Class C items are 60 to 80 percent of items but only about 5 to 10 percent of expenditures. ABC analysis can be used to

- measure the degree to which actual consumption reflects public health needs and morbidity;
- reduce inventory levels and costs by arranging far more frequent purchase or delivery of smaller quantities of class A items.
- seek major cost reductions by finding lower prices on class A items, where savings will be more noticeable;.
- assign import and inventory control staff, to ensure that large orders of class A items are handled expeditiously.

Therapeutic category analysis considers the utilization and financial impact of various therapeutic categories of drugs and then compares cost and therapeutic benefit to select. the most cost-effective drugs in each major therapeutic category. This can be done to select drugs for a formulary or procurement list.

Price comparison analysis compares drug prices paid by different supply systems, as one measure of procurement efficiency. The analysis can also compare supply system acquisition and selling prices with local private-sector prices to gauge the cost effectiveness of in-house pharmaceutical services and to assess price elasticity for cost recovery.

Total variable cost analysis compiles information on variable costs associated with purchasing and inventory management, to help managers consider options for change in terms of their impact on total variable costs.

Lead-time analysis is a systematic approach to tracking procurement lead times, determining the points at which lead time can be reduced, and adjusting safety stock appropriately. Payment time should also be analyzed (when delayed payment to suppliers is feasible).

Expiry date analysis examines levels of stock on hand and their expiry dates and compares this information with average rates of consumption to assess the likelihood of wastage (and to develop appropriate countermeasures).

Hidden cost analysis examines supplier performance to identify any hidden costs incurred because of problems such as late. deliveries and short shipments. Hidden costs may make one supplier considerably more expensive than a competitor that offers a higher unit price but better performance.

QUANTIFICATION

Accurate estimates of drug requirements are needed to avoid stock outs of some drugs and overstocks of others. In addition, suppliers are most apt to compete for an estimated quantity supply contract if they believe that the quantities specified are reasonably accurate.

The most accurate way to quantify pharmaceutical needs is to start with accurate past consumption data from all units being supplied. These data should be tempered by known or expected changes in morbidity patterns, seasonal factors, service levels, prescribing patterns, and patient attendance. Unfortunately, in many countries, consumption data are incomplete or do not reflect real need because the supply pipeline has never been full. In such cases, the morbidity-based and adjusted consumption techniques may be needed for procurement quantifications.

Quantification involves estimating the quantities of specific drugs needed for a procurement. Most quantification exercises also estimate the financial requirements to purchase the drugs. Normally used to forecast needs for an annual or semiannual procurement. They are not usually used to calculate routine order quantities in an established supply system that uses scheduled purchasing (periodic orders) or perpetual purchasing(orders placed whenever need arises).

It is the responsibility of the procurement office to produce a reasonably accurate estimate of drug requirements for each tender, but much of this responsibility can be decentralised. Quantification can consume considerable time in programs that are decentralized but involve multiple layers of review.

Distribution and storage

The distribution and storage system plays an important role in determining whether people have access to good-quality drugs when they need them. It includes inventory control as well as requisition and delivery to the point of use. It also includes collecting information on consumption.

It is necessary to devise and implement a system that results in the safe distribution of good-quality drugs at the lowest possible cost and that reaches the majority of the population, especially in remote areas of the country. Such a system is often best based on a combination of private and public sector initiative. An effective distribution system will:

- maintain supply;
- keep drugs in good condition;
- minimize overstocking;
- minimize losses due to expiry;
- minimize losses due to theft;
- provide information on consumption and requirements in order to forecast future needs.

Access and distribution of quality drugs

Access through private sector

When developing a national policy it is important to take retailers and wholesalers in the private sector into account since they can play a role in maximizing access. In most countries the majority of the population are serviced by private retailers. More over, in a fully private system, patients buy drugs directly from private pharmacies. It may be difficult to ensure that everyone has access to drugs.

The role of the private sector (private drug outlets) is growing, but this sector is mainly concentrated in urban and population centers. This will always affect affordability and equitable access. It may be necessary to create intermediate and peripheral storage facilities managed by appropriately trained personnel in order to improve access to essential drugs, especially in more remote areas. When setting levels of payment to cover distribution costs for wholesalers and retailers, it is most important to take into account the need to keep drug prices affordable to the entire population.

Quality when transporting drugs it is important to pay attention to quality requirements, particularly maintenance of the cold chain, and attention to the maximum temperatures permitted for some products. Distribution and storage in both the public and private sectors should be monitored to ensure the quality of drugs at all levels of the distribution network.

Drug donations Drugs are frequently donated by international organizations. Inappropriate drug donations have caused problems, particularly in emergency situations. The guidelines aim to promote core principles in drug donation:

- it should give maximum benefit to recipient, and it must be based on their needs;
- donations should respect the wishes and authority of the recipient country;
- there is no double standard in quality;
- there should be an effective communication between donor and recipient.

Disposal of unwanted or expired drugs
If the supply system is working well disposal is hardly needed, but it is important to get rid of excess or expired stock or unwanted donations safely.

Table : Examples of measures for controlling drug expenditures

Examples	Explanation/comments
Bulk purchasing	• Includes tenders • Includes pooled procurement
Capping of expenditure	• Ceiling of pharmaceutical expenses • Limits expenditures allowed per treatment episode
Drug selection	• Positive lists, such as **essential drugs lists,** are formulated based on criteria for inclusion (public health needs, therapeutic value, cost) • Negative lists focus on excluding certain products
Marketing and advertisement restrictions	• Advertising and promotion can make up a sizable portion(15-25%) of ex-factory drug costs and are intended to influence consumption patterns. Limitations are intended to reduce price and rationalize consumption
Price control	(refer to section)
Promotion of rational use	(refer to section)
Use of generic products	(refer to section)
User fees and co-payments	• May discourage excessive consumption but may have negative consequences on affordability and equity

Competitive mechanisms in public drug supply

Ideally, drug supply systems should be able to provide drugs, in the most cost efficient manner, to all areas of a country, with minimal stock outs and shortages There exist five different options for the distribution of pharmaceuticals to government hospitals, health centers, and clinics.

Table: Comparison of systems for public drug supply

Description	Responsibility			Examples (Current and past)
	Contracting suppliers	Storage & delivery	Monitoring & drug quality	
Central Medical Stores(CMS) Drugs procured and distributed by centralized government unit.	CMS	CMS	CMS, DRA	Numerous countries in Africa, Asia and elsewhere
Autonomous supply agency Bulk drug procurement and distribution managed by autonomous or semi autonomous agency	Autonomous agency	Autonomous agency	DPO, Autonomous agency, DRA	Benin, Haiti, India (Tamil nadu), Sudan, Uganda, Zambia
Direct Delivery system • Decentralized approach • Tenders establish the supplier and price for each item • Drugs delivered by supplier to districts, major facilities	DPO	Supplier	DPO, DRA	hile, Indonesia, Peru, Thailand
Prime vendor system • DPO establishes contracts with drug suppliers and separate contract with a single prime vendor Prime vendor warehouses and distributes drugs to district, major facilities	DPO	Prime vendor	DPO, prime vendor, DRA	South Africa,(Northern Transvaal),United State of America(many state and local health services)
Fully private supply Private wholesalers and pharmacies manage all aspects of drugs supply with government facilities	Procurement and distribution by private enterprises		DRA	

Notes CMS= Central medical stores; DRA= national drug regulatory authority
DPO = drug procurement office (MOH or other govt. office);

With central medical stores, the state both owns and manages the entire drug supply system. Many countries have adopted this approach but have found the management of such a system difficult. One option to which they have turned is the establishment of autonomous or semi-autonomous supply agencies which, in theory, can manage distribution with more efficiency and focus on public health objectives.

Where centralized distribution proves to be difficult or undesirable, direct delivery systems may be able to better deliver pharmaceuticals to health facilities. However, the management demands for this may also be great. Alternatively, the management can be contracted out to another party, a prime vendor, who is responsible for receiving drugs from suppliers and for stocking health facilities. These last two mechanisms are usually only feasible where a well-developed private sector exists.

Table: Benefits of and concerns associated with decentralization in health

Possible benefits	Concerns
• Improved public sector efficiency in the provision of health services • Stimulation of local participation in their own health care provision • Improved quality of care through better response to local needs.	• Who will be accountable for meeting national policies? • Increased costs: administrative(more layers) and those associated with the transition. • Inter-regional inequalities (poor regions may no longer be subsidized by more affluent regions). • Long –term central versus local rivalries. • Knowledge and management techniques may be more limited at local level than central level. • Health budgets may be reduced to meet other local needs

Decentralization is not an easy solution to the problems of health care systems. While it can be a result of organizational reform, it should not be viewed as a goal in its own right. Decentralization is, however, an option which can be undertaken in a larger reform context to foster the improved implementation of health and drug policies which, themselves, are aimed at better achieving health objectives.
Each component of a national drug policy - including selection, supply, quality assurance, storage and distribution, and rational use - **has economic effects**.

CHAPTER 6

RATIONAL PRESCRIBING, POLYPHARMACY AND COMPLIANCE

The ultimate goals of studying and intervening in drug use practices include

- improvement of quality of health care through effective and safe use of pharmaceuticals;
- improvement of cost effectiveness of health care through economic and efficient use of pharmaceuticals.

Before attempting to intervene to change drug use practices, underlying reasons for problem behaviors must be understood. Interdisciplinary collaboration involving health and social science experts is of utmost importance in this task.

Strategies to improve rational prescribing can be characterized as educational, managerial, and regulatory.

Educational strategies include

- training of prescribers (formal and continuing education, supervisory visits, group lectures, seminars, workshops);
- printed materials (clinical literature and newsletters, treatment guidelines, drug formularies, flyers, leaflets):
- approaches based on face-to-face contact (educational outreach, patient education, influencing opinion leaders).
- prescribing and dispensing approaches (structured drug order forms, standard diagnostic and treatment guidelines, course-of-therapy packaging);
- financing (price setting, capitation-based budgeting).

Regulatory strategies include

- drug registration;
- limited drug lists;
- prescribing restrictions;
- dispensing restrictions.

An intervention should be focused on a specific problem behavior and targeted at the facilities or people that have the greatest need for improvement.

Interventions should be carefully selected with regard to efficacy, feasibility for implementation in the existing system, and cost. Before wide-scale implementation of an intervention, it is imperative to evaluate its effectiveness and cost in the existing health setting.

Programs to ensure rational use of drugs should be an integral part of health and medical care services. The responsibility for promoting rational use of drugs belongs to decision-makers, administrators, and clinicians. It is also the responsibility of health care professionals, consumers, educators and pharmaceutical companies.

Polypharmacy defeats the purpose of rational use of drugs. Drug use indicators can be used for self-audit & feedback.

Compliance or adherence to treatment is the degree to which patients adhere to medical advice & take medicines as directed. Compliance depends not only on acceptance of information about the health threat itself but also on the practitioner's ability to persuade the patient that the treatment is worthwhile & on the patient's perception of the practitioner's credibility , empathy, interest & concern.

The usual **reasons** for non compliance are:

- Did not know the purpose of the prescription medication.
- Shared prescription medication with another.
- Stored medication improperly.
- Used outdated prescription medication.
- Used a duplicate prescription
- Overused medication.

The **consequences** of non compliance are:

- Lack of complete efficacy or treatment failure as in tuberculosis or sexually transmitted diseases.
- Recurrence or relapse of infection /disease.
- Development of microbial resistance e.g.. Nonadherence with antibiotic therapy.
- Increased risk of transmission of communicable diseases from incompletely cured patients.
- Increased health care costs due to readmission's or reconsultations, lost work timings, travel costs etc.

As adherence cannot be dictated, it is important to understand why drug defaulting occurs. The next step is to develop the communication skills needed to interact with patients so those problems may be identified & resolved. It is equally important to remove barriers to good communication. Finally, it is important to assist the patient to a position of autonomy supported by problem solving and self-management skills. All this will lead the patient from being compliant to concordant wherein there is frank exchange of information, negotiation and a spirit of cooperation. Treating a patient as a decision-maker is a fundamental step away from compliance model. The reason being that the price of compliance was Dependence whereas the price of concordance will be greater Responsibility- in the doctor's case, for the quality of the evidence, diagnosis, treatment and explanation; in the pharmacist's case for patient education & communication along with dispensing: and in the patient's case for the consequences of his/her choices.

CHAPTER 7

MISUSE OF DRUGS, STRATEGIES OF DRUG USE, PRESCRIPTION AUDIT

The actual use of pharmaceuticals is influenced by a wide range of factors, including drug availability, provider experience, economic influences, community belief systems and complex interactions among these factors.

In order to prevent misuse of drugs, it is essential to ensure therapeutically sound & cost effective use of drugs by health professionals and consumers.

Improving drug use by prescribers, dispensers and the general public helps to reduce morbidity and mortality, and to contain drug expenditure. The challenge is how best to ensure therapeutically sound & cost effective use of drugs, at all levels of the health system, in both the public & private sectors, by both health professionals and consumers. The three major components are:
Rational drug use strategy & monitoring: Policies & regulations related to RUD
Rational drug use by health professionals: Develop standard Treatment guidelines, Essential drugs list, formulary, educational programs, and other effective mechanisms to promote rational drug use by all health professionals.
Rational drug use by consumers: establish effective systems to provide independent & unbiased drug information to the general public and to improve drug use by consumers.

Drug utilization Review and feedback

Drug utilization review (DUR) is a tool to identify problems in the medication use process: **drug prescribing, dispensing, administration and monitoring**. As problems are identified, strategies are developed and implemented to improve the use of drugs. If actions are successful, the result will be improved patient care and more efficient use of resources.

Drug and therapeutic committees play an important role in improving prescribing practices. Their role has expanded in some settings from selecting drugs for formularies to

- reviewing drug requisitions and revising them to fit budget allocations;
- determine which drugs should be made available to each type of health facility (if this is not determined at the national level.);
- developing standard treatment norms for the common illnesses treated in the area or institution;
- establishing prescribing limitations aimed at controlling irrational drug use(for example, limiting certain antibiotics to use only under the recommendation of a consultant)
- Limiting the amount dispensed at one time to curb abuse of particular drugs and reduce waste;
- Reviewing antibiotic resistance patterns and revising guidelines for antibiotic use;
- Stimulating drug education activities among hospital staff;
- Supervising and monitoring prescribing practices.

CHAPTER 8

GUIDELINES FOR ANALGESIC USE IN PREGNANCY AND LACTATION

PREGNANCY AND ANALGESICS

Drugs can have harmful effects on the fetus at any time during the pregnancy, their nature depending on the timing of exposure. During the first 2 weeks of development, the embryo is thought to be resistant to any teratogenic effects of drugs. The critical period of embryonic development, when the major organ systems develop, starts at about 17 days post conception and is complete by 60 to 70 days. Exposure to certain drugs during this period (17 to 70 days) can cause major birth defects. However, some drugs can interfere with functional development of organ systems and the central nervous system in the second and third trimesters and produce serious consequences.

All drugs should be avoided if possible, in the first 12 weeks of pregnancy. If drugs are to be prescribed then the benefits to the mother must be considerable.

CATEGORISATION OF DRUGS IN PREGNANCY

This is based on Medicines in Pregnancy. The Australian categorization consists of the following.

Category A
Drugs which have been taken by a large number of pregnant women and of childbearing age without any proven increase in the frequency of malformations or other direct or indirect harmful effects on the fetus having been observed.

Category B1
Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed. Studies in animals* have not shown evidence of an increased occurrence of fetal damage.

Category B2
Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed. Studies in animals* are inadequate or may be lacking, but available data show no evidence of an increased occurrence of fetal damage.

Category B3
Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed. Studies in animals* have shown evidence of an increased occurrence of fetal damage, the significance of which is considered uncertain in humans.

Category C
Drugs which, owing to their pharmacological effects, have caused or may be suspected of causing, harmful effects on the human fetus or neonate without causing malformations. "These effects may be reversible. Accompanying texts should be consulted for further details.

Category D

Drugs which have caused, are suspected to have caused or may be expected to cause, an increased incidence of human fetal malformations or irreversible damage. These drugs may also have adverse pharmacological effects. Accompanying texts should be consulted for further details.

Category X

Drugs which have such a high risk of causing permanent damage to the fetus that they should not be used in pregnancy or when there is a possibility of pregnancy.

Table, Analgesic use in pregnancy*

Drug	Category	Drug	Category
Acetazolamide	B3	Methylsergide	C
aciclovir	B3	Metoclopramide	A
Allunopurinol	B2	Mexiletine	B1
Amitriptyline	C	Midazolam	C
Aspirin	C	Misoprostol	X
Auranofin	B3	Morphine	C
Azithroprine	D	Naloxone	B1
Baclofen	B3	Naproxen	C
Bromocriptine(oral)	A	Nitrous Oxide	A
Bupivacaine	A	Nortriptyline	C
Carbamazepine	D	Oxycodone	C
Clonazepam	C	Paracetamol	A
Codeine	A	Penicillamine	D
Colchicines	B2	Pentazocine	C
Cyclophosphamide	D	Pethidine	C
Danazol	D	Phenylbutazone	C
Desipramine	C	Phenytoin	D
Diazepam	C	Piroxicam	C
Diclofenac	C	Pizotifen	B1
Doxepin	C	Prednisolone	A
Ergotamine	C	Probenecid	B2
Famciclovir	B1	Prochlorperazine	C
Fentanyl	C	Promethazine	C
Hydroxychloroquine	D	Propantheline	B2
Hyoscine butylbromide	B2	Propranolol	C
Ibuprofen	C	Sodium valproate	D
Indomethacin	C	Sulindac	C
Ketamine	A	Sulphasalazine	A
Ketoprofen	C	Sulphinpyrazone	B2
Ketorolac	C	Sumatriptan	B3
Mebeverine	B2	Temazepam	C
Methadone	C	Tenoxicam	C
Methotrexate	D	Valaciclovir	B3

Note: For drugs in the Bl, B2 and B3 categories, human data are lacking or inadequate and sub categorisation is therefore based on available animal data. The allocation of a B category does not

imply greater safety than the C category. Drugs in category D are not absolutely contraindicated in pregnancy (eg antiepileptics). Moreover, in some cases the 'D' category has been assigned on the basis of 'suspicion'.

LACTATION AND ANALGESICS

The benefits of breastfeeding are sufficiently important to recommend that breastfeeding should be discontinued or discouraged only when there is substantial evidence that the drug taken by the mother will be harmful to the infant and that no therapeutic equivalent can be given.

Most drugs are only excreted to a minimal extent in breast milk and in most cases the dosage to which the infant is ultimately exposed is very low and is well below the therapeutic dose level for infants. For this reason, there are few drugs which are totally contraindicated whilst breastfeeding. The pharmacokinetics of many drugs ingested by breastfeeding women is such that administration of the drug at or immediately after the infant feeds will result in the lowest level of drug in the milk at subsequent feeding in most cases. For long-acting drugs, medication is best taken by the mother just prior to the longest sleep of the infant. In most situations drugs cross the placenta more efficiently than into breast milk.

Table , Analgesic use and lactation	
Acetazolamide	Compatible with breastfeeding
Allunopurinol	No data available.
Amitriptyline	Compatible with breastfeeding in doses up to 150 mg per day.
Aspirin	Compatible with breastfeeding in occasional doses. Avoid long – term therapy, if possible. Monitor infant for side effects(haemolysis, prolonged bleeding time and metabolic acidosis).
Azithroprine	Avoid breastfeeding
Bupivacaine	Compatible with breastfeeding.
Carbamazepine	Compatible with breastfeeding. Monitor infant for side effects (Jaundice, drowsiness, poor suckling, vomiting and poor weight gain).
Codeine	Compatible with breastfeeding in occasional doses. Avoid repeated doses, if possible. Monitor infant for side effects (apnoea, bradycardia and cyanosis).
Colchicines	Avoid if possible, animal data suggest it can alter the composition of breast milk.
Cyclophosphamide	Avoid breastfeeding.
Diazepam	Compatible with breastfeeding in single dose. Avoid repeated doses, if possible. Monitor infant for drowsiness. Short – acting benzodiazepines preferred.
Ergotamine	Avoid if possible. Monitor infant for side effects (ergotism).
Halothane	Compatible with breastfeeding.
Ibuprofen	Compatible with breastfeeding.
Indomethacin	Avoid possible. Monitor infant for convulsions.
Ketamine	Compatible with breastfeeding.
Methotrexate	Avoid brestfeeding
Metoclopramide	Avoid if possible. Insufficient data on long-term side effects. Increases breast milk production

Table , Analgesic use and lactation

Morphine	Compatible with breastfeeding in occasional doses. Avoid repeated doses, if possible, Monitor infant for side effects(apnoea, bradicardia and cyanosis).
Naloxone	No data available.
Nitrous Oxide	Compatible with breastfeeding.
Paracetamol	Compatible with breastfeeding.
Penicillamine	No data available.
Pethidine	Compatible with breastfeeding in occasional doses. Avoid repeated doses, if possible. Monitor infant for side effects(apnoea, bradicardia and cyanosis). Side effects occur more commonly than with morphine.
Phenytoin	Compatible with breastfeeding. Monitor infant for side effect(cyanosis and methaemoglobinaemia.
Prednisolone	Compatible with breastfeeding.
Promethazine	Compatible with breastfeeding in single dose. Avoid repeated doses, if possible. Monitor infant for drowsiness.
Propranolol	Compatible with breastfeeding. Monitor infant for side effects (bradycardia, hypoglycaemia and cyanosis).
Sodium valproate	Compatible with breastfeeding. Monitor infant for side effects (Jaundice)
Sulphasalazine	Avoid if possible, especially if infant is premature or less than 1 month old. Monitor infant for side effects (bloody diarrhoea, haemolysis and jaundice). Avoid in glucose – 6- phosphate – dehydrogenase – deficient infants.

CHAPTER 9

PRINCIPLES OF ANTIMICROBIAL USE

General principles

This is intended to provide a general statement of acceptable approaches to the use of antimicrobial drugs both in hospital practice and in the community. In hospitals, the choice of which drugs are used may be influenced by such local factors as trends in susceptibility of current isolates, cost of the drugs and in some instances traditional preference or familiarity.(Each hospital's drug committee should produce its own antimicrobial policies within the overall framework suggested.)Acquisition of resistance to antimicrobials is more common in hospitals than in the community due to the selective pressure exerted by high drug levels in the biosphere of the former together with facilitated transfer of organisms between staff and patients. Nonetheless, the same principles apply in both settings. Restraint in prescribing and adherence to the principles discussed below are equally necessary in both hospital and community. Problems of distance, access to specialized care or continuity of contact encountered in remote areas may dictate recommendations at variance with those generally appropriate.

Much viral and self-limiting bacterial disease does not benefit from the use of antimicrobials. Exposure of the patient to the risk of adverse effects due to a drug is thus clearly unwarranted. Such prescribing practices are costly and help create conditions favoring the proliferation of resistant organisms in that patient and throughout the community.

Choice of an antimicrobial agent

When an antimicrobial is indicated, the choice of agent should be based on factors such as spectrum of activity in relation to the known or suspected causative organism, safety, previous clinical experience, cost, and the potential for selection of resistant organisms and associated risk of super infection. The relative importance of each of these factors will be influenced by the severity of the illness and whether the drug is to be used for prophylaxis, empirical therapy or therapy directed by identification of one or more pathogens. A history of allergy or other adverse response to the drug under consideration should always be sought and taken into account.

Prophylactic antimicrobial therapy should be restricted to situations in which it has been shown to be effective or where the consequences of infection are disastrous. Most surgical prophylaxis should be parenteral and commence just before the procedure. A single dose is usually adequate for operations lasting less than 2 hours. The aim is to achieve high plasma and tissue levels at the time that contamination is most likely, ie during the operation..

Empirical antimicrobial therapy should be based on local epidemiological data on potential pathogens and their patterns of antimicrobial susceptibility. Where appropriate, specimens for Gram stain, culture and susceptibility testing should be obtained before commencing antimicrobial therapy. A Gram stain, eg of sputum, or direct antigen detection methods, eg in meningitis, may allow specific therapy to be commenced even before the pathogen has been cultured.

Directed antimicrobial therapy It is important to review the empirical regimen when culture results have identified the organisms present and their susceptibility to antimicrobials. It must be remembered that organisms found to be present are not necessarily responsible for the clinical

condition. Laboratory data must be interpreted in the context of the overall clinical picture. Antimicrobial therapy directed at specific organisms should include the most effective, least toxic, narrowest spectrum agent available. This practice reduces the problems associated with broad-spectrum therapy, viz selection of resistant micro-organisms and super infection and will usually be the most cost-effective.

Choice of parenteral, oral or topical antimicrobial formulations: Parenteral administration of antimicrobials is generally more expensive than equivalent oral therapy but may be necessary due to poor bioavailability of the drug or inability of the patient to take oral medication. Intravenous therapy via a central line may be necessary to avoid causing phlebitis when an irritant concentration of a drug is administered. It is important that topical antimicrobial therapy be restricted to a few proven indications, eg eye infections, because of the capacity of most topical agents to select resistant micro-organisms and to cause sensitization.

Antimicrobial combinations should be avoided unless indicated: to extend the spectrum of cover, eg empirical therapy of suspected mixed infections such as pelvic inflammatory disease; to achieve a bactericidal effect (synergy), eg in enterococcal endocarditis; or to prevent the emergence of resistant micro-organisms, eg in the therapy of tuberculosis.

ANTIMICROBIAL USE IN HOSPITALS

The importance of each hospital adhering to a defined antimicrobial policy is internationally accepted. The aim is to minimize the selection of antimicrobial-resistant micro-organisms and to promote effective and economical prescribing. Successful implementation of antimicrobial policies requires that hospital drug committees should formulate prescribing strategies appropriate for their institution; audit antimicrobial use;

Prescribing strategics:
Hospitals should classify antimicrobial preparations into 3 groups:
unrestricted, restricted and excluded. The primary aim of such policies is not to prevent access to useful drugs but rather to require doctors to justify their use of certain antimicrobials and have their decisions subject to peer review.

Unrestricted: No restrictions should be placed on antimicrobials which are safe, effective and relatively cheap, eg benzyl penicillin.

Restricted: Drugs may be restricted because of concern regarding emergence of antimicrobial resistance, cost-containment or safety. Many degrees of restriction are possible: limited supplies available on one prescription, use only in defined situations, authority to prescribe limited to certain medical staff or special units, and supply only after consultation and approval from a clinical microbiologist, infectious diseases physician or other clinician nominated by an appropriate committee. A mechanism must exist whereby an initial dose of a restricted antimicrobial can be given in an emergency, after which approval is sought.

Excluded: Agents in this category would include preparations considered to have no useful advantage over drugs already held, or drugs superseded by newer releases, eg numerous penicillins, cephalosporins, tetracyclines and sulphonamides. These agents would only be obtained for use under special circumstances. All new antimicrobial agents should be automatically placed in the excluded category until the appropriate hospital committee has considered their role in therapy. A

written request and justification from a hospital clinician should be required before a drug is considered for reclassification by the appropriate committee.. Hospital laboratories should limit the range of antimicrobials for which susceptibility tests are reported routinely. Susceptibilities to restricted antimicrobials should only be reported if the organism isolated is resistant to non-restricted antimicrobials.

Antimicrobial audits
Reviews of antimicrobial usage by product and by clinical unit, with occasional audits of prescribing habits, may suggest specific educational campaigns.

Educational responsibilities Educational functions of hospital drug committees should include the provision of information on antimicrobial use, supplemented by local decisions and data on new antimicrobials as these become available. Drug committees should encourage the provision of information to clinicians on current antimicrobial susceptibility patterns of organisms from their patients.

Forces influencing prescribing
Prescribing habits have been shown to be influenced by education, peer influences, physician characteristics, activities of the pharmaceutical industry such as advertising and drug detailing, control and regulatory measures and demands from patients and society. It is the task of the hospital drug committee to augment influences that foster rational prescribing and to counter those that have the opposite effect.

ANTIMICROBIAL USE IN THE COMMUNITY

Decisions to be made in the community setting are less complex than in hospital but prescribers should have an 'antimicrobial policy' appropriate to their practice. Use of empirical regimens without preceding culture will frequently be appropriate but the risks of this should be appreciated and given due weight. The most common adverse consequence is use of an antimicrobial in a viral disease when none is indicated. However other undesirable consequences could be that; an inappropriate antimicrobial may be chosen with consequent treatment failure; and in serious disease, eg endocarditis, treatment even with an inappropriate antimicrobial may prevent subsequent identification of the organism and its susceptibility as a guide to definitive treatment.

Geographical variation in susceptibility of organisms to antimicrobials may be considerable and advice from a pathologist on current local isolates, eg the proportion of Escherichia coli from urine cultures susceptible to candidate treatments, may be useful in deciding on empirical therapy of urinary tract infection. Selective reporting of susceptibilities by community laboritories may be desirable. Auditing of the pattern of antimicrobial use by the individual prescriber or by a whole practice and comparison of the result with standard recommendations such as those in this book may be instructive.(In Australia, prescribers can obtain data on their own prescribing from those centrally accumulated by the reimbursement authority.) Use of this information for continuing education would be of value.

The problems posed by **pathogenic organisms resistant** to established and to new antimicrobial agents is increasing globally. We must learn from the experience in some Asian and East European communities where unregulated use of antimicrobials has been associated with frightening increases in resistance of major human pathogens. Adherence to the principles of antimicrobial use, is increasingly important. Restraint in the use of new and often powerful antimicrobials is the best

way to ensure their continuing efficacy. Most conditions requiring antimicrobial treatment can be managed using established drugs.
The B-lactams and aminoglycosides are still important, and new agents in the former group continue to appear. Fluoroquinolones increase in number and in use, and newer macrolides have achieved recent prominence. Brief orientating comments are made below on these categories as well as on antiviral, antifungal and some other agents.

BETA-LACTAMS

Penicillins, cephalosporins including cephamycins, monobactams and carbapenems are structurally related and share bactericidal activity primarily directed at the bacterial cell wall. Most B-lactams are relatively safe, except in those patients hypersensitive to them. The various combinations of a B-lactam with an inhibitor of B- lactamase have important clinical applications.

Penicillins: Narrow-spectrum penicillin
These are mainly active against Gram-positive organisms but are inactivated by B-lactamases produced by staphylococci and many other organisms.

Benzylpenicillin (penicillin G) is administered parenterally. It remains the treatment of choice for many infections.

Procaine penicillin is an intramuscular preparation designed to extend the half-life of benzylpenicillin. It provides blood levels for up to 24 hours but these are adequate only against highly susceptible organisms.

Benzathine penicillin is given intramuscularly and provides low levels of benzylpenicillin for up to 4 weeks.

Phenoxymethyipcnicillin (penicillin V) is acid stable and thus may be given orally, although food impairs absorption. It is intrinsically less active than benzylpenicillin.

Antistaphylococcal penicillins
Methicillin, cloxacillin, dicloxacillin, and flucloxacillin are stable to B-lactamase produced by staphylococci. They are microbiologically similar but methicillin has greater toxicity and is no longer used therapeutically. Flucloxacillin and dicloxacillin are more reliably absorbed by the oral route than cloxacillin and may cause less gastrointestinal upset.

Flucloxacillin is generally well tolerated but has recently been found to be associated with cholestatic jaundice in some patients. This may occur after oral or intravenous administration. It can manifest up to 6 weeks after treatment and may last for months. It is more commonly seen in elderly patients. This propensity should not prevent use of flucloxacillin to treat staphylococcal disease of sufficient severity to warrant use of this generally superior drug. However it should not be used for less serious infections. It is not yet clear whether the other isoxazolyl penicillins, cloxacillin and dicloxacillin, have a similar adverse effect. In this book (flu)cloxacillin refers to cloxacillin and flucloxacillin. Methicillin-resistant Staphylococcus aureus (MRSA) should be regarded as clinically resistant to all B-lactams irrespective of laboratory reports of susceptibility.

CHAPTER 10

DRUG INTERACTIONS

A drug-drug interactions may be defined as the pharmacological or clinical response to the administration of a drug combination different from that anticipated from the known effects of the two agents when given alone. The clinical result of a drug-drug interaction may manifest as antagonism (i.e., 1+ 1 < 2), synergism (i.e., 1+ 1 >2) or idiosyncratic (i.e., a response unexpected from the known effects of either agent.

Incidence of Drug Interactions
The clinical effects of any interactions, no matter how well documented, do not occur in every patient or at the same degree of intensity. The incidence and degree of severity of an interaction depend on both patient-related factors and information about the effects of the interaction (e.g. dose-dependency, route). Patient-related factors (e.g. disease process, impairment of organ function) must be individually assessed.

Onset: How rapidly the clinical effects of an interaction can occur determines the urgency with which preventive measures should be instituted to avoid the consequences of the interaction. Two levels of onset are used:

Rapid: the effect will be evident within 24 hours of administration of the interaction drug. Immediate action is necessary to avoid the effects of interaction.

Delayed: The effect will not be evident until the interacting drug is administered for a period of days or weeks. Immediate action is not required.

Severity: The potential severity of the interaction is particularly important in assessing the risk versus benefit of therapeutic alternatives. With appropriate dosage adjustments or modification of the administration schedule, the negative effects of most interactions can be avoided. Three degrees of severity are defined:

Major: The effects are potentially life threatening or capable of causing permanent damage.
Moderate: The effects may cause deterioration in a patient's clinical status. Additional treatment, hospitalization or extension of hospital stay may be necessary.
Minor: The effects are usually mild; consequences may be bothersome or unnoticeable, but should not significantly affect the therapeutic outcome. Additional treatment is usually not required.

A drug interaction pair typically consists of the:

- Object drug
- Precipitant drug

The activity of the "object" drug is altered; the drug causing this change is the "precipitant" drug.

Types of Drug Interactions

Drug interactions are frequently characterized as being either **pharmacokinetic or pharmacodynamic.**

PHARMACOKINETIC

Pharmacokinetic interactions are those in which one drug alters the rate or extent of absorption, distribution or elimination (metabolism or excretion) of another drug. This is most commonly measured by a change in one or more kinetic parameter, such as maximum serum concentration, area under the concentration-time curve, half-life, total amount of drug excreted in urine, etc.

PHARMACODYNAMIC

Pharmacodynamic interactions are those in which one drug induces a change in a patient's response to a drug without altering the object drug's pharmacokinetics. That is, one may see a change in drug action without altered plasma concentration. (e.g increase in the toxicity of digoxin produced by potassium-wasting diuretics.) Pharmacological interaction, that is, concurrent use of two or more drugs with similar or opposing pharmacological actions (e.g. use of alcohol with an antianxiety drug and a hypnotic or antihistamine) are a form of pharmacodynamic interactions.

In order to avoid the incidences of such interactions, unbiased, up-to -date drug & therapeutic information is an absolute must for the prescribers.

CHAPTER 11

PHARMACOVIGILANCE

An adverse drug reaction (ADR) has been defined by the World Health Organisation as "a response to a drug which is noxious and unintended and which occurs at doses normally used in man for the prophylaxis, diagnosis or therapy of disease or for the modification of a physiological function".

Medicinal products are very safe, that is, the benefits are much greater than the risks. Not all the risks from drugs, better called medicinal products, are known when such a product is first marketed. Since there is no programme of testing prior to the marketing of a medicinal product that will find all the risks of its use in everyday clinical situations, we must learn by experience.

The history of international pharmacovigilance goes back as much as thirty years. At this moment, under the WHO Collaborating Centre for International drug Monitoring, there are 58 official member countries (those with a formally recognized national ADR monitoring centre) and 6 associate member countries (those with strong pharmacovigilance capacity but no formally recognised ADR monitoring centre) participating in the programme.

WHY PHARMACOVIGILANCE?

The information collected during the pre-marketing phase of a medical drug is inevitably incomplete with regard to possible adverse reactions

- tests in animals are insufficiently predictive of human safety
- in clinical trials patients are selected and limited in number, the conditions of use differ from those in clinical practice and the duration of trials is limited
- information about rare but serious adverse reactions, chronic toxicity, use in special groups (such as children, the elderly or pregnant women) or drug interactions is often incomplete or not available.

WHY PHARMACOVIGILANCE IS REQUIRED IN KARNATAKA ALSO?

Pharmacovigilance is needed in every Place (country), because there are differences between countries (and even regions within countries) in the occurrence of adverse drug reactions and other drug-related problems. This may be because of differences in:

- drug production
- distribution and use (e.g. indications, dose, availability)
- genetics, diet, traditions of the people
- pharmaceutical quality and composition (excipients) of locally produced
- pharmaceutical products
- the use of non-orthodox drugs (e.g. herbal remedies) which may pose special toxicological problems, when used alone or in combination with other drugs.

Data derived from within the country or region may have greater relevance and educational value and may encourage national regulatory decision-making.

AIMS:
Pharmacovigilance is concerned with the detection, assessment and prevention of adverse reactions to drugs. Major aims of pharmacovigilance are:

2. Early detection of hitherto unknown adverse reactions and interactions
3. Detection of increases in frequency of (known) adverse reactions
4. Identification of risk factors and possible mechanisms underlying adverse reactions
5. Estimation of quantitative aspects of benefit/risk analysis and dissemination of information needed to improve drug prescribing and regulation.

The ultimate goals of pharmacovigilance are:

- the rational and safe use of medical drugs
- the assessment and communication of the risks and benefits of drugs on the market
- educating and informing of patients.

HOW TO START A PHARMACOVIGILANCE CENTRE:

A new pharmacovigilance centre can start operating very quickly. The development of a pharmacovigilance system, however, from the first and uncertain stage to becoming an established and effective organisation, is a process that needs time, vision, dedication, expertise and continuity. Whatever the location of the centre, pharmacovigilance is closely linked to drug regulation. Governmental support is needed for national co-ordination. Pharmacovigilance is nobodyÕs individual privilege. Good collaboration, co-ordination, communications and public relations are needed for coherent development and for the prevention of unnecessary competition or duplication.

BASIC STEPS IN SETTING UP A PHARMACOVIGILANCE CENTRE:

1. Make contacts with the health authorities and with local, regional or national institutions and groups, working in clinical medicine, pharmacology and toxicology outlining the importance of the project and its purposes.
2. Design a reporting form and start collecting data by distributing it to hospital departments, family practitioners, etc.
3. Produce printed material to inform health professionals about definitions, aims and methods of the pharmacovigilance system.
4. Create the centre: staff, accommodation, phone, word processor, database management capability, bibliography etc.
5. Take care of the education of pharmacovigilance staff with regard, for example, to:
   - Data collection and verification
   - Interpreting and coding of adverse reaction descriptions
   - Coding of drugs
   - Case causality assessment
   - Signal detection
   - Risk management.
6. Establish a database (administrative system for the storage and retrieval of data;).
7. Organise meetings in hospitals, academia and professional associations, explaining the principles and demands of pharmacovigilance and the importance of reporting.

8. Promote the importance of reporting adverse drug reactions through medical journals, other professional publications, and communications activities.
9. Maintain contacts with international institutions working in pharmacovigilance, e.g. the WHO Department of Essential Drugs and Medicines Policy (Geneva) and *the* Uppsala Monitoring Centre, Sweden

REPORTING FORM:

A case report in pharmacovigilance can be defined as: ***A notification relating to a patient with an adverse medical event (or laboratory test abnormality) suspected to be induced by a medicin***e.
A case report should (as a minimum to aim at) contain information on the following elements:

1. The patient: age, sex and brief medical history (when relevant). In some countries ethnic origin may need to be specified.
2. Adverse event: description (nature, localisation, severity, characteristics), results of investigations and tests, start date, course and outcome.
3. Suspected drug(s): name (brand or ingredient name + manufacturer), dose, route, start/stop dates, indication for use (with particular drugs, e.g. vaccines, a batch number is important).
4. All other drugs used (including self-medication): names, doses, routes, start/stop dates.
5. Risk factors (e.g. impaired renal function, previous exposure to suspected drug, previous allergies, social drug use).
6. Name and address of reporter (to be considered confidential and to be used only for data verification, completion and case follow-up).

Reporting should be as easy and cheap as possible. Special free-post or business reply reporting forms, containing questions 1-6 mentioned above, can be distributed throughout the target area to healthcare professionals at regular intervals (for example, four times a year).
It may take the yearly distribution of hundreds of thousands of forms to harvest only some hundreds of case reports.

REPORTING BY WHOM?
Professionals working in healthcare are the preferred source of information in pharmacovigilance, for example family practitioners, medical specialists and pharmacists. Dentists, midwives, nurses and other health workers may also administer or prescribe drugs and should report relevant experiences.
In addition pharmacists and nurses can play an important role in the stimulation of reporting and in the provision of additional information (for example, on co-medication and previous drug use).
Pharmaceutical manufacturers, being primarily responsible for the safety of their products, have to ensure that suspected adverse reactions to their products are reported to the competent authority. If adverse reactions are reported directly by patients to the national or local centre, it is useful to consider the possibility of communication with their physicians for additional information and data verification.

STIMULATION OF REPORTING
The reporting of adverse reactions needs continuous stimulation. It is important to achieve the development of a positive attitude towards pharmacovigilance among healthcare professionals so that adverse reaction reporting becomes an accepted and understood routine. In summary, the following may stimulate reporting:

- Easy access to pre-paid reporting forms and other means of reporting
- Acknowledging the receipt of adverse drug reaction reports by personal letter or phone call
- Providing feedback to reporters in the form of articles in journals, adverse drug reaction bulletins or newsletters
- Participation of the centres staff in pre- and postgraduate education and scientific meetings
- Collaboration with local drug or pharmacovigilance committees
- Collaboration with professional associations
- Integration of pharmacovigilance in the (further) development of clinical pharmacy and clinical pharmacology in a country.

CONTINUITY

Continuity in accessibility and service is a basic feature of a successful pharmacovigilance centre. The centre therefore needs a permanent secretariat, for phone calls, mail, maintenance of the database, literature documentation, co-ordination of activities, etc. Secretarial continuity may be achieved through collaboration with related departments, provided there is sufficient capacity.

CHAPTER 12

FORMULARY

A formulary manual contains summary drug information. It is not a full textbook, nor does it usually cover all drugs on the market. Instead, it is a handy reference that contains selected information that is relevant to the prescriber, dispenser, nurse, or other health worker. A formulary is drug centered, as it is based on monographs for individual drugs or therapeutic groups. Formularies may or may not contain evaluate statements or comparisons of drugs. Some formularies also include comparative price information, which can help guide prescribing decisions.

A national formulary manual is based on the national list of essential drugs. The production of a formulary is one step in an ongoing process. The development process of these publications is a continual effort, not limited to the one time production . The process involves gaining acceptance of the concept, preparing the text based on the wide consultation and consensus building, implementing an introductory campaign and training activities, and undertaking regular reviews and updates.

To maintain the credibility of the information, a system for regular updates and for incorporation of accepted amendments into the next edition is essential.

Limited drug lists have been used since the early 1970s to control costs & promote rational use in public and private sector pharmaceutical programs. Limited drug lists can be the main mechanism to prevent the use of dangerous, ineffective & unnecessarily expensive drugs.

Intended to be a ready reference for doctors and contains information which includes the category of the drug, its indications cautions to be observed when using the drug, contraindications, side effects, drug interactions and dosage forms available. Additional notes on use of the drugs will be provided wherever necessary to use the drugs more rationally and avoid complications in therapy. Thus the prescribing doctor will have a publication providing him objective unbiased information about the drugs that will be prescribed.

Hospital formulary: In many countries, especially those with highly developed health systems, hospitals develop their own formulary manuals. The advantage is that the formulary can be tailored to fit the particular requirements of the hospital & to reflect departmental consensus on first choice treatments from the national list of essential drugs. Additional information presented in hospital formularies may include details of recommended hospital procedures, hospital antibiotic policy, guidelines for laboratory investigations and patient management. Hospital formularies usually reflect consensus on the treatment of first choice and thus are not always distinct from treatment guideline

CHAPTER 13

DRUGS AND THERAPEUTIC INFORMATION SERVICES

Access to clinically relevant, up-to date, user- specific, independent, objective and unbiased drug information is essential for appropriate drug use. Prescribers dispensers, and users of medicines all need objective information. A health care system can provide access to the highest quality medicines, but if those medicines are not properly used, they may have negligible benefits or even adverse effects. **Although access to good drug information does not guarantee appropriate drug use, it is certainly a basic requirement for rational drug use decisions.**

The factors influencing drug use are many and interrelated. No single approach is likely to work. Rather, a variety and combination of strategies tailored to the needs of the different groups in society and the different working environments of health workers will be needed.

Objective drug information

A medicinal product must be accompanied by appropriate information. The quality of information accompanying the drug is as important as the quality of the active substance. Information about drugs and drug promotion can greatly influence the way in which drugs are used. Monitoring and control of both these activities are essential parts of any national drug policy.

Criteria that should apply to the development of objective information are that it should be: based on agreed standards; available, accessible and understandable to users; flexible and provided in a variety of forms; relevant to user needs, recognizing the multicultural nature of societies; independent, unbiased and with no advertising; developed with user input; and pilot tested for usefulness and acceptability.

The primary role of a DRUG INFORMATION CENTRE is to keep up – to- date with pharmacological and therapeutic literature and disseminate relevant information when it becomes available. A secondary role of the center is to give clear and definitive information on essential drugs and promote their rational use.

Source of Drug Information :

Information sources fall into three classes. **Primary sources** are the foundation on which all other drug information is based. These include journal publications on drug – related subjects, such as reports of clinical drug trials, case reports and pharmacological research. **Secondary sources** function as a guide to or review of the primary literature. Secondary sources include review articles, meta analysis, indexes (Index Medicus) abstracts (International Pharmaceutical Abstracts), and combinations of abstracts and full – text reprints.
Tertiary or general sources present documented information in a condensed format. Examples include formulary , manuals, standard treatment manuals, text books, general reference books, drug bulletins, and drug compendia. It is advisable to obtain the most current edition available when using secondary or tertiary sources.
All information sources have limitations, and drug information provides should use them with care.

A DIC should provide a variety of services, from responding to patients' and doctors' queries to proactive efforts such as publishing newsletters or drug bulletins, participating in clinical activities, and organizing formulary and treatment guidelines committees. DIC staff are also likely to be involved in training health professionals and regularly evaluating the performance of the centre's staff. Although DICs tend to be small units, it is important that each one have a well – developed annual plan.

Proactive outreach

Health care professionals in both the public and private sectors often have little time or funds to spend on drug information resources. A DIC can fill this gap, but the service must be effectively marketed.

Drug information for health personnel

Comparative, independent, reliable and objective information is also needed for appropriate therapeutic decisions. This can be provided in the following ways:

- Utilizing the services of the drug information center
- Through participation in the development of treatment guidelines and drug formularies, the formation of drug and therapeutic committees, involvement in teaching and clinical meetings, surveys of practice, and outreach services by staff from the drug information center.
- By circulating the drug information bulletin or newsletter. It can offer objectively written articles focusing on drug use and appropriate prescribing practices.
- By disseminating independent scientific literature on the rational use of drugs and on therapeutic advances including material from peer-reviewed medical journals.
- By the organization of training programs, symposia, and lectures for the various groups of health personnel.
- By the development of treatment guidelines and educational material on the appropriate use of drugs by community health workers or paramedical personnel.

Drug information for consumers

Information similar to prescriber information, but in language that is understandable for the non-health professional, should be provided to consumers. In many countries this is done through patient information sheets and drug labeling. These should be regulated to ensure accuracy. Other information may be provided in the form of brochures, through campaigns and, most importantly, through patient counseling. In populations with a low level of literacy, additional ways of presenting information can be used.

Drug Bulletins

The development, production and dissemination of newsletters or drug bulletins that address relevant drug information issues often help develop the market for a DIC. These periodicals should promote rational drug therapy and appear at regular intervals, ranging from weekly to quarterly, depending on their purpose and on the capacity of the DIC. Drug bulletins should provide impartial assessments of drugs and practical recommendations, based on a comparison of treatment alternatives and on the consensus of the main specialists in the field.

- the use of drugs for indications that could be handled by non-drug alternatives; in such cases there can be increased risk and needless expenditures;
- poly pharmacy or the multiple use of drugs, which increases the risks of adverse reactions, including drug interactions;
- drug and prescription hoarding, as people share medicines from previous illnesses, often with a deficient understanding of the action, and risks, of these medicines;
- preference for injectables, and the reuse of disposable syringes, which increases the risk of HIV and other infections;
- inappropriate use of antibiotics and other anti-infectives, which results in drug resistance, contributing to higher morbidity and mortality.

The Alma Ata declaration clearly stares that **"People have the right and duty t participate individually and collectively in the planning and implementation of their health care".** But, public education is seldom allocated the necessary human and financial resources and is frequently treated as a marginal activity or one which should only be tackled when the other elements of drug policy have been dealt with. There is a need to increase the priority given to public education.

The overall aim of public education in drug use *is* to provide individuals and communities with information, and to foster skills and confidence, which will enable them to use medicines in an appropriate, safe, and judicious way.

Educational campaigns are unlikely to be effective if conducted primarily from a top-down and biomedical perspective without an understanding of the socio-cultural framework within which decisions are taken.

At an individual level the benefits of improved public understanding include:
• a better appreciation of the limits of the role of medicines within health care and less belief in the idea that all ills require pharmaceutical treatment;
• an improved balance of power between consumers/patients and health professionals;
• a more critical attitude to advertising and other commercial information, which often fails to give balanced information about drugs;
• a better understanding of how to take medicines when needed.

Drug use should be seen within the overall context of a society, community, family and individual. Public education on drugs should recognize and take into account cultural diversity and the influence of social factors such as poverty, disadvantage and power relations that can influence drug use.

It is important to integrate public education in the appropriate use of drugs within comprehensive national pharmaceutical and health policies.

- public education should encourage informed decision-making by individuals, families and communities on the use of drugs and non-drug solutions;
- public education on drugs should be based on the best available scientific information on drugs, their efficacy and side effects;
- public education should be accompanied by supportive legislation and controlled drug use to make informed choices on drag use easier;

- NGOs, community groups and consumer organizations have an important role to play in public education programmes and should be involved in the planning and implementation of education activities;
- communications training and a reorientation of health care providers' attitudes is necessary if prescribers are to make an effective contribution to public education on drug use in their interaction with the community;
- * public education should be based on sound educational principles which take into account community perception and needs, decision-making processes in families, and the constraints that communities face in their daily lives.

Constraints and facilitating factors

The outcome of public education activities can be influenced both positively and negatively by many factors. The nature and extent of these influences can vary from country to country according to the level of development and health care infrastructure.

Constraining factors include: a lack of policies on both drug use and public education; commercial interests; professional interests; weak infrastructures; resource availability; as well as economic, social and cultural influences.

Facilitating factors include: increased awareness of the need for drug education; improvements in health infrastructures; and the expanding coverage of the world's population by mass media.

Improving public understanding about medicines will not resolve all of these issues but, together with other activities to implement national drug policies, it will contribute to the development of solutions.

CHAPTER 15

ETHICAL CRITERIA FOR MEDICINAL DRUG PROMOTION

Introduction (Optional for our purpose)

1. Following the WHO Conference of Experts on the Rational Use of Drugs held in Nairobi in November 1985, WHO prepared a revised drug strategy which was endorsed by the Thirty-ninth World Health Assembly in May 1986 in resolution WHA39.27. This strategy includes, among other components, the establishment of ethical criteria for drug promotion based on the updating and extension of the ethical and scientific criteria established in 1968 by the Twenty-first World Health Assembly in resolution WHA21.41. The criteria that follow have been prepared in compliance with the above on the basis of a draft elaborated by an international group of experts.

Objective

2. The main objective of ethical criteria for medicinal drug promotion is to support and encourage the improvement of health care through the rational use of medicinal drugs.

Ethical criteria

3. The interpretation of what is ethical varies in different parts of the world and in different societies. The issue in all societies is what is proper behavior. Ethical criteria for drug promotion should lay the foundation for proper behavior concerning the promotion of medicinal drugs, consistent with the search for truthfulness and righteousness. The criteria should thus assist in judging if promotional practices related to medicinal drugs are in keeping with acceptable ethical standards.

Applicability and implementation of criteria

4. These criteria constitute general principles for ethical standards which could be adapted by governments to national circumstances as appropriate to their political, economic, cultural, social, educational, scientific and technical situation, laws and regulations, disease profile, therapeutic traditions and the level of development of their health system. They apply to prescription and non-prescription medicinal drugs ("over-the-counter drugs"). They also apply generally to traditional medicines as appropriate, and to any other product promoted as a medicine. The criteria could be used by people in all walks of life; by governments; the pharmaceutical industry (manufacturers and distributors); the promotion industry (advertising agencies, market research organizations and the like); health personnel involved in the prescription, dispensing, supply and distribution of drugs; universities and other teaching institutions; professional associations; patients' and consumer groups; and the professional and general media (including publishers and editors of medical journals and related publications). All these are encouraged to use the criteria as appropriate to their spheres of competence, activity and responsibility. They are also encouraged to take the criteria into account in developing their own sets of ethical standards in their own field relating to medicinal drug promotion.

5. The criteria do not constitute legal obligations; governments may adopt legislation or other measures based on them as they deem fit. Similarly, other groups may adopt self-regulatory measures based on them. All these bodies should monitor and enforce their standards.

Promotion

6. In this context, "promotion" refers to all informational and persuasive activities by manufacturers and distributors, the effect of which is to induce the prescription, supply, purchase and/or use of medicinal drugs.

7. Active promotion within a country should take place only with respect to drugs legally available in the country. Promotion should be in keeping with national health policies and in compliance with national regulations, as well as with voluntary standards where they exist. All promotion-making claims concerning medicinal drugs should be reliable, accurate, truthful, informative, balanced, up-to-date, capable of substantiation and in good taste. They should not contain misleading or unverifiable statements or omissions likely to induce * medically unjustifiable drug use or to give rise to undue risks. The word **"safe"** should only be used if properly qualified. Comparison of products should be factual, fair and capable of substantiation. Promotional material should not be designed so as to disguise its real nature.

8. Scientific data in the public domain should be made available to prescribers and any other person entitled to receive it, on request, as appropriate to their requirements. Promotion in the form of financial or material benefits should not be offered to or sought by health care practitioners to influence them in the prescription of drugs.

9. Scientific and educational activities should not be deliberately used for promotional purposes.

Advertising

(a) Advertisements in all forms to physicians and health related professionals

10. The wording and illustrations in advertisements to physicians and related health professionals should be fully consistent with the approved scientific data sheet for the drug concerned or other source of information with similar content. The text should be fully legible.

11. Some countries require that advertisements should contain full product information, as defined by the approved scientific data sheet or similar document, for a given period from the date of first promotion or for the full product life. Advertisements that make a promotional claim should at least contain summary scientific information.

12. The following list, based on the sample drug information sheet contained in the second report of the WHO Expert Committee on the Use of Essential Drugs and appended for ease of reference, can serve as an illustration of the type of **information that such advertisements** should usually contain, among others:

- the name(s) of the active ingredient(s) using either international nonproprietary names (INN) or the approved generic name of the drug;
- the brand name;
- content of active ingredient(s) per dosage form or regimen;
- name of other ingredients known to cause problems;
- approved therapeutic uses;
- dosage form or regimen;

- side-effects and major adverse drug reactions;
- precautions, contra-indications and warnings;
- major interactions;
- name and address of manufacturer or distributor;
- reference to scientific literature as appropriate.

13. Where advertisements are permitted without claims (reminder advertisements), they ought to include at least the brand name, the international nonproprietary name or approved generic name, the name of each active ingredient, and the name and address of the manufacturer or distributor for the purpose of receiving further information.

(b) Advertisements in all forms to the general public

14. Advertisements to the general public should help people to make rational decisions on the use of drugs determined to be legally available without a prescription. While they should take account of people's legitimate desire for information regarding their health, they should not take undue advantage of people's concern for their health. They should not generally be permitted for prescription drugs or to promote drugs for certain serious conditions that can be treated only by qualified health practitioners, for which certain countries have established lists. To fight drug addiction and dependency, scheduled narcotic and psychotropic drugs should not be advertised to the general public. While health education aimed at children is highly desirable, drug advertisements should not be directed at children. Advertisements may claim that a drug can cure, prevent, or relieve an ailment only if this can be substantiated, They should also indicate, where applicable, appropriate limitations to the use of the drug.

15. When lay language is used, the information should be consistent with the approved scientific data sheet or other legally determined scientific basis for approval. Language which brings about fear or distress should not be used.

16. The following list serves as an illustration of the type of information advertisements to the genera] public should contain, taking into account the media employed:

- the name(s) of the active ingredients(s) using either international nonproprietary names (INN) or the approved generic name of the drug;
- the brand name;
- major indication(s) for use;
- major precautions, contra-indications and warnings;
- name and address of manufacturer or distributor.

Information on price to the consumer should be accurately and honestly portrayed.

Medical representatives

17. Medical representatives should have an appropriate educational background. They should be adequately trained. They should possess sufficient medical and technical knowledge and integrity to present information on products and carry out other promotional activities in an accurate and responsible manner. Employers are responsible for the basic and continuing training of their representatives. Such training should include instruction regarding appropriate ethical conduct taking into consideration the WHO criteria. In this context, exposure of medical representatives and

trainees to feed-back from the medical and allied professions and from independent members of the public, particularly regarding risks, can be salutary,

18. Medical representatives should make available to prescribers and dispensers complete and unbiased information for each product discussed, such as an approved scientific data sheet or other source of information with similar content.

19. Employers should be responsible for the statements and activities of their medical representatives. Medical representatives should not offer inducements to prescribers and dispensers. Prescribers and dispensers should not solicit such inducements. In order to avoid over-promotion, the main part of the remuneration of medical representatives should not be directly related to the volume of sales they generate

Free samples of prescription drugs for promotional purposes

20. Free samples of legally available prescription drugs may be provided in modest quantities to prescribers, generally on request.

Free samples of non-prescription drugs to the general public for promotional purposes

21. Countries vary in their practices regarding the provision of free samples of non-prescription drugs to the general public, some countries permitting it, some not. Also, a distinction has to be made between provision of free drugs by health agencies for the care of certain groups and the provision of free samples to the general public for promotional purposes. The provision of free samples of non-prescription drugs to the general public for promotional purposes is difficult to justify from a health perspective. If this practice is legally permitted in any country, it should be handled with great restraint.

Symposia and other scientific meetings

22. Symposia are useful for disseminating information. The objective scientific content of such meetings should be paramount, and presentations by independent scientists and health professionals are helpful to this end. Their educational value may be enhanced if they are organized by scientific or professional bodies.

23. The fact of sponsorship by a pharmaceutical manufacturer or distributor should clearly b stated in advance, at the meeting and in any proceedings. The latter should accurately reflect the presentations and discussions. Entertainment or other hospitality, and any gifts offered ti members of the medical and allied professions, should be secondary to the main purpose o the meeting and should be kept to a modest level.

24. Any support to individual health practitioners to participate in any domestic or international symposia should not be conditional upon any obligation to promote any medicinal product.

Post-marketing scientific studies, surveillance and dissemination of information

25. Post-marketing clinical trials for approved medicinal drugs are important to ensure it rational use. It is recommended that appropriate national health authorities be made aware any such studies and that relevant scientific and ethical committees confirm the validity the research. Intercountry and regional cooperation in such studies may be useful. Substantiated information on such studies

should be reported to the appropriate national health authorities and disseminated as soon as possible.

26. Post-marketing scientific studies and surveillance should not be misused as a disguised form of promotion.

27. Substantiated information on hazards associated with medicinal drugs should be reported to the appropriate national health authority as a priority, and should be disseminated internationally as soon as possible.

Packaging and labeling

28. Appropriate information being important to ensure the rational use of drugs, all packaging and labeling material should provide information consistent with that approved by the country's drug regulatory authority. Where one does not exist or is rudimentary, such material should provide information consistent with that approved by the drug regulatory authority of the country from which the drug is imported or other reliable sources of information with similar content. Any wording and illustration on the package and label should conform to the principles of ethical criteria enunciated in this document.

Information for patients: package inserts, leaflets and booklets

29. Adequate information on the use of medicinal drugs should be made available to patients. Such information should be provided by physicians or pharmacists whenever possible. When package inserts or leaflets are required by governments, manufacturers or distributors should ensure that they reflect only the information that has been approved by the country's drug regulatory authority. If package inserts or leaflets are used for promotional purposes, they should comply with the ethical criteria enunciated in this document. The wording of the package inserts or leaflets, if prepared specifically for patients, should be in lay language on condition that the medical and scientific content is properly reflected.

30. In addition to approved package inserts and leaflets wherever available, the preparation and distribution of booklets and other informational material for patients and consumers should be encouraged as appropriate. Such material should also comply with the ethical criteria enunciated in this document.

Promotion of exported drugs

31. Ethical criteria for the promotion of exported drugs should be identical with those relating drugs for domestic use. It is desirable that exporting and importing countries that have i already done so should use the WHO Certification Scheme on the Quality of Pharmaceutical Products Moving in International Commerce.

Appendix

Sample Drug Information Sheet

Various types of information are needed by prescribers and consumers to ensure the safe and effective use of drugs. The following list is a sample that should be adjusted to meet the needs and abilities of the prescriber.

1. International Nonproprietary Name (INN) of each active substance.

2. Pharmacological data: a brief description of pharmacological effects and mechanism of action.

3. Clinical Information:
   (a) Indications: whenever appropriate, simple diagnostic criteria should be provided.
   (b) Dosage regimen and relevant pharmacokinetic data:
      - average and range for adults and children;
      - dosing interval;
      - average duration of treatment;
      - special situations, e.g., renal, hepatic, cardiac, or nutritional insufficiencies that require either increased or reduced dosage.
   (c) Contra-indications.
   (d) Precautions and warnings (reference to pregnancy, lactation, etc.).
   (e) Adverse effects (quantify by category, if possible).
   (f) Drug interactions (include only if clinically relevant; drugs used for self-medication should be included).
   (g) Over dosage:
      - brief clinical description of symptoms;
      - non-drug treatment and supportive therapy;
      - specific antidotes.

4. Pharmaceutical information:
   (a) Dosage forms.
   (b) Strength of dosage form.
   (c) Excipients.
   (d) Storage conditions and shelf-life (expiry date).
   (e) Pack sizes.
   (f) Description of the product and package.
   (g) Legal category (narcotic or other controlled drag, prescription or non-prescription).
   (h) Name and address of manufacturer(s) and importer(s).

Reference: 1. Essential drugs Monitor, WHO action Program on essential Drugs, Issue No. 17, 1994, Pg-16-17.

CHAPTER 16

QUALITY ASSURANCE

Pharmaceutical quality assurance covers all activities aimed at ensuring that consumers and patients receive a product that meets established specifications and standards. It concerns both the quality of the products themselves and all the activities and services that may affect quality.

The importance of ensuring drug quality

- Poor quality drugs can have serious health consequences for users. Drugs may be formulated in the wrong dosages. Also, drugs that have been stored in poor conditions or have become contaminated may be used. Sometimes drugs may contain toxins.

- Poor drug quality-causes money to be wasted, because ineffective treatments or adverse reactions result in extra health care costs. Considerable wastage occurs if drugs are not packaged and stored properly.

- If people do not have confidence in the quality of the drugs they receive, they will lose confidence in the drug policy and health services as a whole.

Challenges

In recent years, national and international authorities have recognized the presence of substandard and counterfeit drugs as a considerable challenge to those involved in quality assurance. The system of regulatory control must prevent the procurement, marketing and use of such drugs. Drug substances and products should meet standards which are internationally defined and recognized.

Laboratory facilities to ensure quality products, and the maintenance of those facilities can be expensive since they require considerable expertise and technology. In many countries, matching resources with needs is a challenge, and it is therefore important to identify the combination of managerial, regulatory and technical quality assurance activities that will be most effective.

Responsibilities of various actors in pharmaceutical quality assurance

Ensuring drug quality is the responsibility of all those involved — from the production of drugs to distribution. Both the public and the private sectors have their share of their responsibilities.

The following points are particularly important:

- Manufacturers should adhere to and implement GMP.
- The Drug Regulatory Authority has crucial responsibilities in quality assurance, namely:
    - Inspecting manufacturers to ensure that they comply with GMP;
    - Using the WHO certification scheme to ensure the quality of imported products;
    - supervising the operation of the national quality control laboratory;
    - ensuring that drugs are appropriately evaluated and registered;

- inspecting wholesalers, retailers and other points of distribution to ensure that product quality is maintained in the distribution chain until products reach the consumer.

♦ Those involved in procurement should ensure that drugs are carefully selected, purchased from reliable sources, inspected at the time of receipt, and stored and transported properly. The necessary laboratory testing must be requested, and mechanisms to report quality defects and a recall procedure must be in place.

• Those involved in final distribution must ensure the proper storage of products, and their appropriate handling, packaging and dispensing.

GOVERNMENT OF KARNATAKA

TASK FORCE ON HEALTH AND FAMILY WELFARE

ALCOHOL USE AND MISUSE IN KARNATAKA

By

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Alcohol Use and Misuse in Karnataka:

A Position Paper submitted to the Karnataka Task Force on Health and Family Welfare

DIMENSIONS OF THE ALCOHOLISM EPIDEMIC IN KARNATAKA: THE CASE FOR URGENT ACTION

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INTRODUCTION

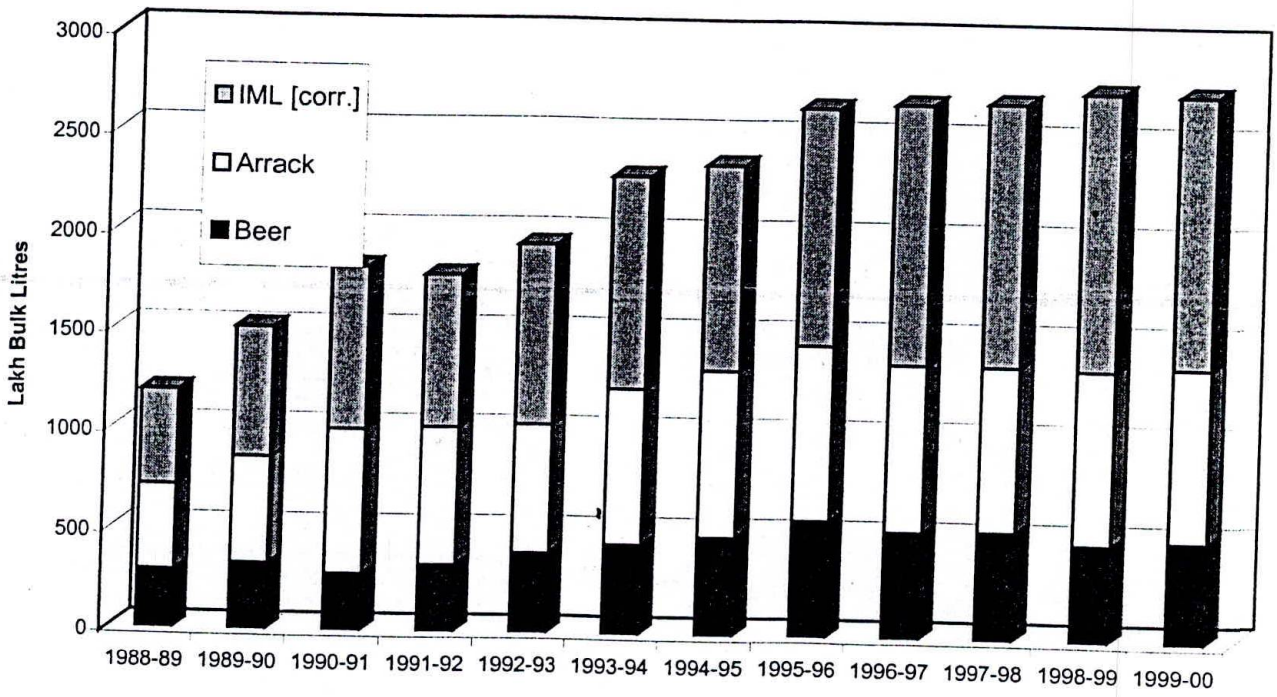
In the public perception, as well as in the minds of Health planners, there is this strongly held and often stated but nevertheless mythical belief that there are two distinct classes of drugs. The licit variety (implicitly safer), and the illicit variety (implicitly dangerous).
This view persists despite accumulating knowledge challenging this belief. Few recognize, that, it is the socially sanctioned, excise paid drugs, alcohol and tobacco, which impose the heaviest health care and economic burden.

THE PROBLEM AT HAND

1. Availability of Beverage Alcohol in Karnataka

Information in this section (Section1) has been derived from data sourced from the State Excise Department, Government of Karnataka and the Census of India, 1991

Rise in Beverage Alcohol Production in Karnataka from 1988 -1999



a. **The major growth in production and sales has been in the spirits / arrack segment and low alcohol content beverage sales and production has shown far less growth. There is a covert pressure to consume high alcohol content beverages in preference to low alcohol content drinks like beer and wine. The irrational and inequal taxation of spirits and beers has a lot to do with this.**
The retail price of 1 quarter [contains 6 units] of whisky in the lowest price range is Rs. 20 [Rs. 8 in 1988], the price of 1 sachet of arrack [3 units] is Rs. 8 [Rs. 3 in 1988], while the price of one bottle of the cheapest beer [2 units] is Rs. 38 [Rs. 11 in 1988]. [1 unit = 12 gms of absolute alcohol]. This works out to a 166% rise for arrack prices, 150% for whisky and 246% rise for beer prices over 10 years.

jumped from the equivalent of 9 bottles (750 ml.) of whisky per year in 1988-89 to 20 bottles in 1998-99.

2. Patterns of alcohol consumption in Karnataka state

The findings in section 2 are derived from data from an ongoing house to house survey looking at alcohol and tobacco use in randomly selected representative samples of rural and urban society in Karnataka

a. Men drink far more than women, but women's drinking is rising

The overall prevalence of alcohol use is lower than in non-temperance cultures. Males are still the predominant consumers, however women are increasingly using and abusing alcohol.

There is a large sex difference with reference to drinking behaviour with very few female users. The prevalence of alcohol use among women has never been studied in detail. 24% of all males and 5% of all females had ever used alcohol in a Bangalore study done in 1983 [Mohan and Sundaram, 1983]. However an indirect measure of this difference can be gauged from the male:female ratio of 57:1 in people seeking help for alcohol related neuropsychiatric problems at the NIMHANS De-addiction centre (1995). What is striking however is the four-fold increase in women registering with alcohol related problems, at the same facility, over the last 10 years. This is likely to be only the tip of the ice-berg.

Depending on the area sampled the prevalence of alcohol use varies. Centers near to alcohol sales outlets have a larger number of users. Figures vary from 20% of all males to 5% of all males (studies conducted in Chottanahally, 10 kms from Malavalli and in Nuggehalli, 10 kms from Pandavapura in Mandya district). The prevalence rates in an urban slum at Bagalur, Bangalore are about 27% of all males and 2% of all females.

b. People start drinking earlier than ever and develop problems earlier

The average age at which males start regular drinking has dropped to 23 years [1998] from 25 years in 1988. The mean age at which they develop alcohol dependence is now approximately 29 years, down from 35 years in 1988. This is a significant drop over the last 10 years.

c. One out of two people who drink develops problem drinking [drinking in quantities sufficient to cause significant medical problems]

Most of the persons who drink have problems related to drinking. Irrespective of the high or low prevalence rates in that geographical location, the proportion of the drinkers having heavy enough alcohol consumption to result in medical problems, vary from 68% to 46% of all users. More than 50% of all people who drink alcohol appear to have problem drinking patterns, i.e. either drinking more than 2 drinks per day [one drink = 30 ml. "peg" of spirits = ½ bottle of beer] or drinking more than 5 drinks at any given setting. These patterns of drinking usually lead to significant medical problems and contribute to significant cumulative economic loss to the state in terms of forgone industrial production.

d. People with heavy use of alcohol develop early health problems

This high proportion of problem drinkers have more frequent health visits at hospitals and clinics due to alcohol related physical illnesses. Among the patients admitted at the district general hospital at Mandya, 54% of the male patients and 16% of the female patients were alcohol users and 52% of these male users had problem drinking. Among the patients attending the general practitioners clinics at Malavalli, 50% of the male patients were using alcohol and 54% of these users had problem drinking. Similarly, studies done at a large general hospital in Bangalore (Savitha Sri et al, 1997) revealed that 40% of all males and 6.6% of all females admitted for medical and surgical problems, had problem drinking.

e. Early alcohol related health damage is under recognized by primary care physicians

Inspite of these high prevalence rates of alcohol problems in their patients only 1.4% to 2.3% of the patients were asked about alcohol use by their doctors where as none of the patients were advised to stop alcohol use. Although a large proportion of the patients were consulting for what appeared to be clearly alcohol related problems, the medical professionals attending to them, did not pick them up. The

It has been calculated that the monetary loss to the Karnataka State Transport Corporation alone, due to alcohol related causes in 1995 –96 was Rs. 55.8 Crores. As part of the effort at Workplace Prevention of Alcohol and Drug Abuse in collaboration with NIMHANS and the International Labour Organisation, the KSRTC were able to bring down their losses by Rs. 27 Crores [Report on the WAPPA, 1999]

j. **The thrust of the interventions for alcohol and drug misuse has hitherto been focused on a] chronic and habitual users in b] urban centers, whereas there is clear evidence that the problem is larger and more serious in rural Karnataka.**

k. **The focus of intervention needs to change from tertiary prevention [treating people after they have become dependent and have developed severe health and social problems] to primary and secondary prevention [preventing people who have not started drinking from starting and early detection and early intervention for people who are drinking at levels likely to start causing problems]**

3. Alcohol dependence and the social cost

The findings in section 3 are based on a 1997 study which assessed social and economic costs in a cohort of admitted patients with alcohol dependence and projected them to an estimated population of all alcohol dependent persons in the state then determined as 4% of the adult male population based upon data from the door to door survey done at Sakalvara (Benegal et al,1997).

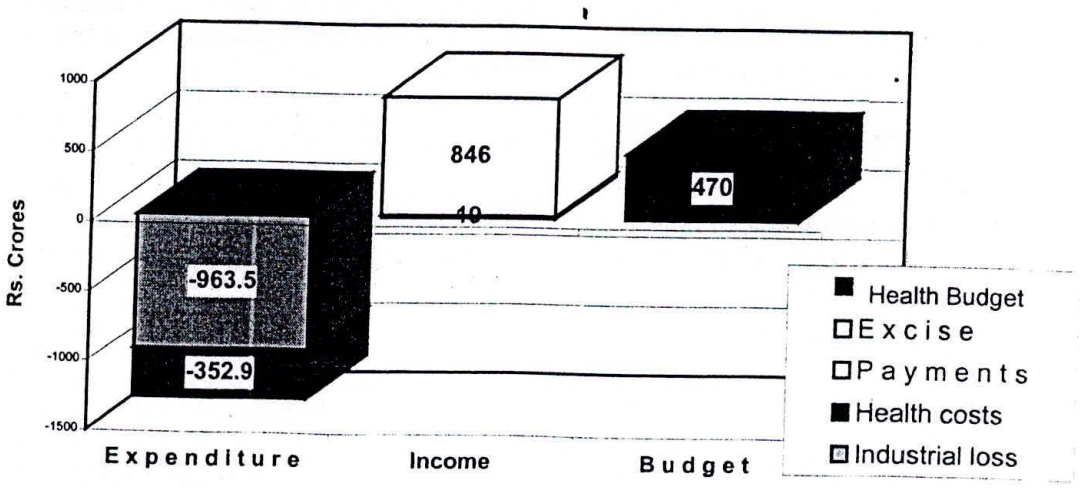
3a. Alcoholic individuals and their immediate families suffer significant economic and health burden

There are more than 5 lakh alcohol dependent individuals in the state. Their average daily individual consumption is around 224 ±112 ml of absolute alcohol equivalent per day ie. equivalent to *255 bottles of whisky per year.*

The average monthly expenditure on alcohol [Rs 1938.40±1649.82] of patients with alcohol dependence is more than the average monthly earning [Rs 1660±1704] which again, is likely to be reduced because of absenteeism, sickness & unemployment. They contribute very little or nothing to family and are likely to incur heavy loans [average Rs 8388 ± 2145 per year].

The economic burden of the individual with alcohol dependence alters the structure and functioning of the family (forcing other members of the family to take up financial responsibilities inappropriate to their roles eg.. young children, widowed mother, sister's husband etc.) This sets up a chain of longer term losses to society (for example, when children lose out on education and subsequent social upliftment, not to speak of the direct consequences of failure and frustration in such a role change).

Alcohol related Profits and Losses [1997]



Existing Regulations against Sales and Retail are not effectively used:

a) Prohibited sales of alcoholic beverages to children below 18 years
b) Restricted sales at retail shops between 9 a.m. and 9 p.m.
c) Prohibited sales of alcoholic beverages in pubs, hotels etc. between 2.30 p.m to 5.30p.m and after10p.m
d) Prohibited setting up retail outlets within 1 km radius of schools, places of worship etc .
e) Attempts to regulate the sales and consumption of alcohol along the state highways.
f) Restrictions against drinking and driving or operating heavy machinery

Advertising: The norms regarding advertising of beverage alcohol are also insufficiently enforced.

B] Demand Reduction: Demand reduction strategies, which have proved to be relatively more effective than supply reduction strategies the world over, have received little attention in Karnataka. Admittedly these require planners to take a long range view. Prevention efforts in the workplace, life skills training to children and adolescents, building up grassroot initiatives against alcohol misuse have ocurred sporadically and never as a part of a larger, well planned initiative.
Also treatment and prevention efforts in the state have targeted the urban sector and largely ignored the large rural sector.

5. Some strategies towards effective action

The Deaddiction Centre, National Institute of Mental Health and Neurosciences, Bangalore in collaboration with the World Health Organisation, is involved in developing a model programme for delivery of services for prevention of Drug and Alcohol Problems in the community. Mandya district has been identified for the development of the project. The project is for two years (1999-2001).

The project involves:
A] Sensitization and training of medical officers in employment with the State Government [Sub – PHC's, Public health centres, District Hospital] and local medical practitioners [with assistance from the local Indian Medical Association] in concepts of substance abuse and its management through brief workshop interactions, in order to enable them to carry out early detection and brief interventions, offer detoxification where necessary and refer to secondary and tertiary centers if required. [These training sessions are brief, lasting for 1-2 hours and usually one session is enough, with provisions of booster sessions after a year or more].
An early result of this activity is that after one month of the training session for the medical officers at Mandya General Hospital, monitoring revealed that the recognition rate of patients with alcohol related problems had risen to 67%. Also all the patients thus identified had been offered brief interventions.

B] Training of peer educators through workshop interactions in order to equip them to run self help groups, acquire techniques of motivation enhancement and imparting relapse prevention and life skills training C] Sensitization of local community and community leaders to promote a primary prevention initiative.

C] Involvement of NGO's involved locally in development projects and local industry to incorporate the model of early detection and brief intervention as well as in disseminating the public health aspects of harmful alcohol use.

6. Summary Recommendations for an Action Plan

Demand Side measures

a) Sensitization and training of medical officers in employment with the State Government [Sub – PHC's, Public health centres, District Hospital] and local medical practitioners [with assistance from the local Indian Medical Association] in concepts of substance abuse and its management through brief workshop interactions, in order to enable them to carry out early detection and brief interventions, offer detoxification where necessary and refer to secondary and tertiary centers if required. This can be done through brief Continuing Medical Education Programmes.

3. Budgetary provisions should be made to fund long term interventions for drug and alcohol misuse.

4. Non governmental organizations similarly working in divergent areas of human development need to be encouraged to network among themselves and with governmental and non governmental agencies working with drug abuse, since this is a shared concern with broad ramifications and long term consequences.

5. The Government needs to work towards a rational Alcohol Policy governing Sales, Production, Taxation, Regulations governing retail, Penalties covering harmful Use, Advertising, etc. In this regard certain draft documents and discussions regarding an International Alcohol Policy which have also been debated amongst stakeholders in India may be a helpful guide. Disincentives to the use of spirits (as opposed to beers and wines) should be actively considered.

6. Research in the area of Alcohol and Drug Misuse is a rapidly progressing area though sadly neglected in the state. Provisions require to be laid in to pursuing such research which has potential for alleviating a major cause of human distress.

Programmes

1. A long term programme for Early Detection and Early Intervention of Alcohol and Drug related problems needs to be instituted at the taluka level all over the state. As experience has shown low cost and minimal interventions aimed at sensitizing retraining primary health care providers [governmental and private] can be an effective strategy.

2. A similar sensitization programme can also be easily imparted to educational workers and help providers (teachers, anganwadi workers, field level staff of N.G.O's running developmental programmes) so that a prevention message can be built into their programmes and so that they can also act as early detection agents.

3. Workplace prevention programmes for alcohol and drug misuse can be promoted after dialogue with industry as early evidence has shown it to be especially effective and financially viable.

4. The Government especially the Excise Department and concerned N.G.O's need to work with the Alcohol Beverage Industry in promoting the self imposed rules of conduct which have been proposed by certain sections of the industry and see that they are universally and consistently employed.

5. The Temperance Board which has funds earmarked for the purpose may be urged to produce educational and publicity material for use in primary prevention, in collaboration with agencies having experience in such communication. In this regard, it is now universally accepted that "scare tactics" and solitary attempts at raising drug awareness are ineffective and often dangerously counter-active.

6. Following from the above, there is a crying need to include "Alternatives and Life Skills Education" in the school curricula in association with some awareness programmes addressing alcohol and drug use, sexuality and high risk behaviours. All such educational inputs needs to emphasize healthy alternatives and teach children strategies to cope with negative moods, adversity and day to day problems.

THE SOCIAL COST OF ALCOHOLISM (KARNATAKA)

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Running Title: Social Cost of Alcoholism

INTRODUCTION

India is traditionally perceived to be a 'dry' culture, but alcohol use in some form has always existed in the country.The view of alcohol as impure and polluting, that many middle class Indians have, was predominantly influenced by Western temperance campaigners in the 19th century. A view which acquired greater popularity during the Nationalist movement - and was shaped into a generally held belief that drinking alcohol was alien to Indian culture.

This influenced the founding fathers of the new Indian Republic into declaring Prohibition as one of the Directive principles of the constitution. From the early 1950's the Government of India has periodically sought to persuade the State Governments to adopt a uniform prohibition policy. Attempts to impose prohibition in various states have periodically been made and predictably lifted as the budgetary deficit and the extra cost of enforcing prohibition made the effort financially non-viable. Consequently, the economic aspect of beverage alcohol as a major source of indirect tax revenue has always been the centre-point of the policy makers' thinking. Little thought has gone into examining the economic consequences of alcohol use and the costs borne by society as a result of it.

Alcohol policies especially those relating to production, consumption and taxation have varied widely across the states. However there has been no systematic recording of data pertaining to alcohol use and research in various aspects of alcoholism, particularly in the perspective of public health, has been minimal. It is not possible at the outset therefore to arrive at a reliable composite estimate of the costs due to alcoholism in the entire country. It would be prudent to gather data from individual states and cumulatively build up country wide statistics.

Despite the gaps in epidemiologic data, a beginning has to be made in auditing the costs due to alcohol misuse in India, based on two major compulsions :

1) The epidemiologic data, albeit crude and incomplete, shows evidence of a rapid and significant rise in alcohol production, consumption and related morbidity, which is only likely to increase further in the light of the drastic social and economic changes taking place in the country

2) Alcohol policy and legislation in India is based on political compulsions rather than the interests of public health. Part of the reason is that there has been little attempt to examine the economic and social burden generated by alcohol misuse to provide a sound guide for policy makers.

REVIEW OF LITERATURE

Epidemiologic Data

During the past twenty five years several field surveys of general psychiatric morbidity as well as alcohol use have been carried out in different parts of the country. It is difficult to generalize the figures derived from them, at a national level because of various methodologcal problems (Mohan & Sharma, 1985). Estimating prevalence of alcohol use in the general population, some of the recent studies

absolute alcohol per user per year in 1990-91 to 2.15 litres of absolute alcohol per user per year in 1996-97 (if alcohol consumption is restricted to alcohol using males in the age group of 15 - 65 years).

Excise tax on alcoholic beverage production and sales forms the second highest source of government revenue (greater than 20%) . In 1985, Karnataka state earned about Rs 50 crores from excise on liquor. This rose to Rs. 846.67 crores in 1996-97 and is estimated to net Rs. 946 crores in 1997-98.

Social Costs

The term 'social' costs has been defined as the sum of private and external costs.Costs falling on third parties are termed 'external' costs (Wagstaff, 1987).

Private costs

Private costs comprise the direct costs borne by the individual consuming the hazardous substance.These include the costs related to loss in income due to absenteeism, reduced efficiency unemployment and the amount spent on buying alcohol. Personal loans incurred are also added to this figure.

External costs

Health costs:

Treatment facilities for substance abuse are organised under the governmental, private and voluntary (non governmental organisation) sectors. The health ministry of the government of India has set up a series of "drug management centres" mainly attached to psychiatric hospitals or general hospital psychiatry units. The ministry of welfare has provided financial support to set up detoxification centres with short-term inpatient facilities for 15 to 60 persons, counselling centres, and after care homes for longer term care and rehabilitation. Most of these provide care for those with predominant alcohol problems (Isaac 1992).

AIMS

Estimation of the cost of alcohol dependence to the individual patient and the cost borne by the state in treating a patient with alcohol dependence syndrome.

METHODOLOGY

Data regarding production, sales, consumption and taxation of alcoholic beverages in the state was collected from the available records of the state excise department.

Only 6.3% of the patients were admitted for the first time. It was the second admission for 57.3% patients and 37.4% had three or more admissions. The mean number of admissions was 2.06 (1.71) over the last two years, the mean stay in hospital being 38.42 (21.83) days (Table 4). Only 25% of the subjects paid for their treatment, the rest received treatment free of cost. The mean hospital bill was Rs 520.72 (1681.33)

Consequently the responsibility for financial support of the family had been taken over by the spouse or other relatives in 88.6 percent. In 24 % of the sample the responsibility for family support had been taken up by non-traditional sources of support e.g. widowed mother, wife's biological family, married sisters and friends 9.7 percent of the families had to send one or more children below the age of 15 years to work to supplement the family finances (Table 5).

7.3% percent of marriages had broken down. 15 percent of all the alcoholics had lost a job within the last year or had been forced to take up lower paying jobs.

Table 6 describes the social cost of alcoholism at the individual level. Private costs amount to Rs. 11086.88. External costs amount to Rs. 18,798.82. The social cost of alcohol dependence is thus Rs. 29,885.80 per patient per month .

DISCUSSION

The primary finding of this study is that the monthly expenditure on alcohol of patients with alcohol dependence is more than their monthly earnings. Their monthly earnings are likely to be reduced because of absenteeism, sickness and unemployment. As they tend to spend more than what they earn, they are more likely to incur loans.

The economic burden of having an individual with alcohol dependence alters the structure and functioning of the family thereby forcing persons to take up responsibilities inappropriate to their roles eg., young children, widowed mother, sister's husband etc. This in turn sets up a chain of longer term loss to society, for example, when children lose out on education and subsequent social upliftment, not to speak of the direct consequences of failure and frustration in such a role change.

Projecting the data obtained at the micro level, we have estimated the social cost of alcoholism in the state of Karnataka given that there are 5 lakh alcohol dependent individuals as deduced from the 3.79% prevalence of alcohol dependence syndrome in the state . External costs include health care provided by the health care system of the state for detoxification and counselling. The cost per person per day in NIMHANS has been calculated at Rs. 600(including etablishment costs, salaries and consumables) by the NIMHANS administration. With a mean of 38.42 days per admission and a mean of 2.06 admissions over 2 years, the cost of health care in a year *assuming all alcohol dependent individuals in the state undergo at least one admission in a year* is Rs. 1129.39 crores (this figure has been adjusted for those who pay for their own treatment). Costs of alcohol related medical and surgical problems (data is

political, of the liquor traders. In many places they from cartels and syndicates to monopolise the trade in specific geographic areas. It is widely believed that liquor traders have close links with major political parties and are able to infulence the liquor policies of the government.

Side by side, following liberalization of the Indian economy, transnational corporations are currently trying to create markets for their beverages in India, using aggressive worldwide marketing strategies. As experience in other developing economies has shown:

1. The diffusion of European style commercial alcoholic drinks adds to and modifies older patterns of drnking, more than it substitutes, thus tending to increase total consumption and drinking situations.
2. While considerable short term economic benefits accrue from the growth of alcoholic beverage industries, in forms of profit, employment and taxes; at the same time, however, there is a gradual rise of long-term social and economic costs as a result of alcohol consumption.
3. Attempts by the government to restrict the transnational companies by licensing, joint ventures, sales of technology and similar means are usually ineffectual as these means are shown to be as effective for the corporations as outright legal ownership in exercising influeance. (McBride and Mosher, 1985).

With the evidence at hand, and the current social political and economic situation in India, it is not difficult to extrapolate to a situation, where the prevalence of alcohol use will rise to resemble that of 'wet' cultures. This in turn will lead to a sharp increase in alcohol related morbidity and the costs accruing from them. In order to promote rationalizing of health care as opposed to rationing it, informed health planning is necessary.

Much more research is needed on the public health aspects of alcohol for confidence to be placed on cost estimates emerging from the available information. Cost calculation should not be based merely concentrating on a minority of alcohol misusers, with severe enough problems to have come to the attention of health professionals. Moderate drinkers may contribute significantly to the overall social cost in the community. Our figures are extremely crude and conservative and must be interpreted cautiously. The epidemiological evidence on which these costs are based require to be improved. Nevertheless even those conservative estimates suggest that alcohol related problems to the society are of great magnitude. The costs are heavy and place a severe burden on the society's scarce resources, more so in the context of a developing economy.

TABLE 1: SOCIO DEMOGRAPHIC PROFILE OF THE SUBJECTS

Mean Age In Years	38.43 (8.26)
Occupation	Percentage
White Collar	12.3
Blue Collar	32.7
Manual Labourers	46.9
Unemployed	18.1
Marital Status	
Married	84.4
Unmarried	8.3
Separated/Divorced	7.3

TABLE 2: PATTERNS OF CONSUMPTION

Duration Of Dependence In Years	7.71 (6.71)
Daily Consumption Of Absolute Alcohol In Ml.	223.74 (111.57)
Type Of Beverage	**Percentage**
Spirits	69
Arrack	27.4
Locally Brewed	2.7
Beer	0.9

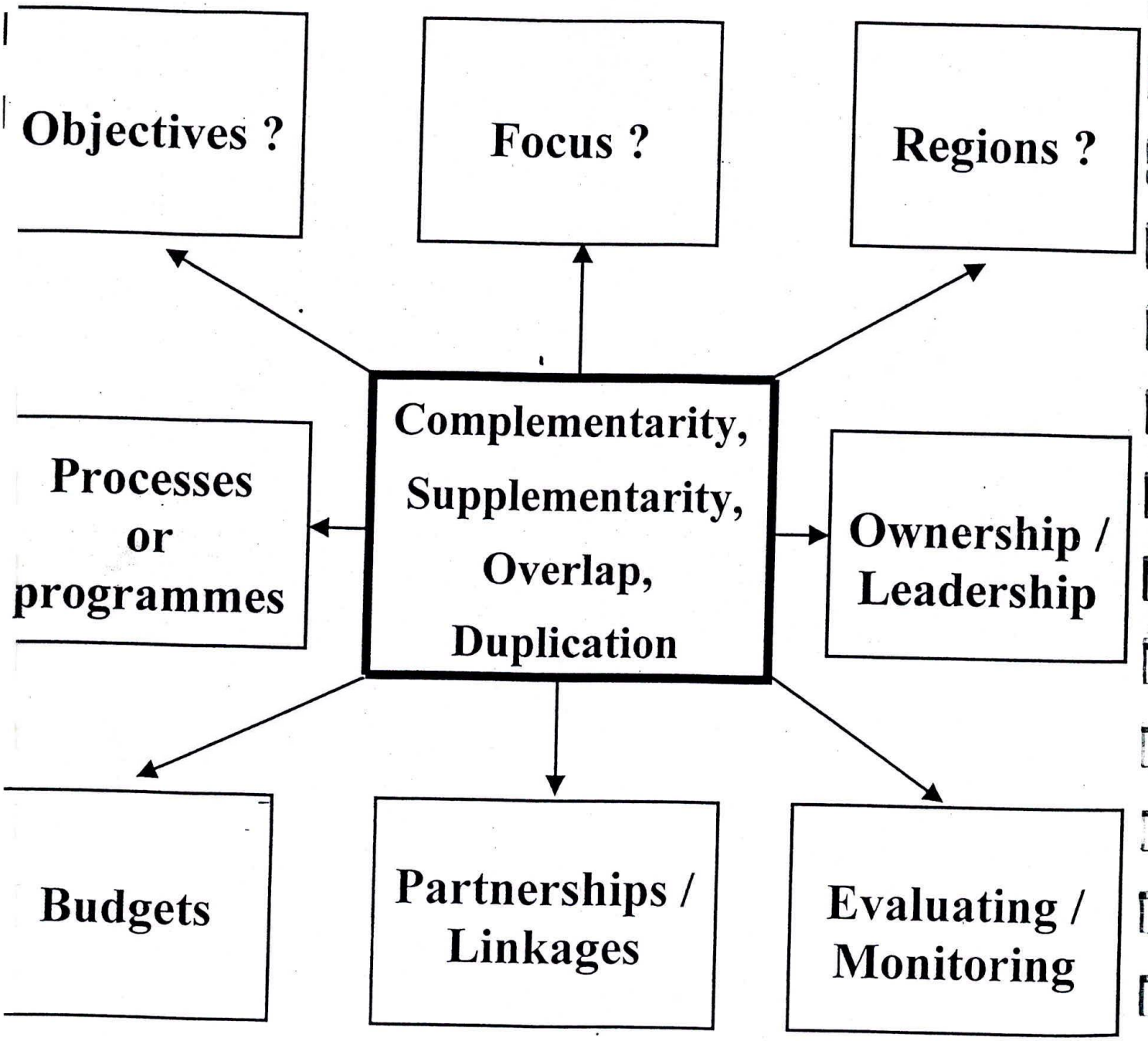
TABLE 5: SUPPORT SYSTEMS --- FINANCIAL

NATURAL	PERCENTAGE
SPOUSE/CHILD	20.8
PARENTS	12.5
SIBLINGS	10.4
OTHERS	10.4
NONE	46.6
UNNATURAL	
NIL	6.2
WIDOWED MOTHER	3.1
MARRIED SISTER	6.3
WIFE'S FAMILY	9.4
FRIENDS	5.2
NONE	69.8
CHILDREN < 15 YEARS, EARNING	**9.7**

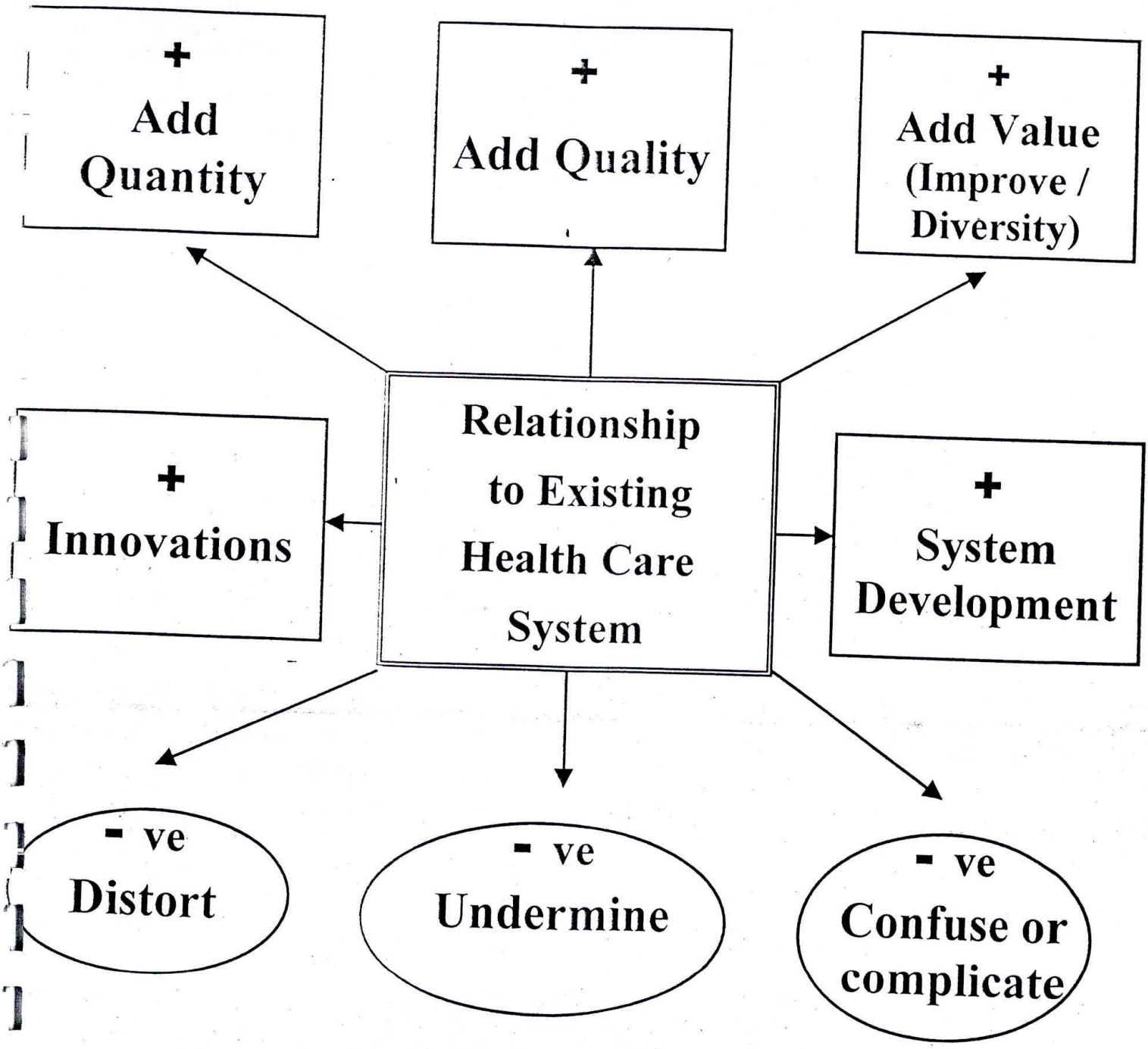
TABLE 7: SOCIAL COSTS OF ALCOHOLISM (PROJECTED TO THE POTENTIAL 5 LAKH ALCOHOLICS IN THE STATE)

Income	Rs. Crores	Expenditure	Rs. Crores
Excise revenue from		Health care provided by state for	
- alcoholics	581.5	alcoholics	**1147.48**
- alcohol users	264.5		
Total excise revenue	846.00	Alcohol related medical/surgical	
Direct payments for		problems (incomplete)	0.15
health services	18.09		
	864.09	Forgone production/ loss of productivity due to sickness, absenteeism, unemployment	691.18
Deficit requiring to be filled up from general taxation pool	***974.72***	Distress to family and friends	na
		Social costs of material damage & criminal activities	na
		Costs of reducing external costs	na
	1838.81		1838.81

Integration of EAP's in Health Service Delivery
Karnataka
CONCEPTUAL FRAME WORK (2)



Integration of EAP's in Health Service Delivery
Karnataka
CONCEPTUAL FRAMEWORK (3)



Integration of EAP's in Health Service Delivery
Karnataka
CONCEPTUAL FRAMEWORK (4)