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Health Care Budgets in a Changing Political Economy

Ravi Duggal

A meaningful analysis of recent health budgets can only be made in the context of the direct and indirect encouragement given by the state to the growth of the private sector in health services. First, the slowing down of state investment in the hospital sector and the subsidies, soft loans and duty and tax exemptions offered; second, the creation of a market for modern health care through the setting up of PHCs and cottage hospitals in the rural areas; and third, the consistent expansion in highly qualified medical personnel who could not be absorbed in the state sector.

WHILE the 1980s saw the beginning of a process for economic change towards greater liberalisation and privatisation of the Indian economy, the 1990s have accelerated the pace of change under the umbrella of structural adjustment. This has also meant increase in borrowings with the debt burden burgeoning and making interest payments a rapidly increasing proportion of the state budget. This state of the economy has its bearing on state spending, and social sectors are the first to get the axe. The little hope which remained of a welfare state evolving in India is now fading away.

It must be indicated at the outset that India has always had a very large private medical sector, especially for non-hospital care. While the colonial state developed the hospital sector at a slow pace, individual private practice expanded without any state intervention. Investment in the private hospital sector was very small until the mid-1970s, after which it spread like an epidemic (Table 1). While the reasons for this historical moment are quite complex two facts stand out. Firstly, the slowing down of state investment in the hospital sector was in itself a signal to the private sector, and the state supported this by giving subsidies, soft loans, duty and tax exemptions, etc. Secondly, the earlier introduction of modern health care in the rural areas by the state through the setting up of PHCs and cottage hospitals had paved the way for the private sector, by creating a market for modern health care in the peripheral regions. Also, by the mid-1970s the number of specialists being churned out had increased tremendously and their demand in the west was comparatively reduced and this too may have played a role in private hospital growth because most specialists prefer hospital practice.

Apart from individual practitioners and hospitals the private pharmaceutical industry has provided considerable support for the expansion of the private health sector. We can clearly see the organic link between the two as they both expanded together at a fast pace post-mid-1970s (Table 1). In more recent years the new medical technology has added another dimension to this private sector expansion with the increasing participation of the corporate sector in health care. This is a clear indication of growth towards a monopoly capitalist character with health care now fully commodified thanks to the new genre of medical technology [Jesani et al 1993]. This coupled with the coming in of insurance multinationals, whose entry has only been delayed due to the political crisis, completes the circle of global market

TABLE 1: PATTERNS OF HEALTH SECTOR GROWTH IN INDIA 1951-95

Year	1951	1961	1971	1976	1981	1986	1991	Latest Year
Hospitals	2694	3054	3862	4465	6805	7764	11174	13692 (1993)
Per cent rural	39	34	32		27	21		31
Per cent private				14	43	44	57	67
Hospital beds	117000	229634	348655	448866	504538	594747	664135	696203 (1993)
Per cent rural	23	22	21		17	18		20
Per cent private				18	28	26	32	35
Dispensaries	6600	9406	12180	11696	16745	25871	27431	27403 (1993)
Per cent rural	79	80	78		69	53		40
Per cent private					13	45	60	63
PHCs		2695	5131	5373	5568	14145	22243	23009 (1993)
Subcentres			27929	37931	51192	98987	131098	131470 (1993)
Doctors								
All systems	156000	184606	450000	628000	665340	763437	920000	110000@ (1994)
Per cent allopathic	39	45	34	34	40	42	43	38
Per cent private Allopathic			62		71	73		
Nurses	16550	35584	80620	113455	150399	207430	311235	340208 (1992)
Medical Colleges	30	60	98	106	111	125	128	146 (1993)
Allopathic Per cent private	7	4	9	9	10	17	19	29
Non -allopathic						222		
Per cent private						65		
Outturn of medical graduates	1600	3400	10400	11982	12170	11970	12086	12000@ (1994)
Postgraduates		397	1396	2265	3833	5427	3139	
Non- allopathic						4000		
Pharmaceutical production (Rs bn)	0.2	0.8	3.0	4.3	14.3	21.4		60.5 (1995)
Government health expenditure (Rs bn)	**0.22**	**1.08**	**3.35**	**6.78**	**12.86**	**29.66**	**50.20**	**113.13 (96-97)**

Source: CEHAT Database; Original Source: Health Statistics/Information of India, CBHI, GOI, various years; for pharmaceutical production: OPPI literature, various years; for health expenditure: from Demand for Grants of various state governments, respective years; @ data estimated by author, # data is revenue + capital and for both central and state governments, excluding water supply and sanitation (see Duggal et al *EPW*, 1995).

consolidation of the health sector in India. This is like Alisha Chinai's 'Made in India' which had busted all popularity charts and supposedly given Indians a pride in the 'Made in India' label but most are not aware that this album was produced and recorded in London, UK! This is what globalisation of India is in reality – the label will become Indian but the surplus will be appropriated by the new genre of imperialists.

Apart from private sector expansion and corporatisation, another strong and undesirable character of the health sector in India is its neglect of rural areas where still over 70 per cent of the population resides. Today there are over 11 lakh registered medical practitioners of various systems in the country of which 60 per cent are located in cities. In case of modern system (allopathy) practitioners as much as 75 per cent are located in cities and especially metropolitan areas. For instance, of all allopathic medical practitioners registered with the state medical council in Maharashtra 55 per cent are in Mumbai city alone which has only 12 per cent of the state's population. The main reason, thus, for the underdevelopment of health care in rural areas is this vast rural-urban gap in the provision of and location of health care resources. With rural areas being underserved two things have happened – a large number of unqualified people have set up medical practice and the rural population exerts pressure on facilities in the cities and towns thus affecting the efficiency and capacity of the latter. In spite of planned development over the last 45 years the state has failed in narrowing the rural-urban gap, and in fact at the behest of imperialist influence it has promoted strategies for rural health care which cause more harm than good for the health of the people. Under the umbrella of community health the state has given rural areas third rate health care through its PHCs and that too only preventive (immunisations) and promotive (family planning) care; curative care which is the main demand of the people has been ignored in terms of investment and allocations and hence people in rural areas are left to the mercy of the exploitative private health sector which more often than not in rural areas comprises unqualified providers. It is important to see the health budgets in the above context for making a meaningful analysis.

While there is a lot of talk about the latest budget (1997-98) being remarkable, it has not really diverted from the path it has been traversing now for a number of years. While the salaried class and the bourgeoisie may have a lot to cheer in terms of saving taxes and having larger disposable incomes, there is nothing in the budget to bring cheer to the toiling masses. Social sector interventions like health care, education, housing, etc, which are regarded as important social levellers and help blunt inequities in society continue to be neglected. This despite the promise of the current government of assuring basic minimum services by 2000 AD, which include 100 per cent coverage for safe drinking water in rural and urban areas, 100 per cent coverage of primary health care services in rural and urban areas, universalisation of primary education, etc, among other basic needs [GOI 1997]. It must be noted here that all the basic minimum needs being talked about are state subjects and the allocation of the centre is a very small proportion. Hence even real increases in allocations by the centre (often linked to new schemes) may have a negligible impact, unless the state governments take some radical measures on their own. (This is not to say that the centre has no influence; in fact with a small proportion of funding the centre dictates policies in terms of advocating and supporting programmes it considers to have national importance, and with control over a major chunk of tax revenues it can twist arms of the states to accept its policies and programmes.)

When the central government presents its budget there is a lot of euphoria and expectation – reliefs in taxes, excise and customs duties, defence spending, interest burden, subsidies. The middle classes and business look forward to the budget eagerly but the same enthusiasm is not shown in the case of state and local-government budgets/expenditure which affect their lives more closely. In fact there is a complete lack of concern for the social sector allocations. Even the media ignores this and highlights only special schemes or concessions which the finance minister announces in his budget speech like the 'cheap' hospitalisation policy for the low income groups announced in the 1996-97

TABLE 2: AN OVERVIEW OF CENTRAL AND STATE HEALTH BUDGETS 1989-97

(In rupees billion)

Category	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96 RE	1996-97 RE
1 Total central health budget	10.12	10.28	12.73	13.82	17.22	21.48	22.95	26.08	28.72
2 GOI's own expenditure	3.78	4.47	4.92	5.56	6.33	7.43	9.47	12.77	14.71
3 Disbursement to states and UTs (1-2)	6.34	5.81	7.81	8.26	10.89	14.05	13.48	13.31	14.01
4 Health expenditure of states #	34.77	39.60	45.86	50.83	56.62	66.69	74.28	85.38	94.42
5 Per cent central component in state budget # (3/5 x 100)	18.2	14.7	17.0	16.2	19.2	21.1	18.1	15.6	14.8

Notes: # The state government expenditures are only from 25 states (excluding UTs) and exclude capital expenditures, hence the actual percentage of central component should be less by about 0.5 to 2 .

Source: 1 *Expenditure Budget 1996-97*, Vol 1, GOI, July 1996, 2 and 4 *Report on Currency and Finance*, RBI, various years.

TABLE 3: SELECTED PUBLIC HEALTH EXPENDITURE RATIOS, ALL INDIA, 1981-95

Year	1980-81	1985-86	1991-92	1992-93	1993-94	1994-95	1995-96 RE	1996-97 BE
Health expenditure as per cent to total government expenditure	3.29	3.29	3.11	2.71	2.71	2.63	3.29	3.29
Expenditure on medical care as per cent to total health expenditure	43.30	37.82	26.78	27.66	27.46	25.75	NA	NA
Expenditure on disease programme as per cent to total health	12.96	11.69	10.59	10.84	10.41	9.51	NA	NA
Capital expenditure as per cent to total health expenditure	7.54	8.45	7.78	4.03	4.47	4.27	3.66	4.00
Total health expenditure (Rs bn) - Revenue	11.89	27.15	52.01	62.04	71.83	78.67	97.93	108.60
Including capital expenditure	12.86	29.66	56.39	64.64	75.18	82.17	101.65	113.13

Source: CEHAT Database; Original Source: up to 1985-86, Combined Finance and Revenue Accounts, Comptroller and Auditor General of India, respective years, other years, Demand for Grants, respective states, various years. The percentage for capital expenditure is based on revenue + capital total whereas for others it is as a per cent of revenue expenditure. NA = not available, RE = revised estimate.

budget or the opening up of health insurance to the private sector in this year's budget.

It is important to note that the central health budget in itself has a very limited scope. It includes expenditures on central government-owned hospitals, dispensaries, the CGHS (health insurance for central government employees and their families), medical research (support for ICMR and allied institutions) and medical education (central government colleges). Apart from this the budget also includes the centre's contributions and grants to various health programmes of national importance like control and eradication of communicable diseases like malaria, tuberculosis, leprosy, AIDS, as well as support for the family planning programme (almost entirely centrally funded) immunisation, blindness control, etc. The larger part of health care budgets come from state and union territory governments' own resources or from their share of revenues disbursed by the centre. On an average during the last decade the centre's contribution (grants and plan fund shares of special programmes) has been about 17 per cent to the overall state health budgets. Table 2 gives an overview of budgets for the last one decade.

It is evident from Tables 2-6 that state governments are clearly the dominant spenders on various health care programmes. However, given the lamentable state of affairs of public health services/institutions and their inability to meet demands of citizens, it is also clear that allocations to the health sector are both inadequate and inefficient. Further, it is also evident that there is a declining trend in public health expenditures and when this is viewed in the context of the introductory remarks above it becomes apparent why the private health sector has such a strong hold of the health care market.

Declining Health Expenditures

The state's commitment to provide health care for its citizens is reflected not only in the inadequacy of the health infrastructure and low levels of financing but also in declining support to various health care demands of the people, and especially since 1980s from when began the process of liberalisation and opening up of the Indian economy to the world markets. Medical care and control of communicable diseases are crucial areas of concern both in terms of what people demand as priority areas of health care as well as what existing socio-economic conditions demand. As with overall public health spending allocations to both these subsectors also show declining trends in the 1980s and 1990s. This increasing disinterest of the state in allocating resources for the health sector is also reflected in investment expenditure with very large decline in capital expenditures during the 1990s.

Further, when we look at expenditures

Table 4: Revenue Expenditure on Health by States 1985-96
(Per Cent of Total Government Revenue Expenditure)

Year	1985-86	1991-92	1992-93	1993-94(RE)	1994-95 (BE)
Union government	0.52	0.45	0.42	0.45	0.42
Major States					
Andhra Pradesh	6.61	5.82	5.87	5.75	5.63
Assam	6.75	5.23	5.57	5.14	6.00
Bihar	5.68	5.66	5.87	6.24	6.89
Gujarat	7.51	5.42	4.79	5.09	5.21
Haryana	7.00	4.19	4.56	3.60	2.90
Jammu and Kashmir	7.61	6.37	6.87	7.71	6.20
Karnataka	6.60	5.96	6.44	6.56	6.39
Kerala	7.85	6.92	6.29	7.13	7.44
Madhya Pradesh	6.69	5.78	5.48	5.65	5.55
Maharashtra	5.97	5.25	5.33	5.34	4.67
Orissa	7.38	5.94	5.63	6.00	5.00
Punjab	7.24	4.32	5.78	5.32	5.33
Rajasthan	8.11	6.85	6.64	6.34	6.97
Tamil Nadu	7.70	6.72	5.73	6.64	6.59
Uttar Pradesh	9.75	6.00	5.81	5.48	5.38
West Bengal	8.92	7.31	7.55	7.15	6.58
Other States					
Arunachal Pradesh	5.85	6.28	6.37	5.64	6.39
Goa, Daman and Diu	8.22	8.33	8.10	7.87	7.52
Mizoram	6.80	5.21	5.10	4.97	4.99
Pondicherry	9.11	8.91	7.93	8.07	8.03
Himachal Pradesh	7.89	7.24	7.73	8.08	8.19
Manipur	6.15	5.74	6.01	5.24	4.54
Meghalaya	9.20	6.73	7.19	7.51	7.33
Nagaland	6.96	4.17	*	5.39	4.78
Sikkim	4.03	6.01	6.81	6.10	6.78
Tripura	6.53	5.54	4.90	5.16	5.10
All India	3.29	3.11	2.71	2.71	2.63

Notes: * = Not available, RE = Revised Estimate; BE = Budget Estimate
Source: CEHAT Database; Original Source: Same as Table 3.

Table 5: Expenditure on National Disease Programmes by States
(As Percentage of Total Health Expenditure)

Year	1985-86	1991-92	1992-93	1993-94(RE)	1994-95 (BE)
Union government	4.47	5.41	6.56	4.93	$
Major States					
Andhra Pradesh	17.00	17.29	16.85	18.09	18.79
Assam	18.77	9.90	*	9.41	7.26
Bihar	10.90	*	11.55	11.75	10.34
Gujarat	14.09	11.91	12.24	13.04	13.76
Haryana	20.75	15.17	14.58	15.95	15.33
Jammu and Kashmir	3.10	*	*	*	*
Karnataka	10.02	5.37	5.28	5.96	5.58
Kerala	12.33	3.78	4.57	5.29	5.98
Madhya Pradesh	11.25	10.63	9.90	9.34	8.84
Maharashtra	16.03	11.95	11.81	11.26	11.87
Orissa	15.84	12.84	12.46	11.33	10.98
Punjab	13.55	8.53	10.18	6.48	6.90
Rajasthan	11.91	9.10	8.89	8.66	8.18
Tamil Nadu	2.89	12.13	11.61	11.65	6.20
Uttar Pradesh	13.52	18.60	18.83	16.51	17.35
West Bengal	8.14	9.93	9.37	9.20	9.18
Other States					
Arunachal Pradesh	23.82	9.98	13.21	17.66	11.73
Goa, Daman and Diu	6.92	4.85	5.67	5.60	5.13
Mizoram	13.67	11.00	11.19	12.81	11.83
Pondicherry	9.90	8.96	8.84	8.70	8.97
Himachal Pradesh	12.86	10.92	13.04	11.40	11.24
Manipur	16.88	18.38	*	*	*
Meghalaya	13.06	14.32	4.50	3.10	4.04
Nagaland	13.88	16.16	*	12.66	16.62
Sikkim	10.38	8.68	9.32	7.64	8.66
Tripura	16.20	6.23	9.49	8.86	9.42
All India	11.69	10.59	10.84	10.41	9.51

Notes: * = Not available, RE = Revised Estimates; BE = Budget Estimates; $ = 1994-95 (BE) union government breakup not available.
Source: CEHAT Database; Original Source: Same as Table 3.

across states not one state shows a significantly different trend in spite of the fact that health care is a state subject under the Constitution! This only goes to show how strongly the central government influences the state's financing decisions and that too with average grants of less than 10 per cent of the state's health budgets, very similar to how international agencies with even smaller grants exert large ideological influences. This lack of initiative on part of state governments to meet demands of the people is in part due to the tight grip that the centre has over Plan resources, which are also largely investment expenditures. Thus the mechanism of 'planned' development is used by the centre to make states tow their line even when the states may have opposition governments in power.

Under structural adjustment since 1991 there has been further compression in government spending in its efforts to bring down the fiscal deficit to the level as desired by the World Bank. The impact of new economics unleashed on people comes via income and prices and affects people through final consumption and/or employment, and for the poorest sections the development expenditures like IRDP, JRY, health care, education, housing and other welfare are crucial in the context of the existing overall life chances available to such sections. There is clear evidence that expenditures on such social programmes are declining in real terms and its benefits are accruing to fewer people. For instance the GOI budget expenditures have declined from 19.8 per cent of the GDP in 1990-91 to 16.58 per cent in 1993-94 and the central health sector has been even more severely affected [Tulasidhar 1993]. The states' share in health expenditure has increased and that of the centre declined drastically, and especially so for the centrally-sponsored disease control and other national programmes which are mostly of a preventive nature. If the states do not pick up the added burden of allocating additional resources for these programmes then tuberculosis, malaria, AIDS, leprosy, etc, would be plaguing the Indian people more severely.

The situation regarding medical care expenditures, which are the responsibility of state governments, is even worse. The decline in these expenditures have been much more severe and this has affected particularly the poorer sections of the urban population. The cutbacks within this account are on commodity purchases such as drugs, instruments and other consumables. Patients in public hospitals are now increasingly being given prescriptions to purchase drugs from outside at their own cost and this too against the background of drug prices having increased two to three times during the last two to four years. In many states small amounts of user charges have been introduced.

TABLE 6: EXPENDITURE ON MEDICAL CARE BY STATES
(As Percentage of Total Health Expenditure)

Year	1985-86	1991-92	1992-93	1993-94(RE)	1994-95 (BE)
Union government	18.49	13.76	14.61	11.90	*
Major States					
Andhra Pradesh	42.23	31.73	32.03	34.72	31.31
Assam	45.22	28.39	24.53	15.75	9.24
Bihar	48.17		15.07	13.14	12.79
Gujarat	32.85	26.86	29.34	26.62	26.46
Haryana	21.59	20.24	19.88	19.18	17.98
Jammu and Kashmir	52.65	*	*	*	*
Karnataka	43.65	24.32	20.93	24.34	22.91
Kerala	51.28	39.11	42.17	44.61	42.14
Madhya Pradesh	37.69	28.51	28.58	24.34	25.16
Maharashtra	24.99	25.25	26.61	28.07	26.15
Orissa	42.46	25.34	24.60	21.85	24.17
Punjab	50.86	23.21	35.36	30.72	30.56
Rajasthan	40.78	28.09	27.59	27.37	25.09
Tamil Nadu	57.46	36.44	35.87	43.42	43.52
Uttar Pradesh	25.80	28.69	30.09	32.33	32.33
West Bengal	44.65	37.86	38.93	36.25	37.18
Other States					
Arunachal Pradesh	62.67	71.63	74.00	68.85	60.41
Goa, Daman and Diu	68.22	49.54	53.23	53.35	54.62
Mizoram	63.73	21.72	19.64	19.54	23.17
Pondicherry	71.58	66.22	57.85	55.07	53.30
Himachal Pradesh	40.52	25.87	24.89	10.14	26.04
Manipur	50.72	20.88	*	*	*
Meghalaya	50.88	34.79	36.62	34.63	33.86
Nagaland	60.15	42.93	*	38.30	37.01
Sikkim	46.73	53.03	49.45	51.48	46.26
Tripura	66.45	43.76	41.92	36.39	36.28
All India	37.82	26.78	27.66	27.46	25.75

Notes: * = Not available, RE = Revised Estimates; BE = Budget Estimates.
Source: CEHAT Database; Original Source: Same as Table 3.

Anecdotal accounts from various states, as well as data from the performance budget of the ministry of health in Maharashtra reveal that the net impact of introduction of user-charges and issuing of prescriptions to purchase drugs, injections, syringes, bandages, etc, from outside have reduced public hospital utilisation in most districts – and these would of necessity mean the poorest. All this ultimately pushes the poor to increasingly use private health providers, often at a cost of personal indebtedness, and makes public health institutions restricted to those who can exert influence to grab the restricted but quality services.

Most of these changes have been at the behest of World Bank whose *World Development Report (1993)* focused on 'Investing in Health'. This report is directed at third world governments to reorient public health spending for selective health programmes for targeted populations where it clearly implies that curative care, the bulk of health care, should be left to the private sector. In keeping with this, the Andhra Pradesh government set up an autonomous body called the Andhra Pradesh Vaidya Vidhan Parishad to make the functioning of taluka level hospitals independent of the government and flexible to accommodate interaction with the private sector and is making further 'reforms' with assistance from World Bank. Punjab, West Bengal and Karnataka governments have followed suit to reform the public health sector under the guidance of World Bank [World Bank 1996]. In fact Punjab has gone one step further and set up a corporation for managing public hospitals with private sector participation. In many states the first steps towards privatisation have been taken through contracting out certain services in the hospital to private bodies. In Maharashtra two municipal hospitals in Mumbai are being considered for handing over to private medical colleges on a lease contract. In a number of states PHCs and selected programmes in selected districts are being handed over to NGOs to run them more 'efficiently'. All in all, the state is gradually abdicating responsibility in the health sector and that too under the garb of a progressive slogan, 'peoples' health in peoples' hands'.

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Financing Strategies for Universal Access to Healthcare

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Introduction

Access to healthcare is critically dependent on how healthcare provision is financed. Countries that have universal or near universal access to healthcare have health financing mechanisms which are single-payer systems in which either a single autonomous public agency or a few coordinated agencies pool resources to finance healthcare. All OECD countries, excluding the USA, have such a financing mechanism. In these countries, excluding USA, 85% of financing comes from public resources like taxes, social insurance or national insurance which insure healthcare to over 90% of the population – even in the USA public finance (Medicare and Medicaid) constitutes 44% of total health expenditure but one-third of the population in the US is either uninsured or under insured. In fact the USA and Canada stand out in sharp contrast even though they are neighbours and strong capitalist economies. Canada gives healthcare access to 100% of its population free of direct payments at 40% of the cost that USA spends and has health outcomes better than the USA.

Outside the OECD group a number of developing countries in Latin America, Asia and Africa like Costa Rica, Cuba, Argentina, Brazil, South Africa, Kenya, South Korea, Iraq, Iran, Thailand, Sri Lanka etc. too have evolved some form of single-payer mechanisms to facilitate near universal access to healthcare. It is only in countries like India and a number of developing countries, which still rely mostly on out-of-pocket payments, where universal access to healthcare is elusive. In such countries those who have the capacity to buy healthcare from the market most often get healthcare without having to pay for it directly, and those who suffer a hand-to-mouth existence are forced to make direct payments, often with a heavy burden of debt, to access healthcare from the market.

India is the most privatised health economy in the world and this despite the fact that three-fourths of the country's population is either below the poverty line or at the subsistence level. Given the political economy of India one would have expected the State to be the dominant player in both financing and providing healthcare for considerations of establishing equity in access to healthcare. But this has not happened.

Historically, the Indian State has always been an insignificant player in provision and/or financing of ambulatory healthcare. Private providers, both modern and traditional, as well as informal providers, have been dominant players in the healthcare market. While pre-colonial healthcare was still largely within the *jajmani* realm of transactions, the establishment of modern medicine during the colonial period gradually moved in the direction of commodification. Today the healthcare system is completely characterised by modern medicine, and healthcare being a commodity. Even the traditional and non-formal providers, often practitioners of quackery, use modern medicine in their practice and operate within the market context.

In case of hospital care the transition has been very different. Right from pre-colonial times, through the colonial period and the post-Independence period upto mid-seventies, the State and its agencies were the main providers of hospital care. There were also significant non-state players who set up large charitable hospitals. By 1970's medical education made a major transition; post-graduation, specialisation and super-specialisation became sought after and the character of medical practice changed. Specialists on one hand began setting up private nursing homes and the corporate sector on the other hand began to show interests in entering the hospital sector. Also major changes in medical technology, which hastened the process of

commodification of healthcare, made for-profit hospitals a lucrative proposition. By 1980's the State was already decelerating investments in the hospital sector and this was a clarion call for the private sector to increase its presence. By the turn of the millennium the for-profit hospital sector had not only become dominant but also within the state sector privatisation via user-charges, as well as through contracting out or leasing had become the order of the day.

It is apparent from the above discussion that the largest source of financing healthcare in India is out-of-pocket or *self-financing*. Out-of-pocket spending on healthcare as a mode of financing is both regressive and iniquitous. Latest estimates from National Accounts Statistics indicate that private expenditures on healthcare in India are over Rs. 1300 billion and 90% of this is out-of-pocket. Public expenditures on healthcare are about Rs. 250 billion additionally. Together this adds up to nearly 6% of GDP with out-of-pocket expenses accounting for 72% of the share in total health expenditures or 4.3% of GDP. This is a substantial burden, especially for the poorer households, the bottom three quintiles, which are either below poverty line or at the threshold of subsistence, and when illness strikes such households just collapse. In fact, for the poorer quintiles the ratio of their income financing health expenditures is 2 to 4 times more than the average mentioned above. Further, while this burden is largely self-financed by households a very large proportion of this does not come from current incomes. A very large proportion, especially for hospitalisations comes from debt and sale of assets.

Data from the 52nd Round NSS of 1995-96 (Table 1) reveals that over 40% households borrow or sell assets to finance hospitalisation expenditures, and there are very clear class gradients to this – nearly half the bottom two quintiles get into debt and/or sell assets in contrast to one-third of the top quintile; infact in the top quintile this difference is supported by employer reimbursements and insurance. When we combine this data with the ratio of "not seeking care when ill" in case of acute ailments by the bottom three quintiles in contrast to the top quintile – a difference of 2.5 times, and the reason for not seeking such care being mostly the cost factor, it becomes amply evident that self-financing has drastic limits and initself is the prime cause of most ill health, especially amongst the large majority for whom out-of-pocket mode of financing strains their basic survival.

Thus in countries where near universal access to healthcare is available with relative equity the major mechanism of financing is usually a single-payer system like tax revenues, social insurance or some such combination administered by an autonomous health authority which is mandated by law and provided through a public-private mix organised under a regulated system. Canada, Sweden, United Kingdom, Germany, Costa Rica, South Korea, Australia, Japan are a few examples.

Experience from these countries shows that the key factor in establishing equity in access and healthcare outcomes is the proportion of public finance in total health expenditures. Most of these countries have public expenditures averaging over 80% of total health expenditures. The greater the proportion of public finance the better the access and healthcare outcomes. Thus India where public finance accounts for only 17% of total health expenditures has poor equity in access to healthcare and health outcomes in comparison to China, Malaysia, South Korea, Sri Lanka where public finance accounts for between 30% and 60% of total health expenditures.

In India public health expenditures had peaked around mid nineteen-eighties and thereafter there was a declining trend, especially post-structural adjustment period. The decade of eighties was a critical period in India's health development because during this period not only did the public health infrastructure, especially rural, expand substantially but also major improvements in health outcomes were recorded. After that public investment in health declined sharply and public

expenditures showed a declining trend both as a proportion to GDP as well as in total government spending. This has also impacted health outcomes, which are showing a slower improvement if not stagnation. At the same time private health sector expansion got accelerated and utilisation data from the two NSS Rounds 42nd and 52nd Round, a decade apart, provides ample evidence of this change. (Table 2 and 3)

Thus, if India has to improve healthcare outcomes and equity in access then increasing public health expenditures will be critical. Apart from this the healthcare system will need to be organised and regulated in the framework of universal access, similar to countries like Canada or Costa Rica. Ofcourse, India has its own peculiarities and the system that will be designed will have to keep this in mind. We cannot transplant say the Canadian or Costa Rican system into India as it is, but we can definitely learn from their experience and adapt useful elements.

Prescription

Currently India's health financing mechanism as mentioned earlier is largely out-of-pocket and one sees a declining trend in public finance. Table 4 provides a profile of the current financing mechanism in India and Table 5 trends in health expenditures. It is quite evident from the data that public finance of healthcare is weakening and private expenditures becoming even larger.

First, within the existing public finance of healthcare macro policy changes in the way funds are allocated can bring about substantial equity in reducing geographical inequities between rural and urban areas. Presently, the central and state governments together spend Rs. 250 per capita at the national level, but this is inequitably allocated between urban and rural areas. The rural healthcare system gets only Rs. 80 per capita and urban areas get Rs. 540 per capita, a difference of over six times. If allocations are made using the mechanism of global budgeting, as done in Canada, that is on a per capita basis then rural and urban areas will both get Rs. 250 per capita. This will be a major gain, over three times, for rural healthcare and this can help fill gaps in both human and material resources in the rural healthcare system. The urban areas in addition have municipal resources, and ofcourse will have to generate more resources to maintain their healthcare systems which atleast in terms of numbers (like hospital bed:population ratios and doctor : population ratios) are adequately provided for. Global budgeting also means autonomy in how resources are used at the local level. The highly centralised planning and programming in the public health sector will have to be done away with and greater faith will have to be placed in local capacities

Second, the public exchequer even today contributes substantially to medical education to the extent that 70% of medical graduates are from public medical schools. This is a major resource that is not fully utilised. Since medical education is virtually free in public medical schools the state must demand compulsory public service for atleast three years from those who graduate from public medical schools as a return for the social investment. Today only about 15% of such medical graduates are absorbed in the public system. Infact, public service should be made mandatory also for those who want to do post-graduate studies (as many as 55% of MBBS doctors opt for post-graduate studies).

Third, the governments can raise additional resources through charging health cesses and levies on health degrading products (if they cannot ban them) like cigarettes, beedis, alcohol, paan masalas and guthka, personal vehicles etc.. For instance tobacco, which kills 670,000 people in India each year, is a Rs. 35,000 crore industry and a 2% health cess would generate Rs. 700 crores annually for the public health budget. Similarly alcohol, which is much larger and presently generates Rs.25,000 crores in revenues can also bring in substantial resources if a 2% health cess is levied. The same logic can be applied to personal transportation vehicles both at point of purchase as well as each year through a health cess on road tax and insurance paid by

owners. Land revenues and property taxes can also attract a health cess which is earmarked for public health (municipal taxes already have an education cess component).

Fourth, social insurance can be strengthened by making contributions similar to ESIS compulsory across the entire organised sector and integrating ESIS, CGHS etc.. with the general public health system. Also social insurance must be gradually extended to the other employment sectors using models from a number of experiments in collective financing like sugar-cane farmers in south Maharashtra paid Re 1 per tonne of cane as a health cess and their entire family was assured healthcare through the sugar cooperative. There are many NGO experiments in using micro-credit as a tool to factor in health financing for the members and their family. Large collectives, whether self-help groups facilitated by NGOs, or self-employed groups like headload workers in Kerala, can buy insurance cover as a collective and provide health protection to its members. Atleast 60% of the workforce in India has the potential to contribute to a social insurance program.

Fifth, other options to raise additional resources could be various forms of innovative direct taxes like a health tax similar to profession tax (which funds employment guarantee) deducted at source of income for employed and in trading transactions for self-employed. Using the Tobin tax route is a highly progressive form of taxation which in an increasingly service sector based economy can generate huge resources without being taxing on the individual as it is a very small amount of deduction at the point of transaction. What this basically means is that for every financial transaction, whether cheque, credit card, cash, stock market, forex etc. a very small proportion is deducted as tax and transferred to a fund earmarked for social sector. For example if 0.025% is the transaction tax then for every Rs. 100,000 the transaction tax would be a mere Rs. 25 or one paise per Rs. 40 transacted. This would not hurt anyone if it were made clear that it would be used for social sectors like health, education, public housing, social welfare etc..

The above are just few examples of what can be done within the existing system with small innovations. But this does not mean that radical or structural changes should not be done. Ultimately if we have to assure universal access with equity then we have to think in terms of restructuring and reorganising the healthcare system using the rights-based approach. This requires a multi-pronged strategy of building awareness and consensus in civil society, advocating right to healthcare at the political level, demanding legislative and constitutional changes, and regulating and reorganising the entire healthcare system, especially the private health sector.

To conclude, we have to stem the growing out-of-pocket financing of the healthcare system and replace it with a combination of public finance and various collective financing options like social insurance, collectives/common interest groups organising collective funds or insurance. At another level the healthcare system needs to be organised into a regulated system that is ethical and accountable and is governed by a statutory mandate, which pools together the various collective resources and manages autonomously the working of the system towards the goal of providing comprehensive healthcare to all with equity.

Projection Of Resource Requirements

The projections we are making are for the fiscal year 2000-2001. The population base is one billion. There are over 1.3 million doctors (of which allopathic are 550,000, including over 180,000 specialists), 600,000 nurses, 950,000 hospital beds, 400,000 health workers and 25,000 PHCs with government and municipal health care spending at about Rs.250 billion (excluding water supply).

1. An Estimate of Providers and Facilities

What will be the requirements as per the suggested framework for a universal health care system?

- Family medical practitioners = 500,000 (one per 2000 population)
- Epidemiological stations = 35,000 (one per 30,000)
- Health workers = 500,000 (one per 2000)
- Health supervisors = 125,000
- Public health nurses = 35,000
- Basic hospitals = 20,000 (of 50 beds each per 50,000 population)
- Basic hospital beds = 1 million
- Basic hospital staff :
  - general duty doctor = 120,000
  - specialists = 100,000
  - dentists = 20,000
  - nurses = 360,000
- Other technical and non-technical support staff as per requirements (Please note that the basic hospital would address to about 75% of the inpatient and specialist care needs, the remaining will be catered to at the secondary/district level and teaching/tertiary hospitals)

One can see from the above that except for the hospitals and hospital beds the other requirements are not very difficult to achieve. Training of nurses, dentists, public health nurses would need additional investments. We have more than an adequate number of doctors, even after assuming that 80% of the registered doctors are active (as per census estimates). What will be needed are crash CME programs to facilitate integration of systems and reorganisation of medical education to produce a single cadre of basic doctors. The PHC health workers will have to be reoriented to fit into the epidemiological framework. And construction of hospitals in underserved areas either by the government or by the private sector (but only under the universal system) will have to be undertaken on a rapid scale to meet the requirements of such an organised system.

2. An Estimate of the Cost

The costing worked out hereunder is based on known costs of public sector and NGO facilities. The FMP costs are projected on the basis of employed professional incomes. The actual figures are on the higher side to make the acceptance of the universal system attractive. Please note that the costs and payments are averages, the actuals will vary a lot depending on numerous factors. (Table A)

3. Distribution of Costs

The above costs from the point of view of the public exchequer might seem excessive to commit to the health sector given current level of public health spending. But this is less than 3% of GDP at Rs.600 per capita annually, including capital costs. The public exchequer's share, that is from tax and related revenues, would be about Rs.400 billion or two-thirds of the cost. This is well within the current resources of the governments and local governments put together. The remaining would come from other sources discussed earlier, mostly from employers and employees in the organised sector, and other innovative mechanisms of financing. As things progress the share of the state should stabilise at 50% and the balance half coming from other sources. Raising further resources will not be too difficult. Part of the organized sector today contributes to the ESIS 6.75% of the salary/wage bill. If the entire organized sector contributes even 5% of the employee compensation (2% by employee and 3% by employer) then that itself will raise close to Rs.250 billion. Infact, the employer share could be higher at 5%. Further resources through other mechanisms suggested above will add substantially to this, which infact

may actually reduce the burden on the state exchequer and increase contributory share from those who can afford to pay. Table B gives the break down of how costs would be shared.

Table A: Projected Universal Health Care Costs (2000-2001 Rs. in millions)

Type of Costs			
➢ Capitation/salaries to FMPs (@ Rs.300 per family per year x 200 mi families) · 50% of FMP services	60,000		
➢ Overheads of FMP services	20,000		
➢ Fees for specific services by FMPs	20,000		
➢ Pharmaceutical Services	35,000		
➢ **Total FMP Costs**		135,000	
➢ **Epidemiological Stations** (@ Rs.3 mi per ES x 35,000)		105,000	
➢ **Basic Hospitals** (@ Rs.10 mi per hospital x 20,000, including drugs, i.e.Rs.200,000 per bed per year)		200,000	
➢ **Total Primary Care Cost**		440,000	
➢ **Per capita = Rs. 440; 2.09% of GDP**			
➢ **Secondary and Teaching Hospitals,** including medical education and training of doctors/nurses/paramedics (@ Rs.2.5 lakh per bed x 3 lakh beds)		75,000	
➢ **Total health services costs**		515,000	
➢			
➢ **Medical Research (2%)**		10,300	
➢ **Audit/Info.Mgt/Social Res. (2%)**		10,300	
➢ **Administrative costs (2%)**		10,300	
➢ **TOTAL RECURRING COST**			545,900
➢ **Add capital Costs (10% of recurring)**			54,590
➢ **ALL HEALTH CARE COSTS**			600,490
➢ **Per Capita = Rs. 600.49; 2.86% of GDP**			

(Calculations done on population base of 1 billion and GDP of Rs. 21,000 billion)

Table B: Projected Sharing of Health Care Costs (2000-2001 Rs. in millions)

	Type of Source			
	Central Govt.	State/ Muncp.	Organised Sector	Other Sources
1. Epidemiological services	70,000	25,000	7,000	3,000
2. FMP Services	10,000	75,000	45,000	5,000
3. Basic Hospitals	--	100,000	85,000	15,000
4. Secondary/Teaching Hospitals	20,000	30,000	20,000	5,000
5. Medical Research	8,000	1,000	1,000	300
6. Audit/ Info. Mgt./ Soc.Research	5,000	5,000	300	--
7. Administrative Costs	3,000	7,000	300	--
8. Capital Costs	25,000	25,000	4,000	590
ALL COSTS	141,000	268,000	162,600	28,890
		Rs.600,490 million		
Percentages	23	45	27	5

Table 1: Key Data pertaining to out-of-pocket expenditures, source of finance and for not seeking care across expenditure quintiles and social groups, NSS 52nd Round, 1995-96

	I Poorest	II	III	IV	V Richest	SC/ST	Other	All
OPD								
Rural								
Rs. per episode	77	94	124	130	174	92	138	128
Urban								
Rs. per episode	95	141	139	164	225	122	166	160
IPD								
Rural								
Rs. per Hosp.	1020	1197	1495	1931	4595	2789	3133	3102
Urban								
Rs. per Hosp.	835	1499	1964	2765	7470	2046	4303	3921
Debt and sale of assets (%)	47	45	42	42	32			43
Did not seek care (%)	24	21	18	18	10			17
Cost as factor in not seeking care (%)	33	23	21	22	15			24

Source: Compiled from NSS 52nd Round data files

Table 2: Per 1000 distribution of hospitalised treatments by type of facility during 1986-87 and 1995-96, India – NSSO

Type of Hospital	Rural		Urban	
	1995-96 (*52nd Rd.*)	1986-87 (*42nd Rd.*)	1995-96 (*52nd Rd.*)	1986-87 (*42nd Rd.*)
Public hospital	399	554	418	595
PHC / CHC	48	43	9	8
Public Dispensary	5	-	4	-
All govt. sources	**438**	**597**	**431**	**603**
Private hospital	419	320	410	296
Nursing home	80	49	111	70
Charitable institution	40	17	42	19
Others	8	17	6	12
All non-govt. sources	**562**	**403**	**569**	**397**
all hospitals	1000	1000	1000	1000

Source: NSSO (1998); Report No 441 on Morbidity and Treatment of Ailments

Table 3: Percentage distribution of non-hospitalised treatments by source of treatment during 1986-87 and 1995-96, India – NSSO

Source of Treatment	Rural		Urban	
	1995-96 *52nd Rd.*	1986-87 *42nd. Rd.*	1995-96 *52nd Rd.*	1986-87 *42nd. Rd.*
Public hospital	11	18	15	23
P.H.C. / C.H.C.	6	5	1	1
Public dispen.	2	3	2	2
ESI doctor, etc.	0	0	1	2
All govt. sources	**19**	**26**	**20**	**28**
Private hospital	12	15	16	16
Nursing home	3	1	2	1
Charitable inst.	0	0	1	1
Private doctor	55	53	55	52
Others	10	5	7	3
All non-govt. sources	**81**	**74**	**80**	**72**
Total	100	100	100	100

Source: NSSO (1998): Report No 441 on Morbidity and Treatment of **Ailments**

Table 4: Financing Healthcare in India c2003

	Estimated users in millions	Expenditure (Rs. Billions)
Public Sector	**250@**	**252 (17)***
Of which Social Insurance	55	30 *(2)*
Private Sector	**780@**	**1250 (83)****
Of which social insurance	*30*	*24 (1.6)*
Private insurance$	*11*	*11.5 (0.8)*
Out of Pocket	*739*	*1214.5 (80)*
Total	**1030**	**1552 (100)**

@ Estimates based on National Sample Survey 52nd Round, and Labour Year Book
** Finance Accounts of Central and State Governments, and Labour Year Book, includes estimated Municipal health expenditures*
*** Private Final Consumption Expenditure from National Accounts Statistics*
$ 85% of private insurance is through public sector insurance companies
Figures in parentheses are percentages

Table 5: Health Expenditure Trends in India

Year	Total Public Health Expenditure (Rs.billions)	% of GDP	Private Health Expenditure (Rs.billions)	% of GDP	% Private to Total Health Expenditure
1975-76	6.78	0.90	24.66	3.26	78.43
1980-81	12.86	0.99	52.84	4.06	80.43
1985-86	29.66	1.19	90.54	3.61	75.32
1991-92	56.40	0.96	160.65	2.73	74.01
1992-93	64.64	0.74	175.57	2.61	73.09
1993-94	76.81	0.98	195.43	2.50	71.78
1994-95	85.65	0.93	278.59	3.04	76.48
1995-96	96.01	0.89	329.23	3.07	77.42
1996-97	109.35	0.88	373.41	3.00	77.35
1997-98	127.21	0.92	458.99	3.30	78.30
1998-99	151.13	0.94	653.40	4.04	81.21
1999-00	172.16	0.96	835.17	4.76	82.91
2000-01	186.13	0.98	981.68	5.18	84.06
2001-02	194.54	0.94	1100.00	5.32	84.90
2002-03	197.32	0.88	1250.00	5.60	86.36
2003-04 RE	235.06	0.98	1400.00*	5.83	85.62
2004-05 BE	249.28	0.96	1600.00*	6.15	86.52

* estimates by author for private expenditures; RE=revised estimate, BE=budget estimates

Source: Public: Finance Accounts of Central and State Governments and RBI's Finances of State Governments, various years; Private: CSO – GOI – Private Final Consumption Expenditures, National Accounts Statistics, 2003

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(81)

HEALTH AND ECONOMIC GROWTH

Evolution in Thinking on Development.

1950s: the real purpose of development was to increase national income, and all it required was an increase in saving and investment.

1970s GNP growth was not the end, but merely a means to development.

1990s-Today - Purpose of development is not just to enlarge incomes, but to enlarge people's choices: these choices extend to quality education, good health, political freedom, cultural identity, personal security, environmental protection, community participation and many other areas of human well-being.

Development must deal with the entire society, not just with the economy, and people must be at the center of the stage. As such, the quality and distribution of GNP growth become as important as the quantum of growth.

Experience in many countries has shown that economic growth does not automatically translate itself into human development, though economic growth is essential condition for human development, a link between growth and human lives must be created through conscious national policies.

Source: Human Development in South Asia 1997, Mahbub ul Haq

From: B.S. Lamba
16/9/99

Health ⇒ Economic Growth

Good Health is a crucial part of well-being, but spending on health can also be justified on purely economic grounds.

Improved health contributes to economic growth:

- ❖ It reduces production losses caused by worker illness
- ❖ It permits the use of natural resources that had been totally or nearly inaccessible because of disease
- ❖ It increases the enrollment of children in school and improves their learning ability
- ❖ It frees resources, that would otherwise have to be spent on treating illness, for alternative uses.

Health ⇒ Poverty Alleviation

The economic gains are relatively greater for poor people, who are typically most handicapped by ill health and who stand to gain the most from the development of underutilized natural resources.

Thus, an enabling environment that improves health of the poor also contributes to poverty alleviation.

Source: WDR 1993

Gains in Worker Productivity

The most obvious sources of gain are fewer work days lost to illness, increased productivity, greater opportunities to obtain better-paying jobs, and longer working lives.

EXAMPLES:

Urban Tamil Nadu, India: – Elimination of deformity due to leprosy would more than triple the expected annual earnings of those with jobs.

The prevention of deformity in India's 645,000 lepers would have added an estimated $130 million to the country's 1985 GNP. This amount is the equivalent of almost 10 per cent of total official development assistance received by India in 1985. Leprosy accounted for only a small proportion of the country's disease burden, less than 1 per cent in 1990.

- **Bangladesh**: Healthier workers earn more because they are more productive and can get better-paying jobs.
- **Cote d'Ivoire**: Daily wage rates are estimated to be 19 per cent lower, on an average, among men who are likely to lose a day of work per month because of illness than among healthier men.
- **Paraguay**: Farmers in malarious areas choose to grow crops that are of lower value, but that can be worked outside the malaria **season.**

Improved Utilization of Natural Resources

Some health investments raise the productivity of land.

EXAMPLES:

- **Sri Lanka**:- The near-eradication of malaria during 1947-77 is estimated to have raised national income by 9 per cent in 1977. The cumulative cost was $52 million, compared with a cumulative gain in national income over the 31 years of $7.6 billion, implying a spectacular benefit-cost ratio of more than 140.

Areas previously blighted by mosquitoes became attractive for settlement; migrants moved in, and output increased.

- **Uganda**:- Massive migration to fertile, but underexploited, land followed the partial control of river blindness (onchocerciasis) in the 1950s.

- **Onchocerciasis Control Programme:-** The estimated cost of the OCP during the whole of its existence, from 1974 to 2000, conducted in 11 countries of the Sahel, is about $570 million. Its estimated internal rate of return is in the range of 16 to 28 per **cent.**

Benefits through Education

- Schooling pays off in higher incomes. Four years of primary education boosts farmers' annual productivity by 9 per cent on average, and workers who do better at school earn more.

EXAMPLES

- **Ghana, Kenya, Pakistan, and Tanzania**: Workers who scored 10 per cent above the sample mean on various cognitive tests have a wage advantage ranging from 13 to 22 per cent.

- **Nepal:** Farmers with better mathematical skills are more likely to adopt profitable new crops.

Poor health and nutrition reduce the gains of schooling in:

- enrollment
- ability to learn, and
- participation by girls.

Children who enjoy better health and nutrition during early childhood are more ready for school and more likely to enroll.

Health and nutrition problems affect a child's ability to learn. Nutritional deficiencies in early childhood can lead to lasting problems: iron **deficiency**

anemia reduces cognitive function: iodine deficiency causes irreversible mental retardation: vitamin A deficiency is the primary cause of **blindness** among children. Older children are subject to other kinds of disease.

Girls are particularly liable to suffer from iodine or iron deficiency – reasons why fewer of them complete primary school. Other health-related reasons include dropping out as a result of pregnancy and parental concern about sexual violence. In societies where girls' education is given lower priority than boys', girls miss school because they have to stay home to look after sick relatives.

EXAMPLES

Nepal:- The probability of attending school is only 5 per cent for nutritionally stunted children, compared with 27 per cent for those at the norm.

Jamaica:- Children with moderate whipwork infection scored 15 per cent lower before treatment than uninfected children in the same school. When retested after treatment, those same children did almost as well as the uninfected children.

Northeast Brazil: - Inadequately nourished children lagged 20 per cent behind the average gain in achievement score over a two year period. Children with bad eyesight lagged 27 per cent behind the average gain over the two years. Both groups had below-average promotion rates and above-average drop-out rates.

China:- A child at the twentieth per centile in height-for-age (a sign of poor health) averages about one-third of a year behind the grade normally reached by children of that age.

Thailand:- Children whose height-for-age is 10 per cent below average are 14 per cent lower in grade **attainment.**

Reduced Costs of Medical Care

Expenditure/investment that reduces the incidence of disease can produce big savings in treatment costs.

For some diseases the expenditure pays for itself even when the indirect benefits, such as higher labour productivity and reduced pain and suffering, are ignored.

EXAMPLES:

Polio:- Calculations for the Americas made prior to the eradication of polio in the region showed that investing $220 million over 15 years to eliminate the disease would prevent 220,000 cases and save between $320 million and $1.3 billion (depending on the number of people treated) in annual treatment costs. The programme's net return, after discounting at even as much as 12 per cent a year, was calculated to be between $18 million and $480 million.

AIDS:- Although it remains much less common in the developing world than diseases such as malaria, its economic impact per case is greater for two reasons. It mainly affects adults in their most productive years, and the infections such as pneumonia, diarrhea, and tuberculosis resulting from it lead to heavy demand for expensive health **care.**

Research in nine developing and seven high-income countries suggests that preventing a case of AIDS saves, on average, about twice GNP per capita in discounted lifetime costs of medical care; in some urban areas the saving may be as much as five times GNP per capita.

Calculations for **India** showed that, given prevailing transmission pattern, each HIV-positive person in 1991 would infect one previously uninfected person every four years. At this rate, there will be six HIV-positive persons in 2000 for every one in 1991.

If the transmission rate could be slowed to one every five years, that number could be reduced to only four infected persons in 2000 for every one in 1991. The corresponding reduction in medical costs, after discounting at 3 per cent a year, amounts to $750 by 2000 for each currently HIV-positive person in India, or a total saving of $750 million.

Similar calculations for **Thailand** suggest savings of $1,250 per currently HIV-positive person, or a potential total saving of $560 million.

COMH-2

Health mustn't hinge on wealth



There's a great deal of conceptual clutter in our discourse on health care

K. SUJATHA RAO

WHEN the "buy one, take one free" sales pitch hits the market for healthcare, it is time to sit up. "Buy a heart bypass and take a week's holiday in Goa" or "Get the second bypass at 50% discount" is no longer a joke. It is on offer today. The question is that while most of us would be lured into buying that extra pair of shoes we do not need, how many of us are willing to have our teeth extracted or heart cut up only because there is a discount? Is it not reasonable to assume that those in dire need of such services would not only respond, but the need for survival being so great, would do so at any future cost to themselves or their family?

This then brings in the question of individual vulnerability which an Ambani and the rickshaw puller have in common, giving rise to the most fundamental principle — is profiteering on the sickness of other humans ethical? Can companies be lauded and individuals be rewarded the best entrepreneurial award for increasing profits on the ill health and vulnerability of people who are struck with the misfortune of falling sick? These are important issues, ones that were hotly debated in UK during the 40's, in Canada and most of Europe in the 60's and 70's, as also in Singapore, Australia during the 80's, resulting in all these countries opting for a strong interventionist role by the state. And this is the issue that troubles the conscience of most Americans, too, as evidenced by their constant yearning for the Canadian model of health care.

Compared to the US, Canada provides universal health care of the same level of quality at one third the cost. Besides, despite being the world's highest spender on health, with 40 per cent from the government, US has nearly a third of its people denied access to basic care and a longevity of life among its black populations at about 58! The sharp differences between the US and Canada are largely on account of the values enshrined in their respective constitutions. For the Canadian psyche, it is social solidarity, order, peace and good governance, while for the US it is personal freedom, pursuit of happiness and liberty. And while in both countries provisioning of healthcare services is by private providers, Canada insures all its citizens — rich and poor — inpatient care and physician services, while in the US, public finance is only for specific target groups, namely the poor and the elderly. Given the widespread poverty, it being underfunded,understaffed and overstretched. Is this gradual veering towards the US model a reflection of our Hinduism which is intensely atomistic and where each lives and suffers in accordance with his own karma?

Is it really true that concepts of equality and social solidarity are indeed foreign and borrowed and therefore not relevant to India as seems to have been pointed out by the then prime minister to a group of agitated women activists in response to his stand on the famous Shah Bano case? Clearly, there is an immense amount of conceptual clutter and lack of direction in our intellectual traditions and constitutional pronouncements of equality, it is inexplicable as to why public discourse on health systems has not followed UK or Canada and why we are creating a system resembling the US.

Can there be true happiness and, more importantly, social stability in a society where a large number of its members suffer want and disease?

As in the US, we too do not seem to be troubled by accepting a two-tier system, where the rich can access world class health care as per their ability to pay while the poor must rest content with the public health system. This is worrying, because unlike Singapore, which also has a two tier system with the public hospitals providing the benchmark in quality of care, public health care in India is considered substandard as a result of our discourse on health. In jumping to ideological positions of public is bad, private is good and governments are bad and markets are good, our intellectuals have trivialised serious debate. The devastation markets have caused, in terms of human suffering and public spending in the US, have not even been studied. Instead, intellectuals have allowed themselves to fall prey to facile arguments for privatisation such as, for example, that in providing choice of private hospitals, the rich will opt out of the public hospitals providing space for the poor!

It is not widely understood that profits by private hospitals are made in two ways — one, volume; and two, during the first two or three days, when patients are normally required to undergo extensive diagnostics and invasive procedures. The incentives implicit in profit making is what forces private for profit hospitals to reduce the length of stay or make the prices so unaffordable that the patient opts to leave. This explains why a large number of the "rich" continue to frequent the public hospitals and why US subsidises the care of all its senior citizens, who largely suffer from chronic diseases, under its medicare programme.

The hijacking of the health sector by the market fundamentalists arguing for more subsidies for the private sector, starving public hospitals of resources, has been possible because of the absence of a national consensus on the values that we need to adopt for ourselves. To start with, as pointed out by former US president, Bill Clinton, in Hyderabad to a gathering of top industrialists, do we believe that there is a higher purpose in life to merely making profits? If yes, can we then agree that those who cannot afford healthcare should be denied it and allowed to suffer and die? Do we believe that all humans are not equal?

As all philosophical principles remind us, can there be true happiness and, more importantly, social stability in a society where a large number of its members suffer want and disease? Is it then not necessary for turning the debate around and placing the principles of social solidarity and public accountability in health getting precedence over privatisation and a further commercialisation of health? A national consensus on some of these issues is important for clarity in public policy and for instilling values of compassion and concern in our society at large and among our health professionals in particular.

The author is with the Indian Administrative Service. The views expressed here are her own

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BUDGET FOR A HEALTHY NATION

The article presents the current scenario in which Budget 2004 is being presented, and questions whether the United Progressive Alliance Government has the political will to make a budget in the defense of people's health

The exercise which the Indian Finance Minister and his colleagues are engaged in currently is no mean task. Making a budget which will impact more than one-sixth of the world's population is a job profile which very few people in the world possess. What makes the task even more difficult is the huge disparities existing in the land.

More than one-third people in India live on less than 1 dollar a day, while the share of the poorest 20 percent of the population in national income or consumption is a paltry 8.1%. About one-fourth of the population in the country is under-nourished. The situation of children is much worse with 47 percent of children below 5 years being under-weight. Even those children can be considered lucky, considering that for every thousand live births, the Under-5 mortality rate is 93 compared to 7 in developed countries. The Infant Mortality Rate (IMR) has improved from 127 in 1970. But it is still high at 67 per thousand live births in 2001, compared to an IMR of 5 in high-income countries. The plight of mothers in India is also bad with the Maternal Mortality Rate being 440 per hundred-thousand live births. Another shocking fact is that, in spite of all the technological advances and increase in private healthcare, only 43% of births in this country are attended by skilled health personnel.

In spite of such alarming health indicators, the per-capita Government expenditure on health has remained at US $4, at average exchange rates for the years 1997-2001, while that of China rose from US $13 to 18, during the same period. In fact the general government expenditure on health, as percentage of the total health expenditure has decreased from 18.4 percent in 1998 to 17.9 percent in 2001. The remaining 82.1 percent is borne by the people as out-of-pocket expenditure. In UK, it is just the reverse with Government expenditure on health being more than 82 percent, and private expenditure being less than 18 percent. (source, yr.) *

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The higher public expenditure on health is not just a phenomenon of developed countries. About 37 percent of health expenditure costs in China is borne by the Government, while in Pakistan it is about 24%, compared to the below 18 percent expenditure by Indian Government.

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The Congress Manifesto and the Common Minimum Programme (CMP) of the United Progressive Alliance (UPA) Government recognised this problem and promised to raise the public spending on health to at least 2-3 percent of the Gross Domestic Product (GDP) over the next five years. At present, the public spending on health is at an abysmally low 0.9 percent of GDP.

Implementing the CMP's promise of bringing the public spending to 3 percent of the GDP has the potential of reducing the private expenditure on health considerably. Expenditure on healthcare has been

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recognized as one of the main causes of falling into the debt-trap in rural and urban-poor families. Studies, including a Special Report by the National Council of Applied Economic Research (NCAER) has shown that public health subsidies are disproportionately distributed in favour of the richer groups and are not well-targeted towards the poor, especially those in rural areas. Hence, the increase in health budget should be specifically earmarked for improving and extending the Primary Healthcare in the country.

The current allocation for Primary Healthcare is grossly inadequate. To compound the problem, the absence-rate among health personnel in primary health centres which caters to the poor in rural areas is reportedly as high as 43%, according to the World Development Report 2004. In the Prime Minister's address to the nation on 24th June 2004, Dr. Manmohan Singh reiterated his Government's commitment to the protection of the interests of the scheduled castes, scheduled tribes, backward classes and all weaker sections. And rightly so, since the health indicators of this section of the people are comparable to the health indicators of some Least Developed Countries. For instance, about 56% of scheduled tribe children in India are malnourished and under-weight, compared to the 47% for the whole of India (National Health Policy 2001). With an under-funded and poorly functioning public health system, it would not be possible to reach out to the poor and marginalized who already suffer from limited access to health systems.

The first step in setting right the above anomaly is given in Congress Manifesto 2004 and the Common Minimum Programme of the UPA itself.

1) Raise the public spending on health to at least 3% of the GDP in the coming budget.
2) Utilise the increased budget to strengthen the Primary Healthcare system in the country.
3) Ensure that the public sector health system improves its capacity and functioning. This is in keeping with the National Health Policy 2001 and the recommendations of the Commission on Macroeconomics and Health (CMH), in which Dr. Manmohan Singh was involved.
4) Strengthen the public sector health system based on principles of equity and social justice. This has been identified as a priority by the World Health Organisation (World Health Report 2003). The Report elaborates that *embracing the principles of primary health care is the way to overcome gross health inequalities*.

An increase in public spending on health would imply increasing the expenditure on health by the Government, which is currently at about 3.1% of the total Government expenditure. The question is whether the UPA government has the political will to take a stand in the favour of defence of people's health. The next few days will tell whether the pre-election promises of the UPA were just hollow promises or an inspired action-plan for the future.

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How to do (or not to do) . . .

Cost and cost-effectiveness guidelines: which ones to use?

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Given the increased awareness of the importance of cost-effectiveness in health care, there has been a growth in the number of published economic evaluations in recent years. Partly in response to concerns about deficiencies in the methodology of published studies, there has been a growth of interest in guidelines for economic evaluation. This paper reviews the various objectives of economic analyses, and then summarizes the existing groups of guidelines for cost and cost-effectiveness analyses. Finally, it compares and discusses the appropriate uses and limitations of the guidelines, with particular emphasis on those developed for applications in developing countries.

Introduction

Given the increased awareness of the importance of cost-effectiveness, or value for money, in health care, there has been a growth in the number of published economic evaluations in recent years (Warner and Hutton 1980; Elixhauser et al. 1993; Elixhauser et al. 1998). This reflects, in part, the increased recognition received by economic evaluation in the policy arena. For example, two jurisdictions, Australia and the Province of Ontario in Canada, have made the provision of an economic evaluation a mandatory requirement for reimbursement (public subsidy) of health care products – both jurisdictions operate a 'positive list' of drugs (Commonwealth Department of Health, Housing and Community Services 1992; Canadian Co-ordinating Office for Health Technology Assessment 1994). In addition, the World Health Organization (WHO) established the Global Programme on Evidence for Health Policy (GPE) in 1998. Its creation recognized that a core function of WHO must be to provide an objective assessment of the various types of evidence which should influence health policy. An integral component of GPE's activities is to provide evidence on the cost-effectiveness of health interventions.

Partly in response to concerns about deficiencies in the methodology of published studies (Gerard 1992; Udvarhelyi et al. 1992; Zarnke et al. 1997; Walker and Fox-Rushby 2000a, b), there has been a growth of interest in guidelines for economic evaluation. The development of guidelines reflects the desire to improve and standardize the conduct of economic evaluations in order to facilitate comparisons between studies.

This paper reviews the various objectives of economic analyses, and then summarizes the existing groups of guidelines for cost and cost-effectiveness analyses. The final sections compare and discuss their appropriate uses and limitations, with particular emphasis on those developed for applications in developing countries.

Objectives of cost and cost-effectiveness analyses

Analysis of costs may be undertaken for a number of reasons. Before making preparations for a costing study, the purpose of the planned work should be clear, as this will help to establish the boundaries for the costing exercise (Kumaranayake et al. 2000).

Cost analyses

Although cost analyses are not economic evaluations per se,[1] they are clearly a key component of them. Cost analysis is a tool that can provide useful insight on the functioning of projects. If the initiative to conduct the costing exercise comes from the project itself, managers may want information for one, or a combination, of the following objectives (Kumaranayake et al. 2000).

(1) Improve budgeting by monitoring costs;
(2) Improve the efficiency of the intervention by identifying potential cost savings;
(3) Estimate the resources required to sustain the intervention by seeking an accurate estimate of the budget necessary to maintain it;
(4) Estimate the resources required to expand the intervention.

In these instances, the financial costs of the project are of interest.

If the impetus for the costing exercise comes from outside the project, objectives are more likely to concern the cost of replicating the project and the extrapolation of results to other settings. In such cases, both running and start-up costs should be collected. Economic[3] costs will also need to be estimated, as in other settings, donated goods and services may not be available and hence may need to be purchased.

Cost-effectiveness

Cost-effectiveness analysis provides a systematic and transparent framework by which to assess the relative costs and consequences of different interventions that can assist in priority-setting exercises. While this approach can answer questions regarding technical efficiency, which aims to maximize the achievement of a given objective within a specific budget (e.g. should a new drug be used to treat a particular disease?), it fails to address allocative efficiency. This broader objective of economic evaluation seeks the optimal allocation of resources across a mix of programmes that cannot all be fully funded, to produce the greatest gain to society. However, cost-utility analysis[4] can be used to assess allocative efficiency within the health sector (e.g. malaria control versus immunization), but cannot make comparisons across sectors (e.g. provision of health care versus education); it is limited to quasi-allocative assessments.

Now that the different types of objectives of economic analyses have been reviewed, let us turn our attention to the guidelines. Recently, a number of guidelines for cost and cost-effectiveness analyses have been published. These have been promulgated by three distinct groups: governments and pharmaceutical agencies; peer-review journals; and developing country specialists. The next section summarizes them.

Guidelines for cost and cost-effectiveness analyses

The guidelines have been summarized, and subsequently compared, by using a modified version of Drummond et al.'s (1997) checklist to identify how the guidelines suggest analysts should perform an economic evaluation.

Government and pharmaceutical guidelines

The first to promulgate guidelines were government agencies and pharmaceutical companies. For example, the Australian and Canadian governments have introduced legislation, to varying degrees, which requires formal economic studies prior to reimbursement for pharmaceuticals (Commonwealth Department of Health, Housing and Community Services 1992; Canadian Co-ordinating Office for Health Technology Assessment 1994). It is hoped that this will ensure a more efficient provision of drugs, and curb the prescription of drugs of low cost-effectiveness, which is both inefficient and unethical as it can deprive a larger number of patients of care from which they would benefit.

Table 1 summarizes the main points of the two governments' guidelines. In particular, the guidelines recommend a societal perspective, the use of final outcome measures, incremental analysis of costs and outcomes, and probabilistic sensitivity analysis. However, the guidelines' aims vary slightly, and this becomes apparent when the two are compared.

The Australian guidelines 'provide a means to identifying and formatting the necessary basic information', and as such provide firm guidance. Yet it is the Canadian guidelines which suggest a 'reporting format to ensure that studies are reported adequately and in a consistent manner that will facilitate their review and comparison'. They represent the most prescriptive and sophisticated set of guidelines among the pair. Their scope is also the broadest, evidenced by the recommendation to use final outcome measures such as quality-adjusted life years (QALYs), enabling questions of quasi-allocative efficiency to be answered.

Peer review journal guidelines

The suitability of government and pharmaceutical guidelines to peer-review journals has been questioned because of their emphasis on new health care technologies (Jefferson and Demicheli 1995). The publication of guidelines for submission of economic evaluations to peer-review journals followed closely behind (Kassirer and Angell 1994; Mason and Drummond 1995; Drummond and Jefferson 1996; Russell et al. 1996; Siegel et al. 1996; Weinstein et al. 1996). Table 2 shows the key recommendations of the *British Medical Journal* (BMJ) and the *Journal of the American Medical Association* (JAMA) guidelines, arguably the most prominent among the group.

The emphasis of the BMJ guidelines is on improving the clarity of economic evaluations, with a view to improving the quality of submitted and published economic evaluations by 'agreeing acceptable methods and their systematic application before, during, and after peer review'. However, the guidelines chose not to state any firm recommendations and consequently they represent little more than a review of accepted methods for economic evaluations. The main recommendation throughout the guidelines is that choices should be explicitly stated and justified. At best, these guidelines will improve technical efficiency as decision-makers should have more confidence in the results presented, but they do not promote allocative efficiency because no standard method from which comparisons could be made is suggested (Drummond and Jefferson 1996).

The JAMA guidelines, the result of a series of meetings with the Panel on Cost-Effectiveness in Health and Medicine (convened by the US Public Health Service), have produced recommendations to improve the comparability and quality of studies (Russell et al. 1996; Siegel et al. 1996; Weinstein et al. 1996; the full report is presented in Gold et al. 1996). The aim of increasing comparability across studies requires much firmer guidelines, which if systematically employed would facilitate comparisons. Therefore, a major feature of the US panel's work was to specify guidelines for undertaking such studies, including a 'reference case' that should be reported in every published study either to complement the base case

Table 2. Peer-review journal guidelines

Methodological aspects	BMJ (Drummond and Jefferson 1996)	JAMA (Russell et al. 199
Perspective/viewpoint	• choice should be justified	• societal
Alternative/comparator	• choice should be justified	• reference case, which h
Identification of costs and outcomes	• resource use associated with an intervention • the inclusion of indirect benefits (productivity from improved health) is left to the discretion of the analyst • outcomes identified are mortality and quality of life	• resource use associated services; patient time e or unpaid); other costs expenses; economic co associated with non-he • fixed costs should not b • the inclusion of health longer due to an interv • outcomes identified are
Measurement of costs and outcomes	• if evaluation is taking place alongside a clinical trial data on resource use can be collected as part of the trial, otherwise it should be based on data on real patients collected from medical records; the use of 'expert panels' to estimate resource use is not recommended • outcome data can be collected from various sources including RCTs, observational trials, meta-analyses, and modelling • health outcomes are measured in terms of natural units in CEA, healthy years gained in CUA, and monetary units for CBA	• costs should be measur distortions • health outcomes should • health outcome data ca RCTs, observational tr
Valuation of costs and outcomes	• costs should be adjusted for inflation and currency conversions • healthy years in CUA can be valued using standard gambles, time trade-offs, or rating scales • health outcomes in CBA can be valued in money terms by using either the human capital approach or the willingness to pay approach	• time costs for individua wage rate • QALYs can be valued rating scales
Discounting	• government recommended rate for both costs and outcomes is preferred	• 3% discount rate for bo for comparison with pa
Presentation of results	• incremental analysis when two or more alternatives are compared	• incremental cost-effect
Sensitivity analysis	• choice of technique should be justified	• one-way and multivaria

CEA = cost-effectiveness analysis; CUA = cost-utility analysis; CBA = cost–benefit analysis; RCT = randomized controlled trial; QAL

Table 1. Government guidelines

Methodological aspects	Australian (CDHHCS 1992)	Canadian (CCOHTA 199
Perspective/viewpoint	• societal	• societal
Alternative/comparator	• practice most likely to be replaced	• existing and minimum p
Identification of costs and outcomes	• cost items that should be included are all direct health care costs, social services costs, home health aides, and/or physical therapy for patients with chronic disability • cost items that should be excluded are indirect costs and benefits unless a special case can be made for their inclusion, and health costs resulting from the fact that a patient lives longer due to an intervention • outcomes identified are mortality and quality of life	• cost items that should b social services costs, spi fall on the patient and f • cost items that should b treatment being evaluat and transfer payments s insurance and welfare p • outcomes identified are
Measurement of costs and outcomes	• resources should be described in natural units • intermediate and final outcomes are preferred for measuring health outcomes • good medical evidence should be obtained from RCTs and meta-analyses	• resources should be des • QALYs are preferred f • effectiveness rather tha appropriate modelling t
Valuation of costs and outcomes	• costs should reflect full opportunity cost • future costs should be valued at today's prices	• costs should reflect full buildings, and equipme • willingness to pay is pre for valuing health outc
Discounting	• 5% for both costs and outcomes	• 5% for both costs and c
Presentation of results	• incremental analysis of costs and outcomes	• incremental and total a
Sensitivity analysis	• the upper and lower confidence limits of the parameters should be substituted	• the use of Monte Carlo

RCT = randomized controlled trial; QALYs = quality-adjusted life years.

or indeed to be the base case. The construction of the reference case is achieved through a standard set of methods and assumptions.

Developing country guidelines

Experts in the field of economic evaluation in developing countries have chosen to concentrate on formulating guidelines for specific programmes: immunization (WHO 1979); diarrhoeal diseases control (WHO 1988); vector control (Phillips et al. 1993); primary health care (Creese and Parker 1994); family planning (Janowitz and Bratt 1994); blood transfusion services (WHO 1998); tuberculosis (WHO 1999); and HIV/AIDS (Kumaranayake et al. 2000). However, recently Murray et al. (2000) published a paper in *Health Economics* discussing the development of WHO guidelines on 'generalized cost-effectiveness analysis'. Because details of their recommendations have not been released yet, it was not possible to review them. But it should be noted that the main aim of these new guidelines is to help produce generalizable results.

Table 3 summarizes the key areas of five of the guidelines.[5] Whereas in the government and peer-review guidelines the target audience is, respectively, economists and, more generally, those wishing to publish their research, the developing country guidelines are aimed at programme managers who may have little or no economic training. This is reflected by the way in which the guidelines go 'step-by-step' through the procedures for undertaking cost-effectiveness analyses. The guidelines tend to restrict analyses to assessments of technical efficiency by recommending the use of process and intermediate outcome measures as end-points. This reflects, in part, the prohibitive cost of many randomized controlled trials (RCTs) in developing countries.

Discussion

The summary of guidelines has illustrated some differences, particularly between, on the one hand, the government/pharmaceutical and peer review journal guidelines, and on the other, those developed for use in developing nations. The first major difference is the applied nature of the developing country guidelines, focusing mainly on specific disease areas, using examples to illustrate techniques and applications (e.g. researchers planning a cost or cost-effectiveness analysis of an HIV/AIDS prevention strategy are recommended to use the guidelines prepared by Kumaranayake et al. 2000). However, they are not mutually exclusive. Indeed, the contents of the disease-specific guidelines are very similar, and therefore could be used inter-changeably. Secondly, their primary emphasis is on costing methodologies, with some providing cost-data collection forms, e.g. Kumaranayake et al. (2000) and WHO (1998) – the latter in electronic form. All of them recommend the 'ingredients' approach to costing, in which the total quantities of goods and services actually employed in delivering the activities are estimated, and multiplied by their respective unit prices. They also review techniques to estimate both financial and economic costs, but emphasize certain aspects of analysis. In particular, a major difference between developed and developing country guidelines is that the developing country guidelines specifically point evaluators to questioning affordability.

Yet a common observation is that none of the guidelines recommend a cost-benefit analysis (CBA)[6] framework, with the exception of the Canadian guidelines (CCOHTA 1994) – see below. This perhaps reflects the increasing dominance of cost-effectiveness analysis/cost-utility analysis in health care related literature (Warner and Hutton 1980; Walker and Fox-Rushby 2000b), which is largely due to the difficulties with applying a monetary value to human life.[7] Therefore, quasi-allocative efficiency goals are the maximum achievable objective through the application of the guidelines. However, a notable feature of the developing country guidelines is that the use of shadow prices for foreign exchange and labour is emphasized, drawing on development economics' tradition of cost–benefit analysis (United Nations Industrial Development Organization 1972; Little and Mirrlees, 1974). This is because in many developing countries some resources have market prices that do not reflect their true 'value', or opportunity cost, because the economy is distorted.[8] For example, the exchange rate is often overvalued, which results in raising the price of exports and lowering the price of imports in terms of the local currency. Clearly, in these instances the official price of foreign exchange does not reflect the true economic costs and benefits of importing and exporting, and a shadow foreign exchange rate is required. In addition, shadow prices may be required to value wages and capital if their prices do not reflect their true scarcity. Often, due to factor-price distortions, the price of labour is artificially higher, and that of capital lower, than their 'true' shadow values, which results in capital-intensive methods of production. The result of shadow pricing of foreign exchange rates and wage rates is to correct for these distortions which, in the cases above, increase the cost of foreign exchange while reducing the cost of labour. This means that projects requiring large amounts of foreign exchange will tend to be penalized in favour of more labour-intensive interventions (Todaro 1994). Indeed, in developing countries, markets often function so poorly that market prices for many goods cannot be used to reflect social opportunity cost. Therefore, analysts involved in economic evaluations in developing countries should be aware of the need to apply shadow prices in certain circumstances, and that the developing country guidelines are the only set to address this issue.

In addition, the government and pharmaceutical, and peer review journal guidelines are not necessarily useful for economic evaluations in developing nations, due to constraints of time, money and capacity. The developing country guidelines have been written with these constraints in mind. RCTs are expensive and time-consuming, which is why most of the developing country guidelines recommend the use of process and intermediate outcome measures, and provide guidance on how to collect this information. This also helps explain the increased use of modelling to predict the impact of health care interventions in developing countries (Foster et al. 1997; Goodman et al. 1999; Marseille et al. 1999). However, given the relatively recent application of modelling the impact of health care programmes in developing countries, coupled with the high cost of RCTs, it is perhaps not surprising that

Table 3. Developing country guidelines

Methodological aspects	Diarrhoeal diseases (WHO 1988)	Immunization (WHO/EPI 1979)	Primary health care & HI (Creese and Parker 1994; Kumaranayake et al. 2000
Perspective/viewpoint	• service providers	• societal	• service providers.
Alternatives/comparator	• should be comparable – only differ with respect to costs or the specified effectiveness	• current practice, i.e. do nothing or an on-going programme	• best possible alternative
Identification of costs and outcomes	• resource use associated with an intervention – distinction between capital and recurrent costs • outcomes ranging from the provision of goods and services up to achieving an impact on health	• resource use associated with an intervention – distinction between capital and recurrent costs • impact of immunization programme	• resource use associated intervention – distinctio between capital and rec costs • impact of HIV preventi strategy
Measurement of costs and outcomes	• quantify inputs in physical units • methods for allocating joint costs include: time used; distance travelled; space used; or proxies • intermediate measures are easiest but large differences in outcome measures	• joint costs for staff should be allocated by either number of working days or percentage of total time, for vehicles by mileage • intermediate and final outcome measures, e.g. number of children prevented	• sources of cost data are: government contracts; s records from donors; loc estimates • methods for allocating j include: time used; dista • service outputs are prefe outcome measures
Valuation of costs and outcomes	• convert cost data into constant (or real) prices • market value of subsidies and donations should be estimated • use the exchange rate employed by the Economic Planning Ministry to convert items purchased from overseas	• convert cost data into constant (or real) prices • use the official exchange rate to convert items purchased from overseas	• shadow prices for foreig exchange and labour sh used
Discounting	• rate used by the economic planning office or Ministry of Finance • or estimate the rate • or use 10%	• rate used by the economic planning office (or its equivalent)	• rate used by the econom planning office or Minis Finance • or estimate the rate • or use World Bank rate
Presentation of results	• average C/E ratios	• average and marginal C/E ratios	• average C/E ratios
Sensitivity analysis	• substitute the upper and lower values of uncertain variables	–	• substitute the upper and values of uncertain varia
Affordability/sustainability	• affordability must be assessed	–	• affordability must be ass

C/E = cost/effectiveness; DALY = disability-adjusted life year.

life-years (DALYs). In practice, there has been a blurring of the distinctions between cost-effectiveness analysis and cost-utility analysis and the latter can be seen as an extension of the former (Musgrove 2000).

[5] I have excluded the family planning (Bratt and Janowitz 1994), blood transfusion services (WHO 1998) and tuberculosis control (WHO 1999) guidelines due to space. However, the main features of these guidelines are similar to those summarized in Table 3.

[6] Cost-benefit analyses express outcomes (e.g. the number of lives saved) in terms of monetary units, therefore enabling intersectoral comparisons, and hence, assessments of allocative efficiency.

[7] For further guidance on cost-benefit analysis see Curry and Weiss (1993), Dinwiddy and Teal (1996) and Perkins (1994).

[8] The reasons why market prices and shadow prices may not coincide include the existence of price and quantity controls, externalities and public goods.

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the existing developing country guidelines fail to provide much guidance beyond the estimation of process and intermediate outcome indicators. Nevertheless, the recent HIV/AIDS guidelines by Kumaranayake et al. (2000) have been written alongside the development of user-friendly models, for use by service organizations and policy-makers. These models can be used to estimate the impact of various HIV prevention strategies in terms of HIV infections averted. It remains to be seen whether the forthcoming WHO economic evaluation guidelines will provide additional guidance in this area.

Unfortunately, existing capacity to perform economic evaluations within developing countries is low, hence the application of sophisticated sensitivity analysis techniques such as probabilistic analysis, as recommended by the Canadian guidelines, currently remains unrealistic in most settings. Again, this is reflected by the recommendation by most of the developing country guidelines to perform univariate sensitivity analysis. However, as capacity in developing countries increases, it is likely that guidelines will reflect this and be modified accordingly.

Nevertheless, it is important to recognize that the needs of policy-makers differ. It may be that a full study with a complex methodology is required to answer a question. On the other hand, there is also a role for less complex studies if resources, the time available, or the information required are in short supply. Indeed, preliminary studies could be performed at the early stages in the development of a health technology in order to inform whether, for example, more research is required. Therefore, it is important that economic studies are timely in relation to the decisions they seek to inform. Clearly though, the immediate task at hand is to assess and improve the efficiency of the health sector. Hence the focus on cost-effectiveness and cost-utility analysis evident in the guidelines reviewed here. However, it would be useful if such studies could be constructed in such a way that the evidence they produce can be used subsequently in inter-sectoral analyses. While the Canadian guidelines (CCOHTA 1994) state that 'Consistent with the desire to permit broad comparisons, the expression of results in cost-utility or cost-benefit terms is preferred' (although recognizing the difficult measurement issues particularly related to the latter analytic technique), the developing country guidelines provide no guidance on this matter. Again, we must wait to see whether the forthcoming WHO guidelines will address the link between intra and inter-sectoral analyses.

All these guidelines reflect the desire to improve and standardize the conduct of economic evaluations in order to facilitate comparisons between studies. However, as to whether guidelines improve the quality of economic evaluations, the available evidence is inconclusive. For example, that guidelines can help is evidenced by the findings of Baladi et al. (1998) who reviewed 12 completed studies that had been undertaken using the Canadian guidelines (Canadian Coordinating Office for Health Technology Assessment 1994). The authors concluded that, 'although studies have been of variable quality, the majority of them were well presented, complete and transparent . . . it appears that the guidelines were instrumental in ensuring a minimum set of standards'. However, Walker and Fox-Rushby (2000a) found that there was no difference between the quality of papers that cited guidelines and those that did not, suggesting that the use of guidelines *per se* does not result in better quality papers.

Conclusions

This review has illustrated that the available guidelines for cost and cost-effectiveness analyses differ in terms of the target audience, objectives and, to a lesser extent, methods recommended. For those interested in performing cost or cost-effectiveness analyses in developing countries, the choice of guidelines should be based on the objective of the study, and as such the disease-specific guidelines provide most options and detailed guidance. They also explicitly address the issues of shadow pricing and affordability, both of which are particularly important in developing countries. However, analysts should be aware of the limitations of these, in particular with respect to the outcome measures and sensitivity analysis techniques recommended.

Unfortunately, the collection of cost information is expensive, in terms of both physical and financial resources, and collecting it in a manner that will be useful beyond a local setting is challenging. Therefore, perhaps a global standard costing methodology remains the ideal? However, using a global standard is not necessarily feasible (Mumford et al. 1998). First, costing studies are driven by local information needs and circumstances, and thus may not be designed to measure the same information. Secondly, sufficient resources may not be available to meet international standards, especially if a less comprehensive analysis or a different method satisfies the locally defined information needs. Third, there is no universally accepted outcome measure for comparing cost-effectiveness across health interventions, even though comparisons between interventions are desired to improve quasi-allocative efficiency. Researchers continue to debate the merits of disability-adjusted life years (Barker and Green 1996; Anand and Hanson 1997), and other measures and valuations of health outcomes, such as QALYs and willingness-to-pay, all of which have their own practical limitations and questions of validity (Morrow and Bryant 1995). Nevertheless, WHO will shortly be releasing their recommendations for 'generalized cost-effectiveness analysis'. It remains to be seen what impact their approach will have on the quality and comparability of future cost-effectiveness analyses.

Endnotes

[1] An economic evaluation compares the ratio of costs and effects of at least two alternatives.

[2] Financial costs represent actual expenditure on goods and services purchased.

[3] Economic costs include the additional estimated value of goods or services for which there are no financial transactions or when the price of the good does not reflect the cost of using it productively elsewhere.

[4] Cost-utility analyses express outcomes in terms of utilities such as quality-adjusted life-years (QALYs) or disability-adjusted

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COST-EFFICIENCY OF THE FAMILY WELFARE PROGRAMME: CLINICS vs CAMPS

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and
MR. D. B. MANJESHWAR **

Introduction

Since independence efforts have been underway to take primary health care to the masses in rural areas in the country. The Alma Ata Declaration in 1978 propounded "... primary health care as essential health care to be made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of development in the spirit of self reliance and self determination".[1] Several problems have been identified in the process of taking health services to the rural areas and many suggestions have been put forward to improve these services and make them accessible to all the sections of the community. And, it has been suggested that the existing infrastructure be revamped to suit future needs.[2] Since financial resources are limited it is important to provide health care in a manner that maximises the benefits and minimises the cost. In other words, the best health care delivery system is the one which yields the maximum benefit at a certain cost or the one which gives a predetermined benefit at the least cost.

Because of advances in drug therapy and in technology many patients can now receive health care without being hospitalised on a long-term basis. Standards of medical practice are changing as well. Many types of surgery can now be managed outside hospitals, in mass camps, specially set-up for the purpose. Mass camps seem to have certain advantages over hospitals. Under-served areas can be more effectively covered. That segment of the population which has little access to existing health care institutions because of poverty and ignorance can also be reached. Moreover, mass camps can be used to relieve the pressure on existing hospital facilities. The consumer (patient) may also prefer mass camps

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because they minimise time away
compared to a longer hospital sta
makers may like to know the cost
of health care through mass cam

For the purpose of illustratio
ing camps since such camps have
years. The camps are held at dist
health centres (PHCs) and health
the primary health centres, other
organisations such as youth club
are of different sizes—large, mec
rare, are of very large size such a
early seventies. However, most o
scale levels. In these camps, usu
conducted—vasectomy, tubectom
ried out in some of these camps

The main objective of this stu
ing family planning services throu
ly, the kinds of clientele served in
ed into. The quality of health care
are also considered. Since this is
to study the cost-efficiency of taki
tion, the results that have been p
those provided merely for the pu
The limitation encountered in wo

Concepts in Cost Analysis:

Techniques such as cost-ben
cost-efficiency analysis can be use
maker in selecting the appropria
the following paragraphs we hav
ed techniques.

(a) *Cost-Benefit Analysis:* is
a service with the gain accruin
cost-benefit is mainly used to ju
action. It attempts to value all s
This method implies that the ben
sex, labour productivity, etc., c
proved health increases happine
is rather difficult to translate su

are incurred in the immediate future while benefits will accrue over a long period of time. Also, it would be difficult to work out a satisfactory discount rate[3]. Therefore, the difficulties associated with expressing benefits in money terms seriously limit the significance of cost-benefit analysis for our purpose.

(b) *Cost-Effectiveness Analysis:* To get around the problems of a suitable monetary measure of benefits, cost-effectiveness analysis is sometimes used. While cost-benefit analysis and cost-effectiveness analysis measure inputs in the same way i.e., in monetary terms they differ in their measurement of outcome benefits. This method relates cost to the desired outcome or benefits in physical terms such as increase in the acceptance rate of family planning services. In this method either cost or effectiveness has to be kept constant while the different options are considered and comparative evaluation is made to show which one of the equally costly alternative policy actions is likely to be more effective or least costly. Therefore, this technique cannot be applied until programme objectives are spelt out in quantative terms for alternative strategies.[4,5]

(c) *Cost-Efficiency Analysis:* is a method of comparing two or more enterprises (say hospitals, health centres or camps) providing similar services or in a single enterprise on different scales (large, medium or small) at different time periods (short run or long run). In this method, physical outputs (number of patients treated, number of operations performed, etc.) can be related to the inputs measured in monetary units. Here, there is need to develop suitable work measurement units and norms for measuring the physical quantum of work or services rendered. The work measurement unit can be arrived at by relating the volume of work input to the staff time measured in terms of man hours, man days, etc. The method implies that the activities are performed with equal efficiency and economy. The efficiency can be expressed in terms of unit cost by relating an unit of physical output of an activity to the cost of all the inputs used in its production.[6] It can also be expressed as partial productivity of a single input. For example, a unit of single input expended in the production process can be related to the output it has generated.

Data Requirements:

In order to come up with cost estimates, the data requirements are many and varied. Expenditures are incurred both by the providers of health services and by the consumers. Overall health costs should also include opportunity costs from both providers and consumers as also capital costs. The various components of costs are listed below:

A. *Provider's costs:*

1. Fees for doctors, para-medical and other supportive staff, etc.
2. Rent, hire charges for building, equipment, etc.

3. Cost of materials like drugs
4. Incentive money for accepto
5. Transport, publicity and oth

B. *Consumer's costs*

1. Expenditures on transport fo attendants, etc.
2. Expenditures on drugs, food
3. Other incidentals

C. *Opportunity costs*

1. Fees forgone by doctors an otherwise treated patients w
2. Facilities which would have l equipment, etc.)
3. Earnings/wages forgone by t patient during the patient's

Limitations of Data

For the purpose of illustration, tres of Karnataka State in 1985 hav expenditures incurred for performi non-laparoscopic, referred to herea last one year. Besides, relevant infor ceptors of these sterilisations were a tubectomy and 298 laparoscopic ste and 76 tubectomy and 121 laparosc health centres. A few comments on be in order here.

In the first place, the main diff spent which are not readily available other departments of the governm mobilisation of acceptors and the already vasectomy, tubectomy and the same institution or camp, with t costs. Under such circumstances it different types of sterilisations. Ma illiterate and incorrect reporting or are other serious problems with th

Secondly, it is rather difficult to impute values or norms for rent for the buildings or site, salary for the doctors and other staff, and interest and depreciation charges for capital equipment used. Some of the attributes of these inputs are their indivisibility, alternative uses and retainable ownership.

Mass camps, to become viable, require more clients. Hence publicity and promotional efforts are intensified and men with vehicles go to the countryside scouring for potential acceptors. The result is that paid-out cost is borne by several individuals and organisations. There is no denying the fact that the whole government machinery is geared to mobilising clients for the camp and such efforts are not always quantifiable in monetary terms. The officials we talked to were emphatic that they campaigned for family planning *in addition to* and *along with* their normal duties. Thus, we feel our estimates of paid-out costs for mass camps can still be under-estimates while those of institutions can be very close to the actual costs.

Next, the efficiency of mass camps and institutional care in terms of input-output relationships does not always lead to meaningful conclusions. Taking the case of inputs, inter-personnel differences in skills always exist. Similarly, the acceptors of services also differ in their characteristics.

Finally, we face some definitional difficulties. Usually, primary health centres provide family planning services to eligible couples on demand. By and large, sterilisation operations are performed at an interval of 8-10 days in the institutional premises and the number of cases operated upon on a single day averages about 10. On the other hand, for camps, two or three PHCs combine together and pool their resources of men and materials. Other government departments also collaborate in this effort by lending their vehicles and staff and in collecting contributions and providing publicity. Therefore, at times the distinction between institutional care and care at mass camps may not be very clear.

Cost-efficiency Estimates

At the outset, it should be stressed that these results are intended to be illustrative and should be viewed as such. This being an exploratory study we could not ascertain the money value for every input. Though we can theoretically impute the money costs for these inputs, we have refrained from doing so since we do not, at the moment, have precise norms for imputing values to these inputs, like rent for buildings and camp sites, salary for the doctors and paraedical workers, interest and depreciation charges for equipment, etc.

For many of the divisible inputs we were able to collect data on cost. These divisible input costs are directly paid-out by the health providers. On the basis of information provided by them we have worked out paid-out unit cost. For indivisible inputs like capital equipment and doctor's services, whose money value is difficult to apportion, partial productivity indices have been worked

out. Paid-out unit costs and partial pr
us some idea about the relative efficie
delivering health care.

It can be seen from Table-1 that c
sive than institution-based sterilisation.
in a mass camp the health provider spe
tion and Rs.277/- if it is a laparoscopic
is done in the institution itself, the provi
it is tubectomy or laparoscopy. Mass c
parison to institutions if one is to go b
feature of mass camps is payment of h
or kind to the acceptors. Besides, the
on promotional efforts like publicity an
to acceptors and their companions. Mo
is not reached leading to a certain amo
result in an increase in per unit cost i

Yet, mass camps find favour with
on retained costs as opposed to paid-ou
tivity per unit of operation team effort c
times higher in mass camps. The avera
institutions by absolute standards and
institution, a team of doctors and par
7 tubectomy or 11 laparoscopic sterilisa
ed team performs 49 tubectomy or 75 l
operation day, one set of operation equ
sterilisations in institutions as against 2
tion, one set of equipment is used to p
against 38 in camps. The major reaso
institutions seems to be lack of demand
tors' services and capital equipment ar
ly large mass camp will have optimum
will lead to economies of scale since th
a large volume of outputs namely the r
down the overall unit cost.

It is pertinent to note that camps
ceptors. Is it because of pooling of al
at one place and at one point of time
compensation offered to acceptors in
of services or the festive atmosphere, v
Or, could it be that institutions and ca
with different elasticity of demand fo
no real conflict between the two mo

TABLE 1

Paid-out cost per sterilisation

Items of Expenditure	Institution		Mass camps	
	Tubectomy	Laparoscopy	Tubectomy	Laparoscopy
1. Cash incentives paid to acceptors inclusive of travel and dietary allowances	155.00	155.00	155.00	155.00
2. Cash incentives to motivators	15.00	15.00	15.00	15.00
3. Remuneration to surgeons and anaesthetists	7.00	7.00	7.00	7.00
4. Remuneration ot operation theatre assistants and attendants	2.00	2.00	2.00	2.00
5. Karnataka State Lottery tickets to acceptors	5.00	5.00	5.00	5.00
6. Cost for drugs and dressing material	25.00	25.00	25.00	25.00
7. Contingency towards soap, candle, oil, electric bulbs, O.T., chappals, etc.	5.00	5.00	5.50	7.85
8. Gift of utensils to acceptors	—	—	55.88	37.65
9. Cost of food articles bought for feeding the acceptors and their companions	—	—	34.56	8.88
10. Cost of petrol, oil and lubricant for the Govt. vehicles pressed into service	—	—	6.19	13.33
Total paid-out unit cost	214.00	214.00	311.13	276.71
Number of cases operated upon	76	121	97	298

vider's main objective is to reach as many clients as possible at a minimal cost. Answers to these questions will help him decide, the total number of clients he can reach, how many clients he must reach from different clienteles and at what cost, so as to minimise the overall unit cost. Paucity of data prevents us from taking care of all these related issues. We have, however, tried to answer some of these questions with whatever data we have at our **disposal.**

Table 2 classifies the clientele of mass camps and institutions, by the age of the acceptor, by age of the last child, husband's education and place of residence. The first panel in the table shows the age distribution of sterilised women. The acceptors in institutions are younger than those in camps; 93 per

TABLE 2

Selected characteristics of

Characteristics of acceptors	Institution	
	Tubect-tomy	La
Wife's Age :		
Less than 20	1 (1.3)	2
20 - 29	70 (92.1)	94
30 & above	5 (6.6)	25
Not stated	0 (0.0)	0
Total	76 (100.0)	121 (
Age of last child :		
< 29 days	68 (89.5)	54
1 month – 12 months	8 (10.5)	33
Over 12 months	0 (0.0)	13
Not stated	0 (0.0)	13
Total	76 (100.0)	121 (
Husband's education :		
Iliterate	40 (52.6)	74
Upto VII Std.	20 (26.3)	19
Above VII Std.	16 (21.1)	17
Not stated	0 (0.0)	11
Total	76 (100.0)	121 (
Geographical accessibility		
Head quarters	17 (22.4)	19
Roadside villages	20 (26.3)	64
Interior villages	39 (51.3)	38
Total	76 (100.0)	121 (

Note : Figures in the parentheses refer to corresponding

cent of the acceptors of tubectomy and 79 laparoscopy in institutions were less than 30 constituted only 87 and 60 per cent respectiv

The third panel in Table 2 sets out the dis cording to their husband's educational attain education as a proxy for the socio-economic

stitutions, about 21 per cent of the husbands of tubectomised women and 14 per cent of those of laparoscopied women had studied beyond VII standard. In the camps, the respective proportions were only 14 per cent and 12 per cent.

The last panel of Table 2 indicates the geographical accessibility of the acceptor's residence to the place where the services were delivered. It shows that 49 per cent of the tubectomy acceptors in institutions, came from the same place where the institution is located or from a place connected by road. In the case of laparoscopy, 69 per cent of the institutional acceptors came from such places. In contrast, in mass camps, only 42 per cent of the acceptors of tubectomy and 41 per cent of those of laparoscopy came from such places. Most of the acceptors in mass camps came from interior villages.

There appears to be some consistency in these patterns which sets apart institution seekers from mass camp acceptors. While mass camps cater to reluctant acceptors, from economically weaker sections, with little access to existing health centres, institutions are preferred by voluntary and early acceptors from relatively better-off families, living closer to the delivery points. However, it should be noted that institutions may have some advantages of their own. The second panel of Table 2 shows the age distribution of the youngest living child of the acceptor. In the institutions, 90 per cent of the acceptors of tubectomy and 45 per cent of the acceptors of laparoscopy had their youngest living child aged less than one month. In the mass camps, the corresponding percentages were only 61 and 15. This indicates that in institution-based health delivery, mothers need not wait long if they desire to have sterilisation immediately after child birth. It would be difficult to deliver such services in mass camps as and when they are desired by the acceptor. The point is that institutions and mass camps cater to dissimilar clienteles.

Another related issue is the quality of services provided by institutions and mass camps. A change in favour of mass camps may lead to a gain in output and possibly a decrease in overall unit cost through economies of scale. This gain in output, may however, involve some loss in quality. Thus, there may be a conflict between the two objectives of quality and quantity. The possible indicators of quality of service can be: adhering to the guidelines of decent health care, pre-operation and post-operation care, efficacy of treatment (inclusive of post-operative complications or death). These aspects can be better understood by undertaking a follow-up study of acceptors. The choice then between the two objectives depends on the weights assigned to them on the one hand and the trade-off between the two on the other.

Concluding Observations:

To recapitulate, our main findings are that institutions with fixed location and daily functioning are efficient in economising divisible inputs and can

perhaps offer s[illegible]ces of a better q
mass camps are [illegible]re efficient by e
capital equipment. While mass cam
families with little access to existin
by voluntary and early acceptors a
easily accessible places. The clientele
that of institutions. It is likely that
for family planning services. All th
planning services and they may as
can be dispensed with, on an out-

It is common knowledge that
in rural areas. Hospitals and clinics
cities, are beyond the reach of the r
hospitals in rural areas since many c
population to keep the hospital g
threshold population is reached wi
hospitals would be advantageous.
mode of health care delivery would
need not be a conflict between the t
other.

The data available to us bein
ploratory. No firm conclusion coul
be obtained by combining the two
about the ideal size of a mass cam
tified data requirements and limita
critical examination. Also, there is
ing to travel to avail himself of a g
minimum population necessary to s
precise norms for pricing severa
equipments, buildings, or standard
so forth. Only a well-designed, suf
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Chapter 11

HEALTH SECTOR FINANCE AND EXPENDITURE

1. Health Sector Financing Problems

The urgency of the need for information about health sector financing and expenditure in developing countries arises out of the current problems of the health sector. Despite the optimism of the late 1970s and the Alma Ata declaration on Primary Health Care, the limited improvements in health status that had been achieved have now been undermined by the world economic crisis of the late 1970s and 1980s. The health needs of many within developing countries and, particularly, the rural and urban poor populations, remain unmet. Infant mortality rates remain high in most developing countries and 80% of the world's population has no access to any permanent form of health care.

The inadequacy of funds in any country is a mix of absolute deficiencies (resource shortages) and relative deficiencies (inefficient use of resources). Resource use inefficiencies may take the form of inefficient manpower use (because functions are not clearly defined) or inappropriate use of technologies (such as capital-intensive methods of health facility construction). The maldistribution of available resources is also an aspect of inefficiency. Health systems in developing countries are generally dominated by urban (hospital) care, leaving only limited funding for rural facilities and primary health care. In many systems, especially those with social security schemes, resource distribution favours the more wealthy (employed and insured); and in most systems it is likely that the poorest have worst access to, and lower utilization of, health care. Finally, problems are caused by the lack of co-ordination between the sources of health finance and health care (such as government, private, foreign), and between the various providers of care (public, private, different levels of the system). The result may be inadequate service provision or wasteful duplication. Management weaknesses underlie these problems.

Resource shortages have been exacerbated by rising costs within the health sector due to increased utilization rates (in some countries), rising expectations - especially for the adoption of new and expensive technology, and an increasing proportion of elderly within the population (particularly in the more developed countries of Latin America and the Caribbean). Often incentives for cost-containment do not exist to temper the impact of these changes on resource use.

The lack of information about health sector financing and expenditure in many countries has undermined appropriate decision-making. The problems of studying financing and expenditure patterns in the health sector include:

- a tendency to regard the health sector as synonymous with health services and to ignore expenditures outside main government health agencies (i.e. a conceptual/definitional problem)
- bureaucratic reluctance to encroach on the organizational territory of co-providers of finance and services (unless formally instructed to)
- the independence of decision making enjoyed by many providers, which takes priority over the need to coordinate and integrate health policy.

The problems, however, are now sufficiently great to encourage more appropriate information collection, and a common methodology for obtaining the information is emerging.

2. Why Study Health Finance and Expenditure?

Studies of health sector finance and expenditure generally have two main purposes, related to the health sector's problems: to investigate the efficiency of the health sector and to provide information for financial planning.

In practical terms, the information can be valuable for:

- identifying who benefits from services and so clarifying the impact of present policies on equity
- identifying who gets what (i.e. the geographical, age, gender, ethnic and socio-economic distribution) and determining whether this is in line with policies

- identifying current patterns of financing and expenditure and so encouraging discussion of alternative sources of finance
- identifying and quantifying resource deficiencies through clarification of the type of services produced and the resources employed in their production
- facilitating the co-ordination of various funding agencies and spending bodies
- analysing resource deployment and identifying the possibilities for re-deployment
- permitting the comparison of financing and expenditure patterns between countries.

3. Steps in a Health Sector Finance and Expenditure Survey

There are four basic steps in assessing health sector finance and expenditure:

- define the health sector
- describe the scope and objectives of the survey
- collect and tabulate the data
- present the results.

3.1 Definition of the health sector

The precise definition of what services and activities comprise the health sector is necessary to guide data collection and, especially, to make comparisons of health systems across countries or at different times.

The following pairs of items show the difficulty of drawing a line between aspects of the health sector/non-health sector. Which should be included within the definition of the health sector?

- health services; environmental services (e.g. water, sanitation, environmental pollution control, occupational safety etc.)
- hospitals; social welfare institutions
- education and training; pure medical research
- medical social work; social work
- formally trained medical practitioners; traditional medical practitioners.

In practice, the limit of the health sector varies considerably between countries and different definitions have been developed for different purposes. In developing countries, the definition tends to be broader than in developed countries because, for example, of greater deficiencies in certain areas (e.g. environmental health) and extensive use of the traditional health sector. A useful rule of thumb is to include all finance/expenditure whose primary intention (regardless of effect) is to improve health.

Surveys often specifically seek to identify primary health care expenditures, and so require a definition of 'primary health care' (PHC). This encounters the same problems as those of defining the health sector (i.e. where to draw the line between health and non-health activities). In addition, it may be inappropriate to include all of the commonly accepted health expenditures as being PHC: To what extent is hospital care primary health care? To what extent do support services such as laboratories undertake PHC? Of course, each level of the health system supports the others but there are distinctions between types and levels of care. The common practice is to identify a 'PHC factor' which can be applied to the total within each category of expenditure. Thus, 0.2 might be the factor for secondary services which provide clear support to the primary level, but 0 might be the factor for tertiary facilities. To apply such factors it is important to identify the range of services provided within facilities or at different levels of the health system. The factors, clearly, represent only an approximation of PHC expenditure; it is difficult to capture the expenditure implication of facets of PHC such as decentralization and community participation.

As it is unlikely that uniform definitions of the health sector or of primary health care will ever emerge, it is necessary to describe clearly what has been included and excluded, and to justify the definition adopted.

3.2 Scope and objectives of survey

The scope and objectives of the survey clearly have to be set within the context in which it is undertaken - reflecting the needs and priorities of the specific country, and the feasibility of data collection. The common questions tackled by such surveys include: What is the total

expenditure on the health sector? What are its sources? How much does each source provide? On what/who is it spent?

It is important first to clarify whether the emphasis is on financing or expenditure or both, and whether it is to be a full or partial review of sources of finance/items of expenditure.

The range of sources that might be investigated includes: ministry of health, other ministries, local government, other state bodies, missions, industry, local voluntary bodies, direct household payments, insurance, self-help, foreign aid (official and private).

Expenditure categories might include: national hospitals, general hospitals, specialized hospitals, health centres, community-based care, private practitioners, drug sellers, sanitation, nutrition, training, research.

3.3 Data collection and tabulation

A variety of data collection methods will be necessary - both because of the different sources of information and to allow for some cross-checking of results. They include routine accounts/budget data, questionnaires, and interviews with health care providers. It can be especially difficult to obtain information about expenditure on private health care, including traditional care, and information should be sought from many sources including providers, users and tax records.

The data should be tabulated as they are collected; particular care should be taken to guard against double-counting and to record income and expenditure against the appropriate source. For example, government subventions to mission facilities could be recorded against government expenditure or against mission expenditure - but the original source is government and the subvention should be recorded on its account when the survey's purpose is to identify the sources of finance. At the same time it is useful to know who controls how much money, and so in some cases it may be appropriate to record the subvention on the mission account.

Normally, sources of finance are defined as above to be government ministries, missions, insurance agencies etc. In some surveys it might

be possible, or relevant to identify the original sources of finance e.g. for government expenditure, the amount originating from taxes (on households, businesses etc.), from borrowing (foreign governments) etc. This is particularly important when there is concern over the equity of financing and expenditure patterns (i.e. who pays, who gets care).

3.4 Presentation of data

The data should be presented clearly, in a form that reflects the survey's objectives and permits relevant decisions to be made. A number of different breakdowns are possible:

- recurrent, capital and total expenditure
- expenditure by line item
- expenditure by source of finance
- primary health care expenditure by source and by line item.

Information about population groups served can be disaggregated by: age, geographical distribution (i.e. urban/rural), insured/uninsured, socioeconomic (income) levels. Similarly, information about the types of health service provided can be disaggregated by: preventive/curative, ambulatory /hospital, primary/secondary/tertiary.

The data can also be used as the basis of other calculations which might add to the survey's usefulness e.g. unit costs (per inpatient day, per outpatient visit), proportion of budget actually spent. Expenditure on programmes or disease categories prevented/treated can be calculated in order to compare expenditure patterns with health objectives and plans, and to monitor the achievement of plans.

4. Results of Health Sector Financing and Expenditure Surveys

The results of surveys that have been undertaken make it more possible to compare health services at different times and across international boundaries. They have provided an impetus to further studies and to refinement of the methods, have contributed towards developing an overall system of national health accounts and have shown that surveys can be undertaken relatively quickly and cheaply.

Studies show that sector finance is contributed by more sources than previously imagined and comprises a higher percentage of national

income than hitherto believed (e.g. 9.8% of GDP in Swaziland). The role of government financing within the sector as a whole, however, remains significant. In Sri Lanka 86.0% of sector recurrent expenditure was provided from government revenues, in Togo 52.4% and in Swaziland 30.2%.

Household expenditure on health care and health-related activities may be a high proportion of total recurrent expenditure within the health sector: in Swaziland it represented 32.4% of the total, in Malawi 31.5% and in Togo 27.8%. In Sri Lanka the wide availability of government health care and limited use of private care resulted in household health expenditures representing only about 3% of sector recurrent expenditure. Foreign aid may also be important: in Swaziland it financed 20.8% of the sector's total recurrent expenditure and in Togo 13.2 %.

Other information obtained through such surveys includes: the importance of foreign aid to primary health care in Swaziland (and the lack of government financial backing for its stated policy of PHC), the unequal rural/urban allocation of resources in Malawi and Sri Lanka, the unequal racial allocation of resources in Zimbabwe, the dominance of curative and hospital care within health expenditure and the significance of private care within the sector (e.g. traditional healers in Swaziland).

COM H-2.

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Inaugural session

GD

↓

Health Economics - new in Ind

↓

S[illegible] Thiruvananthapuram Achuthan Menon Centre
- Public Health (H. Economics Unit)

↓

Others have already started (we shall know during the year)

↓

TB (NTI)

↓

KM

Equipment - costs
WB loans

DrJ. (NTI)

- Imp to work on H.E issues on TB
- NTI has some experience (peripheral)

RK (ISEC)

- No BP apparatus in PHC
-

Srmm →

WB Economics

- Questions - legitimate or illegitimate
- Amartya Sen's Welfare/Development economics
- Choices/options

DC

- Interdisciplinary Centre at Inst of Psych - London
- UK situation
  - Closing of asylums
  - ← DC Socio-anthropologist
- Sea change of peoples view
  - a) Mental Health importance going up
  - b) Increased evidence needed - cost effective
  - c)

Sarah

- Inst of H Sector Dev (IHSD)
- (Political Economy) background
- Charting organisation of services
  - ↓ Swansea (Wales) CH Programmes

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Growing Pressure on Resources

1. International comparisons ?? (How relevant)
2.

- demographic change (ageing...)
- social changes (divorce, poverty.... migration
- Government expenditure cuts
- policy & practice developments
- higher expectations of society
- demand for higher standards by users/carers
- professional expectations about quality & access — new drugs new therapies

Economics: The science of scarcity

Economists - Know cost of everything and value of nothing.

Resource scarcity → gap between needs/demand availability
→ forces choice by individuals by households by society

↓

Choices → imply sacrifice

↓

Sacrifice → opportunities forgone

↓

Opportunity cost → the economic value or worth of opportunities foregone

↓

Economic value → willingness to pay e market price (Supply demand)
→ shadow prices (non-market goods or where market fail

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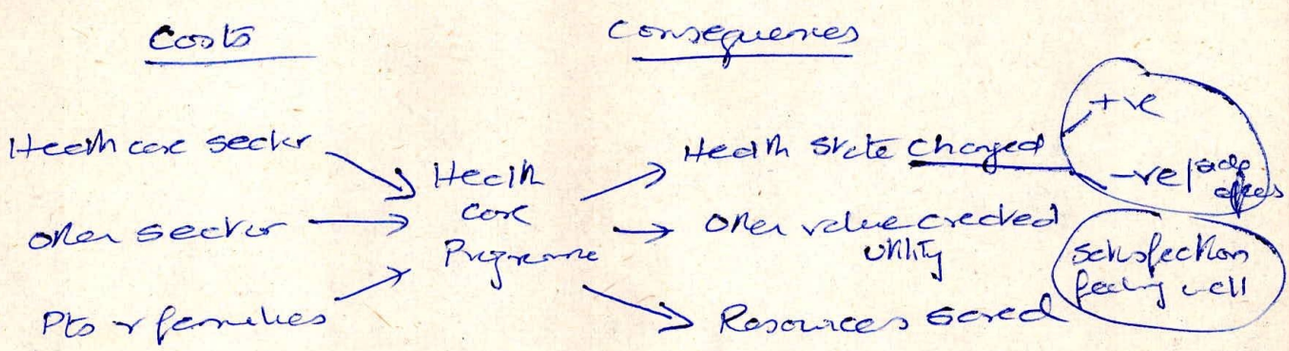
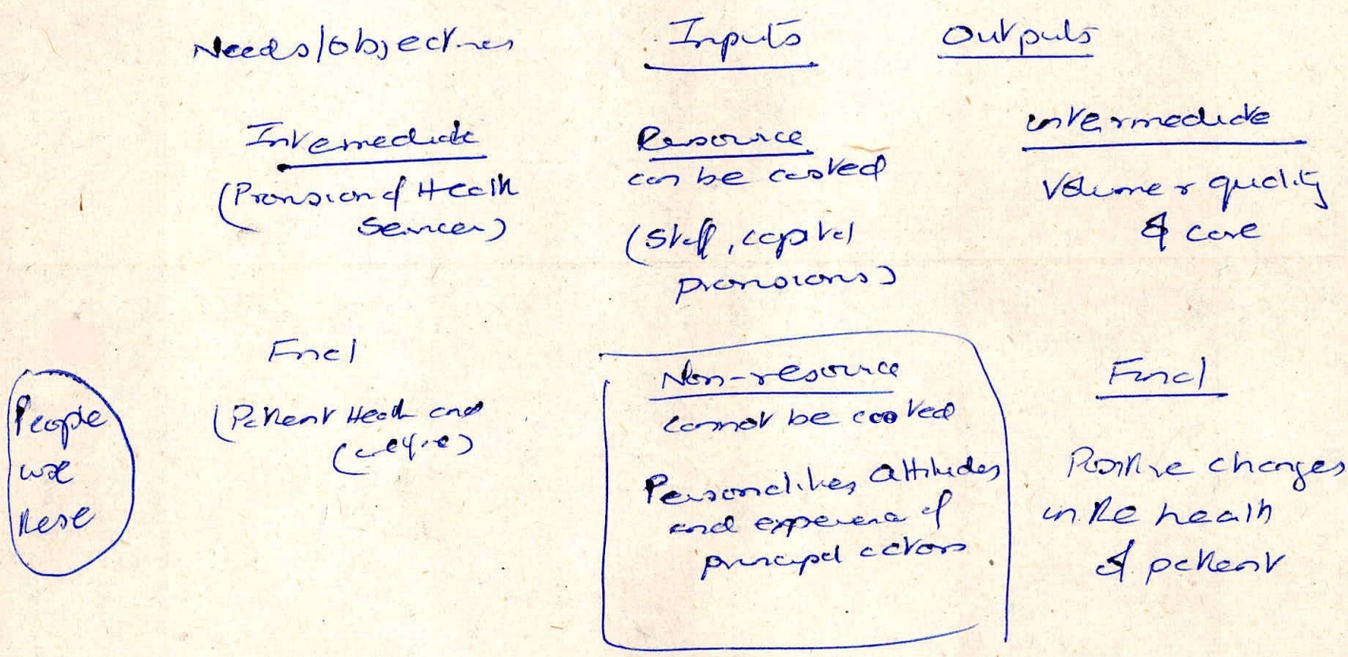
Components of economic evaluation of health care



Evaluative Framework



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Types of cost

A Health
Hospital — staffing/diagnostics, drugs, capitals, running cost

2 Primary Healthcare — staffing, training, consumables, running costs capital

B Other Sector
Social services — social work contacts
Sanitary services — unpaid support workers

C. Family costs
Patients — fees, charges, travel, dep
Family

The economic burden of mental disorders

	Direct costs	Indirect costs	Intangible costs
Patient	Fees, charges	Foregone or impaired work.	Qolife - side effects
Family	Fees, Travels	lost employment	carer burden
Service	Psych & Med sev.	Criminal justice	Staff morale
Society	Tax Burden	lost product	Stigma

—

Mental Health UK — 32 bn dwarfs Defence budget

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Macro-economics

Valuation Difficulty in developing countries

Economic characteristics of LDCs
- High levels of inflation
- currency over evaluation
- Suboptimal savings
- unequal distribution of income

Market failure
- Taxes/subsidies/quotas
- Monopoly power
- Externalities

→ drive a wedge between market prices and social costs benefits
ie market prices no good!
need to educate shadow prices

Measuring outcome in Mental Health

	Outcome measure	Applications	Limitations
1.	Mortality indicators	Suicide Addiction	Quality of life not pre-emmen,
2	Morbidity indicators (admission rate)	Repression of MH Services	Process more than outcome (proxy) Misleading?
3	Psychological well being measures (GHQ, PSE)	Symptom Severity disorder diagnosis	Clinical orientation Negative conceptualisation
4.	Subjective measures (QOL, social support)	user satisfaction Informed care	Benefits are natural and cannot be quantified
5.	Single index and utility scores eg QALYS	MH-service planning and prioritisation	- Narrow specification - loss of information Not tried and tested

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Economic Evaluation

Type of evaluation	outcome measurement eg quality of life QOL
1. cost minimisation analysis	QOL assumed the same
2 cost-effectiveness analysis	QOL measure eg WHOQOL
3 cost consequences analysis	QOL and other measures (multi dimensional)
4. cost utility analysis	Quality adjusted life year
5. cost-benefit analysis	QOL quantified in $ (Eg willingness to pay)

Scope →

Stages of Economic Evaluation

1. Is the methodology applied appropriate
2.
3 Should we do it

- was a well defined question - answerable
- was a comprehensive description of the competing alternatives given
- was there evidence that the programmes effectiveness had been established
- were all the important and relevant costs and consequences for each alternative identified
- were costs and consequences measured accurately in appropriate physical units? → therapeutic effects
- were the costs / consequences valued credibly
- was a sensitivity analysis performed

- Did the presentation and discussion of study results include all issues of concern to users

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Economic Evaluation

1. Conventional Strategy vs DOTS strategy

Costs/outcome		
a) Provider		
b) users		

Hypothesis - DOTS is more effect.

2. Scope → Geography: Rural / urban / Tribal / North/South

Duration → Baseline Minimum 12 months.

Perspective →

Viewpoint → provider, user

3. Costs

	Direct	Indirect	Intangible
Provider	Cost of Drugs, Cost of Salaries, overhead, microscopy		Staff morale
Patients	Fees, Charges		
Patients			

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Outcomes

1. Complaints
2. Cured
3. work days lost
4.
5.

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Comments

1. Classical Economics vs Dev economics

2 Choices/options Policy makers vs People

3 Devd/Devg country differences — Except Scarcity?? (relative) — Others issues very similar

4. People making economic choices (How do we use their reasons in our measurements)

5

Studies

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10/11 Health Economic issues relevant to India

- Health care systems and their objectives
- Public/Pvt mix in finance and provision
- Hospital/community balance
- Formal/informal interface

Efficiency

1. Allocative – Pursuing Health care programmes that are worthwhile
   - undertake activities where benefits exceeds costs
   - drop activities where costs outweigh benefits
2. Operational – For worthwhile programmes, ensure best use is made of scarce resources to meet programme ~~effective~~
   - maximum output for given level of resource
   - minimum cost for a given level of output

Equity (Inequalities)

1. Vertical
   - → unequal treatment for unequal need. (unequal treatment of common vs serious mental disorder)
   - → Financing based on ability to pay (progressive income tax)
2. Horizontal Equity – Equal treatment for equal need
   - equality of expenditure, access, utilization

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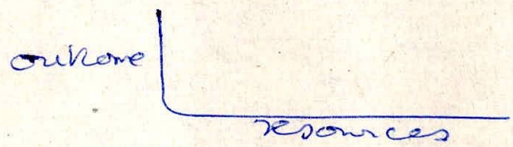
Equity : efficiency trade off

Ideal levels of equity + efficiency unachievable

why - RC some old problem — scarcity

so - a trade off is therefore inevitable

outcome → less efficient more equitable →



(ngo experience)

Health care financing and provision

Financing \ Provision	Public	Pvt
Public	1	2
Pvt	3	4

Pvt is India

1. Public Provision, public finance

   e.g govt health centres, hospitals

2. Pvt Prov Pub fin

   eg contracted out service, GP on many cases

3. Public provision / pvt finance

   e.g pvt wings of govt hosp

4. Private provision / pvt finance

   eg. pvt health care insurance

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Pros & Cons of Public/Prt health care financing

Public model system

Pros – societal objectives
wide coverage / access
redistribution of income
greater accountability

Cons – No market – hard to work optimal balance (set up internal competition)
– Not good at highlighting inefficient prect.
– poor remuneration – reduced incentives

Prt model system

Pros – Higher quality?
Higher remuneration
Greater efficiency / competition

Cons Higher consumer prices and charges
non-complimentary objectives
Less equitable
Insurance problems

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Ramesh Kanbargi

1. Expecting changes → Medical intervention (Disease specific programmes) or Development intervention → Morbidity ↓ → Longevity ↑

2. Health is produced not purchased → water → challenge of drinking water + Urbanisation + Ageing + AIDS/Plague/Malaria

3. Relooking at western Model

4. Integration of Systems

5. High Tech vs

6. Nutrition

7. Resources | Options

8. Phys | Mental | Social

Good Research → Strong Lobby

ComH - 2

People's health and economic development: *policies* for global health and *struggles* for economic justice and the right to health

David Legge
La Trobe University, Melbourne and
People's Health Movement (Australia)

Purpose

- To explore the links between global health inequalities and the unfair and unstable regime of global economic governance
- To highlight some implications for strategy for global health activists and directions for policy

Method

- Review some key reports, episodes and struggles in global health and economic regulation since WW2
- Trace some of the interplay between health issues and the wider debates and struggles regarding economic regulation
- Pull some themes from this review which might inform the practice of health activists

Events, Reports, Struggles (1944-88)

- 1944: Bretton Woods (IMF, WB, GATT)
- 1950s: Health development policy: DDT, doctors and hospitals, population control
- 1955: Bandung Conference and birth of the Non-Aligned Movement (more confident TW voice)
- 1964: UNCTAD 1 (and G77) leads to call for New International Economic Order in May 1974
- 1973: First OPEC price rise
- 1978: Alma-Ata Declaration (PHC, reference to NIEO)
- 1975-80: Onset of stagflation, end of the long boom, emergence of monetarism
- 1981: escalating interest rates, debt trap sprung
- 1981: 'Selective PHC' (the response to Alma-Ata)
- mid 1980s onwards: IMF develops and imposes SAPs
- mid to late 1980s: rise of AIDS/HIV
- 1987: 'Adjustment with a Human Face'
- 1989: Break up of the Soviet Union

A brief digression – some economic history

- 1945-1975 – the 'long boom'
- 1975 + looming threat of over-production (post Fordist crisis)

The long boom (1945-1975)

- The post-WW2 environment
  - need for reconstruction (huge demand)
  - increasing productivity (motor vehicles and cheap oil)
- The boom
  - new technology, capital and labour brought together to make things and services that people need and are able to pay for
  - increasing productivity frees up labour to make new things and to recycle wages as consumption
  - some 'trickle down' to the poor and to the Third World

The threat of 'over-production' (and 'post-Fordist crisis)

- Where expanding productivity (with stagnating employment growth) exceeds 'demand' (because of stagnant purchasing capacity)
- Threat of overproduction limits the possibilities for growth and development
- 'Compensatory' mechanisms which exacerbate the damage from 'over-production'
- Strategies for managing the threat of 'over-production'?

The 'crisis of over-production' (Post-Fordist crisis)

- Expanding (capital intensive) productive capacity faces stagnant demand
  - saturated markets and/or
  - markets with real needs but limited purchasing capacity
- Understood in the corporate world in terms of reduced profitability
- Understood in the policy world as falling growth rates
- Eliciting a range of corporate strategies and policy responses
- Many of which exacerbate the risk of crisis

Reduced profitability: compensatory corporate strategies

- Search for new markets, new products and better marketing (including commodification of family and community functions)
- Externalise costs (including to labour and to the environment)
- Increase market share (horizontal M&As),
- Increase market power (eg vertical integration)
- Reduce wages
- Replace well paid labour with technology
- Many of these strategies will further reduce demand

Slowing growth: compensatory policy responses

- Cut taxes (in particular, reduce corporate and executive tax burden) to compete for new investment
- Outsource and privatise public sector service provision (new market opportunities)
- Labour market deregulation (union busting) to reduce labour costs
- Deregulate environmental controls (converting natural capital into recurrent revenue)
- Force repayment of debt from TW countries
- Force TW countries to open their markets and economies (under the slogan of free trade and open markets)
- Many of these strategies further reduce demand

Responses which tend to exacerbate the crisis

  - Destroy the environment
  - Increase unemployment and inequality
  - Weaken family and community
  - Decay social infrastructure
  - Transfer value from South to North
  - Grow the power of the financial sector
- Exacerbate the over-hang of productive capacity over effective demand

Strategies to counter the threat of 'over-production'

- National Keynesianism (counter-cyclical taxation and public spending)
- Profit recycled as consumption through debt
- Globalised free trade
- Self-sufficiency and regional trade

Profit recycled as consumption through debt (private and corporate)

- Slow growth outlook so profit from trade and production flows into financial sector
- Private consumption supported through increasing private debt (recycling profit as consumption)
- Corporate rationalisation (including M&As, closures and bankruptcies) financed through corporate debt
- Increase size and power of financial sector

Free trade - the key to growth and development?

- 'Free trade' - a catch-all slogan obscuring countries' and corporations' manoevering for advantage
- Regulatory framework defining 'free trade' discriminates in favour of the rich West
  - IP rules compared with barriers to people movement
  - non- agric. market access compared with agric. protection
  - declining terms of trade (commodities vs manufactures)
  - minimal commitment to 'special and differential treatment'
- Globalised free trade risks exacerbating the crisis of overproduction
- Protectionism, can have important benefits as well as drawbacks
- Amin: self-sufficiency and polycentric regional (South South) trade

End of digression back to main story

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- 1989: Break up of the Soviet Union

Events, Reports, Struggles (1992-99)

- 1991: USTR attacks Thai administration over pharmaceuticals policies
- 1992: WHO: 'Health Dimensions of Economic Reform'
- 1993: WB: 'Investing in Health' (virtuous cycle story, SAPs can be compatible with health development!, new interventionism)
- 1995: WTO established
- 1995-98: OECD drive for MAI (note role of NGOs and internet; but continuing push in WTO under 'Singapore issues')
- 1997: Sth African parallel import legislation passed, challenged (challenge defeated April 2001, note role of MSF and other NGOs and internet)
- 1999: PRSPs implemented (new and improved SAPs)
- 1999: WTO in Seattle: outrageous process; dramatic ~~protests~~

Events, Reports, Struggles (2001-04)

- Jan 2000: USTR withdraws threats to Thailand over compulsory licensing of DDI after 12 years of pressure
- Dec 2000: People's Health Assembly and People's Health Charter
- April 2001: Defeat of big pharma in South Africa (note role of MSF and global social movements)
- April 2001: Norway Conference (WHO accepts differential pricing)
- June 2001: CMH Report (warning about health and stability: virtuous cycle story repeated, 'CTC model' and scaled up interventionism: reliance on increased aid (and GFATM) and PRSPs)
- Sept 2001: 9/11
- Nov 2001: Doha and the Statement on Public Health (especially Para 6 and compulsory licensing; note rearguard action by US)
- Oct 2002: Bristol Myers Squib defeat in Thai DDI case
- Mar 2003: Invasion of Iraq (US unilateralism; widespread opposition; note limits to US power)
- Oct 2003: Negotiations for US Thai FTA commence (at risk: comp licensing, data access, extended IPRs)
- Nov 2003: Cancun: G22 stands up to G7; deadlock over agriculture and 'Singapore issues'; US moves to bilateral and regional FTAs
- Nov 2003: Miami FTAA-lite (US knocked back by Latin America)
- Jan 2004: IMF report critical of US twin deficits

Emerging Themes and Conclusions

- Links between health crisis and global governance regime
- Continued drive for vertical interventionism, rather than comprehensive PHC and capacity building
- Despair, violence and instability as a consequence of health crisis and poverty
- Global economic crisis critical to health outcomes; must be part of the health activist agenda
- US hegemony and US unilateralism key factors but there are limits to US power
- Success of TW, NGO and social movement struggles

Links between health crisis and global governance regime

- Affirmation of links between health crisis and global governance regime in AA'78
- Denial (or obscuring) of these links in WB'93 and CMH'01)
- WB'93
  - virtuous cycle story
  - health development through (improved) structural adjustment
- CMH'01
  - virtuous cycle story
  - health development through foreign aid (GFATM) negotiated through PRSPs (SAPs)

Vertical interventionism

- Continued drive for vertical interventionism rather than comprehensive PHC and health system capacity building
- Both WB'93 and CMH'01 gesture towards integrated health system development and capacity building and PHC but rely largely on vertical programs and the new interventionism
- Global governance regime faces legitimation crisis
  - debt, SA and damage to health
  - AIDS crisis and lack of resources, lack of action
  - poverty and health crisis linked to refugees, violence and instability
- Vertical interventionism a reflection of twin drivers
  - defence of global governance regime
  - legitimation through 'addressing' the health crisis

Poverty & health crisis -> despair, violence & instability

- Despair, violence and instability as consequences of health crisis and poverty
  - note CMH warnings of June 01 followed by 9/11
- Reflection
  - strategies which aim to delegitimise will elicit responses that aim to legitimate
  - delegitimation does provide political leverage but
  - need to go beyond delegitimising to positive policy directions for change

Global economic crisis and health

- Global economic crisis major determinant of health crisis
- Responses to economic crisis (and the reform of global economic governance) critical to health outcomes
- Bridging issues
  - TRIPS, AIDS & access to drugs a bridging issue
  - fair trade in particular commodities such as cotton, tea and coffee
  - agriculture (defence from dumping; market access; and farmers' livelihood and local self-sufficiency)
- Global economic policy reform must be part of the health activist agenda

There are limits to US power

- US hegemony and US unilateralism key factors defending global status quo
- But there are limits to US power
  - US dollar status and US / global vulnerability
  - public sensitivity to US deaths but lack of auxilliaries willing to die for Uncle Sam
  - growing credibility gap beyond the US
  - limits to US public acceptance of corporate corruption associated with money politics
  - oppositional social movements, NGOs and information resources (internet)
- Importance of engaging with progressive NGOs and networks in the US and across rich world

Successful campaigns in health related struggles

- NGO and social movement alliances around particular issues; supporting TW governments and officials
- Resources and strategies
  - mass protest (Seattle)
  - technical leadership (MAI Non!, CPT, MSF, TWN)
  - high profile cases / issues (pharmaceuticals in South Africa and Thailand, tea and coffee and fair trade)
  - internet - communication medium and information source
  - grass roots NGOs and social movements
  - leadership documents (such as the People's Health Charter)

Strategies and directions

- Build on successful strategies
- South South and South North solidarity (people, issues, organisations)
- Bring economic reform into health policy reform discourse
  - TRIPS and access to drugs
  - health and fair trade
  - farmers' livelihoods, local self-sufficiency and rural health development
  - environmental issues such as global warming, biodiversity
  - health activists join economic debates
- Delegitimise policy reports which deny the need for alternative economic policies to create the conditions for better health
  - build a strong alternative health policy (linked to global economic reform)
- Global economic reform must be part of the health agenda
  - fair trade with special and differential treatment
  - trade policy which is pro-equity and pro-development
    - sensible self-sufficiency and polycentric South South **trade**

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Events, Reports, Struggles (1992-99)

- 1991: USTR attacks Thai administration over pharmaceuticals policies
- 1992: WHO: 'Health Dimensions of Economic Reform'
- 1993: WB: 'Investing in Health' (virtuous cycle story, SAPs can be compatible with health development!, new interventionism)
- 1995: WTO established
- 1995-98: OECD drive for MAI (note role of NGOs and internet; but continuing push in WTO under 'Singapore issues')
- 1997: Sth African parallel import legislation passed, challenged (challenge defeated April 2001, note role of MSF and other NGOs and internet)
- 1999: PRSPs implemented (new and improved SAPs)
- 1999: WTO in Seattle: outrageous process; dramatic protests

Events, Reports, Struggles (2001-04)

- Jan 2000: USTR withdraws threats to Thailand over compulsory licensing of DDI after 12 years of pressure
- Dec 2000: People's Health Assembly and People's Health Charter
- April 2001: Defeat of big pharma in South Africa (note role of MSF and global social movements)
- April 2001: Norway Conference (WHO accepts differential pricing)
- June 2001: CMH Report (warning about health and stability; virtuous cycle story repeated, 'CTC model' and scaled up interventionism; reliance on increased aid (and GFATM) and PRSPs)
- Sept 2001: 9/11
- Nov 2001: Doha and the Statement on Public Health (especially Para 6 and compulsory licensing; note rearguard action by US)
- Oct 2002: Bristol Myers Squib defeat in Thai DDI case
- Mar 2003: Invasion of Iraq (US unilateralism; widespread opposition; note limits to US power)
- Oct 2003: Negotiations for US Thai FTA commence (at risk: comp licensing, data access, extended IPRs)
- Nov 2003: Cancun: G22 stands up to G7; deadlock over agriculture and 'Singapore issues'; US moves to bilateral and regional FTAs
- Nov 2003: Miami FTAA-lite (US knocked back by Latin America)
- Jan 2004: IMF report critical of US twin deficits

Emerging Themes and Conclusions

- Links between health crisis and global governance regime
- Continued drive for vertical interventionism, rather than comprehensive PHC and capacity building
- Despair, violence and instability as a consequence of health crisis and poverty
- Global economic crisis critical to health outcomes; must be part of the health activist agenda
- US hegemony and US unilateralism key factors but there are limits to US power
- Success of TW, NGO and social movement struggles

Links between health crisis and global governance regime

- Affirmation of links between health crisis and global governance regime in AA'78
- Denial (or obscuring) of these links in WB'93 and CMH'01)
- WB'93
  - virtuous cycle story
  - health development through (improved) structural adjustment
- CMH'01
  - virtuous cycle story
  - health development through foreign aid (GFATM) negotiated through PRSPs (SAPs)

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COM H 2.1.90

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FINANCING HEALTH PROJECT WITH PEOPLES PARTICIPATION

EXPERIENCE OF R A H A .

I shall first try to describe what the Raigarh - Ambikapur Health Association has been trying to develop over the last fourteen years. RAHA is a registerd Society since 1987. It co-ordinaters three base hospitals and 62 rural health centres in 2 districts. From 1974 onwards it's focuss is integrated community health through people's participation, in decision making. Planning implimenting and financing.

The area of operation :

Geographically it is the Eastern spur of the great plateau of central India. Thinly populated (70 to 100 p./sq.k.m.) Raigarh and Surguja districts have a population of about 2.5 millionfor 35,437 sq. km. Surguja has 7,40,000 and Raigarh 700,000 tribals. They form respectively 56 and 49 percentage of the total population. There is no industry worth mentioning, except the Western coal-fields in Surguja. 70% of the tribals are cultivators and 24% agricultural labourers.

Women hold an honourable place and go freely about in the country side. In the fields an in the Jungle they work in happy companionship with the men. Their economy is not really focussed on " increasing production" but rather on fulfilling the needs of immediate consumption. Apart from preserving seeds for the next sowing season, they freely spend all they have. Their willingness to share on the other hand is remarkabble. Motives of profits and competion are remote. Another mental attitude of the tribals need to be mentioned: the need to move together. However, it can also be built up into a real sense of solidarity when an immediate benefit for the individual is sacrificed for the future greater benefit of the group.

The Development Activities of RAHA in shrore :

The Christian missionaries who came to Chotanagpur had the human development, the Shaping of a more just and liberated Society in mind. Education is a primary tool. (1) Raigarh has how about 35,000 children in 92 Primary, 41 middle and 15 high schools . (2) Through the well known Grihini schools more than 13,000 young tribal village firls have been formed to be better women, wives and mothers. Most of them return to their villages to lead and speak out for their totally uneducated brothers and sisters. Others go out in search of employment in order to support their family economically (3) Since 10 years 75,000 tribal children between 3 to 6 get everyday basic stimulating environment they need to develop their full human potential through the Balwadi programme which operates in 380 villages. Local educated girls are trained as Bal Sevikas . (4) The Jagruk Kisan programme took shape in Raigarh district in 1979 with initial assistance of ISI-MOTT. At present 14,000 farmers are helped by 800 animators in 30 centresshe, study ways and means to improve their situation.

In this paper however, I shall mainly deal only with our community health programme indetail, which grew from the discovery that :

- the traditional system of health care did not solve the acute needs of the economically weak tribal population,
- that even well-run hospitals with high bed-occupancy did not mean that the root-causes were tackled, and that improvements in the health situation of the whole community were brought about,
- that hearly 60% of all diseases are preventable.

A wide dissemination of basic knowledge, a change in habits and attitudes and a massive mobilisation of locally available skills could be a better strategy for community health improvement than the cetralised specialised and expensive services of a few big institutions, however meaningful they still are as the top of a pyramid of services.

STEPS 1. Training Village Health Workers (VHW) in 1976.

Volunteers from 5 different religious institutions formed a mobile team. Some of them were nurses and some social workers. The village leaders were approached. Villages were relatively small (25 to 100 households) and each health centre caters to 50 - 100 villages. With the backing of the village leaders and the religions leaders, the need for effective and preventive health care was explained. The people began to realize that they would no longer be forced to sell their cattle or fields to save the life of a sick relative. The people were then invited to select from among themselves a man and a woman who were settled in the village. , who were accepted as leaders and who through their proven devetednesd and ability give reasonable hope that they would effectively and generously help the community. Although men are the traditional healers in tribal society , the women were also invited since they do most of the nursing. They were given, at first, two weeks' camp and then were sent back to their villages. After six months they were called for a second camp lasting two weeks. After this each one was given a first aid kit. After six months of practice as effective village health workers, they were called to the centre for a third camp. These trained VHW's were followed up every month.

Follow Up Meeting :

The monthly meeting is of crucial importance. All the CHW's then exchange their experiences, their records are checked, the medicine kits are restocked, new initiatives are discussed and further improvements are planned. It is a great encouragement to do things together, to feel, you are working in a team that understands and appreciates your efforts. These regular meetings are the ordinary and steady communication channel towards upwards and dowwards.

The VHWs do not get any remuneration from RAHA, except a meal on the monthly meeting day since many have to walk a great distance , 2 - 6 hours. From the beginning RAHA has been careful not develop an employee mentality among them. Their work is considered as a challenge to their generosity. However, we favour the giving of an annual remuneration by the villagers to the VHWs in accordance with tribal custom.

The School Health Programmes

Started on 1980, after a workshop by VHAI, Volunteer school health guides were chosen from among the staff, physical check up were organised and a dentist from one of hospitals visited the main centres. he gave dental care to the school children and teachers in subsidised fees. At the same time patients from the village also profited from this special care. In 1983 Dr. Meera Shiva & Co. were called for another training for the school health guides. Now 273 teachers are working as part time voluntary school health guides in primary - middle and high schools. Twice a year a refresher course is organised for them. Periodic school check up for school children was organised by the help of our doctors and government primary health centres. At this occasion preventive measures are undertaken against blindeness, skin diseases. Along with this immunization is also administered.

The TB Control Programme

In 1984 we got in touch with the tuberculosis control programme of the districts of Ambikapur and Raigarh. National Tuberculosis Institue , Bangalore, was approched by RAHA staff and got a trainning organised for our doctors, community health nurses and lab technicians, in NTI, Bangalore. In collaboration with D.T.C. two of our hospitals were recognised as diagnostic and treatment centres . D.T.C. para medical staff gave training to RAHA staff to collect sputum and prepare slides for testing. Since 1985 September , we are supported by D.T.C., Raigarh and Ambikapur now. We are in a position to treat all the T.B. patients free of cost. NTI has agreed to retrain our staff from the second week of May , 1990. With the help of some outside support, we undertook training of health workers, paramedicals, and centre nurses, specially on prevnetion and early detention, of T.B.

See Appendix 1.

THE MEDICAL INSURANCE SCHEME:

People must be taught to prevent disease, but they should also be protected against the economically crippling effects when unavoidable sickness or accident strikes. In these cases, medical care and hospitalisation are beyone the paying capacity of most of our people and certainly of the poorer.

Therefore in order ;

- to facilitate essential medical care to the rural areas on a cooperative basis so that the crushing burden on an few , could be carried lightly by many;
- to act an incentive to increase participation by the people in the total health programme.
- to enable our base hospitals to fulfill their priority -objective more effectively, namely medical services for all including the poorest,

RAHA has gratualybuilt up an original system of INSURANCE.

It rests on four pillars:

1. Maximum participation of people.
2. There must be a great stress on prevention. Every group that takes part , be actively engaged in preventive and protective measures under the guidence of the nurses and the dedicated service of a village health worker.
3. The spirit of solidarity is the main motive. It is as essential as the two previous one. If every body tries to get back his money's worth, irrespective of his medical needs, the whole scheme is bound to fall. The motto should rather be:" I pay for my brother, and my brother pays for me.
4. Low-cost care: most of the VHPs are traditional medical practicioneres. They need to be encouraged.In order to give assurance to their skill , we give them refresher training on use of herbal medicines, it's proper use collection and protection of herbal plants along with alopathic system.

More than 5 years of training village health workers preceded the start of our M.I.S. (Medical Insurance scheme). Even then we made the mistake of focussing on insurance for hospitalisation in the beginning. There was very little or no response, because nobody wanted to be hospitalised. As proposed for "Local treatment" - insurance got a better response. At first people had not have the slightest idea what insurance ment and hoe they could benefit. After four years of operation, they experienced the enormous advantages.

How does the M.I.S. function?

We work in a two-tier system. In the very begining the yearely membership to MIS was Rs. 1. per person per year. Gradually it increased to Rs. 2.50 then to Rs. 4. Now it is fixed to equivalent of 2 Kg of rice(Rs. 6-7). This can be given in cash or in kind, two months in advance. This local insurance fund at health centre is called as the " SAMARITAN FUND" and is locally managed by a health centre committee. This S.F is used to pay for the re-stocking VHWs medicine boxes and curetive services at the health centre level.

The CENTRAL FUND (second tier) takes care of the hospital referals and is centrally managed, although it is fed by yearely contributions from the different A Samaritan Funds.

THE PURPOSE OF SAMARITAN FUND.

- to give free treatment to the members (according to its capaity).
- to finance all other preventive and protective measures, as needed.
- to foster early treatment, independent of economic conditions, which is the secret to keep cost of treatment low. A person who does not have to pay at the time of treatment, will be inclined to come early, to health center or to hospital.

ELIGIBILITY: those who belong to the economically weaker sectiob, irrespective of caste and creed, but who can be trusted to join in a spirit of solidarity and are ready to take part in the preventive measures. The services of an active VHW is therefore essential.

Collection of the fund: is chiefly through membership fees, which have to be paid, once a year and two months in advance.

Repeatedly changing the fee was disturbing therefore now all have agreed to pay yearly "the value of two kilos of rice per person". The collection can be done in cash or kind. This linking to a common market commodity avoids the need for frequent changes, allows for minor local variations, fosters early collection (during harvest time: dec/jan), and will show a yearly increase in real value to match the increasing cost of treatment (N.B. the whole family should join. Unborn children are insured insured with the mother, and concessions can be given to nuclear families with more than six persons.

Management of the fund: the money collected is kept at the local health centre, and the members are regularly informed through the VHWS of expenses incurred/income received. With temporary

assistance from dono agencies, RAHA has so far been able to double every rupee collected by fees. This was necessary since fees were very low, and the number of members still insufficient to be fully self relient. Those centres who has got high membership stand on their own and do not need any outside help.

The Samaritan Fund is insufficient to last a whole year, where there are less members. In such cases , restrictions are agreed upon (excluding tonics, vitamins, part or full payment of injections.).

The SAMARITAN FUND is not just an insurance sheme. It acts as a catalyser for community participation. It is the change over from the old system of health care where every one pays for himself and which was consequently limited to those who could pay, to a self relient community care system which include the poor because each one pays for the other, and the other pay for him. Through the Samaritan Fund (sp. through prevention and early detention /treatment)we see the sick deminish considerably in number and the poor can equely benefit because all share the burden. It is an implicit invitation towards concern for one another and gives our health institutions the opportunity to serve those for whom they are originally started.

THE CENTRAL FUND AND THE HOSPITAL REFERAL SCHEME.

Part of the money collected for the Samaritan Fund, Rs. 2/- per person , is paid to this Central Fund, from which the hospital bills of members are been paid. Patients contribute only a nominal Rs. 100/- per case or Rs.200/- depending on the distance they have to travel to the referal hospital.

Conditions for referal:-

1. There must be an active trained VHW in the village who regularl . attends the monthly follow up meetings. She/he keeps the records of her /his activities in the village.
2. Only those who have paid their membership fee two months earlier,
3. A sufficiently qualified nurse in the health centre, who effectively takes care of both preventive and curetive needs of the people.

METHOD OF REFERAL

Normally a sick person first reports to the VHW who gives the first aid or initial treatment. When the need arises, informs the nurse or sends the patient to the health centre. Depending on the cases the nurse has then to decide , whether the patient needs to be tranfered to the hospital .The patient comes to the OPD of the hospital with RAHA referal card giving essential data. The patient comes with Rs. 100/- in hand . (in case the patient is poor to finf Rs. 100/- the nurse advances part of it).

If treated in the OPD only , the patient pays up to Rs. 100/- only. If admitted by the

doctor, the patient pay the full Rs. 100/- as his share of the bill. RAHA pays the rest up to Rs. 1000/-. No individual acquires the right to be admitted . Only the doctor decides when and how long the patient has to be admitted. The patient has to arrange for his own food. He has to be accompanied by a companion who sees to his all other needs.

Limitations

- no case older than one month , should be given a RAHA referal card.
- no case resulting from a criminal action or indused abortion etc. will be cosidered.
- old cases like T.B. patients are convered by anotherprogramme.

TREATMENT AT HEALTH CENTRE LEVEL

Can the Medical Insurance Scheme become self supporting?

The real cost of treatment can be kept low if people take an active part in prevention If they report early , or are detected early,If after correct diagnosis treatment is started with out delay. If nurses and people are gradually educated towards a low-cost and rational drug-therapy. If all preventive and promotive measures (immunisations etc.) are used. If herbal home remedies are practiced judiciously.

ACHIEVEMENTS AT HEALTH CENTRE LEVEL.

Among 62 of our health centres, 35% started to functionalready self supporting and 65 % are still in need of out side income. The reason for the different degree of success is due to :- Less number of membership to MIS.

- Freequent transfer of centre nurse
- Lack of raport of centre in-charge.
- Lack of motivation of people to MIS .

OTHER SOURCE OF INCOME FOR HEALTH CENTRE.

1. Dedicated free service of the centre incharge, and other support of her community members.
2. Minimum income from the registration fee from the members(Rs..5-1/-)
3. Some income from non-members.
4. Income generation like kitchen garden , poultry etc.
5. Use of herbal medicine- incurre less expense.

con/p.8

ACHIEVEMENTS AT HOSPITAL LEVEL

For the first three years we saw a big increase in the number of patients refered: 300-500-700. In the fourth year it leveled off at 600 even droped further to 500 as health education for prevention -Immunisation was practiced more widely. The avarage cost ofor patient was less than Rs 400/- . We needed almost Rs.2,00000 for hospital treatment alone which we had not yet succeeded to collect, from the people. There fore we depended still on some out side financial support.

Now we have got a high increase of membership : 75032. This means our Central Fund came to Rs. 1,5000/-+ patient's contribution Rs.58650 /- i.e. a total of Rs. 2,08714/- Our total expense ofor patients refered acame to Rs. 1,85346.

From this we learn the good news that in 1989 for the first time we are able to pay all the hospital bills of RAHA patients from their own collection. This could be possible because 1800 VHWs are working enthusiastically in the villages along with centre nurses towards SELF RELIENCE.

From 1975 health camps were held all over RAHA region . More than 500 men and women have gone through one or more of these camps. About 1800 VHWs from all over 1200 remote tribal villages are now actively engaged in health promotion and primary health care. The momentum of enthusiasm , co-operation and team spirit generated in these initial staged , would eventually die out if ther was no coiled-up SPRING ready to give new energy.This is the new role of the nurses in RAHA, which is understood as motivating and guiding these village health workers. The nurses now multiply their services to the people by the number of villages that take part in the MEDICAL INSURANCE SCHEME.

From the very beginning we have been careful not to develope an employee mentality among these VHWs. They get no remuneration , execpt a meal at the monthly meeting. They see their part- time work as a challange to their generousity. The appriciation they receive from their community is the added stimulus. Self-sacrifice and generousity are not the monopoly of Christians . They can be found in any community. although they are nowhere easy.

SISTER PRABHA[illegible]
Executive Director of RAHA

App. I

T. B. CONTROL PROGRAMME 1989 R

AMBIKAPUR.

Month	New Total	Cases Extra pul	Pul.	Sputom Total	done + Ve	X ray	Comp.	Old Case	OPD Pat.	IP Pat.	OPD spet.	IP Spent.	Posumal	T.B. Name of D.
Jan.	28	-	28	28	2	28	1	689	79	-	8724	-		1. SM.
Feb.	28	5	23	39	3	25	6	716	113	-	11722	-		2. Eth 200 mg.
Mar.	32	9	23	38	9	30	4	738	126	5	10864	637		3. Eth 800 mg.
Apr.	51	4	47	78	17	51	4	766	109	35	8994	2039		4. Is Fort
May	56	9	45	50	9	50	1	813	139	33	11087	2432		5. Th 50 Mg.
June	32	3	29	46	8	31	-	863	171	-	17436	-		6. Rth 450 mg.
July	40	10	30	42	9	35	3	901	155	-	14654	-		7. INH 300 mg.
Aug.	35	8	27	42	6	31	-	937	199	-	17384	-		8. INH 100 mg.
Sept.	29	9	20	52	2	28	6	972	158	-	16014	-		
Oct.	14	-	14	53	10	14	6	699	15	-	1714			
Nov.	24	-	24	66	14	14	3	7117	26	-	2282	-		
Def.	-	-	-	-	-	-	-	-	-	-	-	-		
1988	369	59	310	534	89	337	51				MANKIPI			
Jan.	6	1	5	28	2	6	1	154	18	-	8242	12848		
Feb.	12	1	11	33	7	12	2	166	-	-	6384	3474	2	1. T.S. 2700 Vials
Mar.	8	-	8	40	1	8	2	140	-	-	10103	13188		2. Eth 800 mg. 1400
Apr.	11	3	8	37	6	11	1	145	101	9	12352	7533	3	3. IS Fort 25000
May.	10	-	10	61	7	10	2	153	83	7	9006	6318		4. INH 300mg.
June	8	1	7	36	3	8	-	145	90	3	10503	5421	5	
July	8	1	7	33	6	8	-	149	87	14	10050	22481	2	5. INH. 100 mg. 2000
Aug.	5	-	5	39	3	5	3	137	97	6	10613	8018		
Sept	4	1	3	43	2	4	9	132	58	8	5926	11117		
Oct.	5	-	5	39	4	5	2	131	20	-	2167	-		
Nov.	12	1	11	41	5	12	7	112	-	-	-	-		
Dec.	-	-	-	-	-	-	-	-	-	-	-	-		
Total														

APP.II

THE RAHA INFRASTRUCTURE

Village Health Workers	1755
VHW Supervisors	63
TAB trained active	410
No. of School Health Guides	275
No. of Nurses RNRH	40
No. of Nurses ANM	23
No. of Rural Health Centres	62
Referal Hospitals	3

	R	S
Population covered by RAHA	3,00,000	4,00,000
Total population of both districts	25,00,000	

MEDICAL INSURANCE SCHEME

Membership	Total	1980/1	2000
		1982	10000
		1983	37000
		1984	45000
		1985	50000
		1986	51000
		1987	56358
		1988	50226
		1989	75032

RAHA Patients refered to Hospital

1981	300
1982	551
1983	711
1984	594
1985	387
1986	272
1987	267
1988	234
1989	231

Total No. of patients cared in the village by VHP 3,36,000

Total No. of patients treated in the Health centres 1,92,000

App-II

RAHA Patients Bills Paid by RAHA

	H.C.HOS KUNKURI	A.Pur	Raigarh	Total
1981	50,487.95	26,477.25	15,081.00	92,046.00
1982	1,17,076.40	38,694.75	27,336.00	2,83,806.00
1983	1,76,904.05	76,889.65	29,780.00	2,83,570.00
1984	1,33,365.50	34,293.25	16,493.00	1,84,151.00
1985	1,65,878.00	44,307.00	12,707.00	2,22,992.00
1986	1,23,198.00	40,724.00	11,363.00	1,75,285.00
1987	1,25,477.00	55,949.00	8,519.00	1,89,945.00
1988	1,36,462.00	69,749.00	6,082.00	2,12,293.00
1989	1,00,046.00	70,500.00	15,000.00	1,85,546.00

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QUALITY, COST AND UTILIZATION OF HEALTH SERVICES IN DEVELOPING COUNTRIES. A LONGITUDINAL STUDY IN ZAÏRE

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Abstract—Many developing countries, particularly in Africa, have recently introduced payment schemes based on the selling of essential drugs. This is one of the main elements of the Bamako Initiative according to which the income generated would ensure a reliable supply of drugs and would improve other aspects of the quality of the services offered. Thus, quality improvements would compensate for the financial barrier and as a result the utilization of public health services would be increased or at least maintained. These hypotheses have proven to be partially valid, since there have been cases where the utilization of health services has increased and others where it has decreased; these inconclusive results have fuelled criticisms concerning the inequitable nature of these measures.

This longitudinal study in a rural community of Zaïre shows that the utilization of health services had diminished by close to 40% over 5 yr (1987–1991) and that 18–32% of this decrease is explained by cost. The regular supply of drugs and the improvement in the technical quality of the services—technical qualification of the staff, allocation of microscopes, and renovation of the infrastructures—was not enough to compensate for the additional financial barriers created by the increased cost of services. However, on a local level, the interpersonal qualities displayed by some of the nurses sometimes helped to compensate for the negative effects of the costs, and even to increase the level of utilization of some health centres.

The quality of public services has often been neglected in developing countries. While some attention is given to technical qualities, the interpersonal components of the quality of the services are generally ignored or underestimated by planners and they are the very components which are most resistant to change. It will be a major challenge for health systems to address this issue of quality of care in order to minimize the negative impact of the introduction of user payment schemes. Therefore, now is the time to place quality next to coverage in planners' agendas.

Key words—Bamako initiative, utilization of health services, quality, costs, qualitative methods, quantitative methods.

INTRODUCTION

The austerity measures imposed by the international economic climate of the 1980s led health care officials in developing countries to reexamine their service development policies, adopting strategies like the Bamako Initiative. The experiences of payment schemes and the Bamako Initiative raise several questions about equity, and the impact of costs on the activity of health facilities is among the main issues under discussion.

In the 1980s, some authors defended the idea that demand for health services was independent of the prices charged by the health facilities. According to them, "people are able and willing to pay for health services." [1–3]. This point of view, which is based primarily on the results of certain cross-sectional studies [4, 5], has received only partial support, since this position was seen by some as being too narrow and even dogmatic [6–8]. Many studies suggest that direct costs are among the principal criteria which health system users take into account in their decisions [9–14] and several longitudinal studies report a dramatic drop in the activity of health facilities following the introduction of direct cost recovery systems [8, 15–21].

Several studies suggest that the most vulnerable social strata (poor [8, 17, 20], rural [17] or isolated [19] populations, children and the elderly [17]) are those most affected by the introduction of direct cost recovery systems. The price elasticity of demand may differ significantly from one social category to another [13]. A recent review of studies on utilization reveals that income and, more generally, ability to mobilize resources are highly associated with the utilization patterns of the communities [22]. Lastly, non-users frequently report that they have not sought health services because the utilization costs are too high [7, 22–28].

The negative impact of the introduction of direct cost recovery systems is also often seen as the consequence of the poor quality of the services provided by the public system. The World Bank suggests that an improvement in the quality of services would compensate for the negative effects of prices, knowing that "the relatively longstanding practice of the

church-mission facilities gives fairly conclusive evidence that people will pay for quality health care" and there is ample "... evidence that the poor can and will pay for some health service, when the services and pharmaceuticals are available and their quality is perceived to be high." [1]. UNICEF recently took the same position: "the trend towards decreased demand for services can be reversed when efforts are made to improve the services before a system of payment is introduced." [18].

This point of view seems to be widely accepted. In fact, there are numerous examples where under-utilization of public health facilities is directly attributable to the poor quality of the services [25, 29–35]. The health facilities run by religious orders are often preferred to the structures in the public network because they offer better quality services, though their fees are often higher [1, 25, 36]. Populations are sometimes prepared to travel much greater distances to reach these missions than they are for the government-run structures [37]. Lastly, several experiences, notably in Benin, Guinea and Mauritania, suggest that revitalization of the public sector and general improvement of the quality of services are capable of stimulating utilization of these services [18, 38, 39].

Yet, we do not know precisely what changes are likely to modify public perception of the quality, and subsequently, to effectively compensate for the negative effects of the costs. Some studies suggest that patients are attracted by the presence of qualified personnel [5, 32, 34, 40, 41] and that they would be prepared to make substantial efforts to use services which they recognize as technically competent [37, 42–45]. The availability of drugs also appears to have a significant impact on the utilization of public health resources [17, 18, 30, 38, 39, 45–48]. It is not certain, however, that the quality of the infrastructures has a significant influence on utilization patterns [46]. Some components of quality which patients seem particularly concerned with, such as the interpersonal qualities of the health staff, are rarely mentioned by planners and health care officials who seem to focus more on the technical aspects of the quality [49]. Thus, rejection of public health facilities is sometimes associated with a negative perception of the health care workers who are sometimes faulted for lacking compassion, or being inattentive, dishonest, or disrespectful [12, 16, 17, 30, 45, 49–53].

The longitudinal study presented here was carried out in a rural health zone in Zaïre. It aimed primarily to evaluate the impact that the different components of the supply of services has on the level of activity of public health facilities. The study focused on an analysis of the consequences of changes in cost and quality in a zone offering a high degree of accessibility and quality of services in the African context.

Study setting

The Nioki rural Health Zone (hereafter referred to using the French acronym ZSR: Zone de Santé Rurale), with a population of some 90 000, is about 500 km northeast of Kinshasa and covers approx., 10,000 km^2. Nioki and Ntandambelo are the main cities in the zone. The remainder of the inhabitants are scattered among villages of varying sizes, located near the main travel arteries (roads and rivers). The region of Nioki is poor and the economy is one of subsistence. The standard of living has dropped considerably in the last 5 yr as a result of high inflation rates and the decrease in market price of raw materials.

Since it was established in 1982, the ZSR has benefitted from the support of the Canadian International Development Agency (CIDA). The Central Bureau (known as the BCZSR) provides administrative backup and support for curative and preventive activities. The health facilities include the health centres (HC) run by the ZSR and a 110-bed hospital in Nioki owned by a private forestry company. There are now 39 centres, four of which are in Nioki. They usually have a nurse and a midwife, and sometimes a lab technician. Through a building renovation program, most of the older centres have gradually been refurbished with the financial participation of villagers.

The ZSR has favoured an approach incorporating community involvement: village management of the health centres and the drug fund, contributions towards the construction and renovation of the health centres, and the purchase of equipment, and so on. Proceeds from the sale of drugs are used to maintain the system for purchasing and distribution of basic drugs. The BCZSR sells the drugs to the Village Health Committee which, together with the nurses, is responsible for managing the funds derived from selling drugs to the patients. The BCZSR reviews the prices regularly to maintain its ability to resupply and to adjust its prices to those of the private sellers. In addition to this drug recovery system, there is a fee-for-service system. The patients pay a lump sum fee and they are then given a registration card which entitles them to use the health centre services free-of-charge throughout the duration of the episode of illness. The amounts collected help to pay part of the nurses' salaries: 35% of the consultation fees and 10% of the sums generated by the sale of drugs goes directly to the nurses. This payment scheme (fee-for-service plus drug sales) can be considered as a good example of current practices under the Bamako Initiative, even though it was implemented five years before the BI was launched in 1987.

The quality of service delivered in the ZSR of Nioki is quite high as compared with other zones in Zaïre or similar settings in Africa. As a result of a good operations in the system, drugs are available in all the health centres. Standardized protocols of treatment have been established. To ensure that complete cures are administered, drugs cannot be sold by the unit. Lastly, the nurses' skills and knowl-

edge are kept up-to-date through refresher training sessions and there is regular stringent supervision of the nursing staff.

METHODS

The study is longitudinal, covering a 60-month period from January 1987 to December 1991. It uses qualitative and quantitative data drawn from three main sources briefly described below. All of the information was collected on site by the researchers with the cooperation of the BCZSR.

*Administration data**

We constituted a **cohort of the 21 rural centres** open on 1 January, 1987 to follow the evolution in their monthly activity from that date to December 1991. We were able to construct and validate monthly reports of new cases, as well as quarterly reports of new cases of malaria for each centre. Each month, a utilization coefficient was calculated for each centre by dividing new cases by population served by the centre. For each month, we counted the number of centres: (1) which came into service after the beginning of the study; (2) in which there was a certified nurse; (3) equipped with a microscope: and (4) renovated.† Three cost indices were compiled: the first deals with fees for consultations, the second is based on the costs of four common drugs, and the third is an overall index, weighted in terms of the average relative cost of the consultations and drugs used by a household.‡ Each of these three indices was then deflated on the basis of the monthly inflation rates observed in Kinshasa.

Interviews with administrators and nurses of the ZSR

The interviews with ZSR administrators aimed to validate the operational data collected and to gather missing information. The administrators were asked to rate each of the nurses in the zone according to their technical competence, interpersonal qualities, and integrity. Then, open-style interviews were conducted with the nurses and midwives to qualify the perceptions of the staff members in terms of: (1) the local structure of the supply of health services (existing health care providers, visits by the population, etc.); (2) health-seeking action of the villagers (dominant therapeutic sequences, links between morbidity and utilization, etc.); (3) the evolution of the centre's activity; (4) causes of changes observed; and (5) how much importance the population attaches to the different components of quality.

Semi-structured interviews with the villagers§

The first theme addressed in these interviews referred to the characteristics of the population in the health area, with the accent placed on details about the local context. The villagers were then questioned about their usual utilization patterns and the influence of cost, accessibility and illness on these patterns. Then, the discussion focused on perceptions of the quality of the services. Many questions referred to what villagers consider to be the top qualities of nurses and whether the qualities of the nurses had an effect on their health-seeking strategies. Other questions focused on the effect of the presence of a microscope or renovated facilities on their health decisions.

We also added several questions to a parallel research study of 228 mothers who had recently delivered babies.¶ These questions focused on: (1) actions that these women (or other members of their family) followed during their most recent episode of illness; and (2) their perceptions and expectations concerning the qualities of the health care personnel.

RESULTS

A considerable decrease in activity was observed over the 60 months of the study. On average,** utilization in the cohort dropped by close to 40% (see Fig. 1). There are major seasonal fluctuations in activity. It rises during the height of the rainy season (December and January) when the incidence of communicable diseases is higher, the rivers are too high for fishing, and there is little work in the fields. It drops during the dry season when the villagers are busy fishing and working the fields and their financial liquidity is lower (April to August). The χ^2 test judging the presence of a monthly component is highly significant ($\chi^2 = 62$; $P < 0.001$††) [54].

*The BCZSR information system is functional and reliable. The operational data is systematically recorded and compiled on a monthly and quarterly basis by the nurses. The record-keeping is monitored and checked during regular supervisory visits made by the BCZSR.

†It should be borne in mind that throughout the period studied, supplies were by and large regular: thus it was not possible to directly evaluate the impact of the continuity of supplies on the level of activity.

‡A detailed description of how the indices are constructed can be found in Ref. [22].

§Members of the health committee, village authorities, patients of the centre or passersby. It should be noted that the purpose of these interviews was not to carry out a precise survey on the health behaviour of the households. Instead the goal was to improve our knowledge of the evolution of different parameters influencing utilization of the health centres and to improve the validity of our results by studying this information in relation to the statistical data collected and the statements of the nurses and key informers.

¶Study conducted by Mr Karl I. Taj Nawel; the results are to be published shortly.

**The use of averages rather than totals is justified because certain data is missing. The use of a variable such as "total new monthly cases in all of the centres in the cohort" would result in a systematic bias and an underestimation of the actual values.

††The null hypothesis is: all the monthly seasonal indices equal 1. The alternate hypothesis is: at least one of the monthly indices is different than 1.

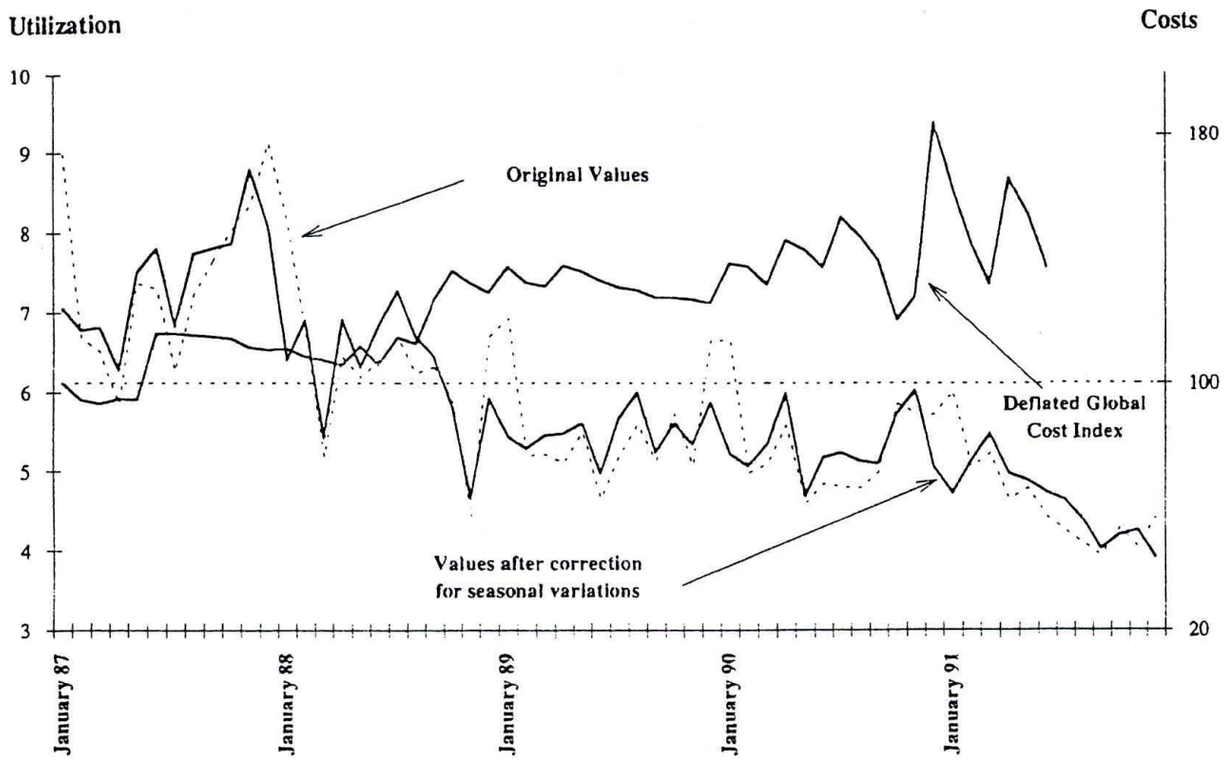

Fig. 1. Utilization (monthly average utilization coefficient) and costs (1987–1991).

The profiles of those who sought treatment in the health centres changed over the course of the study. The number of cases of malaria* recorded dropped even more than the total number of cases. On average, 48% of the new cases in 1987 were attributed to malaria. This figure dropped to 41% in 1991. According to the administration and staff in the zone, this drop cannot be explained by an endemic reduction in malaria, but rather is the result of changes in the health-seeking behaviour of the local population.

Effects of changes in costs

The ZSR fees increased dramatically between January 1987 and December 1991. The fee for consultation increased 94 times in current zaïres and that for medications rose 100 times. Overall, these increases outstripped inflation rates. The actual cost of utilization (inflation aside) thus also increased, following a trend clearly opposed to that of new cases (see Fig. 1). To study the degree of association between series of costs and utilization, we resorted to statistical models which take into account the auto-correlation components of temporal series† [55]. The first model relates the average utilization coefficient, corrected for seasonal variations, to two variables: the global deflated index and the number of centres opened after the study began. This last variable was considered a potentially confusing factor; it was introduced to allow for modifications in the catchment areas of the centres in the cohort to be considered in the cost–effect analysis. In the second model, the global index is replaced by indices of drug prices and episodes (Table 1). In both models the independent variables are significantly associated with the level of activity. The total explained variance (R^2) is 50 and 56%. The partial determination coefficients of the costs, for which we assigned minimal and maximal values because of the presence of multicolinearity, range from 18 to 32%. As Fig. 1 suggests, this association between costs and activity seems strong from the second to the fifth year of the study (it is not the case in the first year where covariations were modest).

The interviews with the staff members and the villagers suggest that the changes in cost had modified some characteristics of both demand for and supply of public health services.

(a) Modifications in demand. Many nurses stated that they are seeing more and more patients who had previously been seen by other providers (drug sellers, traditional practitioners, private nurses‡ and other informal resources) and that the public would only

*The cases listed under the diagnostic category of "malaria" include not only cases of malaria, but also feverish bouts which indicate this diagnosis and are considered by the patients and nurses to be cases of malaria.

†Two types of analyses were used. The first was based on ARIMA models; the second on linear regressions where auto-correlation is corrected by the so-called iterative approach. Both generated comparable results. Here we are presenting only those results obtained with the second method, which is easier to interpret.

‡In Zaïre, more than 200 nursing schools, the majority of which are private and/or illegal, have trained a plethora of nurses and private nurses can be found even in small rural villages.

Table 1. Results of regressions—Model 1 and Model 2. Dependent variable: monthly utilization coefficients after correction for seasonal variations

	Model 1				Model 2			
	Coefficient		Partial R2		Coefficient		Partial R2	
	Beta	B. Stand.	Minimum R2	Maximum R2	Beta	B. Stand.	Minimum R2	Maximum R2
Independent variables								
Intercept	6.5*	—	—	—	7.3*	—	—	—
Global price index	−0.022*	−0.409	18.7%	32.5%				
Price index—episodes					−0.006*	−0.462	20.6%	24.7%
Price index—drugs					−0.017*	−0.377	18.1%	22.2%
Opening of new HCs	−0.189*	−0.389	17.2%	30.9%	−0.157*	−0.343	13.5%	17.6%
General linear test	$F = 24.64$; $P < 0.0000$				$F = 21.06$; $P < 0.0000$			
Total contribution (R2)	49.6%				56.3%			

*$P < 0.01$ (t-statistic)

come to the centre later on, if these first treatments failed. This was confirmed by several villagers who told us that they cut back on their visits to the health centre, restricting them to situations where they felt that the health problem was particularly troubling. Some said that when the illness was not serious, they did not use any treatment at all and others admitted that they buy more drugs outside of the public facilities than they did before.

Several nurses feel that even though they charge more for drugs than the zone does, the private nurses and sellers are successful because they "do not charge for the card" and they are willing to sell drugs by the unit (a practice which, in theory, is prohibited in public services). The villagers go to these private resources to buy their prescriptions one day at a time, as long as they feel it is necessary. One nurse comments that even though the drugs sold by the private resources are more expensive (penicillin is sold for 25,000 zaïres as opposed to 15,000), the total cost of the treatment is less. He reports that each time the zone modifies its fees (which have to be posted at the door), the private nurses in the village come by to check them so that they can readjust their prices. Finally, the nurses and health committee representatives report more and more requests from the public for credit. "Many of those who no longer come were on credit; they have not repaid their debts and now they do not dare to come when they are sick."

The increased costs had a more significant impact on malaria patients than on those who suffered from illnesses which were considered more serious or more difficult to treat. Malaria is in fact so common that it is often regarded as a matter of course. In addition, most of the villagers know how to recognize and treat malaria themselves. Thus, people do not necessarily have to seek treatment from the health centre since there are numerous ways to procure antimalarial drugs (travelling drug sellers, dispensing pharmacies, informal sources, friends and relatives, etc.).

(b) Modifications in supply. Most of the nurses bend to these requests. They justify these practices by humanitarian concerns, citing the need to do something for the poor and elderly. The second reason they give, and probably the more important reason, is their fear of seeing the public turning to the competition. Nevertheless, they seem more inclined to resist requests to waive the registration fee than to pressure regarding the sale of drugs by the unit. Some nurses say they compensate for their refusal to waive the registration fee by extending better payment conditions and allowing greater flexibility in terms of the drug quantities. One explanation for this resistance is that waiving the registration fee translates into a loss of income for the centre and the nurses have a vested interest in the amount collected. In addition, the nurses and midwives are often frustrated because the public does not give them enough recognition for their work and their technical training. "People do not want to understand that they are paying for the work that is done and not for the paper. We are nurses, not pharmacists."

Effects of the changes in quality

(a) Impact of microscopes and renovations. During the study period, the number of centres equipped with microscopes rose from 12 to 16. We expected the allocation of microscopes, requested by the village health committees, which assumed the acquisition costs, to be positively associated with utilization. The statistical analysis did not reveal significant associations between the number of microscopes and activity, though the interviews with the nurses and villagers strongly suggested the existence of these associations. The nurses felt that the centres without microscopes were at a disadvantage and that even though microscopic tests were expensive, many patients came solely for that purpose. Some expressed the opinion that microscopes were one of the primary assets of the zone centres as compared to the "private" resources. All those working in centres equipped with a microscope stated that the loss of it would lead to a decrease in the centre's activity, even to a "uprising among the citizenry."

The villagers appear to be unanimously in favour of microscopes: "You can see diseases in the blood and stool." "It keeps nurses from using guesswork to prescribe treatments." "It can see what the nurse can't." In one of the centres, the villagers had such a strong image of their microscope that when they

were asked what they would do if it disappeared, their first response was "the microscope cannot disappear!" They then admitted that they would probably go to another centre. Most of the villagers say that they are ready to travel to a centre further away from their home for a microscope.

During the study period, 14 of the 21 centres of the cohort were renovated. Here too, we did not find a significant statistical association with the level of activity in the health centres. However, this finding was not surprising. Even though the renovations had the support of the health committees, improving the quality of the building seemed to correspond more to a professional vision of quality than users' perceptions. The villagers seemed very happy that their health centres were being renovated. Obviously, the village derives some prestige from having a pleasant health centre and the inhabitants can be proud of it. Yet, the renovation seems less important than the microscope and whether or not the centre was renovated did not have a true influence on utilization patterns. All of those interviewed told us that they would prefer an unrenovated centre equipped with a microscope to a renovated one, with no microscope. Some were amazed that we even asked them this question since the answer was so obvious: "Even if there were no walls, what counts is that there is a microscope in the centre." "It's not the centre or the paint on the walls that will cure people."

(b) Effect of sex, length of stay, and qualification of the nurses. The majority of those interviewed prefer male certified nurses. According to a few people, this is because "men are more competent," even though women are "more compassionate." Most often, however, it is because the men are "braver" and more available and they can "stand more than women." Though there is a clear preference for men, this does not seem to have an influence on utilization patterns. None of the respondents indicated that he would leave the centre if it was run by a woman. There is no evidence of a systematic rejection of women nurses.

Insofar as length of stay of the nurses, our subjects were usually in favour of keeping their nurse on the job for a long period of time. This opinion, however, is always conditional: "on condition that he is good," "on condition that he receives patients warmly," "on condition that he works well," and so on. Some villagers think that a nurse should not stay in the same job for too long because "after 2 or 3 yr, the people know his weaknesses" and he will be subject to pressures which could be harmful to the centre. However, a high turnover of certified nurses does not seem to have a significant impact on the evolution of the activity in the health centres even if the people often say that they wish to avoid such a situation. This impression coincides with the findings of the multivariate statistical analysis which did not reveal a significant association between the utilization of the HCs in the zone and the number of centres in which the certified nurse has been working for more than 3 months.

Lastly, the villagers do not seem to focus on the official qualifications of the health care staff nor do they use this as an important criterion to judge them. In fact, most of the villagers do not seem aware of the difference between an A2 nurse (4 yr of professional training) or an A3 nurse (2 yr of training).

(c) Effects of the qualities the villagers attribute to the staff. We did not use statistical models to assess the global impact of the nurses' qualities on the evolution of the activity; instead qualitative approaches were used to shed light on this centre issue. A prerequisite to the analysis of these effects was to identify which qualities the community valued in health personnel. The responses of the 228 women who were surveyed show that these main qualities were conduct and technical competence and to a lesser extent, integrity. The top quality mentioned (by 96%) was the nurse's interpersonal qualities (respect, patience, courtesy, attentiveness, friendliness, and straightforwardness) while technical qualities (good treatment, good work, good diagnosis and punctuality) were listed by only 4%. In response to a question about the second quality of a good nurse, 86% of those who mentioned conduct first, chose technical next and 68% of those who mentioned technical first, chose interpersonal qualities second. In all, over four-fifths of the respondents placed the relational aspects first, followed by the technical ones.

These findings are corroborated by the interviews in the villages, though the predominance of the relational components is less marked and honesty is a quality which seems more important than it appeared in the survey of the women. The quality of the reception was mentioned very often. A good nurse is one who "knows how to welcome you" and "receives people well." The initial greeting is of prime importance since "even if he is competent, a nurse who does not extend a warm greeting is discouraging" and therefore his treatment cannot be effective. The relations with the community outside of the centre, and in particular, respect for women is often mentioned, especially in the villages where there have been problems with "playboy nurses."

Most of the time, competence is judged according to results: a competent nurse "cures us when we are sick," his treatment is effective and leads to a quick full recovery (especially for children). The quality of the process and the relevance of the diagnosis are also common criteria. The good nurse "works well" and "provides proper care." He also has to prescribe medication in accordance with the illness. Another criterion used to evaluate competence is whether or not the nurse's recommendations and decisions are deemed to be well founded by other *a priori* more qualified health workers. For example, when a patient is transferred to the Nioki hospital, a nurse's decisions should not be reversed by those working there. In a rural centre, the good nurse is **considered**

one "who provides treatment on-the-spot," and does not transfer patients to Nioki.

All the villagers we met reported that they linked their health care decisions to the qualities they attribute to the nurses. In order to shed more light on this relation, the following sections report two examples drawn from the 11 case studies. The first one deals with technical matters and the second one with the nurses' behaviour.

Example 1. The Inunu centre, like many others, experienced a marked decrease in activity during the period studied due to rising costs and competition among providers. From January 1987 to June 1990, the drop in activity was about 60%. Following this drop, the centre faced a sudden rise in monthly users: from 39 in October to 142 in June. Then the activity decreased steadily, and by December had returned to the levels of June. That sudden peak closely followed the death of a child who had been placed on intravenous by the "private" nurse of the village and then developed a fatal case of septicemia. This death caused a big stir in the village and prompted all of the "private" nurse's patients to go running back to the centre which they considered less "dangerous." According to the nurse in the centre, after a few months, as the villagers' "memories faded," those who had left the private nurse gradually went back to him.

Example 2. The nurses Mon... and Mpé... Mon... is probably the most competent nurse in the zone (he earned the highest score on the BCZSR's technical evaluation), but he conducts himself poorly and lacks integrity. In the three villages where he worked, none of our respondents had anything negative to say about his competence, but they all complained about his conduct, especially his lack of warmth in dealing with patients and his lack of respect for the villagers.* In two centres, following Mon...'s appointment, there was a brief increase and then a decrease in the number of the monthly users. It is possible that in these two centres, part of the population was initially attracted by his competence, but after a while he was rejected because of his attitudes and conduct. The third centre experienced an extreme drop in activity when Mon... worked there and we thus defined the Mon... effect as: "A drop in utilization follows the appointment of a nurse who is competent, but whose conduct is highly offensive."

Mpé...'s competence is considered by the central bureau as "average to good" and his conduct and integrity are judged "excellent." He worked in two villages where he clearly had a favourable image: people remark on his modesty, sobriety, personal warmth, and his respect for his patients and the villagers. During our visit, we noted that in contrast to some of his colleagues, Mpé... was unpretentious and respectful in dealing with the people that we questioned. In the first centre, the annual average utilization coefficient has strongly decreased since Mpé... left the centre. In the second, his arrival coincided with a clear rise in the level of activity. In the two villages, several respondents declared that Mpé...'s transfer had modified the villagers' health-seeking practices. These observations led us to formulate the Mpé... effect as: "The appointment of a relatively competent nurse whose strength lies in interpersonal relationships has a positive influence on the activity of a centre."

It is difficult to say whether or not the "Mon..." and "Mpé..." effects are epiphenomena, since so few nurses received such divergent evaluations and were the subject of such clear positions expressed by those we interviewed. It is clear, however, that interactions between the local population and those appointed to work in the health centres influenced the level of activity.

DISCUSSION

A complex phenomenon like utilization trends of public modern health services over a period of several years and the role of its various determinants can be understood only by using qualitative and quantitative methods applied to different units of analysis. In the specific context of Nioki, where utilization of the public health services dropped dramatically over a 5 yr period, utilization is significantly associated with the deflated costs even after controlling for potentially confusing factors. The observed partial determination coefficients for costs suggest that 18–32% of the variation of the utilization can be explained by cost variations. However, these values cannot be compared to other results since previous longitudinal studies published in developing countries did not use statistical tests to quantify the long range effects of costs.

The increased costs have had effects on the demand for and the supply of health services. First they reduced the demand for the services provided by the zone in cases of common diseases like malaria. Second, the villagers have made a partial substitution of sources of care and supply even though in most of the villages the unit cost of drugs sold by the health centres is lower than that of the "private" resources. So the public responded not only to the unit cost of drugs and services, but especially to the total amount that they had to spend. Third, the villagers requested more credit, fee exemptions and drugs sold by the unit to decrease their expenses. Many nurses acknowledged that they had adjusted their practices in response to these pressures. With regard to this, they demonstrate a more sophisticated sense of marketing than the central office. The way that they work around the official regulations illustrates their ability

*While we did not meet him in person, the villagers' descriptions of Mon... paint a portrait of a very arrogant individual: a beer-drinking, womanizing young man, self-confident and aware of his privileged background and the advantages that his level of education and his technical competence carry.

to adapt to the changes: to the consequences of the increase, the loss of buying power among the people and the pressures that they face.

It is well known that improving the drug supply is the first attribute of quality which leads to a dramatic increase in utilization of health services. Availability of drugs was not a problem in this setting, although the zone attracted patients from neighbouring zones because of the availability of drugs. Renovation had no effect on the villagers' utilization patterns even though it was an important concern for the nurses and the administrators of the zone. The villagers were clearly in favour of microscopes, another aspect of technical quality. However, the acquisition of microscopes did not generate global changes in utilization patterns, even though many respondents reported that they consider the presence of microscopes in their health-care decisions. The effects of microscopes may be modest or non-existent. As the number of microscopes presented few variations, a lack of power in statistical analysis could also be responsible of the non significant associations observed between utilization and microscopes.

Activity in the health centres was closely related to the changes in personnel. As the Mpé. . . and Mon. . . examples show, the villagers were very sensitive to the conduct and interpersonal skills of their nurses. The competence attributed to the nurses and, in particular, the results of their care (the example of Inunu is particularly instructive in this regard) clearly influenced the patients' decisions to seek services. Because competence is seen as perfectible whereas interpersonal skills are not, the villagers prefer a nurse of average competence with good interpersonal qualities to a competent one with poor interpersonal skills.

Even if costs seem to have a negative impact on utilization and some other factors a positive impact, it is not easy to assess how these divergent determinants interact. This can be illustrated by the case of the centres of Mesilo and Mpole. These two villages are about 15 km apart and both centres face strong competition from numerous traditional practitioners. In Mesilo, the activity has not followed the general trend in the zone and there was only a minimal drop in utilization over the period studied. Moreover, the monthly utilization coefficient is one of the highest in the zone (9.3% on average vs 5.8% for the entire cohort). Mpole's profile of evolution is diametrically opposed: there has been a constant and pronounced decrease in the number of patients, the monthly utilization coefficient for the centre is on average 5.4%.

A study of the Mesilo centre's records shows that approx. 20% of its patients come from villages located outside of the catchment area. These patients give two main reasons for coming to the Mesilo centre: the microscope and the certainty of finding drugs. Nevertheless, the microscope and the availability of drugs cannot explain the fact that the level and the trend in utilization at Mesilo is so much higher than that of the neighbouring centres and the cohort (even after excluding the patients who reside outside of the health area, the monthly utilization coefficient at the Mesilo centre is on average still much higher than that of the cohort: 8.5% vs 5.8%). The most plausible explanation for these differences is in the relations between the community and the nurse. Mesilo is the only one of the eleven centres visited where the nurse on duty has not changed since 1987 and the inhabitants of Mesilo have never requested that the BCZSR transfer him. There has been a considerable sustained cooperation between the nurse and the chairman of the health committee, who is a traditional practitioner. This cooperation, which must be very reassuring to the local residents, contributes to reinforcing the image of quality and competence of the health care team. On the contrary, the Mpole centre has had six different certified nurses during the study period and relations between them and the villagers have never been satisfactory. We were told of various incidents where the local people and the nurses clashed and two out of these six nurses were judged very harshly by those we interviewed. The integration of the nurses in the local community was difficult. Since the population had a reputation for being "difficult" and very attached to traditional beliefs, the nurses' motivation was low and they did not like this low-paying and out-of-the-way centre. Indeed a transfer to Mpole is often seen as a disciplinary measure prompted by problems in another centre (conflicts with the locals, misappropriation of funds, poor performance, etc.). Shortly after we visited Mpole, the health committee sent a request to the central bureau in which it explained that as a result of the excesses of the preceding nurse and the constant turnover of certified nurses, the villagers were requesting that the departing nurse not be replaced, that the nurse-midwife be certified and that a new birth attendant be assigned to perform deliveries.

These two cases illustrate how cost and quality interact. In contrast to most of the other centres, the attraction that Mesilo has for the local population and that of the neighbouring villages has played a "protective" role, compensating somewhat for the negative effects of the cost increases. On the contrary, Mpole seemed to be the example of the type of village in which the increased fees had the maximum impact. The unsuccessful integration of the nurses and a negative perception of them by the local population probably aggravated the decrease in the number of patients using the centre.

CONCLUSION

This study confirms, as other longitudinal studies have, that in the long term, major increases in cost (higher than inflation) have a negative impact on the utilization of health services. It identifies the aspects of quality of care that may compensate for this

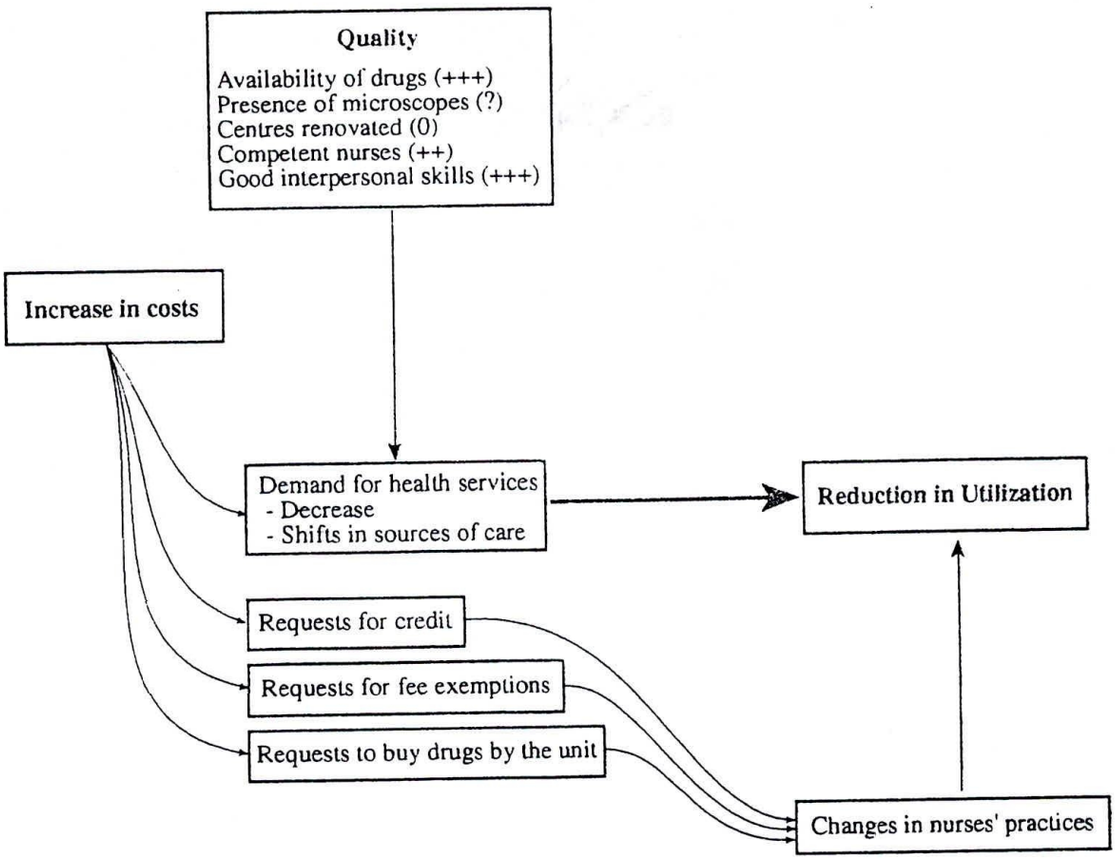

Fig. 2. The effects of costs and quality on utilization in Nioki.

situation and shows how cost and quality interact.

Cost seemed to be a major criterion in the choice of resources in this context where many of the people are poverty-stricken and the competition between providers is strong. However, other components of the supply of services also had an influence on the tilization of the health centres. Technical aspects of the quality had variable effects, but the image of quality projected by the nurses clearly influenced utilization patterns.

The reduction in the utilization of public services occurred within a context where the services were considered to be of excellent accessibility and good quality, higher than those in many similar settings. Moreover, the "technical quality" had even improved over the course of the period studied. Yet, neither the steady supply of drugs, nor the relative competence of the nurses, nor even the substantial improvement of the infrastructures and the equipment were able to offset the drop in activity due to the increased costs. However, as some examples suggest, good quality of services can partially compensate for the negative effect of the prices. This protection, however, is highly relative. On the one hand, it always occurs on a very local level and in situations which, all things considered, are marginal. On the other hand, of all the components of quality examined, only that related to the interpersonal relations between the local people and the health workers seems to be truly able to secure this protection. Figure 2 presents our interpretation of the dynamic process that linked costs, quality and utilization in Nioki during the study period.

This study suggests that the dictum according to which an increase in the quality of services compensates for the negative effect of the increased costs of these services is only partially valid and that it would be very difficult for this statement to serve as the basis of a revision of the strategies for service delivery. This brings us back to the concerns already raised about the inequitable nature of the effects of the Bamako Initiative. At the same time, we might ask if those who defend the equation "increase in costs + improved quality = increase in utilization" have not advanced this idea simply to justify the introduction or increase in user fees in public services, following what is an essentially accounting logic.*

The "technocratic" vision of quality that health care authorities have and the vision that the general public has are not necessarily congruent. Authorities are least aware of the interpersonal relationships which may partially compensate for cost effects and

*Incidentally, a recent study in Cameroon used the same expression [48]. In that case, the equation appeared valid but the measure of quality was based only on the availability of drugs and shortages of drugs was an important characteristic of the study setting.

for which they are least capable of introducing changes. As illustrated in a recent UNICEF update on the progress and obstacles to the implementation of the Bamako Initiative [56], they place more emphasis on the technical competence of the staff, supply and distribution of drugs, availability of equipment and infrastructures. But for the general public, the meaning of quality could be primarily respectful personnel, availability of drugs and effective care.

It is a major undertaking to improve the quality of services in a way which will be appreciated by users. Improving drug availability and accessibility is certainly a first priority and often a major challenge,* but once this goal is reached, further improvements in quality will require far-reaching modifications of the attitudes held by health care planners whose values most often reflect that of the biomedical or accounting logic models. These changes also raise the question of the relationships between the public authorities and the people they serve in countries where democracy or any form of dialogue still remains to be invented.

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The World Bank has published its new 'Sector strategy paper on the health, nutrition and population sector'. *The Lancet* published this commentary on the World Bank paper. RIAC / INFI obtained copies of the document. You can request yours, in English or in French, on the 'Request form for scientific documentation' included in this Newsletter.

More dollars, more sense?

Unlike its earlier healthy-policy pronouncement,[1-4] the World Bank's recent *Strategy Paper on the Health, Nutrition and Population Sector*[5] sets out what the Bank itself intends do in the sector over the next decade. We should sit up and listen, for the strategy will have an impact on the health and well-being of millions of people world wide.

The Bank's central objective lies in reducing poverty.[5] According to the sector-strategy document, the organisation's mission is threefold: (1) to address the health needs of the poor and vulnerable through increased targeting of health-sector resources to specific groups; (2) to correct the performance of health-care delivery systems through reforms in public-sector organisation and resource allocation; and (3) to ensure the financial sustainability of the sector by reconfiguring financing mechanisms and reinforcing cost-containment measures.

Underlying the strategy is the view that, although affordable and feasible solutions to the most common causes of poor health are available, inappropriate public policies and poor government regulation and weak health programmes render much spending on health care ineffective and inefficient. The document asserts that there is almost consensus that government performance (eg, use of public health facilities by the poor, allocation of public resources and cost-effective health-care interventions, cost-containment) will not improve with just more public clinics and better-paid public-sector health-care providers. It argues that the solution is in public-sector reforms that strengthen governance, regulation, and institutional capacity, enhance public-sector accountability, improve senior-level management, and develop public-private initiatives. The central message of the strategy document is the need for "a substantial redefinition in the role of the state and non-governmental" actors.

Most of these policies have been elaborated and advocated in earlier Bank policy documents. Newsworthy is how the Bank will attempt to ensure adherence to these ideas. First, it will strive to put the dysfunctions of the health sector on the public agenda, by financing more broad-based policy analyses, country-specific sector work, and analyses of how systems are working. Second, the Bank will pursue "lending approaches that take a more comprehensive view of the HNP [health, nutrition, and population] sector, rather than just activities supported directly through Bank assistance". This measure entails a gradual shift from project-specific investments to a "sector-wide approach". Third, the Bank intends to practise greater country selectivity through a strategy of "aid-triage". It will refuse further health-sector credits to those countries whose governments do not meet a threshold of commitment to the sector and where the Bank and the government cannot agree on the above principles of reform.

The strategy document sets out an ambitious and complex agenda for the sector and for the Bank itself. The Bank acknowledges that it entails risks and challenges. Accordingly, the document spells out how the Bank needs to change the way it does business. It notes that more process-oriented approaches will be required, and one recommendation is that greater attention be given to policy and institutional analyses during project preparation and to monitoring during implementation. Both would be facilitated by a greater presence of the Bank in the countries themselves.

In view of declining levels of government-to-government development assistance, the compensating role of the Bank and its strategy of re-engaging other donors in the sector are encouraging. The Bank has placed the health sector firmly on domestic-policy agendas and focused attention on critical health reforms long ignored. The strategy document, which is frank and self-critical, deserves to be recognised as a constructive initiative to fostering debate on global cooperation for health-systems development.

However, there should be caution in support for the part the Bank wishes, and intends, to play in the sector. While few would question its impressive range and depth of technical expertise in health-sector reform, there is still a need to nurture and mobilise the expertise resident in ministries of health, as well as in other agencies, and to support the strengthening and capacity-building efforts within governments. Despite the beneficial contribution that economic analysis has made to the sector, the relevance of complementary analytical disciplines and medical knowledge should be recognised. And while the Bank strategy acknowledges the importance of other members of the international community and the need for its partnership with other agencies, it gives little mention to WHO, UNICEF, UNFPA, and the bilateral aid organisations. The overall impression given is that the Bank wants to go it alone. However, it will serve no-one's health if the Bank becomes the world's Surgeon General.

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Paying for the Kasongo hospital in Zaire: a conceptual framework

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Experiences and discussions relative to community financing of health services tend to focus on the health facility of first access, that is, the health centre. The referral level, the hospital, a crucial element in the district health system, is hardly mentioned in the debate.

In this paper a conceptual reference framework for user fees is presented. It is argued that a financing policy at district level should be comprehensive and, therefore, not a priori exclude the referral level. Criteria for raising fees, as well as the rationale for fees – apart from raising funds – are discussed. Special emphasis is put on fees charged at the district hospital, which may be an important source of financing (complementary to external – national or international – funding). The case of the Kasongo hospital is presented in detail.

Introduction

The financing of health services is a subject of major concern throughout the world, especially in developing countries. Particularly in sub-Saharan Africa, it is clear that the central budget allocated to health services is insufficient to allow the health system to provide the population with appropriate health services at an acceptable level. The need to mobilize additional resources is obvious. Aid from developed countries and international institutions is limited, and the bleak outlook for funding from outside the health sector has increasingly led to the exploration of possibilities of mobilizing resources from within it, namely through increased cost-recovery from users. Consequently, community financing schemes have received much more attention in recent years.

Obviously, in poor developing countries, a community is not in a position to meet the cost of the entire district health service by self-financing alone. Part of this service still has to be financed by sources other than the community, such as national (government) and/or international sources. There is general agreement about this position. Opinions differ, however, when it comes to choosing the nature of health services that are most suitable for community financing and national/international financing respectively. Which section of the health services should be funded by community financing, and which part by other sources? Why? What is the rationale behind such decisions?

A framework for the analysis of the suitability of user charges for health services is discussed in this paper: reference is made to the local context, namely, the district health system (DHS). According to the Harare Declaration (WHO 1987) '. . . a district health system (DHS) is taken to mean a more or less self-contained segment of the national health system which comprises a well-defined population living within a clearly defined administrative and geographical area, either rural or urban, and all institutions and sectors whose activities contribute to improved health.' An 'integrated' district health system is one in which the first-line health services (the health centre) and the referral level (the hospital) each fulfil their specific and complementary roles with reference to a common goal, which is the acceptance of responsibility for the health of a well-defined population. In fact, in the present discussion, we shall focus on the district health services system, which is a subsystem of the district health system, even if the latter denomination will be used throughout.

In this framework for analysis, criteria for the suitability of user charges refer to the place of a given activity within the district health system, rather than focus on the nature of the activity itself (whether curative or preventive services). What is meant by 'place'? Two issues are to be considered.

Firstly, user charges should contribute to the possibility of the community making 'informed' choices concerning organization and planning of the health service. An informed choice is easier for activities with a low technology, which take place near to people, and which people use more often. Indeed, people can then experience which problem has been solved by which effort (for example, a financial effort), and can then assess if the effort is worthwhile compared to alternatives such as self-care or self-medication. The logic underlying this issue is aimed at strengthening participation.

Secondly, user charges should contribute to the process of using the appropriate level within the system, and should not hamper accessibility and continuity of care. For example, charges should temper the tendency to make trips to hospital for health problems that could have been treated not only at lower cost, but also more effectively, at a properly-functioning health centre. Conversely, charges should facilitate the use of the referral level when this is necessary – the logic is to increase the effectiveness and the efficiency of the system.

In this paper, the financing of the Kasongo health district is presented, and its rationale as well as its practical implementation (with particular emphasis upon the referral level – the hospital) is discussed.

Financing policy in the Kasongo health district

The Kasongo health district is a rural area situated in eastern Zaire. It covers an area of 15 000 kms^2 and, in 1980, had a population of 195 000, some 30 000 of whom lived in the largest town in the area. The health services have overall responsibility for health care in the area, supplying the population with integrated and continuous care (Kasongo Project Team 1982).

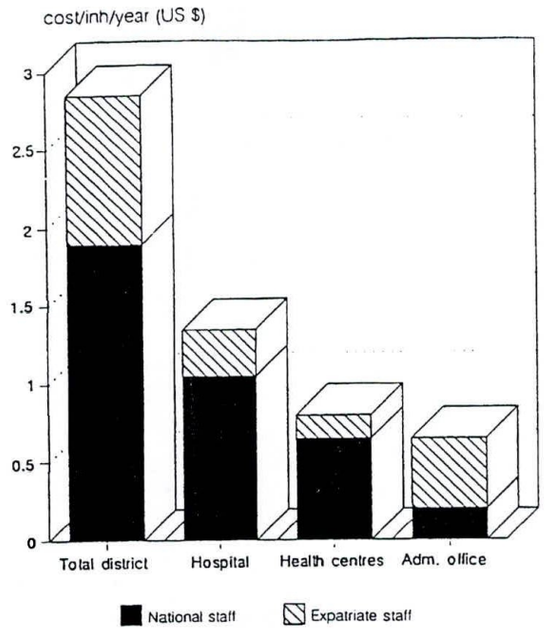
The district is organized as a uniform, two-tier structure consisting of a decentralized network of 16 health centres and one referral hospital with 180 beds. The health district is managed by a district medical officer, who leads a team of four medical doctors, an administrator and a nursing officer. Each health centre is staffed by a nurse, a nursing assistant, a clerk and a manual worker, and serves a population of about 10 000.

The district executive team was composed of Zairean and Belgian doctors, with, on average, about four doctors present at every point throughout the history of the project (two national and two expatriate doctors). The recurrent cost/per inhabitant (inh)/per year for the whole health district, in 1986, amounted to US$ 2.9/inh/year (Pangu 1988). The available budget was similar to what was nationally foreseen in Zaire at the time (all sources of financing together); the major difference with most other districts in Zaire was that, for the Kasongo district, these funds were readily available. The figure of US$ 2.9 includes the net wages of expatriate doctors, as well as the cost of the supervision of the project by the senior staff of the Institute of Tropical Medicine, from Antwerp, Belgium.

Approximately half of this total cost (US$ 1.41/inh/year) occurred at the hospital level. Figure 1 represents the total recurrent costs of the district per inhabitant per year, when the district functions with national staff alone, as well as the incremental cost of having additional expatriate staff. If the district functioned with Zairean medical doctors only (assuming there are four medical doctors), then the total cost would be US$ 1.93 per inhabitant per year.

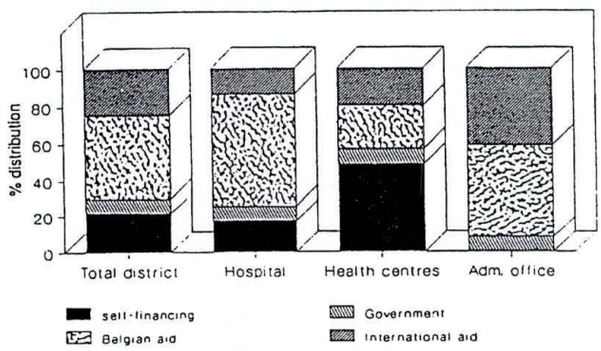
The financing of the district health system in Kasongo relies upon four sources: the community, the Zairean government, Belgian aid (Co-opération Belge) and multilateral aid. Figure 2 represents the relative distribution of these financing sources in 1986.

In Kasongo, the option was taken to limit local community financing to the health centre level, and to subsidize the cost of the referral hospital through external funds. It was deemed preferable to concentrate community financing on those parts of the health system that depend least on



Data for 1986 (*source*: Pangu 1988)

Figure 1. Recurrent costs Kasongo district (distribution according to services)



Data for 1986 (*source*: Pangu 1988)

Figure 2. Financing sources Kasongo district (distribution according to services)

technology, where people understand, and can take part in the choices made, and where the results are clearly visible (Pangu and Van Lerberghe 1990). The health centre, compared to the hospital, is the unit within the health system where people can more easily participate in the decision-making process: decisions taken at that level are less technical, and the health centre is nearer to people and more frequently used by them than the hospital. Users of the health centre will more readily see and understand what they have paid for (Van Balen and Mercenier 1986). The hospital was therefore considered more suitable for external funding in Kasongo.

The following principles guided the choice of the mode of payment at health centre level. The fee should not be related to the individual cost of the care but to the total operating cost of the health centre, and to the total number of users of the facility. In addition, it should not hinder continuity of care. A flat-rate payment per episode of illness or of risk (for instance for pregnancy or under-fives) was considered to fit these principles. This payment entitles all to the care required for dealing with the particular problem, including referral to the hospital. The funds thus raised stay at the first level, enabling a self-funding of operating costs[1] and a participation of the community in the management of the health centre. This promotes cost-sharing among all users (more than, for instance, a fee-for-service payment would do) and enhances solidarity. Solidarity can be defined as the consciousness of togetherness and the willingness to bear its implications (Ministry of Welfare, Public Health and Culture, The Netherlands, 1991).

Obviously, the flat rate paid at the health centre cannot cover the real cost of a referral and a hospital admission (even if technically justified), given the limits of people's income in Kasongo, and it was never the purpose that it should. At this level, the district authorities decided to cover the cost of referred cases and justified admissions at hospital level with the (available) funding from national and international sources. This complementary funding will be labelled 'external' funding throughout this paper. In the 1980s, government funding decreased dramatically, while international funding remained more or less constant, in absolute terms. In reality, the latter decreased because of inflation. On the whole, there was a gradual decrease in the external funds available.

Paying for hospital care in Kasongo: who pays? Why? And how much?

It may appear as if at hospital level no fees were charged. This is not the case. Some of the patients using the hospital did pay for the services provided. This leads us to the main issue to be discussed in this paper. Who does and who does not pay for hospital care? For the sake of clarity, we propose to formulate this question as follows: Whom amongst the patients at the referral level can benefit significantly from the external funding? Why is this so? The overall guiding principles were as follows:

- The external funding will support the cost of justified hospital care, which can be provided by the hospital within the limits of its resources, to all people who need it, provided they live in the district.
- This funding will not support the cost for people living outside the district, nor will it support the cost of justified care which cannot be offered within the limits of the resources available. In these situations, the full cost of care will be charged.
- Finally, this funding will not support care which can be delivered at lower levels of the health system (health centre or community), or care which is technically not justified. In these situations, the fees charged will be beyond the real cost.

It is useful to briefly present some crude data concerning the Kasongo hospital, prior to a more in-depth discussion (Annual report 1987). The hospital had 180 beds, with paediatric, internal medicine, surgery and maternity wards, as well as an intensive care unit. Technical services, such as a laboratory and an X-ray department were available. Thirty-two qualified nurses, 14 auxiliary nursing staff and about 35 administrative, technical and maintenance staff were employed at the hospital.[2] In fact, the available facilities at the hospital were limited to the more technical ones. Extra facilities, such as catering services, were not provided for (food was supplied by the family members of the admitted patients). Even some tasks, such as washing patients (except at the intensive care unit) were

handled by the family. In 1987, there were 2665 patients admitted, of whom 416 (15.6%) died. More than half of the deaths (237 out of 416) occurred in the intensive care unit. The overall admission rate in 1987 was 14.3 per thousand (37.5 per thousand for the urban population; 9.3 per thousand for the rural population and; 1.25 per thousand for the population of the district not yet covered by a health centre (Annual report 1987)). In the same year, 449 major surgical interventions took place.

The classification of an individual patient into either category – fee-paying or non fee-paying at the hospital – was based upon the principles mentioned above. In practice, two distinctions were made.

The first was between users 'within' the (district) system, and users 'outside' of the (district) system. Patients 'within' the district health system were:

(a) Individuals who lived within the defined geographical area of the district, and where a health centre was operating (a system of regularly updated family files, kept at each health centre, enabled people to be identified); those who had been referred to the hospital by their health centre.

(b) Individuals who lived in areas located within the boundaries of the district, but where no health centre had yet been set up,[3] and who then used the first-line service on the compound of the hospital, usually a clinic held by a nurse.

(c) Individuals of any of the previous groups who presented with an emergency who came straight to the hospital, that is, even if they had bypassed their health centre.

Patients 'outside' of the district health system were:

(a) Individuals from other districts, those who did not belong to the well-defined communities living within the district boundaries.

(b) Individuals from the district who did not follow the proposed procedure within the health system, such as patients who came straight to the hospital (except emergencies) when there was a health centre located within their community.

For patients within the system, internal barriers (for instance, financial barriers) between the different units in the district health services system – namely health centres and hospital – were to be avoided. Indeed, continuity of care should be preserved for the population for which the district health system has explicitly accepted the responsibility of care.

On the whole, the proportion of patients coming straight to the hospital gradually decreased. Table 1 illustrates the evolution of the number of visits to the hospital outpatients clinic, compared to the total number of primary consultations in the district health centres. In the period from 1973 to 1983, there was a gradual and substantial decrease in utilization of the hospital as a first-line service, as well in absolute and relative terms. This decrease was associated with an important increase in health centre utilization. This trend illustrates an increasingly more effective and efficient use of health services in the district health system in this period. This evolution was shaped by the gradual extension of the district's health centre network in that period (starting in the town of Kasongo), as well as by the presence of financial disincentives against direct hospital utilization.

Table 1. Evolution of proportion of patients attending the hospital's out-patient clinics versus the health centre's out-patient clinics (1973–1983)

Year	Hospital OP clinics (first access health facility)		Health centres OP clinics	
	N	%	*N*	Total
1973	11 780	47	13 522	25 302
1974	10 880	30	25 308	36 188
1975	7726	19	34 013	41 739
1976	5943	12	42 348	48 291
1977	7000	13	45 000	52 000
1978	7226	17	34 410	41 636
1979	7774	14	46 639	54 413
1980	7792	13	54 362	62 334
1981	6599	11	54 589	61 188
1982	3245	7	42 000	45 245
1983	2572	6	39 883	42 455
1987	1050	1.9	54 381	55 431
1989	(data not available)		59 285	

Source of data from 1973 until 1983: Pangu 1988.
Source of data for 1987 and 1989: Annual reports 1987, 1989.

The relative importance of each factor is difficult to assess objectively; however, in a setting where at the beginning of the 1970s, most of the people of the district hardly had the opportunity to utilize a properly-functioning health centre (with a presence of well-trained staff, the use of flow-charts, a constant availability of drugs and regular supervisory visits and so on), the former explanation is very likely to be more pertinent. In addition, other factors may very well have contributed to this trend, such as a perception by health service users of the benefits of utilizing the appropriate level of care in the system.

A second distinction was made between justified care on the one hand (qualified here as 'need'), and unjustified care, or justified care which cannot be provided within the limits of the available resources (both qualified here as 'demand') on the other. Former ('need') patients were favourably assessed in terms of fees, so as not to hinder continuity of care. The following two examples illustrate this distinction. A caesarian section was considered as need, and the request for an X-ray, in the absence of a technical indication for it, as demand. A strangulated inguinal hernia was considered as need and a non-complicated inguinal hernia as demand. The former example is clear-cut, while the latter is not. Indeed, at first glance, it may be argued that the distinction is arbitrary and unacceptable.

In fact, the surgical cure of a simple non-complicated hernia is justified *in se*, but, out of consideration for efficiency, it is necessary to set priorities within the body of justified care. The volume of work foreseen for the doctors did not allow equal commitment for all the justified care. In the case of the example given, the opportunity cost of performing surgery on all the hernias would become too high. Indeed, hernias are a highly prevalent problem in the Kasongo district. A survey done in 1974 indicated that one male out of four in Kasongo presented a hernia (De Muynck 1979). Half of the (major) surgical interventions at the hospital at that time were performed for hernias (51.6%, or 284/550).[4] If inguinal hernias had been a rare problem, implying a negligible workload, it could very well have been considered as priority for justified care (a need). It is not possible, given the scarcity of the resources available, to do everything for everyone under the same conditions, if overloading staff with work is to be avoided (and too much work would eventually lead to less time available to treat more serious conditions). The ethical concern behind this policy is the need to maintain a sustainable and financially viable health service system for the people for whom the health services has taken an explicit responsibility. This system has not only to be *effective* when tackling the health problems of the population, it should also be *efficient*.

In the Appendix, a range of services provided at the hospital, with the fees charged (or not charged for them), are listed, according to the distinctions discussed earlier. The yearly patient revenue raised at health centre and at hospital level in the Kasongo district – cash payments and contributions from private insurance schemes[5] – is presented in Table 2. It appears that approximately 40% of the total patient revenue generated in the entire district was raised at hospital level. This revenue remained more or less constant in 1986, 1987 and 1989, as well in absolute and in relative terms. Periodical increases in hospital fees and in contributions for the employer-organized insurance schemes took place several times a year, with the purpose of catching up with inflation. Additionally, two other ways of raising revenue at the hospital level were established in Kasongo.

Additional hospital funding

Shifting priorities within the body of justified hospital care

The decision to categorize a given health problem in Kasongo under the label 'demand' or 'need' was made after consideration of the local circumstances. This decision included an assessment of the severity of the problem (for example, the suffering it caused, whether it was life-threatening if not treated), the frequency of the problem, and the resources available at hospital level. This categorization was regularly reviewed by the district executive staff. In the 1980s however, in a context of decreasing government funding, most of the changes in this categorization were unfortunately carried out with the purpose of generating additional resources.

The following examples illustrate the dynamic of this distinction. In 1986, the following surgical

interventions were considered as priority justified care (in the category of 'need'): removal of a benign tumor (such as lipoma) and a non-urgent hysterectomy (a myoma). In 1987, these interventions were then classified as non-priority justified care (in the category of 'demand'). Consequently, patients were charged a fee for these interventions even if they were 'in' the system, although only approximately half of the fee being charged to patients 'out' of the system presenting the same problem (see Appendix).

The dynamic in this categorization is an important issue, because it refutes the idea that categories had a certain arbitrariness. The distinctions made were as a flexible answer to changing situations – in this case a situation where external funding decreased, and where additional patient revenue was necessary. Consequently choices had to be made, and priorities defined.

Contributions from primary to secondary level

An additional measure was considered in 1986: the implementation of a scheme of financial participation towards the cost of the referral level by the health centre network. The purpose was to link this financial contribution to the extent to which the populations covered by the different health centres (could) use the hospital. This participation was to be proportionate to the real possibilities of hospital utilization by the communities of the different health centres. As such, linking the financial contribution simply to the number of people covered by each health centre would not solve this concern. Theoretically, the larger the population, the higher the (potential) utilization of the hospital. But obviously other factors, other than the number of people, play a role. For example, the distance from health centre to hospital, the transport facilities to the hospital, and the scattered population within the health centres' catchment area. A coefficient was then determined for each factor and for each health centre. For example, a coefficient of 1 for health centres located within a range of less than 5 km from the hospital, a coefficient of 0.9 for health centres within a range of 5–15 km from the hospital down to a coefficient of 0.3 for health centres situated at more than 80 km from the hospital. The contribution of each health centre was calculated according to the following formula:

number of inhabitants × coefficient distance × coefficient transport facilities × coefficient population scatter × flat rate.[6]

Some of these coefficients were fixed (like the coefficient for distance), whereas others could

Table 2. Patient revenue in the Kasongo District (in Zaïres)

	1986	1987	1989
First line health services:			
Payments for health care	1 851 835	3 428 686	10 860 539
Employer organized insurance schemes	254 935	554 790	1 605 040
Subtotal (in Zaïres)	2 106 770	3 983 476	12 465 579
(in US $)	35 113	36 213	35 616
(% of total)	(61.6%)	(60.9%)	(60.6%)
Referral level:			
Payments for health care	584 420	844 054	3 442 288
Employer organized insurance schemes	729 345	1 717 601	4 667 122
Subtotal (in Zaïres)	1 313 765	2 561 655	8 109 410
(in US $)	21 896	23 288	23 170
(% of total)	(38.4%)	(39.1%)	(39.4%)
Total (in Zaïres)	3 420 535	6 545 131	20 574 989
(in US $)	57 009	59 501	58 786
	(100%)	(100%)	(100%)

Source: Annual reports Kasongo district 1986, 1987 and 1989; data for 1988 was not available. Exchange rate (average) Z per $ was 60 in 1986, 110 in 1987 and 350 in 1989.

Table 3. Yearly contributions in Zaïres (per health centre) to the operating costs of the referral hospital (1986)

Health centre	Number of inhabitants	Coeffic. distance	Coeffic. transport	Coeffic. scatter	Total/ year
HC 1	12 466	1.0	1.0	1.0	12 466
HC 2	10 233	1.0	1.0	0.7	7163
HC 3	11 715	1.0	1.0	1.0	11 715
HC Kipaka	12 333	0.7	0.8	0.7	4835
HC Kieshi	6283	0.7	0.8	0.7	2463
HC Sengamali	11 096	0.8	0.8	0.8	5681
HC Mulangabala	9022	0.8	0.8	0.8	4619
HC Nianga	9800	0.4	0.7	0.4	1098
HC Kabumbu	4716	0.3	0.2	0.3	85
HC Kunda	11 639	0.5	0.6	0.5	1746
HC Rudika	8953	0.7	0.5	0.7	2193
HC Kongolo	5000	0.7	0.5	0.7	1225
HC Lupaya	7168	0.9	0.9	0.4	2322
HC Mwanandeke	8978	0.7	0.75	0.8	3771
HC Kamumba	7897	0.6	0.7	0.5	1658
HC Karomo	13 972	0.7	0.6	0.8	4695
Total	151 271				67 735

Note: In 1986, the average exchange rate was 60 Zaïres = 1 US$. From 1988 on, the same coefficients were used, but with a flat rate of 2 Zaïres instead of 1 Zaïre.

very well change over time (such as the coefficient of transport facilities). The characteristics considered in the above formula are, of course, not exhaustive, but it was considered that they would give a fair enough approximation of the opportunity to use the hospital.

In 1986, the yearly contributions to be paid covered a range of 85 Zaïres to 12 466 Zaïres (Table 3). Urban health centres within the district (health centres 1, 2 and 3 in Table 3) had on average, substantially higher utilization rates than the rural health centres, and easily managed to cover their operating expenses. They referred more patients to the hospital (in absolute and relative terms) than rural health centres (Table 4). According to the formula established, they also contributed substantially more to the cost of the hospital. In 1986, the total contribution for the entire network of health centres yielded approximately 68 000 Zaïres (US$ 1133). This contribution represented 5% of the total amount of users' contribution to the hospital.[7]

These rising payments were of course an additional financial burden to the health centres, which already had to cover their own operating

Table 4. Proportion of referred cases by health centre network (1988)

Health centre	Total number of new contacts/yr	Proportion of referred cases to the hospital (%)
HC 1	5920	13.6
HC 2	3555	27.2
HC 3	5642	12.3
HC 4	2489	28.8
HC Kipaka	3682	6.1
HC Kieshi	3858	2.8
HC Sengamali	3222	5.0
HC Mulangabala	2597	12.3
HC Nianga	2403	2.5
HC Kabumbu	1607	1.2
HC Kunda	2637	3.3
HC Rudika	3595	2.3
HC Kongolo	1276	4.1
HC Lupaya	1659	17.8
HC Mwanandeke	(no complete data available)	
HC Kamumba	1784	3.6
HC Karomo	3441	2.7
HC Kahamibwe	3580	1.6
Total	52 947	9.1
Urban HC (HC 1,2,3 and 4)	17 606	18.1
Rural HC (all other HC)	35 341	4.6

expenses. As mentioned above, this was not a problem for urban health centres, but may have been one for some of the rural health centres which had lower utilization patterns. Health centres had to regularly increase the flat rate in order to pay all the operational expenses. These increases obviously had implications for the financial accessibility of the first-line health services for the poorest in the community. In that respect, the possibility cannot be excluded that these payments contributed to this burden in some of the health centres.

On the other hand, the increased payments were ıt implemented on an arbitrary basis. Even if the total yield in revenue was relatively marginal, the exercise was an attempt to link the contributions paid, to the opportunity to use the hospital. These payments clearly avoided a situation where only the actual hospital users would contribute to its cost. Indeed, potential users also contributed. The logic behind this decision, as well as the criteria used to determine the contribution, were acceptable to the different health committees. This was not the case for a proposal to invoice part of the cost of supervision to each health centre. Such a policy would have implied that the more remote health centres were to be penalized; some committees even proposed to discontinue supervision if such a policy were implemented.

Conclusions

The hospital in Kasongo is not financed as an isolated unit within the district health system: health centres and hospital are financed as elements in one system. The system of user fees at the hospital was conceived so as to discriminate positively in favour of the patients ng within a well-defined geographical area, for which the district authorities had taken responsibility; those who had not bypassed the first level within the district health (services) system; and those who presented a health problem considered to be of high priority (a source of suffering and/or which was potentially life-threatening). Thus, this scheme of user fees was not arbitrarily imposed; it explicitly aimed to strengthen the district health system, and the discrimination introduced was intentional. Resources were limited and choices had to be made.

It is important to emphasize the fact that the district authorities decided upon these distinctions: indeed, it was their responsibility to decide upon the allocation and optimal use of resources. The sustainability of an effective system has to be secured and this may imply – to varying degrees – a discrimination against some patients out of considerations of efficiency. It is obvious that it is not for the population of the district to take such decisions, because the population is not in a position to step back from their situation and make a rational decision in this matter.

Additional contributions to be made by the communities in the district (and not merely by the users of the hospital), such as those discussed in this paper, should be fairly distributed across the population. Not only may this be a means to increase resources, it may also focus on issues people understand, so that they know and support what they are paying for.

Appendix

Fees levied at the Kasongo hospital in 1986.* (in Zaïres; in 1986 the av. exchange rate was 60 Zaïres for 1 US$)

	'In' system	'Outside' system
I. *Primary consultations at the hospital*		
(held by nurse)		
emergency ('need')	50	150
no emergency ('demand')		250
II. *Secondary consultations at the hospital*		
(held by doctor)		
patients referred by health centre ('need')	–	
patients referred by primary hospital consult. ('demand')		100
III. *Hospital admission*		
shared room		
'need'	–	300
'demand'	300	300
single room (per day)		
'need'**	–	100
'demand'	75	300
private room (per day)	250	500

IV. *Surgery*		
Need:		
strangulated hernia	-	1500
appendectomy	-	1500
urgent splenectomy	-	1500
urgent laparotomy	-	1500
caesarian section	-	2000
hysterectomy (upon complication)	-	2500
annexectomy (after extrauterine pregnancy or pyosalpinx)	-	2000
uterine prolapse cure	-	1500
non invasive orthopaedic surgery	-	800
invasive orthopaedic surgery	-	2500
urgent haemorrhoidectomy	-	1000
amputation	-	2000
resection tongue frenulum	-	300
abscess incision and evacuation	-	300
tooth extraction	-	300
eye surgery	-	1500
Demand: ***		
removal benign tumour	800	1200
circumcision	200	400
unilateral hydrocaelectomy	1000	1500
bilateral hydrocaelectomy	1500	2000
unilateral inguinal hernia (non complicated)	1000	1500
bilateral inguinal hernia	1500	2000
other hernia	1000	1500
non urgent haemorrhoidectomy	300	500
non complicated gynaecological tumours	300	500
V. *Maternity*		
Need:		
normal delivery (after referral)	-	300
complicated delivery (after referral)	-	500
tubal ligature	-	500
curettage	-	500
therapeutic pregnancy interruption	-	500
suture	-	300
Demand: ***		
normal delivery (without referral)	1500	2000
tubal inflation	200	500
VI. *Specialized examinations*		
Need:		
X-ray	-	500
ECG	-	400
Demand:		
X-ray	500	500
ECG	400	400

* The most common services provided at the hospital level are listed here.
** i.e. if the doctor decides that the isolation of the patient in a single room is necessary.
*** Demand refers here to justified hospital care which was considered not to be a priority.

Endnotes

[1] The health centre's operating costs covered by local community financing were the costs of drugs and minor supplies, the wages of locally paid staff (the nurses being paid either by national/international sources), costs of transport material (such as bicycles) and maintenance of the health centre building.

[2] The salaries of staff were fixed according to the (grossly insufficient) nationally proposed rates. This was compensated for by fringe benefits, such as free housing and free medical care for staff and their family members; by the status linked to the 'profession'; and by unofficial payments from patients which certainly occurred to some extent.

[3] In 1980, approximately 40 000 inhabitants of the district (total population 195 000) did not yet have access to the services of a health centre within a reasonable distance. The extension of the coverage with first-line health services within the district was a gradual process. Indeed, out of a concern of efficiency, the communities living in areas with a more dense population and with earlier access to the hospital were, at the first stage, to be covered by first-line health services.

[4] The data refer to a period before the discussion and identification of priorities within the body of justified hospital care, that is, in 1974. In 1989, this distinction had been valid for several years. Then, 'only' 29.1% of the major surgical interventions (127/436) were for non-complicated inguinal hernias. There is no reason, a priori, to assume that the prevalence of hernias would have been significantly lower in 1989.

[5] These private insurance schemes consisted of the payment of a quarterly contribution/employee, which guarant[illegible]ee care for the employee and his family at any level [illegible]he district health system. In 1989, the amount of this contribution was 3500 Zaïres per quarter (approximately US$ 10).

[6] In 1986, this flat rate was 1 Zaïre; in 1988 it was 2 Zaïres.

[7] In 1986, the community's financial contribution to the referral level was as follows (in Zaïres):

- payments for care:	584 420	
- private insurance schemes:	729 345	
- contribution of health centres:	68 000	
Total	1 381 765	(approximately US$ 23 000)

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Original Article on Health Care Policy

WILL COST EFFECTIVENESS ANALYSIS WORSEN THE COST EFFECTIVENESS OF HEALTH CARE?

David U. Himmelstein, Steffie Woolhandler, and David H. Bor

Cost effectiveness analysis is increasingly advocated as a basis for health policy. Analysts often compare expensive interventions with highly cost-effective programs such as hypertension screening, implying that if the former were curtailed resources would be reallocated to the latter and the efficiency of health care would improve. However, in practice, savings are unlikely to be targeted in this way. We present refined policy models that take into account actual patterns of resource allocation in the United States, and provide more realistic estimates of the likely uses of savings. We illustrate the implications of these models in an analysis of the effects of diverting funds from an expensive but effective practice. Eliminating such a practice would actually worsen the overall cost-effectiveness of U.S. health care unless there are radical changes in health policy. Cost effectiveness analysis incorrectly predicts health and cost outcomes of policy initiatives because it ignores the political constraints to health care decision-making.

"There's no economy in going to bed early to spare candles if the result is twins."
Chinese proverb

Few question the need to wisely apportion health resources. Clearly, expenditures without benefit should be eliminated and those that result in long-term savings should be encouraged. Efficacious but expensive medical interventions raise more vexing questions.

Cost effectiveness analysis (CEA) is increasingly advocated as a basis for these difficult decisions. Cost effectiveness analysts determine the costs and effects of a medical intervention, and summarize the results as a cost per death or morbid event prevented (1). They advocate curtailing exhorbitantly expensive practices in order to divert funds to better uses. They implicitly assume that savings from eliminating costly programs will not be wasted but will be spent on more cost-effective care, thereby improving the efficiency of the health care system as a whole (2).

This assumption seems unwarranted, at least in the United States. In our health care system it is quite easy to curtail expensive interventions by denying insurance payments for them. However, short of radical changes in the organization of health care there is little hope of diverting savings to the 35 million people without any health insurance, a group currently denied many basic services that are very cost-

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effective. Thus, though the advice of CE analysts may result in freeing up resources now devoted to expensive practices, these resources are unlikely to be spent on preferable alternatives. As a result the overall efficiency of health care may actually decline.

Unfortunately, virtually all published CEAs compare the cost effectiveness of expensive practices with ideal alternatives, not the real uses to which savings would be diverted. Thus coronary artery surgery has been compared with highly cost-effective interventions such as control of hypertension (3), though savings from the former are unlikely to be targeted for the latter.

Health policy analysis should take into account not only the relative cost effectiveness of services, but also the complexity and frustrating irrationality of current mechanisms of resource allocation. Within the framework of the existing U.S. health care system, savings from curtailing an expensive intervention would either reduce total health care spending or be redistributed to a wide variety of medical services, including many of dubious cost effectiveness. In the former case, the overall cost effectiveness of the health care system will improve only if the practice eliminated is less cost-effective than the system-wide average. Alternatively, if savings are used to expand other health services, the efficiency of the system will improve only if the practice eliminated is less cost-effective than this array of added (marginal) services.

In this article we explore the implications of two refined policy models that take into account actual patterns of resource allocation in U.S. health care. Our findings suggest that unless patterns of resource allocation are radically altered, eliminating practices characterized by CEA as exhorbitantly expensive would actually worsen the overall cost effectiveness of health care.

THREE ANALYTICAL MODELS

Traditional CEA implicitly or explicitly contrasts an expensive intervention with other more cost-effective practices, based on the assumption that resources can be redistributed from the former to the latter. The number of lives saved by such a transfer is calculated by the Traditional Model as:

> Additional lives saved = (savings from eliminating expensive intervention/cost per life saved by ideal alternative practice) - (savings from eliminating expensive intervention/cost per life saved by expensive intervention).

The change in the average cost effectiveness of care (health spending/lives saved by health care) is:

> Change in cost per life saved = [total health expenditures/current number of lives saved by health care] - [total health expenditures/(current number of lives saved by health care + additional lives saved by transfer of resources to ideal alternative practice)].

The more realistic assumption that savings from the eliminated intervention will be redistributed to other health care and apportioned in the same manner and pattern as

other increments in health spending implies an alternative model, which we will call the Redistribution Model. The number of lives saved by redistributing health resources in this way is:

Additional lives saved = (savings from eliminating intervention/marginal cost per life saved by the health care system) - (savings from eliminating intervention/cost per life saved by the intervention eliminated).

The marginal cost per life saved for the U.S. health system as a whole is defined as the additional cost to save one additional life given the prior level of health spending and current patterns of resource allocation. In the Redistribution Model the effect on the average cost effectiveness of medical care is calculated as in the Traditional Model.

A third model, the Spending Reduction Model, incorporates the assumption that savings will not be reinvested in health care, but will reduce total health spending, i.e., be redistributed to non-health-related activities. In this model the number of lives lost by curtailing spending is equal to the number of lives that the intervention had previously preserved, and the change in system-wide cost effectiveness is:

Change in cost per life saved = (current total health expenditures/current number of lives saved by health care) - [(current total health expenditures - savings from eliminating the intervention) / (current number of lives saved by health care - lives lost by eliminating the intervention)].

METHODS FOR ESTIMATING THE COST EFFECTIVENESS OF CARE

Use of the Redistribution and Spending Reduction Models requires estimates of the marginal and average cost effectiveness of medical care. These estimates are summarized in Table 1. The marginal cost effectiveness of care can be calculated from either of two types of data: geographical variation in health spending and mortality (4), or temporal variation in health spending and mortality. Statistical models relating geographical variation in mortality rates and health care spending for the 400 county

Table 1

Estimates of the marginal and average cost effectiveness of medical care[a]

Source of estimate	Marginal cost per life saved by medical care, dollars	Average cost per life saved by medical care, dollars
Geographical variation	1,081,965	—
Time trend 1980–83, assuming medical care responsible for 15% of decline in mortality rates	3,248,299	1,056,985

[a] See text for calculations.

groups in the United States in 1970 have been developed by Jack Hadley (4). He correlated health spending and death rates for various age, sex, and race cohorts after controlling for factors such as income, education, marital status, work experience, cigarette consumption, and disability. A 10 percent increase in per capita medical expenditures was associated with an average decrease in the mortality rate of 1.57 percent. Since the communities studied all had basic medical services, the differences between high- and low-cost areas approximate the effects of marginal increases in medical spending, yielding an estimate of:

Marginal cost per life saved = (health spending per 100,000 population) (0.10) / (death rate per 100,000) **(0.0157).**

Given a 1983 U.S. health spending of $1459 per capita and the death rate of 858.9 per 100,000, the marginal cost per life saved by U.S. health care can be estimated as $1,081,965. (We have based this and all subsequent estimates on 1983 data, with costs for other years inflated to 1983 dollars using the Consumer Price Index.)

Alternatively, the marginal cost effectiveness of care can be estimated from temporal change in U.S. mortality rates and health care spending between 1980 and 1983. Decreases in mortality rates during this period reflect, in part, the most recent additions to medical care and hence the marginal value of health services. The proportion of the mortality decline that can be attributed to medical care is not known, but has been estimated as at most 3.5 percent (5). We conservatively assumed that 15 percent of the mortality improvement is attributable to improvements in health care, and performed sensitivity analyses based on the assumption that medical care accounted for between 2 and 30 percent of the improvement in mortality rates (Appendix). The cost per life saved by the marginal increment in medical care can be calculated as:

Marginal cost per life saved = (increase in inflation-adjusted health spending per 100,000, 1980–83) / (decrease in age-adjusted death rate per 100,000, 1980–83) (0.15).

Age-adjusted mortality rates per 100,000 population for 1980 and 1983 were 588.8 and 549.6 respectively (6). Per capita health care spending was $1049 in 1980 (adjusted for inflation to $1268 in 1983 dollars) and $1459 in 1983 (6). Thus, based on temporal trends we estimate that the marginal cost per life saved by U.S. medical care is $3,248,299. (See Appendix for sensitivity analyses.)

The relation between health spending and the number of lives saved by medical care based on time trends for the period 1920–1983 is displayed in Figure 1. The slope of the curved line at a given level of health spending is the marginal cost to save a life (in 1983 dollars) at that level of spending.

THE AVERAGE COST EFFECTIVENESS OF CARE

The average cost effectiveness of medical care can be calculated from temporal change in U.S. health spending and mortality rates between 1920, when spending was negligible and curative medicine had little effect on mortality (7), and 1983. We again

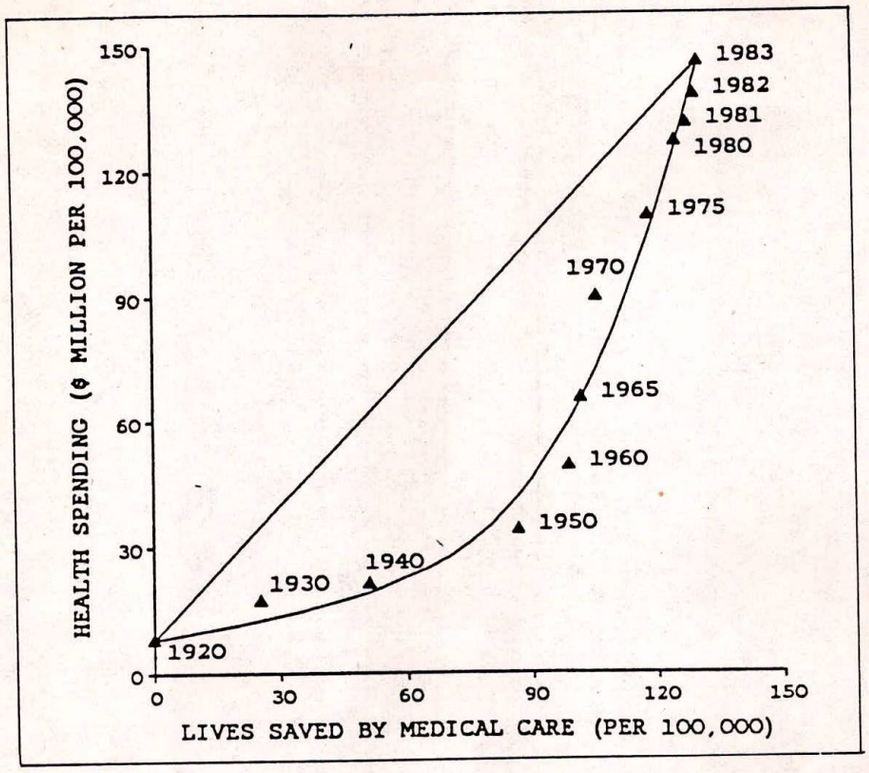

Figure 1. Relation between health spending and number of lives saved by medical care, 1920-83.

assumed that medical care accounts for 15 percent of historical improvement in death rates, and explored the range of 2 to 30 percent in our sensitivity analysis (Appendix). The average cost effectiveness of care can then be calculated as:

Average cost per life saved = (increase in inflation-adjusted health spending per 100,000, 1920-83) / (decrease in age-adjusted death rate per 100,000, 1920-83) (0.15).

Age-adjusted mortality rates per 100,000 population for 1920 and 1983 were 1420 and 549.6, respectively (6, 8). Per capita health spending grew from about $16 in 1920 ($79 in 1983 dollars) to $1459 in 1983 (6, 8). The estimated average cost effectiveness of care is $1,056,985 per life saved, equivalent to the slope of the straight line in Figure 1.

Table 2

Effect of eliminating an intervention costing $10 billion, with a cost effectiveness of $1 million per life saved, and reinvesting savings in health care (Redistribution Model)

A	*B*	*C*	*D*	*E*
Estimated marginal cost to save a life by medical care,[a] dollars	Lives lost by eliminating the intervention ($10 bil/$1 mil)	Lives saved by reinvesting savings in medical care ($10 bil/*A*)	Net loss of lives (*B*–*C*)	Increase in average cost to save a life,[b] dollars
1,081,965	10,000	9,242	758	2,389
3,248,299	10,000	3,079	6,921	22,215

[a] See Table 1 for source of estimate.

[b] *E* = health spending/[(lives currently saved by health care) – (lives lost by redirecting spending)] – current average cost to save a life = 355.4 billion/(336,239 – *D*) – 1,056,985.

THE EFFECTS OF CURTAILING AN EFFECTIVE BUT EXPENSIVE INTERVENTION

In order to illustrate the implications of these alternative cost effectiveness models, we calculated the effect of eliminating an effective but expensive medical practice that consumes $10 billion per year, and has a cost effectiveness of $1 million per life saved. We chose this hypothetical example because its cost effectiveness is similar to that of interventions that have been singled out in CEAs as very expensive (3, 9, 10).

Eliminating such an intervention and reinvesting the savings in health care (Redistribution Model) would result in a net loss of either 758 or 6921 lives per year, depending on whether geographical or temporal data are used to estimate the marginal cost effectiveness of care. The average cost per life saved by the health care system as a whole would rise by either $2,389 or $22,215 (Table 2).

Eliminating the hypothetical intervention and using the savings to reduce health care costs (Spending Reduction Model) would result in the loss of 10,000 lives and increase the average cost per life saved by the health care system as a whole by $1748.

DISCUSSION

Cost effectiveness analysis frames difficult health policy questions in appealingly simple and apparently objective equations. When similar techniques are applied to the straightforward problems of the family budget their usefulness is indisputable. However, the usefulness of CEA rests on the assumption that funds denied to inefficient services will be diverted to more efficient ones. This assumption ignores the political realities constraining health resource allocation, at least in the United States. A private system of health care that allocates resources through market mechanisms cannot shift money toward the most efficient services because those most in need, the poor, are precisely those least able to pay. The rational decision-making needed to render CEA a useful tool is only possible within the framework of a universal, egalitarian health system. Yet cost effectiveness analysts in the United States have not advocated such a national health program. In the absence of this reform, their advice to curtail seemingly exhorbitantly expensive practices may actually be worsening the efficiency of care.

Our analysis of the effect of curtailing inefficient programs refines the traditional CEA policy model to take into account real patterns of resource allocation. This refinement is based on admittedly imprecise estimates of the average and marginal cost effectiveness of health care. Yet even such flagrant imprecision is almost certainly more representative of actual outlets for savings from curtailed interventions than are the theoretical possibilities traditionally offered as comparisons in CEAs. Our estimates of the cost to save a life are of similar magnitude to, though higher than, figures derived from the Rand Health Insurance Experiment, which examined the cost effectiveness of free care (11). Because free care preferentially aids the poor who are likely to have important unmet medical needs (12), it "targets" funds to interventions likely to be more cost-effective than other marginal increases in health spending. For this reason our results appear consistent with those of the Rand Experiment. As shown

in our sensitivity analysis (see Appendix), even widely divergent estimates of the effectiveness of medical care lead to the same conclusion: CEA is useless unless health decision-making is radically changed.

It is surprising that the average cost to save a life by health care is so high. Yet even this seemingly high figure translates into approximately 340,000 deaths averted in 1983 by health care. The high average and marginal costs reflect several factors. First, such calculations ignore the benefits of care that diminishes suffering but not mortality. Second, because mortality is tabulated yearly, patients saved several times in a year (e.g., diabetics with frequently recurrent ketoacidosis) will be counted only once. Finally, the cost effectiveness of care is diluted by a large body of useless activity practiced under the rubric of medical care. Thus CEAs treat the 10 percent of U.S. health spending wasted on excess administration (13) as a fixed cost of medical practice, i.e., as a constant in the cost equation that inflates the cost of care without improving health.

Cost effectiveness analysis has been criticized for ignoring or distorting "soft" endpoints (14) and implicitly reinforcing discrimination against the elderly (15) and the poor (11). We would add to these philosophical criticisms a technical one: CEA incorrectly predicts health and cost outcomes because it assumes ideal rather than real patterns of resource allocation. Our calculations suggest that in the absence of improved means to target care, curtailing even the most costly interventions ever identified by CEA (3, 9, 10) would have little or no beneficial effect on the efficiency of U.S. health care.

It is possible that in the context of a different health care system, such as the British National Health Service, CEA could be a useful tool. This, however, should not be assumed. Wise clinicians have long demanded that therapies be tested in the complex milieu of human populations, and have been wary of evidence based solely on in-vitro study. Similarly, the clinical and cost outcomes of CEA can and should be measured in well-designed trials. Until this is done, we believe that CEA should be considered experimental and of uncertain value. Health policy analysis that claims to be an objective technical exercise apart from politics may lead to wrong and harmful answers.

APPENDIX

For our analysis we assumed that medical care is responsible for 15 percent of the historical improvements in death rates. Because this assumption is inexact, we repeated the analysis using the alternative assumptions that medical care accounts for 2 or 30 percent of mortality improvements. All other calculations were carried out in the same manner indicated in the text.

If medical care is responsible for 2 percent of the changes in death rates, the marginal cost effectiveness of care is $24,362,245 per life saved, and the average cost to save a life by medical care is $7,927,390. Eliminating the hypothetical intervention and redistributing the savings to health care would cause a net loss of 9590 lives and increase the average cost to save a life by $31,033. If savings were used to reduce health spending, 10,000 lives would be lost and the average cost to save a life would increase by $1,988,779.

If medical care is responsible for 30 percent of the changes in death rates, the marginal cost effectiveness of care is $1,624,150 per life saved, and the average cost to save a life by medical care is $528,493. Eliminating the hypothetical intervention and redistributing savings to health care would cause a net loss of 3843 lives and increase the average cost to save a life by $12,222. If savings were used to reduce health spending, 10,000 lives would be lost and the average cost to save a life would decrease by $7117.

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radheri 9/11/98

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There exists a consensus today that (1) we 'need' foreign Investment although some would restrict it to certain sectors only; and (2) it is the solemn responsibility of the state to provide the basic needs--health, education and housing--to all the citizens of the country.

This book challenges these two consensus. It is shown that the long term effects of foreign investment are negative and that welfare state is actually hitting at the poor.

The Western economies have a vested interest in perpetuation of these falsehoods. They want to penetrate the Indian economy and establish their stranglehold before Indian business can come into vogue. And, in the name of welfare state they are leading the Indian government to increase spending on social sectors at the cost of economic infrastructure.

India lies at the threshold of becoming a world economic power. She may, however, slip and miss this opportunity if she does not reconsider these two misinformation.

The limited purpose of this book is to draw attention of the public to this wrong consensus so that we are saved from the pitfalls that lie ahead.

THE ARGUMENT

Foreign Investment

Foreign investment leads to short term growth. In the long run it has a negative effect because of two reasons:

1. The rate of return on domestic capital declines. It is these profits that are reinvested in the economy in the long run. The foreign investor, as the term 'foreign' denotes, will reinvest according to profitable opportunities available on the global scale. Thus, in the long run foreign investment itself is uncertain. And, the domestic profits decline. As a result, foreign investment hits at economic growth in the long run.

2. The foreign currency received from the inflow of foreign capital has to be used to import something or the other. It is mostly used for imports of consumer goods. These inflows increase the supply of foreign currency and lead to the appreciation of the rupee. This hits at our exports. These increased imports and reduced exports, if allowed to persist for a long time, lead to a structural deformity in the Indian economy. It becomes dependent on imports of consumer goods.

As a result we see that countries which have relied on foreign investment have had high rates of growth as long as these net capital flows are positive. However, when they turn negative, the economies crash as has happened in Latin America, East Asia and Russia.

Foreign investment, on the other hand, has the beneficial effect of cajoling domestic businesses to become globally competitive. This same objective could be achieved by making them face import competition by throwing open trade. This would have a short term impact. Even better would be to put into effect a domestic competition policy and to encourage new entrepreneurs to secure latest technologies and challenge the stranglehold of inefficient domestic producers.

Our foreign investment policy should be as follows:

1. Increase government expenditures on law and order and justice. This provides the framework for domestic investment.

2. Release national debt by sale of PSEs and unproductive real estate. Use the savings in interest to finance expenditures on public goods including infrastructure. This will lay the foundation for increased domestic investment.

3. Encourage technology purchase instead of foreign investment. Impose profit reinvestment clause in foreign investment approvals.

4. Abolish Income Tax and collect similar revenue by imposing import duties; and higher excise duties on luxury consumption goods.

Trade Policy

The benefits of foreign trade are real. However, they come along with the long term risks of disturbances across the borders. As the share of foreign trade in our economy increases these long term risks increase.

The benefits from every 1-percent increase in the share of foreign trade declines due to the law of diminishing returns. The risks and costs from every 1-percent increase in such trade increase. An optimum level of foreign trade is determined where these incremental benefits and costs are equal. Thus, we need to pitch our foreign trade to such 'optimum' level rather than 'maximum' level as determined by short term comparative advantage alone.

Thus we find that countries which have aimed at ever increasing levels of foreign trade have crashed when the international markets have turned weak. By this time their economies have been so thoroughly geared to meeting global
demand that they are unable to retrace their steps and revert back to a domestic demand-led growth pattern.

The long term costs of foreign trade are likely to increase in the coming years because the demand from the industrial economies is likely to crash. There is a strong underlying movement towards global equalization of wages. This is slowly but inexorably putting pressure on the wages of the industrial countries and also their demand for goods from the developing countries.

Therefore, we would do well to limit the integration of our economy into the global market. We should aim at self-sufficiency in essential goods so that our domestic economyremains unaffected by such global **turmoil.**

Therefore, instead of running after foreign investment, we must take measure to increase domestic investment. It is not the shortage of capital but that of a pro-business environment
that hinders domestic investment.

Our trade policy should be as follows:

1 Increase import duties and provide export subsidies to close the trade gap. This would ensure that the economy is not getting structurally deformed into an import-dependent one.

2 Cross-subsidize small scale industries by increasing the cost of credit to large capital-intensive borrowers. This will create more jobs.

3 Where necessary subject domestic businesses to limited spurts of import competition to cajole them into global competitiveness.

4 Shift internal terms of trade in favour of agriculture to reflect the shadow cost of urbanization.

Welfare State

Government expenditures on social sectors have two opposite effects:

1 They lead to betterment of lives of the poor by provision of health, education and food.

2 The taxes imposed to finance these expenditures reduce surplus with the business, hit at investment and job creation and at the poor themselves. A further negative effect of the welfare state is that it makes the people psychologically dependent on the government instead of invigorating their efforts at self-earning.

An statistical analysis shows that those states and countries which have delivered good governance have achieved better growth rates and poverty eradication than those who have incurred heavy expenditures on the social sectors.

Instead of increasing government expenditures on social sectors our policy should be as follows:

1 Increase government expenditures on public goods like water supply and reduce those on private goods like heath cure.

2 Dovetail a 'Right to Work' programme within such a provision of public goods. The poor will be able to secure social services with such income.

3 Regulate private providers of social services like education and health. This will provide succor to the poor from the exploitation of the private providers.

4 Honour our tradition of private charity to take of the poorest of the poor.

1 WELFARE STATE

[Public expenditures on private goods in social sectors have direct positive effects but indirect negative effects due to imposition of taxes, curtailment of investment and lesser job creation. It is shown that the latter predominates. Therefore, instead of providing social services, the government must switch to the provision of public goods and regulation of private providers of private goods].

WORK VERSUS WELFARE

Two Levels of the Problem

The objective of the government is to secure the welfare of its citizens. Our constitution states:

> "The state shall, in particular, direct its policy towards securing that the citizen, men and women, equally, have the right to an adequate means of livelihood" (Article 39(a)).

This is fine. The problem is that such welfare of the people can be secured by two almost contradictory policies.

1 Tax the business and spend the money in provision of the means of livelihood to the poor. Even if they do not have an opportunity to work and earn, let food, housing education and health be provided to them.

2 Minimize tax on the business and enable it to provide jobs to the people, who then secure their livelihood from such income. Enable the people to work, earn, express themselves, and autonomously secure livelihood in the process.

Our suggestion is that work-based livelihood has two distinct advantages. First, it enables people to realize their higher faculties as human beings. Second, it leads to greater economic growth and better lives for all.

Gandhi

Gandhi was a harsh critic of consumption-based approach to human welfare:

> The Western civilization has "bodily welfare (as) the object of life... This civilization takes not neither of morality or religion" (1908:17).

He felt that material welfare was an endless trap:

> "We notice that the mind is a restless bird; the more it gets the more it wants, and still remains unsatisfied. Our ancestors, therefore, set a limit to our indulgences. They saw that happiness was largely a mental condition. A man is not necessarily happy because he is rich, or unhappy because he is poor. Observing all this, our ancestors dissuaded us from luxuries and pleasures" (\\1908:21).

The object of life, therefore, was not an ever increasing level of material well being, but to procure "freedom for full expression of (one's) personality" (\\Pyarelal 1951:326).

The primary requirement for the expression of personality, or the discharge of one's duty by the poor people of India was that work and food be available to them. Gandhi was too deeply moved by the poverty and starvation that he had seen during his travels. Independence from the British was required precisely because the British had singularly failed to create such a society during their rule.

Gandhi's solution to this problem was the charkha. He repeatedly stressed the role of the charkha in the provision of this immediate relief:

"These starved men, refusing to work, were like mere animals. Now, how can we solve the problem of getting work out of people like this? I see no way except that of universalizing spinning" (\\Desai 1924:179).

Between work-based and consumption-based approach to livelihood, Gandhi preferred the former

"I must refuse to give the naked by giving them clothes they do not need, instead of giving them work which they sorely need" (\\1921a:227).

It will be clear that his focus was on provision of work. If basic livelihood is provided to the people by doles, it may secure livelihood but it does not secure self-expression, which was the objective of society.

Tagore

Tagore's economic thought is based upon what might be called an 'evolutionary' concept of man. The purpose of this human life, according to him, is not mere consumption and yet more consumption. He compares material consumption to the cooking of food. The purpose of burning wood is not an end in itself. Its meaning arises in the food that is cooked" (1969:32). "Progress has come to mean to go on walking without ever reaching the home" (\\1969:33). Thus, mere increased consumption or improved standard of living was not the objective of life.

Modern technology makes it easier to meet one's natural necessities with less effort. The energies that are thus saved must be used for karma-kshaya. This is defines as 'working out' one's inner tendencies. It is working out. There is no karma-kshaya in consumption because there is no karma. Thus, for Tagore, consumption was at a discount and work at a premium.

Logically the next step was to reduce the role of government in welfare. People had to become self-dependent. They should not only work and engage in karma-kshaya but also take care of their social needs themselves:

"Today the thoughts of the Bengali people has been separated from the villages. Today the responsibility of providing water is that of the government. The burden of health provision is upon the government. For learning also one has to knock at the door of the government. The tree that flowered itself today begs the sky for a rain of flowers with its naked branches."

This is as direct an indictment of the provision in our constitution that the state shall secure adequate means of livelihood as provided in our constitution.

Amartya Sen: The Futility of Endless Choices

The thinking of Gandhi and Tagore is based on working out one's inner tendencies and restraint of consumption. In sharp contrast Western thinking makes no distinction between the inner and external self of man. It is entirely based on expansion of material consumption. One modern variant of this approach of consumption-is-welfare is the concept of expansion of choice.

Economist Amartya Sen is the votary of this approach. He says:

"Both the fasting monk and the starving pauper may be hungry--the difference is that one exercises a free choice, and the other does not." (\\Human Development Report).

Therefore, he concludes, instead of worrying about generating growth per se, we must begin examining whether it leads to expansion of choice or not.

It is true that industrial societies do provide a wider range of choices to their people. But it is equally true that these high standards of living are not translating into a better quality of life.

Let us examine this by an example. John has high education, income and health. He has a wide choice. His heart's desire isto eat good food. But he sees on the TV the money that the tennis players make and the acclaim they get. His mind develops an attraction for tennis. He exercises his choice and goes playing. At the end of the day, however, he is not happy. In the exercise of choice of tennis, he has missed out on a good meal with his friend. His heart's long standing desire for good food remains unfulfilled although his mind's newly acquired desire has been fulfilled. He is distraught not because he has limited choice but because he has exercised his choices **incorrectly**.

Now, let us say he, that is, his mind, somehow realizes that his heart's desire is that of eating good food. So he travels around the world enjoying food in various countries. This time around he exercises his choice correctly. But, after a while food also gets into a rut. The bother of travelling becomes too much and he can tell the taste by the look of a dish. It becomes boring. Again he becomes distraught.

The reason is that having fulfilled one of his heart's desires, he has failed to move on to other deeper desires. Perhaps, at a deeper level, he wanted to listen to music. But, not realizing this, he kept on eating more of good food. Even the exercise of choice correctly did not lead to a satisfactory life for him.

Interestingly, if he had been listening to his heart more attentively, he might have understood his deeper desire to listen to music earlier. Food would not have retained the same attraction. He could have reached music easily by restraining his longing for food.

Therefore, it is self-restraint not expansion of choice that can lead to a better quality of life.

John made two mistakes. First, he allowed his mind to lead him into tennis while his heart wanted food. Second, he did not realize that 'food' was not the deepest of his heart's desires. It

was just the one that was most prominent at a particular moment. He should have tried to discover other deeper desires of his heart as he went along.

The improvement in quality of life, therefore, can come not from expansion of choices but by choosing wisely within what is available. By restraining oneself from the non- or superficial-desires one reaches deeper into one's heart and improves his satisfaction with life. The extent of choice that is available is, really, irrelevant. What matters is giving correct direction to oneself within the choice that be available.

The basic proposition of welfare state is that people should have more income, education and health to be able to expand their choices. This is fallacious. Surely, people should have more income, education and wealth but only so that they can fulfill their inner desires and transcend them. The manner of provision of such welfare, therefore, has to be such that helps them transcend. It has to be work and self-expression based provision.

The Environment Lobby: Limits to Consumption

The environment lobby argues that man must be able to consume in the long run--'sustainable development.' They are afraid that if man consumes too much of the earth's resources today, not enough may be left for the future generations. In order to ensure that future generations can consume and consume and consume yet more, they say that we must take some precautions now. Some of the 'key priority areas' for action are: energy efficiency, environmentally sound technologies and conservation of fresh water resources.

No dispute with these. That, however, does not solve the inherent conflict between demand and supply. If earth's capacity to supply is finite and mankind's desires are infinite, small improvements in the supply brought about by such measures do not really eliminate the imbalance. The hard fact is that there is no solution in the long run except by curtailing man's consumption.

The question then is how to promote man's welfare while restricting his consumption. We have to seek ways of enhancing people's welfare without requiring unlimited increases in consumption. It is here that our philosophy comes in. Our Sages developed a four point progressive scale of desires or vasanas--lowest being material consumption followed by money-making, power-seeking and self-understanding--kama, artha, dharma and moksha. They said that all human beings have all the four desires. The purpose of man's life was to evolve from the lowest--kama, to highest--moksha. Thus consumption, money-making and power-seeking, or kama, artha and dharma, were all certainly necessary but only as a means to attaining moksha.

For the Western environmentalist, kama is the sole purpose of human life and objective of social and economic governance. Success is judged not by how many saints it produces but by the number of cars that it does. Kama is at a premium and moksha at discount. GDP per capita is the high altar of all measures of human progress.

Our sages broke this logjam by saying that consumption, or kama, is the lower of one's desires. It is to be fulfilled as much as necessary but no more. The objective of life was to transcend kama and move on to artha, dharma and moksha.

COMH 2.11

HEALTH ECONOMICS IN INDIA : A review of work done and an agenda for research under Panchayati Raj.

- by Ravi Duggal

Economics of health care emerged as a discipline in the seventies in western capitalist economies because the need to curb escalating costs of health care had become urgent, especially so in the context of the fiscal crisis that faced the capitalist state (see O'connor, 1973).

This need culminated in the First World Congress on Health Economics in 1980. The World Bank got interested in this area and brought out various publications. The WHO too flared up this area to attract global attention to issues on health economics and health financing by devoting the 1987 World Health Assembly to this theme.

Today health economics and health financing are being considered as important areas in health services research and health policy making even in developing countries. It may be noted that the interest in this field in developing countries is not independent of the interest in western capitalist countries. In the former it developed as a response to their need to curb escalating costs but in the latter no such need existed because, (at least) the public investment in the health sector in these countries is at best marginal compared to the requirements of the population in terms of a minimum decent level of development.

In the developing countries this interest has appeared for

two reasons. Firstly, these countries are poor. Hence, economists of the west (as well as many of our own) feel that there is a lack of resources in these countries. Therefore, they feel, care must be taken in committing resources especially to the social sectors. To sort out this problem of resource crunch international experts have come to their aid through various funding agencies with low-cost models which would reduce strain on resources. The so called voluntary sector in India has been most willing to oblige these agencies by carrying out successful experiments in low-cost health care delivery, especially in the rural areas. This demonstration has helped change government health policy towards supporting such programs.

Secondly, new medical technology has brought about radical changes in health care delivery. It has completed the commodification of health care and made it an extremely profitable business. This has brought into the fold corporate interests which now demand a stepping up of privatisation (Jesani and Ananthram, 1990).

Hence health economics and health financing become important to help focus and debate various issues, especially those concerned with resource allocation and management. However, till today the framework and context of this discipline has been largely restricted to liberal western economics. In India this thought current/ideology has diffused rapidly and is reflected clearly in health policy and programs both in the public and private sectors.

In India health services research emerged in a big way only

in the eighties primarily due to the fact that international funding becomes easily available for such purposes. And in the mid-eighties health financing and health economics becomes an important area of research and many research institutions jump into it. The government too subsequently gets interested and finances such research efforts. Today a fair amount of groundwork has been done and the foundation laid for the development of this discipline. Unfortunately the major focus of such research is only the operational aspects and hence management and market research institutions dominate this field. The political economy aspects are being looked into by only a couple of institutions.

For an underdeveloped country like India it is the latter kind of research that is more important to understand analytically the wide ranging and complex set of issues in this area of research. We are not underestimating the value of operations research. It is important, but it becomes meaningless if not backed up by significant research in political economy of health care.

Before we present a review of known studies in this field in India it is important to briefly discuss the context in which such research has to be placed i.e. the underdeveloped state of health care services in India. Table 1 gives a historical overview of health care services and health financing in India.

There is a remarkable continuity in the colonial character of health services development in the present times. The same enclave pattern of development continues - urban concentration, class/caste biases, state subsidies for the private sector and a

general lack of interest on part of the state in developing the health sector for universal access.

Of special importance in the context of health economics, is the rural-urban differential development. The health policies and programs of the government have clearly favoured a better development of the urban health sectors. Hospital and medical services are available mostly in urban areas when 3/4th of the population resides in villages. Villages today have access to what WHO popularised as primary health care. In India primary health care in effect means family planning and communicable disease control programs - basic medical services are not available adequately under this primary health care approach. In the towns and cities there is no primary health care approach but pure and simple medical services being delivered through dispensaries and hospitals.

In the private sector a similar bias exists with regard to allopathic professionals. They are mostly located in urban centers. In rural areas non-allopathic (qualified and unqualified) and a variety of 'quacks' practice allopathic medicine and provide services at whopping costs to the population. Health care services being basically a suppliers market makes private medical practice a lucrative business. In a recent a study in Jalgaon district of Maharashtra we found net private health expenditure to be Rs.174.99 per capita per year in comparison to Rs.26.09 per capita spent by the government (Duggal and Amin, 1989). The rural-urban differences as regards private health expenditure were not significantly different. In fact users of public health services were significantly higher in urban

areas, and non-users of any type of service higher in rural areas (ibid). This is a clear indication of gross inadequacy of public health services, especially in rural areas. We will not go into any further details as this is a well documented area and Table 1 is self-explanatory showing the slow growth of health services in general and the growing rural-urban inequality.

Review of Studies done in Health Economics/Financing

Health care services are financed through a variety of sources. It is important to understand all these if the review must be complete.

Sources of Health Financing

The largest source of health financing in India (and the least documented and known) are private households' direct out-of-pocket expenditures that go mostly to the private health sector. In the Jalgaon study we found that 88% of a household's health expenditure goes to the private health sector (Duggal and Amin, 1989).

The Ministries of Health of the Central and State governments finance public health care services- government owned hospitals, dispensaries, health centres, medical colleges etc.... These services are available to all citizens without any charges for services (of course, registration fees and charges for certain services, as well as for certain class of patients does exist but

it constitutes less than 1% of the expenditure by this ministry). For instance in 1984-85 the Central and State governments spent Rs.34,638.46 million on all health services and it received only Rs. 104.03 million (or 0.3%) as charges from patients. If we add other direct receipts like medical education fees, public health services and sale of contraceptives even then it comes to barely 0.5% of the governments' total health expenditure (CAG-1989).

Other Government Ministries and departments like Railways, Post & Telegraphs, Mines and Steel, Defense etc also spend on health services but only for their employees. Total expenditure on health care by these department is not known but it is a substantial amount. For instance the P & T department in 1988-89 spent Rs. 222 million and the Railways spent Rs.1,272 million in 1987-88 (CBHI, 1989). There are many more departments big and small who spend on health care and whose employees get fairly good services or reimbursement of costs for treatment. When we consider the fact that the government is one of the biggest employers in the organised sector and the fact that Railways are spending Rs.148/- per beneficiary (employee and family members) the total finances involved from this source must be very large.

Like the government departments a large proportion of organised sector employees in both the private and public sector get some medical benefits from their employers. Information on this source is also poorly documented. Part of this benefit is administered through the ESIS, which in 1986-87 spent Rs. 99.58 per beneficiary. Similarly, large public sector undertakings and private companies spend between Rs.700 and Rs.1200 per employee.

In the Jalgaon study we have found the average medical benefit received by such employees to be about Rs.100 per beneficiary (employee and family members). If we extrapolate this to even half of the total organised sector the resources being spent will amount to a huge sum.

Another important source of health finance are the local bodies, especially the municipalities and municipal corporations. Data on municipal finances is today very sketchy; it exists but access is difficult because of the sheer lack of compilation. In the pre-independence period municipal finances were compiled alongwith state finances but that practice has stopped. In Jalgaon district we found that municipal health expenditure (which is only for urban areas) was 11% more than the total government health expenditure (excluding water supply) for the entire district. So this again is a very major source of health care funding.

Some of the other sources that are as yet small in volume are health insurance packages (private and public), foreign assistance and local charitable initiatives. Data on these sources is scattered and requires a lot of research initiative to compile it.

Studies in Health Economics

There have been very few studies of the health sector in colonial India. At best these studies have been descriptive and had mainly been undertaken to facilitate health administration.

Health economics or health financing as an issue definitely did not figure.

One of the earliest and best documented studies is by D.G. Crawford. His two volume history of the Indian Medical Service is a classic (Crawford, 1914). Of course, his work is based largely on a lot of similar exercises undertaken by his predecessors, only the latter documents are not easily accessible today.

But the first document that takes a small peek at the area of health financing is Bradfields' 'An Indian Medical Review' (1938). This is perhaps for the first time that financial data pertaining to the health sector is discussed in India's health literature (of course, data on government finances for public health expenditure are available since the middle of the 19th century or perhaps even earlier, in official documents).

Bradfield's review in a sense was an anticipation of a more detailed analysis of health conditions and health services in India which was undertaken by the Health Survey and Development Committee under the chairmanship of Joseph Bhore between 1943 and 1946.

The Bhore Committee Report was the first detailed analysis of the health situation in India (GOI, 1946). The four volume report is exhaustive leaving out no area related to health in its analysis. It provided a very comprehensive plan for a national health service in India. Not only is it unfortunate that the recommendations of this committee, which provided for a decentralized health care services structure, remain unimplemented

but it is also unfortunate that such a comprehensive analysis of the India health situation has not taken place since then.

The only health survey in pre-independent India which is known to have looked into issues related to health economics was the Singur Health Survey in Bengal in 1944. This survey by R.B. Lal provided the first known estimate of private household health expenditure in India. This survey recorded private health expenditure to be Rs.2.50 per capita per year in the Singur area which was seven times more than what the government was spending (36 paisa) on health care services. Together both these expenditures constituted 4% of per capita GDP at that time (Seal et.al., 1958).

The foundation laid by R.B. Lal was built upon by S.C. Seal during his tenure at the AIIHy&PH. Seal carried out general health surveys in 9 districts (one in each state) between 1955 and 1958. These surveys were one of the first of its kind in India and they recorded private household expenditure. The average private household expenditure recorded in these surveys was Rs.3.34 per capita per year and it ranged from Rs.0.29 in Rajasthan to Rs.10.40 in Bengal (Seal et.al, respective years). In the resurvey of Singur in 1957 this expenditure worked out to Rs.5.60 per capita per year (Seal et.al., 1958).

The only other major survey results that are available in India are those from the National Sample Survey. In the 3rd Round of the NSS in 1951 private household health expenditure was recorded as Rs.5.77 per capita per year (Rs.3.84 in rural areas and Rs.11.04 in urban areas) (NSS, 1952). Alongwith the state

health expenditure in that year the total works out to Rs.6.63 per capita which was 2.53% of GDP; private health expenditure being 6.7 times of state health expenditure.

NSS in its consumption surveys has been recording health expenditure, but for the NSS this is not an important category and hence in its reports health is not reported separately but as part of "miscellaneous goods and services". However, the CSO makes estimates annually but these are questionable.

Public health finance data is available through the Comptroller and Auditor General's Combined Finance and Revenue Accounts (CFRA). These are the audited accounts of the nation and are easily available for scrutiny and analysis. However, this data has never been analysed in any significant manner. The FRCH has been looking at this data for the last two years for the period 1951-52 to 1984-85 and will soon be publishing a critical analysis of public health finance in India during the first six five-year plans. It must be pointed out here that whenever any analysis of health financing is taken up either by the Planning Commission or academicians and researchers interested in health issues only Plan data is used. Non-plan data that constitutes the larger portion has very rarely been considered for analysis. We hope that the FRCH study on State Sector Health Services and Financing fills this gap partially (see Duggal, 1986; 1990 for a preliminary analysis of this).

The Operations Research Group has done 2 studies (ORG, 1985; 1986) of state sector health financing but these have a very limited coverage. A study by IIM, Ahmedabad provides a better

out of it depends entirely on who grabs this opportunity. If it is going to be the same marketing and management institutions then the same story as in the case of health services research will be repeated.

Local body finance constitutes another important area which also has not received any attention inspite of the fact that with some effort the data can be put together. NCAER and NIUA have in recent years contributed important studies of urban local body finance (NCAER, 1980; NIUA, 1989) - see Table 1.

In the colonial period local body finance data was part of the National Accounts but after Independence this was separated and hence it is no longer compiled at the national level. There is perhaps a need to revive this compilation so that consolidated data is available for analysis.

The voluntary health sector, corporate sector, hospital studies are areas where some sketchy work has been done but these are emergent areas for further research. Infact health financing of the voluntary sector is getting special attention with assistance from Ford Foundation (see special issue of Health for the Millions Vol.XVI No.3) and a lot of research and documentation has already been done.

An agenda for Research under Panchayati Raj

One important fact that emerges out of the above review and should be of direct concern to Panchayati Raj organisation is the

review of health financing in India (IIM, 1987) at a single point of time but Roger Jeffery's book 'The Politics of Health in India' (1988) is perhaps the first review of the state health sector in India that looks at health financing historically and in some detail. D. Banerji's 'Health and Family Planning Services in India' (1985) gives a better and more critical analysis of development of health services in India in the post-independence period. Though health financing and economics does not feature in the classical sense a fairly sound analysis of the political economy of health is presented. However, it is unfortunate that none of these works looks at the private health sector in India in any significant manner, especially given the fact that it constitutes an overwhelming proportion of the health care delivery structure.

Perceiving this sheer absence of analysis of the private health sector FRCH has undertaken a number of studies in the past five years to try and establish a data base that will facilitate a proper analysis of the political economy of the private heath sector. These studies have looked at the so called voluntary sector (Jesani et.al. 1986), household health expenditure (Duggal and Amin 1989), private sector and privatisation (Jesani and Ananthram, 1990), private practitioner clinics (ongoing), corporate sector health benefits (ongoing) and complete health investment in a district (ongoing). Given the fast pace of privatisation and expansion of the private health sector research initiatives in this area are being taken up and many international agencies are coming forward to support such studies. Infact, in the next few years health economics, especially as it concerns the private sector, is in for a boom period. What research will come

urban bias of health care services in India. Whatever little has developed in the health sector of India has been appropriated by the industrial-urban settlements. Therefore, under Panchayati Raj reorientation of health care services for the benefit of rural populations is very important. Hence, before we get into research issues it is important to lay out a structure for the development of health care services under Panchayati Raj.

In this context it must be pointed out that the basic frame-work already exists in the recommendations of the Bhore Committee Report (GOI, 1946). We will not go into the details of this report but would only comment that we agree with its basic unit of using the 10,000 population level for establishing a minimum decent level of health infrastructure. Briefly, we feel (and this may be a little modification of Bhore) that this level should have a 50 bedded hospital with 2 General Practitioners, a gynaecologist, a medical specialist and a general surgeon. These should be supported by 10 nurses, 4 public health nurses and one paramedic per 1000 population. The doctors must be mobile by turn to provide support to PHNs and paramedics who would be providing domiciliary care. This must be a universal structure with adequate support of secondary and tertiary levels.

The 10,000 population level is a pragmatic and economic level to set up a variety of services and programs, besides health services. Hence the basic controlling unit of the Panchayati Raj should also be at this level. Such Panchayati units should be a constitutional creation with complete powers that facilitate administrative and financial control. However technical control and management must necessarily vest with the concerned

professional body, in this case the health professionals. Since the intention of this paper is not to discuss a model we will leave this here and move on to research issues.

The basic weakness in our health planning is the lack of an epidemiological base. This is the most urgent need in health service research in India. Without this, planning of health services becomes a meaningless exercise. Epidemoliogical research should not be only clinical in nature but must have a strong social and political basis. Once this database is established only then does other research have any meaning.

Closely linked to social epidemiology is social auditing. If social epidemiology constitutes the foundation on which the health structure must be erected, social auditing is the monitoring and guiding element that assures that the health services provide social justice.

To bridge social epidemiology and social audit a firm information system and data base is necessary. A lot of research needs to be undertaken with the assistance of health workers as to what would be the requirements of such a system.

Only with these facts established can any other relevant research be undertaken. Hence, in the process of constructing a health structure under Panchayati Raj the above issues have to be discussed if the structure must be effective and efficient.

Some of the other important areas of research under health economics would be prescription studies, cost analysis studies,

utilisation studies, health worker-patient relationship studies, among many others that may be listed.

To conclude we would like to stress that all the research work that is undertaken should not be the prerogative of research institutions or academic departments but they should be a matrix effort of researchers, bureaucrats, Panchayati leaders and other citizen body representatives and various health personnel involved in providing health care services.

Table 1 : Health Care Services and Health Expenditure in India 1880-1989.

YEAR	Health Care Services: Hospitals & Dispensaries		Beds (% Rural/ % Pvt.)	Allopathic Doctors (% Rural/ % Pvt.)	Health Expenditure: State	Municipal (only urban)	Total 4 + 5
	1		2	3	(Rs. per capita) 4	5	6
1880	1212[a] (NA/NA)		NA	NA	0.05	0.43	0.09
1900	1736[a] (NA/NA)		NA	NA	0.07	0.78	0.16
1920	5067 (NA/27.8)		55772 (NA/NA)	NA	0.12	1.67	0.30
1930	6448 (NA/28.0)		67245 (NA/NA)	NA	0.19	2.74	0.51
1940	7441 (NA/12.7)		74111 (NA/NA)	47524 (NA/76)	0.18	2.0	0.46
	Hosp.	Disp.					
1951	2694 (NA/NA)	6587 (79.3/NA)	117000 (NA/NA)	61440 (NA/NA)	0.61	NA	–
1956	3374 (39.0/NA)	7446 (84.5/NA)	152888 (23.5/NA)	76904 (NA/NA)	1.33	NA	–
1961	3334 (33.9/NA)	9540 (79.9/NA)	229634 (22.4/NA)	83756 (29.5/60.4)	2.35	NA	–
1966	3982 (33.0/NA)	10231 (79.9/NA)	295530 (20.6/NA)	103184 (NA/NA)	3.64	NA	–
1971	3862	12180	348655	151129 (39.4/NA)	6.47	24.68 (NCAER) (1971)	–
1976	4465	11696	448866	210504	12.88	48.08 (NCAER) (1977)	–
1981	6805 (26.7/43.8)	16754 (69.2/14.0)	504538 (17.2/28.4)	268712 (27.2/70.6)	25.67	33.48 (NIUA) (1980)	–
1986	7764 (21.0/45.3)	25871 (53.2/40.0)	594747 (17.6/26.1)	319254 (NA/73.4)	55.06	55.10 (NIUA) (1987)	–
1989	10145 (31.1/55.6)	29189 (46.8/53.6)	622668 (17.7/29.4)	352000 (NA/NA)	75.00	NA	–

a) Only state financed institution

Sources of Table :

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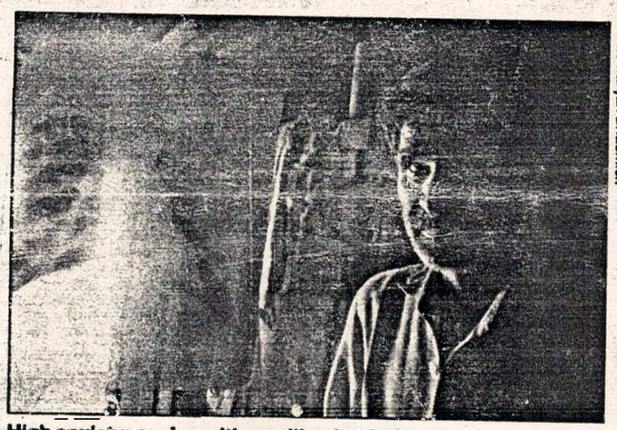
The cost of caring

India's health care system is close to breaking point, under the pressure of a severe resource crunch, an enormous population and a growing disease burden

Cost effective health care is today a major concern all over the world. In India it has assumed particular urgency considering the need to reconcile the colossal health care needs of the people with the fiscal constraints facing an economy undergoing structural adjustment. India's health care system must cater to a population fast approaching one billion. It must struggle to contain more than half the known cases of endemic diseases in the world. And it must do this with an infrastructure so thinly stretched that it completely fails to reach millions at the margins of the system.

If India is to develop an efficient health care system, Indian planners and policy makers must soon tackle the daunting challenge of reallocating health care expenditures to achieve greater effectiveness in solving the major health care problems of the nation. Existing approaches are unlikely to significantly ameliorate the problems facing health care in India.

By investing in a large public health network, medical education and research, the State in India has played a dominant role in providing health care. Today, however, this network is being supplanted by the large private sector in health, the result of a perceived loss of confidence in the public sector.



Palashranjan Bhaumick

High anxiety: coping with an ailing health care system

Yet, while it is fashionable to decry the public sector in health in India, it has made considerable progress since Independence. Over the last 20 years the health infrastructure has grown dramatically. Hospital beds have increased two and a half times, and the primary health care network has expanded rapidly over the Sixth and Seventh Plan periods. More than 2,060 Community Health Centres, 22,000 Primary Health Centres and 130,000 sub-centers now provide basic curative care.

The lower level facilities within the primary network also serve the purpose of communicable disease control, reducing the incidence of malaria, tuberculosis, cholera and other communicable diseases. The public sector accounts for 45 per cent of hospitals, 70 per cent of hospital beds, employs 25 per cent of registered allopathic doctors and trains 85 per cent of all medical graduates.

This large public health network, however, accounts for a total expenditure of just 1.5 per cent of GDP. In the current fiscal year, 1993-94, the Ministries of Health and Family Welfare at the centre and in all states and Union territories will spend about Rs.6,600 crore on health and family welfare. Ministry of Finance estimates placed this expenditure at Rs.6,000 crore for 1992-93. In addition, an estimated Rs.3,000 crore will be spent by municipal bodies from their own resources.

The erstwhile socialist countries spend, on average, 3.5 per cent of their GDP on health care, while OECD countries spend over 6 per cent of GDP. In its Alma Ata Declaration, the WHO has recommended that public health expenditures should gross at least 5 per cent of GDP. However, if the private spending of 4.8 per cent is included, India's total expenditure on health care would increase to over 6 per cent of GDP.

For a low income country like India this represents a highly distorted pattern of health investment. The ratio of public to private spending goes against the experience of all other countries except the US, whose health system at present is based on private insurance and out-of-pocket expenditures, a pattern that has sent health care costs spiralling out of control. In all other OECD countries over 75 per cent of health care is publicly financed.

Financial constraints have impeded public health care delivery in India. But, even these scarce financial resources are not being optimally used. Departments of health (excluding family welfare) at the state level are spending around 5 per cent of total government expenditure, plan and non-plan, on medical and public health programmes. The health sector's share of the total plan outlay in major states is around 3 per cent. However, instead of producing effective health interventions, these allocations are largely supporting a gargantuan health bureaucracy.

"A serious problem in sectoral allocation of public health spending has been the large and increasing proportion of expenditure on salaries... (while) non-salary components like medicines, equipment, etc are inadequately funded," states a current report on health financing issues released by the Ministry of Health.

This problem has affected one of the most essential components of public health care, disease control. While the Centre makes sectoral allocations towards disease control programmes, it fails to ensure their effective utilisation programme-wise. Once allocations are made for the plan period, allocations for non-salary inputs begin to shrink and the concerned programmes suffer correspondingly.

The sustainability of these programmes depends on allocations made by the state. However, as the report observes, "States have shown a tendency to divert programme funds away from components they are earmarked for resulting in a mismatch of priorities, allocative inefficiency and the consequent inability to fulfil programme objectives... The declining share of non-salary spending will only further

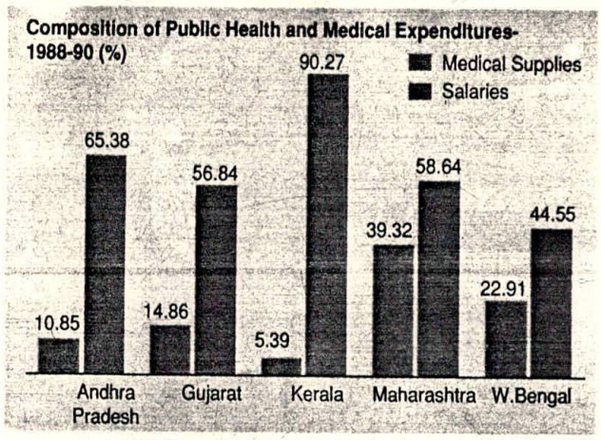
aggravate inefficiencies within the system causing further damage to the already poor reputation of the public health services."

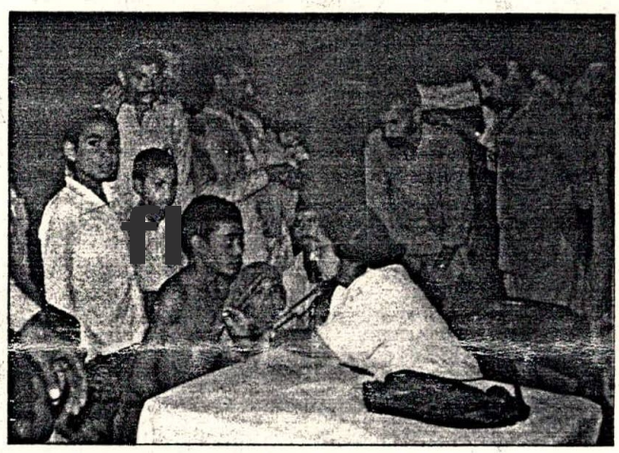
As health infrastructure expanded in the '80s, expenditure on salaries rose faster than on components like medicines and equipment. Expenditure on salaries is between two to three times that of materials. Studies have shown that non-availability of basic medical supplies is a major reason for poor utilisation of public health services.

Further, the emphasis from the Fifth Plan onwards on creating a rural health infrastructure to reduce disparities between urban and rural health facilities could have proved counterproductive. "There is some evidence, albeit circumstanstial, that the rapid growth in health care facilities during the '80s resulted in spreading resources thinly on too many facilities," says V.B.Tulsidhar, senior economist, National Institute of Public Finance and Policy. "The allocation of funds to complementary non-personnel inputs fell during the '80s. This could be partly on account of the resource crunch and partly due to the creation of more physical facilities than the resource position permitted." Consolidation of existing facilities before investing in new ones is a good way to arrest this trend, he suggests. This would improve the utilisation rates and bring down the unit costs of care with marginal additional investments.

"A related issue is the better targeting of existing programmes which have high cost effectiveness and are administratively amenable to targeting," suggests Tulsidhar. "Disease control programmes have these characteristics, but unfortunately, allocations to these programmes are being cut." An important element of health finance is central intervention in crucial areas of disease control.

States spend around 90 per cent of the total expenditure on medical and public health, since the provision of health care is mainly the responsibility of state governments. However, a part of this expenditure is fully or partially funded by the Central government. States have come under severe budgetary pressure since expenditure cuts at the Centre have sharply reduced the Centre's grants to centrally sponsored schemes.





Rural health care needs public support not private solutions

As a percentage of total health expenditure, grants fell sharply from 6.7 per cent in 1984-85 to 3.9 per cent in 1989-90. For disease control programmes funded mainly through central transfers, the share of central grants fell from 41 per cent in 1984-85 to 29 per cent in 1988-89, finally declining to 18.5 per cent in 1992-93. "However, revised estimates indicate that the figure could be around 25 per cent, almost equivalent to 1991-92 revised estimates for the states," concedes Tulsidhar.

"In spite of the fall in transfers to states, the real expenditure on medical and public health and on medical services grew fairly rapidly between 1985 and 1991 and fell marginally during the adjustment period," he says. "This, however, masks the fact that disaggregated data show considerable compression in spending on disease control programmes which are essentially in the nature of preventive health spending. Preventive expenditures are known to have high cost effectiveness. Therefore, a cut in this item of expenditure will cause allocative inefficiency."

If disease control has been adversely affected, evidence shows that the public health sector is not even fulfilling its purpose of delivering curative health care to the people. "If the PHCs and other public facilities are functioning well, why is it that more than half the rural patients go to private doctors and that district hospitals are overcrowded with rural patients?" asks Prem Vashishta, deputy director general, National Council of Applied Economic Reseach. "Utilisation of government facilities at the all-India level is as high as 40 per cent. However, the utilisation of PHCs by rural households is only 8.02 per cent."

The limitations of the public health system have meant increased private health care spending in India. Including out-of-pocket expenses and expenditure by the institutional sector, it is estimated to amount to more than two-thirds of the total health expenditure. NSS estimates for 1984-85 show that the share of the Central government and local bodies in health expenditure was around 37 per cent while the household and private non-household sector accounted for the remaining 63 per cent.

"Per capita health expenditure was about Rs.120.10 for the year 1984-85, with public expenditure per capita being Rs.44.55 compared to a per capita household expenditure of Rs.75.55," says Ramesh Bhat-in 'Paying for India's Health Care', a study of health economics in India. "Given the rate of inflation and the increase in the demand for health care services since 1984-85, overall expenditure in absolute terms must have gone up significantly."

Significantly, the number of rural patients seeking treatment from private

doctors increases as their income level decreases. One reason is that rural private practitioners often provide credit or even accept payment in kind for their services. Studies by Vashishta and associates have shown that the cost of treatment differs significantly between private and public doctors. Average expenditure for treatment from private doctors is Rs.146.7 per illness episode and Rs.169 for government doctors at 1990 prices.

Oddly, the average cost of treatment per illness episode increases with a rise in the patient's income in the case of private treatment but declines in the case of treatment at a public facility. "A plausible explanation is that the better-off sections of rural society manage to get some services from public facilities free of cost, while the not so better off have to pay unofficially. For instance, obtaining medicines free is a major problem since shortage of medicines is perpetual," says Vashishta.

The problem is, however, one of access rather than quality of service. In a paper on health care utilisation patterns, health researcher Meera Chatterjee remarks, "There is no evidence that people make a conscious choice between the public and private health systems *per se*. In rural health surveys, the vast majority of consultations reported have occurred with health providers who are nearby and have convenient timings." Though services at public facilities are free, the transport and opportunity costs are daunting, clinic timings are often unsuitable and the doctor is often not available.

Moreover, "The shortage of medicines at government facilities results in having to fil prescriptions at a market chemist from whom credit is usually unobtainable," adds Chatterjee. Thus, she found that, on average, only 15 per cent to 20 per cent of consultations reported are with government health providers. Significantly, the closer the public facility, the higher the rate of its consultation, and the rate could be as high as 60 per cent in the vicinity of a district hospital.

Says Vashishta, "While the role of PHCs in implementing various public health and family welfare programmes cannot be underestimated, it is important to examine, in the framework of social cost-benefit analysis, whether the massive fixed investment in PHCs is justified." Average daily attendance at PHCs is 20 patients. With around 22,000 PHCs, this means about 440,000 patients receive routine curative care per day in the face of an estimated daily morbidity of over 5 million cases in rural India. Thus, PHCs are treating only about 8 per cent of morbidity in rural India.

In fact, all studies show that the public sector accounts for only around one fourth of health care in both rural and urban areas. The 42nd National Sample Survey shows that while public hospitals are the single largest providers of in-patient care, accounting for 60 per cent of all hospitalisations, routine out-patient care is provided mainly by the private sector.

Centre and State Public Health and Medical Expenditures-(%)

Share in total public health and medical expenditure	1984-85	1989-90	1992-93
States' own expenditure	79.9	87.9	85.7
Grants from Centre	5.8	3.6	3.3
States' total expenditure	85.7	90.5	89.0
Centre's own expenditure	14.4	8.5	11.0

Source: National Institute of Public Finance & Policy

Much criticism of the public sector in health is, in fact, directed at the unduly large share of public hospitals in health expenditures. However, these hospitals also show the public health system at its best. A comparison of expenditures and health care delivery at King Edward Memorial Hospital, Bombay and two private hospitals in the city shows that the former provide services on a scale that cannot be rivalled by any private hospital.

While total annual expenditure for 1991-92 at KEM amounted to around Rs.17 crore, annual income was Rs.3.23 crore. In contrast, while expenditure at two private hospitals, was Rs.16.15 crore and Rs.13.77 crore, their income was Rs.16.78 crore and Rs.18.63 crore respectively. With roughly equal expenditures, KEM, however, provided medical services to 63,695 in-patients, as opposed to 11,085 and 12,853 in the private hospitals, and 1,428,064 out-patients as compared to 39,532 and 21,514 respectively.

"A significant difference between public and private hospitals is that the latter can control their work load," says Dr Pragnya M.Pai, dean, KEM Hospital. "Private hospitals turn away patients if all beds are occupied, and also those who cannot pay a cash deposit. Emergency and complicated cases are refused. In public hospitals there is no selection, services are provided to all comers, rich or poor." Patients from low and middle income groups have little choice but to use public hospitals and this results in overcrowding and huge work loads.

Public hospitals have a full complement of highly trained staff that few private hospitals can match. With a staff-patient ratio of 3.3 to 1, (3:1 in the US) and a work load ten times that of private hospitals, "Therapy wise, public hospitals are as good as the private 'five-star' ones," says Pai. "They offer all services, including super specialities, at no or minimal cost."

However, public hospitals are not cost-effective in the long run, Pai points out. "Treatment at public hospitals will not be cost-effective if the disease process does not stop," she says. "Mortality and morbidity rates are not coming down, we are merely buying time." More investment in water, sanitation and housing and innovative measures to increase the role of public hospitals in preventive care are necessary, suggests Pai.

'Regionalisation' of health services, where a public hospital would be responsible for the total health care, including immunisation and other preventive measures, of a population within a 'catchment area' of perhaps five miles, is one way to do this. In addition, a three-tier system of outreach services, periphery hospitals specialising in particular ailments, supervised by apex hospitals offering super specialities would build a network that would result in more rational and productive use of resources.

Drawing upon the resources of the private sector is another avenue that could be explored. "Public and private hospitals should complement, not compete with, each other," says Pai. Co-operation in areas like investigation, where private hospitals have the technology and public hospitals the clinical material would put the heavy expenditure in the private sector to more productive use.

The private health sector is an amalgam of institutions of different sizes from

out-patient clinics and dispensaries to nursing homes and hospitals run by single owners, partners or as companies. According to Central Bureau of Health Intelligence estimates, in 1988, private organisations and voluntary agencies owned 56 per cent of the 9,831 hospitals in India and 30 per cent of the approximately 586,000 hospital beds, besides 49 per cent of all dispensaries. In states like Kerala and Maharashtra, the share of private and voluntary hospitals as a proportion of all hospitals is 70 per cent and 92 per cent respectively.

"Analysis of the characteristics of these institutions in cities like Hyderabad shows a hierarchical arrangement of private services that broadly matches the purchasing power of different sections of society," says Rama Vaidyanathan Baru in a doctoral study on the private sector in medical care and its interrelationship with the public sector. The structure manages to reach all sections of the population, belying the popular notion that the private sector caters only to the rich and the public sector to the poor. The evolution of the private sector in India has not taken place independent of the public sector but, in fact, "has used manpower, resources and a variety of subsidies offered by the state to foster its own growth," remarks Baru.

Over the years, concessions in the form of loans and tax exemptions by the government and reduction of import duties following economic liberalisation have given a fillip to the growth of this sector. "During the '70s and '80s, government expenditures on medical care remained static. This provided the scope for the growth of the private sector from the mid-seventies onwards," she says. The rise of corporate hospitals with large business groups and NRIs investing in hospitals located in large cities, providing mainly specialist care, is a phenomenon of this growth.

While the expansion of public services was curtailed form the mid-'70s onwards, the government did not cutback the number of medical students graduating each year. Low employment opportunities in the public sector, coupled with the rising demand for medical services, fuelled the growth of the private sector.

While private health expenditure is high, it is not necessarily cost effective. Nor is it quite as rational as its proponents would have us believe. "Whether private spending is making a positive impact on the health of the population is highly questionable," says consultant surgeon Arun Bal. Most of the expenditure is accounted for by investment in sophisticated diagnostic equipment in large cities. "Bombay now has five MRI facilities, where only one would suffice for its entire population; London has one," he remarks. "The recurring expenditure for one scanner is Rs.56 lakh a year, enough to set up three new PHCs."

Overinvestigation is the easiest way to recover such heavy investments, and since many patients are reimbursed by employers, they don't complain. Overmedication resulting from aggressive marketing policies of drug companies is another harmful practice in this sector. "Broad spectrum drugs like ciprofloxacin are being prescribed even in rural areas, with dangerous consequences," says Bal. "Since these medicines are expensive, most people do not complete the course, turning large sections of the population drug resistant."

Social Insurance In Selected Countries - 1990 (%)

	Share of population covered	Social insurance as share of total health expenditure
India	5	2
Kenya	10	4
Indonesia	13	6
Korea Rep. of	90	25

Source: World Development Report 1993

The major dilemma that confronts policy makers is reconciling the need for equity in health care with the need to make the system, to some extent, financially self supporting. Even in advanced capitalist economies like the US, the universal provision of health care, with no one excluded because of inability to pay, is an accepted responsibility of government.

Health insurance is a good way to mobilise funds from employers and employees for health care in urban areas, freeing tax revenue to upgrade and consolidate primary health care services. India's experience of health insurance, however, has so far been discouraging. Despite the launch of comprehensive health insurance schemes by the government, at present only about 5 per cent of the population is covered. In 1989, three years after its launch, the Mediclaim insurance scheme covered only 264,000 people. The Central Government Health Scheme launched in 1950 as a contributory health scheme at present covers 41.20 lakh beneficiaries. The Employee State Insurance Scheme which provides health coverage to employees of factories and establishments with salary not exceeding Rs.1600 a month, now covers 26,748,750 beneficiaries.

"The costs of medical care are so high today that it is not possible for any individual to pay for all his own health care needs," says Ashok Bhatkhande, director, administration at P.D.Hinduja National Hospital, Bombay. "Today any private service is unaffordable for middle income group families and public services are unacceptable. The only way out is some insurance scheme." Private insurance schemes like Mediclaim have not worked in India because they are not properly designed, he feels. "For instance, premia for insurance schemes abroad depend on risk; here, there is no scheme of differential premia."

"Mediclaim, it is reported, has not even been able to recoup its advertising expenses through premiums as yet," says Tulsidhar. "Canada is one country where social insurance works. However, in India, even the preconditions for social insurance do not exist." Canada introduced national health insurance in 1971. Every province in Canada runs a public insurance plan with the federal government paying about 40 per cent of the cost.

The insurance plans are funded through federal and provincial taxes and private insurers are prohibited from offering coverage for the same services as the provincial plans. Hospitals and doctors are private and are paid through global budgets; doctors are paid on fee-for-service basis and patient charges and extra billing of patients is banned.

Though the system has led to rationing, with shortages of equipment and long waiting lists, Canada is one of the few countries that has managed both to contain costs and look after the health needs of all its people. If India is ever to create a durable social safety net, it would have to follow suit.

■ JEANNE PRASAD

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NOTE ON HEALTH FINANCE

For a long time now, one of the major concerns of organisations working in voluntary health care has been the timely and sustained funding of their activities. Dearth of finance or its untimely availability may put a project off the rails. Available funding is generally of a periodic nature, say for a period of two or three years. Many organisations are unable to manage the recurring costs of a project for a further period i.e., beyond the committed period of funding. It is therefore worthwhile for a project to try and create its own resources with a view to making it financially controllable and manageable. Divergent financing avenues available with the voluntary organisations can also help them protect from the dangers of unforeseen financial ambiguity.

In many organisations including hospitals, self-generated finance represents a substantial portion of their total income. In some cases, there are other more innovative self-financing schemes such as health insurance etc. Some effort by voluntary organisations for mobilising finance have been successful and others not so successful. It is also seen that many voluntary organisations committing themselves to self-generating financial activities do so on a temporary basis to remove their short-term difficulties only and not with an eye to overcome such problems in the long run and on a permanent basis.

Self-generating financial activities may be an important and workable solution for the financial constraints being faced by voluntary organisations. This may also help them achieve financial independence, enabling them to carry out the desired programmes without any time-lag. Till now, however, there has been little systematic effort to document these processes for self-financing of primary health care activities. There has also not been much discussion of these experiences with a larger number of voluntary organisations so that they can learn from these experiences.

Over the last year, the Ford Foundation has been reviewing the funding experiences of voluntary health projects and taking up case studies. Leading on from these case studies, the Ford Foundation organised at Pachod a workshop "Paying for health in the voluntary sector: experiences and prospects". This workshop brought together a small number of voluntary health organisations, intermediary support institutions and donor agencies.

The meeting discussed existing financial constraints faced by voluntary organisations, different funding options were

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explored and the information and data that may be required by organisations wanting to initiate self-financing activities. Support needs and future help for voluntary organisations wanting to strengthen their financing capacity were also discussed. Among the conclusions emerging from this workshop, the following are of broad interest:

1. A large number of Indian voluntary organisations working in health make some use of internally generated funds. This is a flexible, appropriate response to their perceived needs and is likely to continue. They are concerned about overdependence on outside donors, including government, and see advantages, both financial and programmatic, in some degree of self-financing. There are problems and disadvantages as well, which are of significant concern to the organisations.

2. Voluntary organisations are already an important testing ground for innovative approaches to health financing in India, which merits further attempts. For example, some groups have shown that use of a progressive fee schedule can generate a significant part of hospital costs from communities while still providing access to free services for poor patients. Others have been experimenting with prepayment and health insurance schemes. Much can be learned from the voluntary sector and the wider community from both successes and failures.

3. Voluntary organisations recognise the need for better information, documentation of experiences and technical support to improve their financing activities. There is a need for resources and institutions to fill this gap.

As a follow-up of this meeting, it was decided to organise a national-level meeting where a larger number of voluntary organisations, relevant government officials and representatives from management and donor institutions could come together and discuss these issues to provide a sense of direction to organisations who are looking at various aspects of health finance and also to identify areas of priority where sustained work needs to be taken up.

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VOLUNTARY HEALTH ASSOCIATION OF INDIA

AGENDA FOR NATIONAL WORKSHOP ON HEALTH FINANCE

Wildflower Hall, Shimla
1-4 May, 1990

Day 1: Ist May, 1990

Session I	:	Introduction
9.30 - 10.30 a.m	:	Opening remarks - Mr.Alok Mukhopadhyay Introduction of participants Review of agenda, Organisation of discussion groups, appointment of rapporteurs.
10.30 - 11.00 a.m	:	TEA BREAK
Session II	:	Issues in the Financing of the Voluntary Sector.
11.00 a.m -1.00 p.m	:	Current scenario -Dr.Ashok Dayal Chand Issues -Mr.Alok Mukhopadhyay Plenary discussion
1.00 -2.00 p.m	:	LUNCH BREAK
Session III	:	Background: The past and future of Government Financing of Health Care; Implications for the voluntary sector.
2,00-2.30 p.m	:	Government Financing of health care from the early 50s' to date, paper presented by Dr.Ravi Duggal
2.30 -3.00 p.m	:	Health Finance in the 8th Plan: What we in the Voluntary Sector can expect, paper presented by Dr.Rameshwar Prasad.
3.00-3.30 p.m	:	Plenary discussion of papers
3.30-4.00 p.m	:	TEA BREAK
4.00-4.30 p.m	:	Government funding of health care programs of the Voluntary Sector Dr.A.K.Mukherjee & Dr.S.C.Sharma.
4.30-5.30 p.m	:	Group discussion of issues raised by Drs.Mukherjee & Sharma

Night session *

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Day 2: 2nd May, 1990

Session IV	:	Issues in Financing the Voluntary Health Sector.
9.30 - 10.10 a.m	:	An overview of issues and current experience - Ms.Priti Dave
10.10 - 10.30 a.m	:	Discussion
10.30 - 11.00 a.m	:	TEA BREAK
11.00 - 1.00 p.m	:	Presentation of case studies: - Integrated health development project - Purely health project - Hospital - based health project - Umbrella organisation.
1.00 -2.00 p.m	:	LUNCH BREAK
2.00 - 3.00 p.m	:	Discussion and listing of issues brought out in case studies.
3.00 - 5.00 p.m	:	Small group discussion of above Issues.
8.30 - 10.00 p.m	:	Plenary presentation of group repor.

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Day 3: 3rd May, 1990

Session V	:	Strengthening skills for Financial Soundness in the Voluntary Sector.
9.30 - 10.00 a.m	:	Opening Statement outlining session Plan: Skills needed and Strategies for skill development. Dr.Peter Berman
10.00 - 10.30 a.m	:	Skills development strategies for Voluntary Organisation's experiences in India - Dr.Prem Talwar
10.30 - 11.00 a.m	:	TEA BREAK
11.00 - 1.00 p.m	:	Case presentations of applications of specific skills: Assessment Methods - Mr.Sanjoy Ghosh Costing - Dr.Ashok Dayal Chand Management Information and Supervision. BIRAC/AF. Financial Planning - Mr.Thulsiraj
1.00 - 2.00 p.m	:	LUNCH BREAK
Session VI	:	Strategies for the future: developing a plan of action.
2.00 -4.00 p.m	:	Group discussions to develop specific proposals for future activities including research, training, documentation, policy etc. Identification of problems and priorities.
4.00 - 5.30 p.m	:	Plenary to discuss future strategies/develop resolutions.
7.00 - 9.00 p.m	:	Cultural Programme

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INTRODUCTION

There has been a growing recognition of the important role of the voluntary sector as "innovators of health development". It has been suggested that many of the strands of the current "Primary Health Care" approach have evolved from the experiences of the voluntary sector, such as the training of community based health workers (Newell 1975). In addition to providing "models" in health service organization and delivery, voluntary organizations have also provided valuable lessons in qualitative aspects of program management and community participation.

A recent review of the health financing experiences of four voluntary organizations in India indicates that the sector may also provide lessons in program financing (Ford Foundation 1989). The studies show that voluntary agency health programs are funded from a number of different sources, including government, donor agencies, and community and self-generated sources. In many projects, the community and self-generated sources represented a significant proportion of total health income. Moreover, within this category organizations exhibited many innovative financing mechanisms, such as progressive fee scales, prepayment/insurance schemes and income generating schemes.

The widely held view that the current level of resources available to the health sector is unreliable has prompted the search for alternative sources to complement existing ones. Increased contributions from the community have been identified as an important financing option (Stinson 1982). There are many lessons to be learnt from the financing experiences of the voluntary sector, both for other

voluntary organizations as well as larger public health providers.

This paper presents the findings of a larger survey of the health financing experiences of voluntary organizations in India. In particular, it examines the scale and methods of community and self-financing adopted by them. Community and self-financing methods are described, and then evaluated in terms of both their overall net contribution and their distributional impact on service beneficiaries. Some questions posed are:

- What types of health activities are supported by community and self-financing methods?
- What costs do they cover?
- Are costs borne equally? by rich and poor? by healthy and sick?
- How (and by whom) are community and self-financing activities planned and managed?

The organizations studied represent a broad cross section of the voluntary sector health community. They were sampled to reflect a range of the different types of voluntary organizations providing health care, as well as different locations, size, and types of health care provided. They were also chosen on the basis that they were known to be tapping at least one community or self-financing source.

THE ORGANIZATIONS

This paper provides a summary of the health financing experiences of 12 voluntary organizations. Each of the organizations were visited by the author for approximately two days. During these visits the author gathered information on the kinds of health services provided and the overall structure of their financing. Additional information about their community and self-financing methods was also collected. Some of the groups were identified with the help of the Voluntary Health Association of India (VHAI), others were groups already known to the Ford Foundation. They were chosen on the basis of a number of criteria:

(1) That the overall sample represented a broad cross section of the voluntary health community, including organizations that provide health care as their main activity, as part of integrated development activities, or as a support service (eg. to economic activities or as an employment entitlement).

(2) That they reflected a range of geographic locations, size, and type of clientele served. Organizations differ in the type of health services provided (eg. hospitals and outreach services), and their mode of organization and delivery.

(3) That they tap community/self-financing sources.

Table 1 provides a summary of organization characteristics. It outlines their location, date established and/or health program started, a brief description of project activities (both health and non-health), mode of health service organization and delivery, population served, and total expenditure in a most recent year.

The 12 organizations are located over six states in India. The oldest organization was established in the 19th century and the newest in 1984. In terms of their health activities some projects provide only community based care (SEWA and Goalpara Cooperative

Health Society), others provide only hospital level care (BMCWS), and some provide both (Christian Hospital and Aravind Eye Hospital). Some of the organizations provide health care alone (Students Health Home and Christian Hospital), while others also provide non-health related services, such as child welfare centers, a women's income generating scheme, environment and sanitation programs (CINI and Tribhovandas Foundation). RAHA and UPASI differ from the other organizations in that they do not provide health services directly. They serve a supportive role to health providers, helping with staff training and management. RAHA is a federation of catholic health providers, and UPASI an association of tea growers.

Most of the community based health programs have trained Community Health Workers (CHWs) who provide basic curative, promotive and preventive care. Health services at Tribhovandas Foundation are closely integrated with the Amul dairy cooperatives. The community projects differ greatly in the size of population served. Goalpara serves a population of 1,247 and Tribhovandas Foundation serves 8 lakh population. Similarly, total annual expenditure ranges from Rs.18,527 (Sewagram) to 110 lakh rupees (Aravind Eye Hospital).

SOURCES OF REVENUE

Table 2 provides a breakdown of the major sources of health revenue for the organizations. There are three main sources, community and self-financing, government, and donor agencies. All the organizations, with the exception of SEWA generate revenue from community and self-financing sources. In eight organizations it represent the sole source of income. In fact, SEWA (although not indicated by the table) also taps a small amount of revenue from community sources. This will be discussed later. Government does not represent a substantial source of income for the majority of these organizations. Tribhovandas Foundation received 55 percent of its total income (both health and non-health) from the Overseas Development Administration (ODA), through the Government of India. Donor funding represented almost 100 percent of SEWA's health income and the Christian Hospital's community health project.

Table 3 lists the different methods of community and self-financing adopted by the organizations. There are five main methods: User fees, prepayment/insurance schemes, commercial schemes, fund raising activities, and "in-kind" contributions. The "Other" category includes contributions from the Amul Union and village milk societies in the Tribhovandas Foundation, and contributions from tea estates in UPASI.

Ten out of the 12 organizations levy some form of user charge, six organizations implement a prepayment/insurance scheme, three run commercial schemes, four raise revenue through fund raising activities, and three accept payment in-kind. Each of these community

and self-financing methods are described in turn, and examples drawn from the 12 organizations. The financing methods are then evaluated on the basis of the following criteria:

(1) **Yield.** This assesses the financial performance of community and self-financing methods. It asks: does the method successfully fulfill its financing goal? what is the level of revenue raised? what costs are covered?

(2) **Equity.** This assesses the distributional impact of financing methods. It asks: are financing burdens borne equally or differentially by the rich and poor? are there mechanisms in place to protect those judged too poor to pay? and if so, how, and by whom is means testing done?

(3) **Risk sharing.** This assesses the degree to which risks are successfully shared in prepayment/insurance schemes. It asks, is there a sharing of burden of illness between the healthy and sick?

COMMUNITY AND SELF-FINANCING METHODS

USER FEES

User fees are defined as any payment made by beneficiaries directly to health care providers, such as fees for services or prices paid for supplies, eg. drugs and immunizations. User fees for community based care are not widespread, although some organizations charge for drugs (SEWA). The BMCWS charges Rs.5 for an immunization. Immunizations were initially provided free of cost by BMCWS, however, on the introduction of the fee they registered an actual increase in the follow-up rate of immunization from 50 percent to 90 percent.

Organizations running prepayment/insurance schemes often ask members to pay for drugs, either at a subsidized rate (Tribhovandas Foundation) or at cost price (Goalpara, SSSS). This type of payment made by members is called a co-payment. As well as raising revenue co-payments also serve the purpose of deterring overuse of health services by members as may happen if care is provided at nil cost after payment of the membership fee. Organizations affiliated to RAHA raise a substantial proportion of their revenue from non-member fee collections, both through service fees and drugs sales. However, levying of service fees for community care is, overall, not widespread.

At the hospital level, fee collections represent a major source of income. In BMCWS, Christian Hospital and Aravind Eye Hospital they represent the sole source of income. All these institutes are financed 100 percent through fee collections. The Christian Hospital levies fees per item of service rendered, for

example for consultations, diagnostic tests, drugs, bed charges and operations. BMCWS charges Rs.250 for a "package of maternity care" and a five day stay. The Christian Hospital has private wards where patients are charged a higher bed charge and also higher service fees. The Aravind Eye Hospital has different classes of wards which have graded service charges.

Evaluation of user fees

(1) Yield

On the whole, organizations did not explicitly state what their financing objectives with user fees were. As a result it is difficult to assess how successfully funds are raised with this financing method. Nevertheless, it is estimated that SEWA recovers approximately 47 percent of its basic drug costs, and Tribhovandas Foundation roughly 60 percent. Both charge for drugs on an ad-hoc basis. Goalpara's objective is to provide drugs at cost price to members and at over cost price to non-members. It is not possible to determine whether this pricing strategy is successful. In all community based projects, drug income is pooled into the general revenue pool. It is not used directly to replenish drug stocks.

Three hospitals raised sufficient fee revenue to cover all costs. The Aravind Eye Hospital generated a "surplus" which subsidized outreach care, in the form of rural eye camps.

(2) Equity

All organizations were concerned that by charging they should not exclude the poor from services. Organizations waived fees either partially or totally for patients considered unable to pay. At the community level both Goalpara and Tribhovandas Foundation waive drug fees for those patients judged unable to pay. In the case of Tribhovandas Foundation the CHW judges capacity to pay and at Goalpara the doctor. In both cases ability to pay is assessed on a discretionary basis, although the CHW is better placed to judge since she resides in the community.

At the referral level, institutes raising fee revenue also had mechanisms in place to protect the poor. The BMCWS and the Christian Hospital partially waive fees for those patients considered unable to pay full treatment costs. The Christian Hospital presents non-affording patients with a fully itemized service bill and asks them to meet an agreed portion of the total. Ability to pay is again judged on a discretionary basis, this time by hospital doctors. The Aravind Eye Hospital has two separate institutes, one providing totally free care and one which charges patients for care. The "quality" of care provided in the two facilities is identical. They differ only in the "hotel" facilities offered, ie availability of bed, degree of privacy, bathroom facilities, etc. It is left to the patient to decide whether they would like to stay at the free or paying hospital. This takes away the burden of assessment from the doctor or other gatekeeper.

PREPAYMENT/INSURANCE SCHEMES

Prepayment/insurance schemes are usually contributions made by individuals and households in advance of service need. Only the sick avail of services. Therefore, in such financing schemes risks are shared between the healthy and sick. Schemes may provide different levels of coverage for community and hospital care, varying from partial coverage to total coverage.

Six organizations implement prepayment/insurance schemes. Table 4 presents a summary of the schemes. Coverage is provided on either an individual or household basis. The Students Health Home provides coverage to educational institutes, although in Calcutta individuals may enroll at a higher premium. Annual memberships fees vary from Rs.2 per person to Rs.6, and for households from Rs.10 to Rs.18. In some schemes, membership fees may be paid in either cash or in-kind (sorghum in Sewagram, rice in RAHA, and either rice or "community labor" in Goalpara). The number of members enrolled in each scheme varies considerably, from 6,800 in SSSS to 5.5 lakhs in the Students Health Home.

The schemes vary in the type and level of coverage offered. In some, membership entitlements include totally free referral and community care (Sewagram and RAHA). Although at Sewagram, a differentiation is made at the referral level between planned and unplanned illness episodes. Members with unplanned illnesses are treated free of cost and those with planned illnesses (eg. pregnancy and chronic ailments) are given a 25 percent subsidy. At RAHA, members after paying an initial entrance fee receive free hospital care upto a

ceiling of Rs.1000. The Tribhovandas Foundation scheme provides free CHW services, drugs at subsidized rates, and hospital care at 50 percent of cost. Goalpara and SSSS provide free doctor consultations and drugs at cost price. SHH provides free doctor consultations and other services at nominal rates, for example drugs, diagnostic tests, bed stay, operations etc.

Non-members are not entitled to avail of services at Sewagram, SSSS and Students Health Home. In Goalpara and RAHA, non-members can use the services but at a cost. They are charged commercial rates for a doctor consultation and drugs. At Tribhovandas Foundation non-members are not discriminated at the primary level. Like members they can also avail of CHW services and obtain subsidized drugs. Non-members are most often not affiliated to milk societies and do not own milch animals. Therefore, the Foundation feels that they are usually the poorest in the community and are least able to pay for services. In fact, even drug fees are waived for those non-members considered too poor to pay. Non-members, however, are not entitled to subsidized referral care.

The prepayment/insurance funds are managed in different ways by the organizations. At Sewagram the community health worker is responsible for collecting membership collections, both in cash and kind. Collections are undertaken once a year, usually at harvest time. The health worker sells the collected grain in the open market. From the funds generated he purchases drugs, pays Sewagram for mobile support, and then retains the difference as his salary. It is compulsory that at least 75% of villagers enrol in the scheme. In RAHA

individual health centers are responsible for enrolling members. This is undertaken once a year. New members have to wait for two months before they are entitled to member benefits. Membership collections are split into two separate funds, one managed by individual health centers to cover community costs, the other managed by RAHA to cover referral costs. Village milk societies in the Tribhovandas Foundation are responsible for membership collections. Collections are usually undertaken once a year at the time that the societies distribute milk profits. Funds are passed up to the Foundation. The Goalpara village health committee is responsible for collection and management of funds. At the Students Health Home individual education institutes are responsible for membership collections. All collections are passed to the Home. Doctors at the SSSS dispensary are responsible for collecting membership fees. This is all year around and there is no waiting period between enrolling and service uptake.

Evaluation of Prepayment/Insurance Schemes

Table 5 summarizes the evaluation of pre-payment/insurance schemes in terms of the three criteria.

(1) Yield

It is estimated that membership fee income covers approximately 96 percent of all community costs at Sewagram, that is the salary of the VHW, drug costs and mobile support costs. Referral costs of members were covered from other sources. In RAHA, membership income (comprised of a portion of membership fees and entrance

charges) was sufficient to cover all referral costs. However, at the community level income from membership fees represents a relatively small source of revenue, covering no more than 10 percent to 20 percent of total community costs. The major source of income for health centers are non-member fee collections. It appears that members may be using services in excess of their contribution, and/or that there is not sufficient risk sharing between healthy members and sick members (this is investigated further below). At Tribhovandas Foundation, membership fee income and member (and non-member) drug collections account for only 13 percent of total income (both health and non-health). A rough analysis of costs and financing of the scheme at the community level indicates that membership fee income and drug sales together cover approximately 70 percent of community health costs, (ie. salary of the CHW and drug costs). The remaining 20 percent of costs are covered by milk societies, and 10 percent from other sources. Higher level support and referral costs are met from other Foundation sources, namely the Amul union and Government of India. In practice funds are not earmarked for specific costs, all revenue is pooled in a general fund. Data is not available to assess the financial performance of the Goalpara Health Cooperative scheme. At the Students Health Home, contributions from members cover approximately 54 percent of total cost [membership fee income (34 percent) and member service fee collections (20 percent)]. Government grants, donations and fund raising activities covered the remaining costs. Contributions from members cover approximately 45 percent of program costs at SSSS (membership fee collections (15 percent), and

member service fee collections (31 percent). Domestic donors covered 44.5 percent of costs, and the balance came from miscellaneous sources.

(2) Equity

Sewagram and SSSS have membership fees related to ability to pay. At SSSS, patients earning below Rs.1000 a month are charged Rs.2 annual membership fee and those earning above Rs.1000 are charged Rs.5. Income assessment is carried out by the doctor, whose own discretion is used to assess ability to pay. At Sewagram, members are categorized into the following socio-economic groups: households that own irrigated land and employ contractual labor for agricultural work, called salder; households who own irrigated land and a pair of bullocks, but do not employ salder; households who own unirrigated land and a pair of bullocks, and do not employ salder; landless laborers.

Membership contributions are graded according to these categories. These income groups were established by the communities themselves, through a village committee. The committee is also responsible for assessing and allocating families to categories.

Another mechanism in place in some schemes to ensure that the poor are not excluded is the option of paying membership fees in either cash or in-kind. At Sewagram, contributions may be made in Sorgham, at RAHA in rice, and at Goalpara either in rice or through community labor (eg. crop watching). Schemes that request members to pay a co-payment, mostly towards drugs (Tribhovandas

Foundation, Goalpara and SSSS) all waive fees either totally or partially for those members (and in Tribhovandas Foundation also non-members) judged unable to pay. Assessment of ability to pay is undertaken by the CHW at Tribhovandas Foundation, and by doctors at Goalpara and SSSS. In all cases assessment of capacity to pay is left to the discretion of the assessors. Although in Tribhovandas Foundation, the CHW is in a better position to judge patients paying capacity since she lives in, and is a part, of the community. As already mentioned in the discussion on equity concerns with user fees, Tribhovandas Foundation allows non-members the same community health service entitlements as members. Non-members are usually not affiliated to the milk societies, do not own milch animals, and therefore, are often the poorest in the community and least able to afford health care costs.

RAHA has an additional financing policy to ensure greater equity among members. Members referred to any one of three hospitals affiliated to RAHA, pay an entrance fee related to the distance travelled. Charges are Rs.200 if the distance travelled is less than 200 kms, Rs.150 if over 25 kms but less than 100 Kms, and Rs.100 if over 100 Kms.

(3) Risk sharing

Ideally in a prepayment/insurance scheme members enrol when healthy and only those who fall ill avail of services. Pre-requisites for successful risk sharing in prepayment/insurance schemes are that members contribute in advance of service need, and

that a large enough number of people enrol to ensure a sufficient pooling of risks. The first criteria may be ensured by introducing a waiting period between enrolment and membership eligibility.

All the prepayment/insurance schemes, except SSSS fulfill the first criteria, i.e. members enrolling prior to service need. The scheme run by SSSS functions as more of an "entrance fee", since members join at the time of service need. RAHA is the only organization to have a formal waiting period of two months for new members before they are entitled to use services. In Tribhovandas Foundation there is an incentive to enrol only when referral care is required, since non-members are entitled to the same community services as members and there is no official waiting period between enrolling and member entitlement. However, the Foundation did not express this to be a problem. This may be because the fund is closely linked to the village milk societies, providing a village level structure to assist in the collection of dues.

It is not possible to comment on the degree to which schemes fulfill the second criteria - that there is a large enough number of people to ensure sufficient pooling of risks. The actuarial soundness of schemes is unknown in the Indian context and is difficult to assess. Clearly, some schemes like the Students Health Home which have large membership do achieve successful risk sharing. While in RAHA it appears some centers do not have adequate membership for risk sharing between healthy and sick. Sewagram is the only organization where it is compulsory that a fixed proportion of households enrol, 75 percent of village households must join before services are provided.

COMMERCIAL SCHEMES

Commercial schemes are activities (both health related and non-health related) that are run by organizations on a for profit basis to help finance health care. The BMCWS runs two commercial schemes which help fund health services, a day care center and convalescent home. A day care center located in a affluent area of Bombay provides creche, nursery and school facilities for children. Parents are charged a monthly attendance fee, in addition to which on joining they are each asked to pay a deposit of Rs.2000. The Society has invested this money in fixed deposits, and this provides them steady interest earnings. Surplus from this center is used to finance health services as well as other day care centers situated in poorer localities, where fee income is not sufficient to cover costs. In addition, a convalescent home located in one of the maternity hospitals provides accommodation to patients attending the Tata cancer hospital. It is very difficult for patients undergoing protracted cancer therapy to find affordable accommodation in Bombay. The home offers a single room for the patient and two family members at a rate of Rs.50 a day. In 1987/88 the Home generated a profit of two lakh rupees. This was used by the Society to fund health services.

The Aravind eye Hospital has an optical shop and a pharmacy on the hospital premises. These are owned by hospital doctors and run on a for profit basis. Profits generated are distributed among the shareholders. These schemes were initiated, partly to compensate for the low salaries paid to hospital doctors. The optical shop and pharmacy pay rent to the hospital.

SEWA has recently opened a drug shop, which stocks only rational, generic drugs. They plan to supply drugs to municipal hospitals and other charitable institutes with some mark up but trying to keep well below commercial rates. They will use profits to directly fund other health activities.

FUND RAISING

Organizations in many cases devoted considerable time and effort to fund raising activities. In one group (SSSS), it represented a substantial source of revenue, in others a relatively minor source (Goalpara and Students Health Home). Goalpara raises revenue from hosting charity plays and melas (fairs). Revenue raised in this manner represented approximately 5 percent of total income. SSSS raises funds from society subscriptions. Individuals and private businesses can subscribe to the Society as either annual or life members. This source, combined with other private donations represented roughly 45 percent of total Society income. The Students Health Home, among other activities held a sponsored walk. Internal fund raising represented 3 percent of total income at the Home.

IN-KIND CONTRIBUTIONS

As already mentioned, many organizations provide the option of paying for services in either cash or in-kind, in rice (RAHA), sorgham (Sewagram) or community labor (Goalpara). However, in all cases it is for payment for prepayment/insurance scheme membership. None of the organizations offered payment in-kind as an on going

payment option. This could be because the management of such a financing scheme might be too cumbersome. A one time payment is simpler to manage, plus it is easier to sell grain in the market in bulk rather then smaller quantities.

OTHER SOURCES OF COMMUNITY AND SELF-FINANCING

The Tribhovandas Foundation provides health care through village milk cooperatives. The milk cooperatives and Amul Union contribute a significant amount of revenue towards health services. Milk societies support 50 percent of the CHW's salary, plus they contribute approximately Rs.1000 per year. The Comprehensive Labor Welfare Scheme run by UPASI is financed largely through membership subscriptions from private tea estates. Contributions are linked to land holding. Tea estates by legislation have to provide health services to their employees. Prior to UPASI's involvement this meant providing hospital care. UPASI has helped train link workers to provide preventive and promotive health care.

CONCLUSIONS

This review of the health financing experiences of voluntary organizations in India shows that community and self-financing methods represent an important funding source for the sector. In eight organizations they represent the only source of funding. Some organizations rely on only one method of community/self-financing, while others tap a mix of sources. In one case, Goalpara, community/self-financing methods were stepped up when donor funds dried up.

Organizations exhibit an array of community and self-financing methods. User fees were an important source of funding for hospitals. They were not so widely used at the community level, although some groups charge on an ad-hoc basis for drugs and one group charges for immunizations. User fees were frequently used as a co-payment for prepayment/insurance schemes and for non-member service charges. Prepayment/insurance schemes were an important source of funding for community based health care. Commercial schemes were only used to fund hospital care, although one organization, SEWA, has recently opened a drug store which will supply drugs at prices that allow some income to accrue. Profits will be used to fund outreach care. Fund raising was an important source of income for only one organization.

Experiences with these community/self-financing methods are mixed. The review highlighted both the strengths and weaknesses of financing activities. Some important examples are:
the three hospitals that are financed solely from fee revenue, and

the prepayment/insurance schemes run by Sewagram and RAHA. At Sewagram, income from membership fee collections was sufficient to cover almost all community costs. The policy that at least 75 percent of households must enrol in the scheme before services are provided has ensured that risks are sufficiently pooled to make the scheme financially viable. At RAHA, experiences with the prepayment/insurance scheme varies at the community and referral level. At the community level, individual health centers are responsible for managing funds. Membership fee income on average covers 10 percent to 20 percent of community costs. Non-member fee collections cover the majority of costs at centers. RAHA manages the referral fund, reimbursing hospitals directly for member costs. This is an example of third party prepayment/insurance, where the insurer and health provider are separate. The RAHA fund was sufficient to cover all referral costs. Introduction of a waiting period between enrollment and service entitlements has ensured that members do not join at the time they are in need of services.

Although tapping revenue from the community all organizations were concerned that the poor should not be excluded from services. All groups had mechanisms in place to protect non-affording patients from the potentially adverse effects of charges. These included waiving fees either partially or totally for those patients considered unable to pay, a sliding membership fee scale for a prepayment/insurance scheme, and the option to pay membership fees in either cash or in-kind. However, the assessment of ability to pay in a systematic manner remained a concern. Groups

tackled this in a number of different ways: some left assessment of ability to pay to service "gatekeepers", such as doctors or CHWs, others left it to the patient to decide whether they wanted to utilize a free or paying facility, in one case a village health committee was responsible for allocating households to income groups.

On the whole, organizations were not explicit about their financing goals were with community and self-financing activities. This made it difficult to assess the degree to which any one financing method was successful. They often did not link a financing activity with a particular health activity, or state what proportion of costs they wanted to cover with that source. Very often they were not aware how much cost recovery they were achieving with a particular source. However, the widespread use of community/self-financing methods implies they are useful and at least somewhat successful. Income from community and self-financing methods is usually pooled into a general revenue fund.

It is generally felt that organizations need to improve the planning and management of community and self-financing activities. For example, it is unclear on what basis organizations establish fee levels and prepayment/insurance premiums. They appear to be largely set in an ad-hoc manner. Fees and premiums should be set with some reference to service cost and some measure of ability to pay, usually gauged on the basis of household income. The only exception is Sewagram which considered the ability of households to pay when setting premium levels. In addition, for insurance premiums actuarial risks also need to be considered. Some knowledge of household

demand/utilization behavior is also important when setting user fees and prepayment/insurance premiums. The Aravind Eye Hospital was the only organization to have a financial management system, that tightly monitored costs.

Little is known about the extent to which organizations consult and involve communities in financing decisions. It appears that some, like Tribhovandas Foundation and Sewagram do have on going dialogue with the communities they serve. Participation of the community in both the planning and management of financing activities will also ensure their commitment to the service. The structures and processes required to enhance community participation is an area that needs to be further explored. Some organizations have ideal village structures that might facilitate such interaction between service providers and the community, such as village committees, milk societies and Mahila Mandals.

This review has shown a voluntary sector rich with experiences in community and self-financing of health programs. In many cases voluntary organizations have forged ahead with innovative financing activities, sometimes in response to declines in funding. Some of these financing activities can be further strengthened with better planning, management and monitoring. It is hoped that such documentation and sharing of financing experiences will help other health providers wanting to explore financing possibilities.

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Table 1 Voluntary Organization Characteristics

Voluntary Organization	Location	Date Started	Services Provided	Health Service delivery/organization	Populatio Served
Sewagram	Wardha, Maharashtra	Hospital 1945, Community Health Program 1972	1. 500 bed hospital 2. Outreach Community Health Program	- Trained male VHW provides basic curative preventive & promotive health care. Mobile with doctor and ANM provides supportive care every 2 months	- 10,29
Bombay Mother & Child Welfare Society (BMCWS)	Chawls in Bombay	1947	Health activities - 2 Maternity Hospitals (40 beds each) with Child Welfare Centers Non-Health Activities - Day care centres - Convalescent Home	- Outpatient and Inpatient Maternity Care - Outpatient Paediatric care including immunization	
Raigarh, Ambikapur Health Association (RAHA)	Raigarh Orissa	1969 Community Health activities started 1974	Federation of 3 referral hospitals and 65 independent health centres with outreach community care	- RAHA functions include: Management of insurance scheme, training and support for health centers - Health centers staffed by nurse provide outpatient care, run MCH clinic - VHWs provide community based care	4,00,
Christian Hospital	Bissamcuttack Orissa	Hospital 1954 Outreach community care 1980s	120 bed hospital, community project currently not operational	Outpatient/inpatient care, specialities include: obstetrics, gynecology, surgery, ophthalmology	-

UPASI	Coonoor, Tamil Nadu	19th Century CLWS-1971	Association of Tea growers, run Comprehensive Labor Welfare Scheme ((CLWS))	CLWS provides training, management support to health programs of individual tea estates. Tea estates have small cottage hospital, and outreach care provided by link workers	2,50,0
Goalpara Cooperative Health Society	Shantiniketan W.Bengal	1984	Dispensary, Periodic Community health activities	Doctor provides outpatient care twice weekly	1,2
Students Health Home	W.Bengal	1955	Polyclinic, Plus 28 Regional Clinics	Polyclinic has 70 beds; provides outpatient and inpatient care Regional clinics; outpatient care only Health education campaigns, blood donation camps	5,50,0
Saheed Shibsankar Saba Samity (SSSS)	Burdwan W. Bengal	1978	Dispensary occupational health activities, Rural Health Program, School Health Program, Fair Price Medicine Shop	Doctors provide outpatient care weekly MCH clinic	-
Aravind Eye Hospital	Madurai, Tamil Nadu	1976	2 Urban Hospitals (800 beds) 2 Rural Hospitals (500 beds), Outreach Program	Outpatient and inpatient eye care. Regular eye camps organized	-
Tribhovandas Foundation	Anand Gujarat	1980	Community based Health Program-linked with Amul Milk Cooperatives, Nutritional Rehabilitation Centers, Balwadis Women's Income Generating Scheme	CHWs provide basic curative, preventive and promotive care, Field Supervisors provide support to CHWs Milk Society building used as base for coordinating health activities	8

SEWA	Ahmedabad Gujarat	Union 1972 Health Program 1984	Union of self-employed women. Helps organize women into cooperatives of various trades, provides credit facilities legal aid etc. Provide health care as a support service to members. Run a drug shop which stocks rational, generic drugs.	Health Centers in urban slums and rural villages CHWs provide basic care, doctors provide support twice weekly	
CINI	Daulatpur W. Bengal	1975	Community-based Health Program, Dispensary and Nutritional Rehabilitation Center. Other activities: Income Generating Schemes, Farm, Health Training, Research	CHWs provide MCH care through Mahila Mandals, doctors run daily OPD, weekly MCH clinic, Supplementary Feeding	(C H P

1. Latest year available 1983/84
2. Based on 3 monthly average expenditures

Table 2 Sources of Revenue

Source	Sewagram (Community Project)	BMCWS	RAHA	Christian Hospital	Hospital Community Programme	UPASI	Goalpara	Students Health Home	SSSS	Aravind Eye Hospital
	Percentage of total income									
Community/ Self-financing methods	96	97.7	100	100	-	100	100	66.5	100	100
Government	-	2.3	-	-	-	-	-	33.5	-	-
Donor Agency	-	-	-	-	100	-	-	-	-	-
Other	4	-	-	-	-	-	-	-	-	-
Total	100	100	100	100	100	100	100	100	100	100

Table 3 Methods of Community/Self-financing

Method	Sewagram	BMCWS	RAHA	Christian Hospital	UPASI	Goalpara	Students Health Home	SSSS	Aravind Eye Hospital	Tribhovandas Foundation
1. User fees		X	X	X		X	X	X	X	X
2. Prepayment/ Insurance Scheme	X		X			X	X	X		X
3. Commercial scheme(s)		X							X	
4. Fund raising			X			X	X	X		
5. In-kind contributions	X		X			X				
6. Other					X					X

Table 4 Prepayment/Insurance Scheme Characteristics

	SEWAGRAM	RAHA	Tribhovandas Foundation	Goalpara	Students Home
Coverage	Household	Individual	Household	Household	Institut and Indi
Annual subscription fee	8 payali sorghum (landless) and 2 payali sorghum per acre (landholders), or equivalent cash.	Rs.5 or 2 Kg rice	Rs.10	Rs.18 in cash or in kind (rice or labor)	Rs.2 - per for institu Rs.6 - for
Number of members	At least 75% of households (12 villages covered)	75,000	approx. 1/5 to 1/6 of all households in villages (317 villages covered)	150 out of 175 households in village	630 Institu total 5,50 students c
Member entitlement	Community care: free CHW services, drugs and mobile (doctor+ANM) services. Hospital: free care for unplanned illness episodes, 25% subsidy for planned illness episodes e.g. pregnancy and chronic ailments.	Community care: free CHW services and drugs. Free health center services including MCH clinic. Hospital: free care after paying entrance fee upto ceiling of Rs.1000.	Community care: Free services, subsidized drugs. Hospital: 50% subsidy	Dispensary: free doctor consultation and drugs at cost. Free periodic public health activities	Polyclinic, clinics: f sultations diagnostic operations at nominal
Non-member entitlements	Non-members not entitled to use community health services	Non-members charged for drugs (over cost), not entitled to attend MCH clinic.	Non-members have same entitlements to community services as members, but not hospital care.	Non-members charged for drugs (over cost).	Non-membe entitled of servic
Management of fund	VHW responsible for membership collections. Collections once a a year at harvest time. Compulsory that 75% of villagers covered.	Individual health centers responsible for membership collections. Collections once a year. New members waiting period 2 months before service entitlements. Rs.3 retained by center, Rs.2 to RAHA for referral fund.	Milk societies responsible for membership collections. Collected once a year at time milk bonus payments distributed. (Non-milk society members can also enroll in scheme).	Village health committee manages funds. Collections once a year.	Institut once a ye viduals o (No waiti

Table 5 Eva' 'ion of Prepayment/Insurance Schemes

	SEWAGRAM	RAHA	Tribhovandas Foundation	Goalpara	Students H Home
1) Yield	- Member fee collections cover approx. 96% of Community health program costs (VHW salary, drugs and mobile costs) - Referral costs met from other sources	- Membership fee collections over approx. 10 to 20% of community costs. Non-member fee collections cover roughly 60% of costs. - Membership fees cover 100% of referral costs.	Estimated that: - Membership fee collections together with drug income covers approx. 70% of community based costs. 25% of costs are covered by milk societies. - Referral costs are met by Amul Union and a donor agency. However, in practice all income pooled in general revenue account.	NA	Membership collections 35% of serv costs. Serv fee collect from member 20% of cost Balance cov from fund r activities.
2) Equity	- Sliding membership fee scale. Income assessed on basis of whether landless laborers, landholders, size of landholding and income. Income assessed by village committee. - Can pay membership fee in cash or in-kind (sorghum)	- Can pay membership fee in cash or in kind (rice). - Referral charge related to distance travelled to hospital. The greater the distance, the less charged. - RAHA provides a matching contribution to those centers requiring funds.	- Non members not excluded from community services. They are usually poorest in community, often owning no milch animal - Drug fees waived for those judged unable to pay. Assessed by VHW.	- Drug fees waived for poor. Ability to pay assessed by doctor.	-
3) Risk sharing (a) do members join prior to service need? (b) are there sufficient members for "pooling of risks"?	(a) Members join prior to service need. (b) Compulsory that at least 75% of village households enroll.	a) Members join prior to service need. 2 month official waiting period for new members between enrollment and service eligibility. b) Overall 75,000 members. Individual health center membership varies depending on location and population density.	a) Members join prior to service need. Reportedly, a few join at the time hospital services required. b) 1/5 to 1/6 of all village households enroll.	a) Members enroll prior to service need. - b) 150 out of 175 households enrolled.	a) Memb pric serv b) Lar ship

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August 1, 1989
Dr. Peter Berman
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INFORMATION NEEDS FOR PROGRAM FINANCING

Introduction

Over the past year, we have been reviewing experiences with financing voluntary organization health programs in India. This has included published literature, program reports, and new case studies, the reports of which have been distributed at this workshop. It is abundantly clear from what we have seen, that India's voluntary sector is rich with experience and innovation in meeting the financial demands of non-government health programs, including hospitals, rural health facilities, and community-based activities.

The self-financing efforts of voluntary organizations are often based primarily on the experiences and insights of successful program leaders and managers. Our explorations suggest that while this often provides a sound basis for developing new approaches to program financing, sometimes it does not. For example, while some of the groups we have visited accept the principle of raising extra funds from "deluxe" or "luxury" services, there may sometimes be uncertainty about what level of charges will generate a real surplus (over costs) as opposed to just a cash flow.

As voluntary organizations seek to increase their self-financing capacity, whether for reasons of greater independence or simply to expand their operations, there will be an increasing need to develop capacity to plan and analyze alternative financing strategies and to monitor and evaluate their results. This will require practical information that can be collected and analyzed rapidly and that provides relevant guidance for program decisions. This brief paper will review some of the different dimensions of information needed for such planning, the range of methods for getting it, and how it might be utilized.

INFORMATION NEEDS AND DIFFERENT METHODS OF FINANCING

Appropriate information can help in deciding which methods of program financing may be most advantageous and how to organize and manage different approaches to financing. Experiences with different types of financing activities will also generate much relevant information about what works and doesn't work in the field.

The menu of financing methods is limited. The paper on community financing experiences around the world by Wayne Stinson provides a broad review of these methods, including: fees charged to users, sale of drugs/supplies, personal or production-based prepayment schemes, donated labor, income-generating activities, and contributions/donations/special fund-raising activities. To these "community" financing methods, we might add government and donor grants and loans as other important sources of financial support.

For each of these methods -- and different combinations of methods -- certain types of data or information are relevant for planning, monitoring, and evaluation. One can identify four major categories of data needed. e.g.:

1. Data related to defining the financing problem,

2. Data related to the costs of program activities.

3. Data related to generating revenue for program activities,

4. Data related to assessing results of financing activities, certainly including the financial success, but with special emphasis on the social and economic impact or implications of self-financing.

DEFINING THE FINANCING PROBLEM

Voluntary organizations are moved to develop self-financing activities in response to some perceived need. This could include the simple desire to increase the funds available for programs in general, or an effort to remove excessive dependence on one or several sources of funds because they are unreliable or inappropriate in some way, or other reasons.

Often, one can more easily identify the problem qualitatively than quantitatively. Dependence on donor funding is a frequent complaint. For example, programs expand rapidly when funding is available initially, but are forced to contract if funding is not renewed. Expenses are reimbursed, but late or irregularly or not fully.

How can these perceived disadvantages of dependence be translated into goals or targets for self-financing activities? How much funds should be raised internally to offset the negative effects of rising and falling fortunes in seeking outside funds? What kind of financial buffer could protect against reimbursement problems?

To answer these kinds of questions, organizations need to look carefully at their total funding, at the composition of their funding by its source as well as its use, and at changes over time (and possible future changes) in these aspects. An example of one attempt to examine such questions can be found in Table 11 of the VHS-Madras case study attached, which provides a trend analysis of the composition of sources of finance for the hospital.

Another useful approach is to attempt to quantify the financial goals of self-financing activities, say, year by year. In part, this requires some knowledge of the cost, revenue, and social and economic dimensions discussed below. However, it also requires that one try to develop a financial plan with some analysis of possible results under different assumptions about future conditions. Priti Dave will present an example of such a planning exercise on day 3 of this workshop.

Tools. The main tools for generating this kind of information are those of financial accounting. Much of the data needed is probably available in annual financial reports. For the financial planning, simple "spreadsheet" analysis is useful. Much of the data and methods discussed below can also contribute.

COSTING PROGRAM ACTIVITIES

For general fund-raising activities and for setting financing targets, knowing the gross amounts of resources required for a given program or activity can be adequate. For example, program managers may know how much is required per village or block to set up and maintain a certain project model. A hospital's annual recurrent costs may be easily estimated from the previous year's experience.

But for some types of self-financing activities, knowing the actual cost for specific units of service or more detailed breakdowns of types of costs may be important. Costs provide a useful indicator of efficiency in program activities and, of course, they are the benchmark against which any efforts at raising funds related to the provision of individual services must be assessed in terms of ability to generate a surplus. For example, if services such as "luxury" beds in a hospital are established to generate revenue to support regular services, clearly the charges for those beds must exceed their costs. Otherwise, the hospital will be subsidizing its "luxury" users, not earning income from them! A more difficult example might be estimating the cost of services to be provided under a prepayment or insurance scheme, where the final result depends not only on the operating costs of the program, but on the utilization of services by scheme members.

Not all self-financing activities seek to generate a surplus of revenue over costs for each individual service, although for income-earning schemes, this is certainly an important criterion of success. For user charges for services, some services may be earmarked to earn a surplus while others might be intentionally under-priced, provided free, or users even paid in a subsidy to encourage use of some services (e.g. ante-natal care, immunization) or the access of certain members of the community, such as the poorest families. Memberships in prepayment schemes might also be assessed on a sliding scale. In any case, awareness of costs provides the information needed to keep an eye on the "bottom line" which may be essential for survival of the program.

The "Costs and Financing" case studies distributed here provide a number of examples of such analysis. For instance, Table 3 from the Parivar Seva Sanstha case study (attached here) shows how income from user charges compares with costs in two clinics in Delhi. The clinic in the higher income area recovers significantly more than its costs, through higher charges and fewer cases treated at no charge. The clinic in the lower income area runs a deficit, related to lower charges and larger numbers of patients treated free.

Health services are produced by combining a variety of inputs in the final product, for example the time of health workers, drugs and supplies, laboratory services, etc. Costs provide a useful common denominator for measuring the total amount of inputs used per service provided and hence can be used to gauge the relative efficiency of different units. For a hospital, this could include things like the use of diagnostic tests, elective surgery, etc. For health centers and community-based services, one might be interested in looking at staff-population ratios or prescribing practices. One example from the case studies is given in Table 13 of the SEWA-Rural study (attached). This compares the average cost of drugs and supplies used in different rural clinics. Finding variation in these figures does not necessarily mean there is a problem, as there can be differences in the types of cases coming. But it does help identify questions that can be asked to improve management. While low cost is not the goal of health programs, wasted resources mean that fewer services can be provided within a given budget. Increasing efficiency or containing costs, while maintaining the quality of services, can in effect be another form of generating financial resources for programs.

Some of the basic measures in costing services include the following:

1. Total cost: the sum of the value of all inputs to a program or activity.

2. Average cost: the total cost divided by the total number of units of output of an activity, e.g. the cost per hospital bed-day, the cost per outpatient visit or immunization.

3. Fixed/Variable cost. Fixed cost is that portion of cost that remains the same no matter how much service is provided, e.g. the cost of constructing a clinic building. Variable cost is that part of cost that increases with the amount of service activity, for example the drugs used in an outpatient clinic.

4. Investment/Recurrent cost. Investment cost is the base cost incurred to get an activity or program started, e.g. construction, training, etc. Recurrent cost is the cost that must be met in each period of time to keep activities going, e.g. salaries. This concept is similar to fixed and variable cost but also somewhat different -- the former relates to the quantity of service provided, while this is concerned with the time of expenditures and use of resources.

In self-financing activities, one may not initially try to meet all costs (total costs) from new financing sources, but first seek to cover part of costs, such as variable or recurrent costs.

Tools. A range of methods is available for calculating the costs of services. Most of what is done is common sense, although it is helpful to be familiar with certain accounting conventions. Some of the important issues that need to be dealt with are: 1) costs that are incurred at one time but provide inputs used over subsequent time periods, e.g. training of a health worker, purchase of a vehicle, etc. 2) joint costs, or costs of inputs that are used in providing several different services, e.g. the kitchen or laundry in a hospital, which services patients in different wards. For small outpatient facilities, these matters can often be adequately handled by applying simple allocation rules, possibly based on interviews with workers or managers. For larger facilities like hospitals, which have more "core" services and a larger administrative component, more formal methods exist such as "step-down" cost allocation methods.

FACTORS AFFECTING REVENUE

While knowing costs provides a benchmark against which to assess certain self-financing activities, understanding the factors affecting revenue is essential to the design and management of those activities. These factors include the behavior of health care users, their economic resources and spending patterns, the availability of

alternative sources of services and other market factors, and other community, social and economic conditions affecting the program. What kinds of information are needed to better understand these issues and their implications for self-financing activities?

Levels and patterns of use of services. Several methods of self-financing depend heavily on the service utilization behavior of the population being served. Such methods especially include user fees, drug sales, and prepayment and insurance schemes. When revenue depends on individuals using or subscribing to the use of services and when one seeks to alter the conditions of such use, by introducing a fee for example, factors affecting user behavior can significantly affect results.

For planning purposes, it is useful to be able to estimate the volume of services likely to be sought, e.g. the number of in-patients, outpatient visits, pregnancies, immunizations, etc. This depends not only on the population rates of need for such services, but, perhaps more importantly, on whether and how they act upon that need. What proportion of the population does not seek services and why? What other sources of care are used and how do they compare in terms of access, cost, etc.? Information such as this can be used to help estimate the likely uptake of services.

Of equal importance is the need to monitor and assess what happens to service use once self-financing activities are introduced. What is the impact on use levels and patterns and who is affected?

Levels and patterns of health expenditures. Again, where self-financing activities depend on individuals making payment for something, one must consider how much people are willing and able to pay. One way of gauging that capacity is to understand how much they are already spending on comparable services available elsewhere. This at least provides an estimate of the most people might be willing to spend on comparable services provided from the voluntary sector. Where similar services can be provided at lower cost, one might reasonably assume some willingness on the part of the population to support such programs.

For example, a recent household health expenditure study in Indonesia estimated that, on average, households spend about IRp.250 per person per month for primary curative care, with about 8-9% of population ill during any given 2-week period. It was estimated that, if over 90% of those cases were treated at primary health care clinics,

the full cost of that care would be around IRp. 79 per person per month on average. This was seen as a simple test of the feasibility of establishing a prepayment scheme for primary curative care that could provide equivalent services at less than one-third the cost of those already being purchased privately. On the face of it, such a scheme should be popular and improve people's well-being as well.

Similar calculations could be done for services such as hospital care, although there the need and use of services is much rarer for individual households and the level of expenditures much higher.

Such information may indicate an economic justification for self-financing activities, but this does not necessarily translate easily into success in running such schemes in the field. People's attitudes and preferences play a crucial role in how well such activities are received.

Consumer preferences. In addition to learning more about where people go for health care and how much they spend, it is important to try to understand why they do what they do. People may be unwilling to pay for services they feel ought to be provided free of charge or they may be reluctant to pay in advance for the possibility of treatment at some future date. Project services may appear to be comparable with private alternatives, but other factors not obvious to project managers may be important to users, for example, the age/seniority of service providers, waiting time, clinic hours, etc.

Market information. Some self-financing activities depend on being able to sell goods in order to generate a surplus to support program services. Examples of this include lotteries, special income generating activities, and sales of drugs. Voluntary organizations need to undertake appropriate market research to gauge whether such schemes are feasible or not. One should also consider what the effects of such schemes might be on other producers in the market.

Tools. A standard method for assessing health care utilization and spending factors is the household survey. This need not be a major research undertaking, especially if one can identify clearly a few important aspects on which information is needed. The advantage of the survey is that it can give a reasonably representative picture of the whole population to be served. An important disadvantage, however, is that some of the information needed is difficult to collect accurately in a formal interview setting.

Other methods may also be very useful, especially when resources are limited or there is little time available. Interviews with key informants in the community can give a good picture of the health care marketplace and provide insights into utilization patterns and consumer preferences. Group interviews, such as focus groups, can also be useful in this regard.

Another method usually not recognized as such is the monitoring and assessment of experiments and pilot projects in self-financing. Even with the best survey data, it is often difficult to predict how populations will respond to changes in the way services are provided or to efforts to raise funds from the community. There is much to be learned from just getting started and keeping careful track of what happens, perhaps augmented by qualitative research methods.

SOCIAL AND ECONOMIC IMPACT

The major concern about self-financing activities in the voluntary health sector is their effect on the poor. Voluntary organizations exist as social service and development institutions dedicated to meeting the needs of those most disadvantaged in society. There is much discomfort with taking on some of the characteristics of the commercial sector, such as charging for services, producing and selling goods at a profit, etc.

It is also clear that different approaches to self-financing have different effects in terms of who pays and who receives benefits. Donor funding, while it has its difficulties, may appear to be the least problematic in this regard. The burden of payment is somewhere far outside the community -- the benefits go to those being served. Nonetheless, the widespread use of at least partial self-financing in the voluntary sector suggests that the distributional issues need to be addressed.

Stinson's paper provides a good summary of the strengths and weaknesses of different methods of community financing. For example, user charges, while easiest to administer and most familiar to populations, place the financial burden of illness only on the sick and probably disproportionately on the poor. In contrast, prepayment schemes share the risks of illnesses more equally, but require more effort at administration and management and membership charges are difficult to vary by income classes.

There are no simplistic answers or solutions to the distributional questions, but it is critically important to address them frankly and openly. This requires information on differences in

health needs, service use, and spending within the population -- for example by income groups or other relevant groupings such as land-holdings, caste, etc. Much of this is the kind of information discussed in the preceding section. In addition, much can be learned by assessment of experiments introducing new schemes, if they are monitored not only in terms of their overall effects, but in terms of the distribution of benefits and costs to different groups in the community.

Tools. The methods available for looking at social and economic impact are similar to those already mentioned above. Of particular importance, however, is the need to develop appropriate definitions of different groups in the community. Survey information on income is often unreliable and household consumption expenditure is difficult and time-consuming to measure. In rural villages, key informants or group interviews may be a good and rapid source of information on households' socio-economic position.

INFORMATION VERSUS RESEARCH

Voluntary organizations are action-oriented and may have little interest in collecting large amounts of data for which practical applications are not obvious. Yet this whole paper has been discussing different types of information for which surveys, cost accounting, and qualitative research techniques might be needed. What is realistic and appropriate for a voluntary organization, whose goal is service not research?

There is no single answer to this question. Obviously, it depends a great deal on the interest and capacity of each organization. One must acknowledge at the outset the action/service mission of voluntary organizations and the understandable reluctance to fritter away scarce resources on studies whose value may be limited. However, one must also recognize that self-financing activities which are poorly planned or based on wrong assumptions about communities also have costs. Clearly, what is needed is not research, but appropriate information for planning, monitoring, and evaluation.

Experience to date suggests that there is still a long way to go in developing appropriate information to support the self-financing activities of the voluntary sector. Methods need to be adapted to the field situations of a large number of groups working in different parts of the country. The experience gained from trial and error approaches needs to be reviewed and shared to at least reduce the probability of

repeating others' mistakes. Steps are being taken in this direction, which, while constantly facing the critical test of practicality and usefulness, will also hopefully contribute to strengthening the financial stability of voluntary health programs.

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SELF FINANCING PARTICIPATIVE COMMUNITY HEALTH CARE PROGRAMME FOR TIRTHAHALLI TALUK OF SHIMOGA DISTRICT, KARNATAKA

Sponsored jointly by Ford Foundation, Kasturba Medical College (Department of Community Medicine), Kasturba Hospital, Manipal and Manipal Industrial Trust.

The programme is being implemented in the backward taluk of Tirthahalli in Shimoga District. A local co-ordination Committee was constituted in April 1989. The recruitment and training of the staff was done in October, November and December 1989, and the actual work started in January 1990. The objectives of this project include the following:

a) To provide improved domiciliary care especially in the field of MCH and family planning.
b) To impart intensive health education.
c) To build up a good referral system.
d) To generate community participation.

There are 2 main components in this programme:

i) The Mobile Medical Clinic: This is staffed by a husband and wife team of doctors (husband - MD in OBG and wife - MBBS with Paediatric experience), supported by Medico Social Worker, ANM and a Lab Technician-cum-Dispenser. 19 clinics are conducted in different places where Government facilities are not available. Some of the clinics are once a week and others are once a fortnight. About 20 to 40 patients attend each clinic. Initially the number of general patients was more, but this is gradually coming down, and more women and children are attending the clinics.

ii) The field component: Domiciliary maternal and child health care is rendered by village health volunteers (Sanchalikas). There are 100 Sanchalikas. Each Sanchalika looks after 100 households. They have identified and maintained a register of pregnant women, underfives and eligible couples in the 100 households. The most important activity of the team is health education and motivation of mothers. 10 Sanchalikas are supervised by one Lady Supervisor, who is a graduate and who has received training at Manipal. The Sanchalikas were also trained at Manipal in 3 batches.

Ms. Erika Larson, an Anthropologist and a medical student from the United States spent about 4 weeks in March/April 1990 in the project area working with the mobile clinic team, the field staff and the community. She has given an interim report. A meeting of the project staff was held at Agumbe on 7th and 8th April in 3 batches of about 35 each. The following issues were considered:

a) Knowledge, attitude and skills of Sanchalikas in the delivery of MCH care.
b) Acceptance of the health care facilities offered by the Trust.
c) Extent of utilisation of the health services.
d) Willingness of the community to meet the cost of the health care facilities offered by the Trust.
e) Attitude of the people towards acceptance of family planning.
f) Cultural factors influencing health and diseases.

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It is too early to come to any definite conclusion. However, the following views can be considered for the purpose of making interim assessment of the situation:

a) Sanchalikas and Supervisors: The raw-material is good. They are enthusiastic and have the right attitude. From the registers maintained by them it is observed that they have made a good job of identifying 100 households each, with women in the reproductive age group, pregnant women, lactating mothers and children under five. However, they require further training. This has been arranged in 3 batches in May 1990 starting on 2nd May, 14th May and 23rd May respectively. A Lady Community Development Officer, who is already working in Tirthahalli area has been asked to supervise their work. A Lady Doctor has been appointed and she will be incharge of the field wing, with emphasis on the spreading of health education in the community.

According to the survey carried out by the field staff each 100 households being looked after by a Sanchalika has between 2 to 8 pregnant women. The total number is expected to be around 500 at any given time in a population of about 50,000 being looked after by the Sanchalikas. It is planned to organise group meetings regularly through Mahila Mandals and impart health education to the pregnant women and the members of the Mahila Mandals in the villages, so that in a couple of years time there will be at least about 1,000 rural women trained by us, who will form a purely voluntary force at the grassroot level, in addition to the Sanchalikas working with the Trust.

b) Acceptance: There is need for the services offered by the Project, but it is not reaching the people in the interior villages, and also the poor sections of the community. The reasons put forward are distance, lack of bus facility, loss of wages and the cost of the service (registration charges and payment for costly medicines). Alternative arrangement suggested was providing medicine kits to the VHVs and giving them the necessary training in the use of such medicines. This is being arranged.

c) Extent of Utilisation: More general patients than women and children attend the clinics. This may be because the health education imparted so far has had only a weak impact. This is being set right. The location of some of the mobile clinics is inconvenient. Some of them are being changed to more convenient locations.

d) Acceptance of family planning: From the survey of the 10,000 households already made, there are 2 to 8 pregnant women out of each group of 100 families. This shows that family planning norms are acceptable to the people.

e) Cultural factors: There are still a large number of people in the villages who believe that diseases are caused by God or Evil Spirits. Their approach invariably is to appease the God/Evil Spirits, and also to seek medical intervention. The medical intervention may be home remedy, ayurvedic medicine or allopathic system. The choice depends upon the economic conditions of the family and the easy accessibility of the facilities.

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In view of the inability of the mobile clinics to deliver health care facilities in the interior inaccessible villages, and the comparitively high cost, it is doubtful whether the community or the Mandal Panchayats will come forward to contribute towards its maintenance, when the Ford Foundation Grant ceases. However, the field component is considered most crucial. Its members are a part of the community and they are involved in the spread of health education, providing first aid at the door steps in the interior places, and act as a friend, philosopher and guide. With sufficient training and experience, and under the guidance of a qualified doctor the field component is expected to become popular. The cost not being so high, the community is likely to agree to contribute towards the maintenance of this component.

The monthly medical camp conducted by the Kasturba Medical College and Hospital, and the referral services of the Kasturba Hospital, Manipal are considered invaluable. The assurance of these facilities being continued even after the Ford Foundation Grant ceases, goes a long way in creating in the minds of the people of Tirthahalli that their participation in the programme will be beneficial to them in the long run.

28th April 1990
Manipal

P.V. Rao
Executive Secretary
Manipal Industrial Trust