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Constraints to Scaling Up Health
Interventions: Country Case Study: India

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A Comparative Case Study of Health Care Outcomes in Karnataka and Tamil Nadu¹

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¹ This is a background paper prepared for the CMH- Working Group 5. In preparing this paper, I have benefited from discussions with several people both within and outside government. I wish to thank them all. However, I take sole responsibility for the views expressed here.

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Abstract

This paper compares three health programs in the states of Tamil Nadu and Karnataka: the Tamil Nadu Integrated Nutrition Program and the Integrated Child Development Services; the AIDS Control Program; and the State Health Systems Development Program. The analysis indicates that health outcomes are determined by a complex interaction between:

Community and Household Level Issues: The key challenges faced by health programs when addressing community and household issues are: (i) the need for comprehensive community needs assessment; (ii) targeting of programs; (iii) increasing market for services offered; and (iv) building public-private partnerships to increase access.

Health Services Delivery: The analysis indicates that effective implementation is the most important determinant of the success of the program. The areas of focus here are: (i) devolution of implementation authority; (ii) training; (iii) monitoring and evaluation; and (iv) feedback.

Health Sector Policy and Strategic Management: There is substantial capacity at both the central and state levels to both formulate and implement health sector policies. Some important factors influence a state's ability to take full advantage of this capacity: (i) willingness to adopt appropriate technology/evidence based interventions; (ii) availability of technical assistance; and (iii) capacity to adopt such interventions.

Governance and Overall Policy Framework: Finally, states face constraints in achieving desired health outcomes at the policy level, including: (i) capacity for policy formulation; (ii) long-term sustained commitment; and (iii) commitment reflected in financial allocations.

Comparative Case Study: Karnataka and Tamil Nadu

Background

This case study is one of several pieces of research commissioned by the London School of Health and Tropical Medicine (LSHTM) to contribute to the effort to analyze the impact of health on development, economic growth and equity in developing countries undertaken by the Commission on Macroeconomics and Health (CMH). One of six Working Groups reporting to the CMH, Working Group 5 focuses on improving health outcomes for the poor, and has the task of elaborating options and costs for mounting a global effort to improve dramatically the health of the poor over the short and long terms. The efforts of the Working Group focus on three key questions:

- What set of interventions will significantly the health of the poor in a relatively short time period?
- What factors hamper the widespread implementation of these interventions amongst the poor and what options are available to address such constraints?
- What are the total costs of scaling up and sustaining interventions in differing scenarios?

This paper attempts to address the second question in the Indian context, and examines some of the constraints to the scaling up and chances of replicating effective health interventions in two southern states, Karnataka and Tamil Nadu. The aims of the study are to:

- (i) assess the range and intensity of constraints to scaling up and replication;
 - (ii) explore difficulties in relaxing constraints, and whether they are amenable to “buy out”;
- and

- (iii) document effective examples of programs where constraints have been relaxed, and the costs and sustainability of such efforts.

Section I

A. Introduction

Since Independence, India has developed a large and multi-tiered health system, where the government largely finances and provides basic health services, while the private sector predominantly provides curative care. The National Health Policy (1983) set targets for improving the health status of India's population and for reducing fertility, as well as for establishing a large health infrastructure at the primary health care level. As a result, there have been improvements in many indicators; for example, the infant mortality rate has come down from 137 per 1,000 live births in 1970 to 72 per 1,000 live births in 1996. Life expectancy at birth has increased from 50 to 61 years in the same period.

However, these gains could have been more uniform had there not been substantial constraints to the effective delivery of health care, particularly to the poor, and key health indicators continue to be low (2). Government spending on health is smaller than the world average at 0.9% of GDP in 1999-2000 (3), and in 1995-96 it was estimated that government expenditures accounted for less than one-fifth of all health spending. While this low level of spending is of concern, other important areas of concern include:

- Analysis indicates that India is facing all three stages of the health transition simultaneously: problems associated with underdevelopment among the poor and disadvantaged; the emergence of diseases of affluence; and new environmental and behavioral threats (4).

- Health services are grossly skewed towards urban areas: in 1991, only 32% of all hospitals, 20% of all hospital beds and about 40% of all trained doctors were in rural areas, where more than 70% of the population lives (5).
- Compared to the public sector, the private sector is predominant in its share of qualified practitioners as well hospitals. An estimated 85% of doctors and 65% of hospitals operate in the private sector.
- There are large regional disparities in health outcomes: the northern belt, comprising Rajasthan, Madhya Pradesh, Uttar Pradesh, Bihar and Orissa, has significantly poorer health indicators than the rest of India, particularly the southern states.

Selected Demographic Indicators: All India, Karnataka and Tamil Nadu (6)

	India	Karnataka	Tamil Nadu
Population (million) 1991 Census	844	44.8	55.6
Crude Birth Rate 1996	27.4	22.5	19.2
Crude Death Rate 1996	8.9	7.6	7.9
Infant Mortality Rate 1996	72.0	53.0	54.0
Expectation of Life at Birth 1992	58.7	62.2	61.5
Gender Ratio 1991	929	960	972
Institutional Delivery 1993	24.5	42.8	61.3
Per Capita Income 1996	9578	9004	9868
Female Literacy Rate 1991 Census	39.4	44.3	61.3

B. Governance and Overall Policy Framework

Political stability and government effectiveness: Since 1991, India has been implementing a series of economic reforms involving greater reliance on market mechanisms, including deregulation and reduction of government controls, greater autonomy of private investments, less use of the public sector, and more opening up of the economy to international trade(7). Critics of the reform package have pointed out that investments in medical and public health have declined from 2% of GDP in the Sixth Five Year Plan to 1.75% in the Eighth Five Year Plan, despite the Eighth Plan's claim that human development was its ultimate goal. Data indicate that budgetary allocations for the social sectors by the central government have stagnated in real terms between 1989-90 and 1993-94 at about 6% of GDP.

Priority attached to the health sector: A serious attempt to develop an integrated health system started in 1940, with the constitution of the Bhore Committee. The National Planning Commission was established in 1950, and since then health issues have been consistently addressed in national plan documents. India's long-term strategy for health sector development is enunciated in the National Health Policy (1983), which is based on the assumption that primary health care is a basic right, and it is the business of government, through its vast primary care network, to provide the necessary services. The NHP gives high priority to the control of infectious diseases of public health importance and preventable causes of maternal and child mortality. Given India's burden of disease, these are appropriate goals; however, investments have not always reflected these priorities.

Health is a State subject, according to Article 47 of the Constitution of India. While the central government does initiate and finance health programs, it is the state government's responsibility to implement such schemes. Within this structure, state governments spend about 87% of the

total health budget, the center about 10%, and municipalities account for the remaining 3%. The share of salaries in the budget has continued to increase, and is estimated to account for 70-80% of health sector funds. As a result, the total amount of resources available for priority health services is small (2).

Priority attached to meeting basic needs of the poor: The government has traditionally attached high importance to poverty alleviation and basic minimum needs programs. Between 1952-61, the government launched the community development program to promote integrated rural development, and activated the Panchayati Raj Institutions, or the system of local self-government, to encourage local ownership and accountability. Until 1980, the government initiated and implemented various programs aimed at strengthening the rural base of the economy, development of rural infrastructure and fulfilling minimum needs. Since 1980, the government has launched directly targeted poverty alleviation programs. Analysis indicates, however, that disparities in income distribution persist: the richest 30 per cent of the population account for 52% and 54% of consumption expenditure in rural and urban areas respectively; and the poorest 30 per cent have only about a 15% share in consumption expenditure in rural as well urban areas.

Structures available for public accountability and opportunities for public opinion to be voiced: Opportunities for people's participation in the policy formulation, planning and implementation of social programs were strengthened by the 73rd. Constitutional Amendment that empowered the Panchayati Raj Institutions (PRIs) and laid down guidelines for the devolution of powers to PRI bodies at the district and village levels. Health is an important area for such devolution of financial and implementing powers, but the provisions of the 73rd. Amendment have not been uniformly implemented in all states. In Karnataka, for example, the Karnataka Panchayat Raj

Act was passed in 1993, according to which district and lower level bodies (Zilla Panchayats) are to look after the management of hospitals and dispensaries, and the implementation of maternal and child health, family welfare, immunization and vaccination programs. This has not been the case with Tamil Nadu, where decentralization has been more through departmental channels, and less through people's participation. Such devolution not only gives voice to people at the grass root and makes programs more need-based, it also makes the system more accountable to the people.

In addition, the Home Ministry has declared that 48,000 NGOs are registered under the Foreign Contribution Regulation Act, and many more would be operating without being registered under that Act. Many of these NGOs are active in the health sector, although exact numbers are not available. These NGOs play a key role in increasing access to health care facilities by marginalized communities and also in increasing accountability of government programs.

Section II

Given the heterogenous nature of Indian states, and the marked disparities in levels of development and health outcomes, it is necessary to analyze policies, programs and outcomes at an adequately disaggregated level so as to be able to come to meaningful conclusions. In this paper, a comparison is made between the neighboring states of Karnataka and Tamil Nadu.

These two states have been chosen for several reasons: (i) they are both in the same part of the spectrum with regard to many development indicators as well as health indicators; (ii) they each have had examples of success in the health sector which are quite different from the other; (iii)

the chances of one state being able to replicate the successes of the other state (“learn from each other”), given some key inputs, are very high (7).

Karnataka

A. Health Status and Epidemiology

The southern state of Karnataka occupies the western part of the Deccan plateau. The state is eighth largest in the country in both area and population. The population of Karnataka (as per 1991 census) was 45 million, or 5.83% of the country’s population, 51% of whom are males. 31% of the population lives in urban areas, as against an average of 26% in the rest of the country.

Selected Health Sector Indicators

Total Population (1991)	44.8m	Children under-5 Mortality Rate	90.0
Annual Exponential Growth Rate 1981-91	1.92	1981-91	
Growth of medical institutions from 1960-1997		Institutional deliveries SRS 1993	42.8%
Population per government institution	19,078	Total Fertility Rate SRS 1994	2.8
Population per PHC	21,548	Total Infant Mortality SRS 1996	53.0
Number of doctors per 1,000 population		Life Expectancy at Birth SRS 1992	62.2
Population per bed in government institution 1996-97	1,166	Immunization Coverage (average) Polio BCG Measles	
Per Capita Income 1995-96	9,004	HIV Prevalence	2.1%

To get a perspective on how Karnataka stands vis-à-vis the rest of India, consider the following:

- The sex ratio in Karnataka is 960 females to every 1,000 males (Census Reports, 1991), which ranks Karnataka fifth in the country.
- With an IMR of 65 per 1,000 live births (Sample Registration System Reports, 1993-95), Karnataka ranks fourth in the country.
- The maternal mortality rate of 450 per 100,000 births (The Progress of Indian States, UNICEF, 1995) which puts the state in eighth rank.
- The average life expectancy in Karnataka is 62, slightly higher than the all-India average of 60.

B. Public Health Expenditure

Social sector expenditure in Karnataka has been around 38% of total revenue expenditure, and the average annual expenditure on health-related items accounts for 25.7% of this. This is second only to education, at 53% of total social sector expenditures. The annual increase in health sector expenditures between 1990 and 1996 in real terms has been about 6%. Expenditure on health and family welfare together account for about 1.21% of the net State Domestic Product, which is well below the recommendation of the Indian Council of Social Science Research and Indian Council of Medical Research joint council of about 8 or 9% of SDP over the next twenty years.

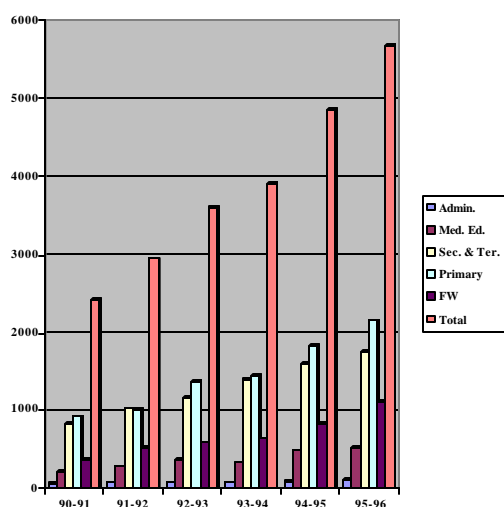
Within the health sector, about 65% of the health budget is spent on the primary level, 20% on the secondary level and about 15% on the tertiary level. However, of this, the major portion goes towards salary costs, and very little is left over for non-salary development activity, operations

and maintenance and ensuring adequate supplies of drugs and essential materials. In addition, in Karnataka the Zilla Parishads are responsible for implementing primary health and family welfare programs, as well as manage some community and district hospitals. From a review of budgets of one Zilla Parishad, from 1990/91 to 1994/95, the share of the community and district hospitals fell from about 23% of the total to about 5% (2). If this is typical, then the rural hospitals in Karnataka are under severe pressure. However, the budget for primary health services administered by the ZPs was not affected.

Structure of Health Revenue Expenditure – Plan and Non-Plan(8)

(Figures in Rs. Million)

	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Administration	62.54	84.96	80.41	84.63	99.99	118.05
Medical Education and Training	222.19	289.02	378.06	340.59	493.03	526.50
Secondary and Tertiary Health Care	831.51	1027.73	1173.38	1403.83	1608.80	1767.93
Primary Health Care	931.21	1013.34	1382.97	1452.94	1834.88	2158.13
Family Welfare Program	382.71	538.66	590.61	639.42	835.00	1117.89
Total Health Expenditure	2430.16	2953.71	3605.43	3912.42	4871.70	5688.49



C. The Public Health Care System: An Assessment

Governance and Overall Policy Framework

Planning and budgeting capacity: Historically, Karnataka has had the commitment to plan effective programs and implement them, and is generally considered one of the better administered states in the country. The Mysore Civil Service (MCS) (replaced by the Indian Administrative Service after Independence) for over half a century was reputed to choose only the best, and then be held to very high standards by the Royal Family, who also had over several generations supported health and education programs. Public servants in Karnataka quite often will, even now, hold as an example for their own conduct those erstwhile MCS officers. Arising from that is a strong sense of pride in civil service, and in doing a good job; politicians do respect, by and large, the decisions of the civil servant; and as a result, many good officers opt for the Karnataka cadre, as being a place where they can work without much interference. For example, it has been possible in Karnataka to streamline admission into medical colleges, and posting of doctors through counseling: traditionally areas fraught with political interference. In addition, Karnataka took the initiative, with commitment from the highest levels, to analyze human development outcomes in the state, and published the Human Development in Karnataka 1999 report. This report documents extensively how far Karnataka has come in terms of health, education, nutrition, women's empowerment, and many other human development indicators; compares Karnataka's performance to the rest of India; and recommends concrete steps for improving outcomes in some key areas, such as increasing budgetary allocations, and improving monitoring systems. The report has been widely disseminated and discussed, and initiatives are being undertaken to follow-up on the recommendations, for example with the expansion of micro-credit schemes and income generating activities in the impoverished northern districts.

In addition, Karnataka has participated in several World Bank and other external donor funded projects in the health sector, including the India Population Project 8 and 9; Health Systems Development Project; AIDS Control Project; as well as many centrally sponsored schemes for leprosy elimination, TB control and cataract blindness control. Involvement in these projects has given the government the opportunity and the necessary technical assistance to be able to assess health sector development, and adopt technically suitable solutions to specific health problems. For example, under the State Health Systems project, the government set up a Strategic Planning Cell, the purpose of which is to analyze health sector data and provide advice to the government on issues such as burden of disease and cost-effectiveness of interventions, extent and role of private sector involvement in health care, medical manpower management and so on.

In spite of these initiatives, lack of coordination and inadequate strategic planning continue to be viewed as constraints to optimal use of resources, even by government. In an effort to address this constraint, the current government has set up (in 2000) a Health Task Force, a high powered body which provides advice to the Chief Minister on the directions that need to be taken in the health sector. However, certain persistent problems have yet to be systematically tackled, such as lack of outreach and impact of health programs in certain regions.

Systems for monitoring progress towards goals: Goals in the health sector have usually been set in quantitative terms. For example, norms have been set for the expansion of health facilities in rural areas based on population size. Expansion in health facilities follows these norms rigorously, and progress towards the achievement of these norms is also monitored. *This input-oriented approach to goal-setting is itself a constraint to the achievement of quality outcomes:* these norms are not uniformly applicable across the state; and data and analysis on their impact on health outcomes is weak. Quality of care and patient satisfaction are not assessed, and since

the bulk of the health budget is devoted to salaries and administrative costs, efforts at upgrading quality and effectiveness get short shrift.

Similarly, goals or targets are also set for various disease control programs, such as eradication of leprosy by 2000, or eradication of polio and so on. However, there is an absence of the necessary systems for achieving these targets: adequate facilities are not available for training of staff; for their supervision and on-going monitoring of program activities; and for measuring outcomes in order to ensure achievement of stated goals.

Health Sector Policy and Strategic Management

Organization and structure of health care infrastructure: At the state level, the Department of Health and Family Welfare (DOHFW) supervises the Directorates of Health and Family Welfare services; Medical Education; Indian Systems of Medicine; the Controller of Drugs; and the Population Center. Medical colleges run by the state, and government hospitals attached to teaching institutions come under the Directorate of Medical Education. At the district level, the District Health and Family Welfare Officer is responsible for organizing health services in rural areas (preventive, promotive and curative. The District Surgeon, who heads the District Hospital, is responsible for providing medical services in urban areas.

This multiplicity of departments and functionaries has led to compartmentalization of health service delivery, and seriously affected the quality of care. Attempts are being made by the government to bring about better convergence and coordination by: (i) appointing a Commissioner, Health and Family Welfare whose role it to coordinate the activities of the different Directorates; and (ii) by giving the PRIs a prominent role at the district level. The Zilla

Panchayats now not only operate the district budgets for health, but also implement several state schemes such as family welfare programs and immunization programs.

Expansion of health infrastructure: The number of health institutions in Karnataka has increased from 1,248 in 1961 to 2,624 in 1997. There are an estimated 17,000 practising doctors in Karnataka, of whom about 11,000 are functioning in the private sector. About 80% of these are general duty medical officers, and the rest are specialists, mainly in the areas of general medicine, obstetrics, general surgery and anesthesia. The number of beds in government hospitals increased from 13,786 in 1961 to 43,867 in 1997. *The major constraint in effectively utilizing these beds is the availability of medical and para-medical personnel, especially in remote rural areas.* Doctor absentee-ism and vacancies in posts is common. The government is now addressing the problem by implementing a method of “counseling” whereby doctors have a choice, during the recruitment process, of where they will be posted. This has, reportedly, significantly improved the availability of doctors in the periphery, since many have chosen areas which are close to their home town, or which, for other personal reasons, are convenient for them. Allocations to non-salary recurrent costs are seriously inadequate: per capita allocations for drugs across India had been calculated at about Rs. 0.15. For the past four years, user charges have been levied at KHSDP hospitals, and the amount collected has been retained at the hospital for hospital improvement, maintenance, drugs and supplies. The response to this program has been good, and, at secondary level hospitals included under the KHSDP at least, the situation is comfortable. This is not, however, the case for the rest of the system.

Private sector: Of the 1,709 hospitals in the state, 43 are specialty institutions, 451 are maternity homes, and 1,215 are general hospitals (9). The NCAER survey (1993) shows that 46% of out-patients and 40% of in-patients are being treated in the private sector. Private facilities

predominantly provide curative care, while the government provides most of the preventive and promotive services. The number of private medical institutions and beds in some districts are much higher than the public institutions. *There is, therefore, an urgent need to monitor and regulate the private sector to ensure that quality health care is being delivered in this vast network of institutions.* The government has adopted a set of regulations that can be broadly classified as drug related (Pharmacy Act, the Drugs and Cosmetics Act); practice related (Indian Medical Council Act, Human Organ Transplant Act); and facility related (Nursing Homes Act); and the private health sector has also been brought under the Consumer Protection Act. At the same time, the government recognizes that it is necessary to engage the private and voluntary sectors as partners in the prevention of communicable diseases, and in service delivery, particularly in remote areas where staffing of government institutions has been a problem. In the KHSDP, some successful attempts have been made to forge partnerships with the private sector by handing over the management of CHCs and PHCs to NGOs (see Section IV).

2.4 Health Service Delivery and Utilization of Services

The following section discusses the three main areas of concern as far as utilization of services is concerned:

Outreach Programs in Rural Areas: The data clearly indicates that the utilization of health services by the scheduled caste (SC)² and scheduled tribe (ST) populations of Karnataka is not commensurate with their health needs:

² The Scheduled Caste (SC) and Scheduled Tribe (ST) populations in India have been designated in the Constitution of India as special groups which have been historically and traditionally discriminated against. They constitute approximately 26% and 8% respectively of the total population on average, although there are significant differences between states. The government has implemented numerous affirmative action programs in order to provide these populations better access to resources and opportunities.

Utilization of Health Services by SC/ST Groups (%) (3)

Indicator	Karnataka SC/ST
Distribution in Population	22.6
Outpatient treatment	28.1
Immunizations at government hospitals	27.7
Public sector health subsidies	
Short hospitalization	20.8
Hospitalizations	23.6
PHC and others	25.8
Immunizations	28.0
Total	24.1
In-patient days	26.1
Distribution of in-patient days between public and private facilities	
Public	55.8
Private	44.2
In-patient days for childbirth	15.5
Pre/post natal visits	27.0
Hospital charges	34.5

The table clearly shows that SC/ST groups are paying more than their fair share for accessing health services in Karnataka; and for many key conditions, their access to health services is not at the level that could be expected even from their percentage distribution in the population, without accounting for their larger health needs due to their poor economic and nutritional status, and the costs of utilizing the private sector. Public health sector subsidies are not significantly skewed in favor of SC/STs, with a mere 24% subsidies being targeted at this group, as against almost 35% in Tamil Nadu. Most disturbing is the fact that only about 15% of those receiving ante- and post-natal care belong to SC/ST populations: in light of the government's stated objective to raise the birth weight of babies in order to tackle the twin challenge of the stagnating

IMR and high levels of malnutrition, this shows a lack of commitment to properly targeting these services. At the same time, about 35% of hospital charges are being collected from SC/ST patients. If the targeting mechanism were being effectively implemented, SC/ST patients should largely be exempt from paying any charges, given their socio-economic circumstances.

Programs such as the Yellow Card Scheme have been initiated by the government to address this issue (see Section IV), but with mixed results.

Increasing Access for Women: GOK has computed the Gender related Health Index (GHI) for Karnataka. The GHI measures gender inequalities in selected health and education related parameters:

Gender related Health Index Scores (8)

District: Top 5	GHI	District: Lowest 5	GHI
Dakshina Kannada	0.807	Bellary	0.484
Kodagu	0.718	Bidar	0.523
Bangalore Urban	0.696	Bijapur	0.523
Uttara Kannada	0.677	Gulbarga	0.530
Chickmagalur	0.626	Raichur	0.536

The table clearly shows that the GHI follows the general pattern of development in Karnataka: the northern belt scores significantly lower than the traditional best performing districts in the state. The sex ratio is adverse across the state; and while the average IMR in the state is 53 per 1,000 live births, the IMR for females is 62 per 1,000 live births. Until the age of 35, female mortality is consistently higher than male mortality, and the maternal mortality rate is unacceptably high at 450 per 100,000. Gaps in literacy rates between men and women range from almost 30% in Raichur and Bidar, to about 14% in Bangalore (Urban) and Kodagu. At the same time, Karnataka has been a pioneer in enacting legislation to increase women's political

participation, and the number of women in the state Legislative Assembly has increased from 1.3% to 4.5% between 1952 and 1994. Government programs for women's development and empowerment have been implemented. However, as noted in the Human Development in Karnataka Report 1999: "Karnataka introduced for the first time in the country earmarking of one-third of the funds for women under all heads of development...However, the possibility of women actually being used as fronts for male beneficiaries remains. By spreading benefits thinly across sectors, major transformations in the human development levels of women also cannot be expected." (8).

Redressing Regional Imbalances: As is clear from the previous tables, the six districts of Gulbarga, Bidar, Bijapur, Raichur, Dharwad and Bellary show poor health indicators due to uneven development in the health infrastructure and delivery of services. This is partly due to historical reasons: most of these districts were part of the erstwhile Hyderabad state, where development activities had been believed to be neglected. On the whole, the state has tried to skew resources in favor of these districts, and the allocation of funds to Zilla Panchayats gives weightage to population and several measures of underdevelopment. However, it is discouraging to note that the Human Development in Karnataka report states that "Arbitrage between competing demands is not easy when every district demands an equal share in public funds or insists that most of the revenue generated within its borders be returned to it on the expenditure side." (8). Given these political constraints, the difficulty of providing additional resources to rectify regional imbalance in a sustained manner has proved difficult. Resources continue to be allocated more or less on a pro rata basis, and the concern for the relative human development needs of districts is yet to be addressed comprehensively. Since the last one year, however, with the change of government, and with the Chief Minister's taking a personal interest in the issue,

many new programs have been launched, specifically aimed at addressing this imbalance. If that commitment were to be maintained for a period of time, there is a possibility of having a significant impact.

Section III: Tamil Nadu

3.1 Health Status and Epidemiology

Tamil Nadu is the seventh largest Indian state in terms of population, at about 55.6 million (1991), and the eleventh largest in terms of land area. The demographic indicators of the state compare well with the rest of the country:

Selected Health Sector Indicators

Total Population	55.6 million	Children under-5 Mortality Rate	
Annual Exponential Growth Rate 1981-1991	1.43		
Per Capita Income 1995-96	9,868	Total Fertility Rate 1994 SRS	2.1
Institutional deliveries SRS 1993	61.3%	Infant Mortality Rate 1996 SRS	54.0
Immunization Coverage		Life Expectancy at Birth SRS 1992	61.5
HIV Prevalence	1.59%		
Rural Population/PHC	25,614	Rural Population/sub-center	4,237

- Annual exponential growth rate between 1981 and 1991 was 1.43, which ranked the state only behind Kerala, and the birth rate, at 19.2, also ranked the state second after Kerala;
- With an IMR of 54, the state ranks fifth, behind Kerala, Maharashtra, Punjab and Karnataka;

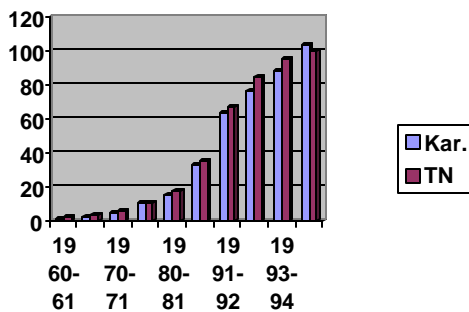
- Life expectancy at birth is 61.5 years, which is behind Kerala, Punjab, Maharashtra, Haryana and Karnataka;
- Female literacy rate is 52.3%.

3.2 Public Health Expenditure

The table below shows the comparative allocations, per capita, on health, between Karnataka and Tamil Nadu. As can be seen, allocations have not been significantly different over a 30 year period. This is at first counter-intuitive, since the outcomes in specific programs are significantly better in Tamil Nadu as compared to Karnataka. In order to examine this issue more closely, it is useful to look at allocations to specific programs, as has been done in Section IV. Allocations for AIDS control, for example, are significantly larger in Tamil Nadu than in Karnataka, and the outcome, as a result, is quite different.

Government Revenue Expenditure on Health (In Rupees per Capita) (10)

Year	Karnataka	Tamil Nadu	Year	Karnataka	Tamil Nadu
1960-61	1.97	2.47	1985-86	33.81	36.25
1965-66	2.70	3.73	1991-92	64.30	66.82
1970-71	5.44	6.76	1992-93	76.80	84.98
1975-76	11.37	11.42	1993-94	88.49	95.46
1980-81	16.28	18.23	1994-95	103.84	100.75



3.3 The Public Health Care System: An Assessment

Governance and Overall Policy Framework

Planning and budgeting capacity: Tamil Nadu has demonstrated a consistent commitment to development in the social sectors, and this has been reflected in the planning of programs. For example, in the case of the family planning program, efforts have been made to dovetail the efforts of the Family Welfare, Health, Education and Nutrition departments. This strategy has been extremely successful in achieving the goals of increased age at marriage and smaller family size. Similarly, efficiencies in the implementation of several centrally sponsored schemes have been introduced after reviewing the information coming in from the field: for example, the leprosy program was mainstreamed into general health services rather than maintained as a separate vertical program when the numbers of leprosy patients dropped to the point where it was inefficient and cost-ineffective to maintain a parallel program. This type of strategic planning, taking a holistic view of the sector, has contributed significantly to the gains made in the social sector in the state.

Systems for monitoring progress towards goals: As in other states, the system for monitoring progress is highly centralized. *In interviews with Health Department, it was evident that there was a need for systematic analysis of the volumes of data being gathered from different health programs.* In Karnataka, for examples, a Strategic Planning Cell has been set up, as well as a Health Task Force, to take a comprehensive look at health sector data and take sector-wide initiatives. In addition, devolution of power to the PRIs on a large scale, as in Karnataka, has not happened in Tamil Nadu. There has been decentralization of implementation within the departmental structure, but not so much of decision-making authority. If information gathered in the field could be disseminated and acted upon at that level, through appropriate institutions, it

would contribute significantly to program efficiency. For example, in Karnataka, the PRIs have been able to mobilize funds for the nutrition program, based on local needs, even when government funding has been delayed.

Health Sector Policy and Strategic Management

Organization and structure of health care infrastructure: As in Karnataka, the health sector is broken up into several separate departments. Each department has its own set of programs being administered within its own hierarchy. *There is a need to coordinate and converge the different programs at the field level, either through integration of programs at a level closer to the field, or by involving local bodies in the administration of programs.* This has been done in Karnataka by the appointment of a Commissioner, Health, who coordinates activities at the state level, and by involving the PRIs at the field level, who have responsibility for implementation of all development programs, and can thus function as coordinators at that level. The challenge for Tamil Nadu is to now build upon the gains made so far, and a review of service delivery mechanisms needs to be undertaken.

Private sector: There is a large private sector operating in the state. Data indicates that 44% of hospitalizations among those below poverty line were in the private sector; for above poverty line populations it was even higher at 66%. Similarly, almost 45% of SC/ST patients resorted to private care. In outpatient visits, the proportion getting private care is even higher: 64% of the poor, 73% of non-poor, and 60% of SC/ST patients. This situation is similar to that in Karnataka, and the challenge is also similar. *Given the size of the private sector, how can the government forge useful public/private partnerships so as to increase access to health services for the poor?* Particularly in rural areas where it is difficult for the government to post doctors, having partnerships with private doctors and NGOs in outreach activities would make sense, and this

has been tried successfully in Karnataka. In Tamil Nadu also, NGOs have been utilized extensively for outreach in particular programs very successfully, such as in the AIDS control program. More such initiatives for public financing and private provision of services need to be tried.

3.4 Health Services Delivery and Utilization of Health Services

This section would assess the extent to which the health system in Tamil Nadu has been able to make available effective and efficient health interventions to poor and marginalized groups, and the extent to which such groups have been able to access such interventions.

The following section discusses the three main areas of concern as far as utilization of services is concerned:

Utilization of Health Services by SC/ST Groups (%) (3)

Indicator	Tamil Nadu SC/ST
Distribution in Population	27.3
Outpatient treatment	34.3
Immunizations at government hospitals	32.2
Public sector health subsidies	
Short hospitalization	33.9
Hospitalizations	34.0
PHC and others	48.1
Immunizations	32.3
Total	34.8
In-patient days	34.4
Distribution of in-patient days between public and private facilities	
Public	66.4
Private	33.6
In-patient days for childbirth	35.5
Pre/post natal visits	43.6
Hospital charges	15.0

As the table indicates, the utilization of services by disadvantaged populations is commensurate with their proportion in the population. The system appears to be more equitable than in Karnataka: almost 50% of subsidies are allocated to SC/ST groups, and they bear less than 15% of the burden of costs. Access to other health services is also disproportionately high in SC/ST groups compared to their distribution in the population. This could be due to socio-cultural reasons: Tamil Nadu has had a long history, spanning more than a hundred years, of a movement for the liberation of the lower castes. While having some parallels with the communist movement in Kerala, it is also very different; but it has had the effect of perforce making the system more responsive to the needs of these marginalized groups, as well as making the groups more aware of their rights.

Health Transition: The state is now facing a demographic transition: with an increase in male and female literacy and other indicators of social development, increasing urbanization of the population, and changing lifestyles, the burden of communicable disease is being surpassed by the burden of non-communicable disease. This is a new challenge, and one that the state needs to gear up for. More than 30% of the population now lives in urban areas - yet there are no policy guidelines, nor programmatic initiatives in place to address the health needs of urban populations (11).

Gender Issues: Female infanticide is still a problem in several parts of the state, notably Dharmapuri, Salem and Madurai. More than 30% of pregnant women surveyed expressed a preference for a male child.

Population Aging: Due to the rapid decline in fertility in Tamil Nadu, the age structure of the population will slowly transform to include a progressively larger proportion of the elderly. It

will be a particular challenge for the state, which has done well in tackling the burden of communicable diseases, to turn its attention to the burden of diseases of aging – non-communicable diseases.

Section IV: Comparative Outcomes of Selected Programs: Nutrition, AIDS Control and Secondary Health System

Findings

For the purposes of this paper, three state-wide health programs have been compared and analyzed: the Tamil Nadu Integrated Nutrition Program and the Integrated Child Development Services; the AIDS Control Program; and the State Health Systems Development Program. The first part integrates the findings of the analysis of three programs and presents the main points; more detailed descriptions of the programs and outcomes follow. Essentially, the analysis indicates that health outcomes are determined by a complex interaction between:

Community and Household Level Issues: The key challenges faced by health programs when addressing community and household issues are:

- ***Community Needs Assessment:*** Who are the poor? What are their needs? The more successful programs, such as the State Health Systems Development Project (KHSDP) in Karnataka, or the TINP in Tamil Nadu, have conducted comprehensive needs analyses, taking into account the social and cultural milieu of marginalized groups, as well as addressing felt needs. Also, reliable baselines have been established, to be able to assess community impact of programs.

- **Targeting of programs:** How should programs be designed to best address such needs? This question is often not systematically answered before launching many programs. Those programs which have been able to clearly set out their goals are best able to target the program effectively. For example, by targeting all people below the poverty line for supplemental feeding, the Karnataka nutrition program was less effective at tackling malnutrition than the Tamil Nadu program, which clearly targeted those at nutritional risk.
- **Increasing market for services offered:** Poor and vulnerable groups need to be properly mobilized to be able to take advantage of programs designed for their benefit. Making available state-of-the-art facilities at hospitals does not result in improved health outcomes, as was seen under the KHSDP: the launching of a series of health camps by the KHSDP helped to make the public familiar with the services available at the hospital, as well as other systems that had been put in place such as the referral system. The media campaign undertaken by Tamil Nadu State AIDS Control Society also helped to increase people's awareness of the disease and the demand for services offered by the government.
- **Building public-private partnerships to increase access:** More importantly, given the size of the private health sector in India, and its reach in rural areas, the issue of financing versus provision needs to be carefully looked at: is it possible for government to finance the provision of services by the private sector, particularly in areas where the government is not able to reach? Some initiatives in this area (for example, under the KHSDP) have demonstrated that this can be successfully done, and more such experiments are needed.

Health Services Delivery: The analysis indicates that effective implementation is the most important determinant of the success of the program. The areas of focus here are:

- ***Devolution of implementation authority:*** The devolution of implementation authority and flexibility to district and field worker levels allows the program to be responsive to needs at the grassroots.
- ***Training:*** The quality of training received by all levels of personnel, both technical and management, determines the quality of the program. Focus needs to be on accurately assessing training needs on an on-going basis and providing for the necessary upgrading of skills.
- ***Monitoring and Evaluation:*** This remains a weak link in most programs. Regular supervision is not provided for in program budgets. The quality of data that is collected in the M&E system is largely unreliable, and cannot be used as an effective tool for managing the program or for making mid-course corrections.
- ***Feedback:*** There is no system for generating information from the field level into making programmatic decisions. The needs felt at the community level are not fed back into the system to be able to change the emphasis in any particular component, or area of coverage.

Health Sector Policy and Strategic Management: As has been discussed earlier, there is a substantial capacity at both the central and state levels to both formulate and implement health sector policies. Some important factors influence a state's ability to take full advantage of this capacity:

- ***Willingness to adopt appropriate technology/evidence based interventions:*** In most health programs, the technical paradigms adopted have been consistent with international

standards. This has been due to collaboration between the Government of India, and funding agencies such as the World Bank, WHO, Danida, USAID and many others.

- ***Availability of technical assistance:*** Such collaboration has provided programs with the technical assistance necessary to make available inputs that have been tested and found to be effective internationally. However, not all states have had access to technical assistance: for example, Tamil Nadu has benefited enormously in the implementation of its AIDS Control Program by the presence of the USAID-funded APAC Project, which has provided key technical and other inputs to the government program. Karnataka, like many other states, has not had this advantage.
- ***Capacity to adopt such interventions:*** The funding of these inputs has been uneven, however, and the focus of funding has tended to be on building infrastructure.

Governance and Overall Policy Framework: Finally, states face constraints in achieving desired health outcomes at the policy level, including:

- ***Capacity for policy formulation:*** There has been a history, at both the central and state levels, of commitment to social sector development and poverty alleviation programs. The structures for policy formulation, such as the Planning Commissions at both central and state levels, are functioning actively and have been seized with development issues since Independence.
- ***Long-term sustained commitment:*** However, long-term commitment to any one program or strategy has not been consistent, as a result of which specific programs have suffered in implementation. Some states, such as Tamil Nadu, have been able to make significant

gains in social sector programs, such as literacy, family planning and nutrition, because they have managed to sustain political commitment over several decades.

- ***Commitment reflected in financial allocations:*** Policy statements have not always been backed up by adequate financing of prioritized programs. For example, the funding of the nutrition program in Karnataka is a fraction of the funding of the nutrition program in Tamil Nadu, despite both states having declared nutrition as a critical area of focus. The outcomes of the programs in the two states clearly reflect the difference in priority accorded to the program.

Summary Constraints Tables

Community and Household Level

Constraint	Financial		Other	
	Tamil Nadu	Karnataka	Tamil Nadu	Karnataka
Community needs assessment			Needs assessment for the health sector not conducted, priorities centrally determined. Needs assessment for individual programs, such as TINP, have been conducted.	Needs assessment conducted for KHSDP, and used in program design and implementation. Not done for other programs, however.
Targeting of programs			Comprehensive assessment of impact of outreach programs on target groups patchy: good systems in place for TINP and AIDS control, but not for all programs; feedback loop needs to be strengthened.	Comprehensive assessment of impact of outreach programs on target groups for KHSDP, but not for most health programs; feedback loop not established for most programs.
Increasing demand and access to services offered				Poor use of media and other channels for increasing demand for services.
Building partnerships with private sector and NGOs			No plan for involving the private/NGO sector in health care delivery	

Health Service Delivery Level

Constraint	Financial		Other	
	Tamil Nadu	Karnataka	Tamil Nadu	Karnataka
Devolution of implementation authority		Allocations to local governments need to be increased, since they are more responsive to local needs.	Devolution within line department, but not coupled with devolution to local governments.	Devolution to local governments, but not coupled with devolution within line departments.
Program management and supervision	Lack of adequate incentive packages for retention of staff in rural areas.	Lack of adequate incentive packages for retention of staff in rural areas.	Inadequate technical assistance in some key areas of health system development.	Inadequate technical assistance in nutrition and AIDS control programs.
Availability and distribution of adequately trained staff	Inadequate allocations for non-salary expenditures, including supervision.	Inadequate allocations for non-salary expenditures, including supervision.		Inadequate supervision and training of lower level staff.
Availability of drugs and medical supplies	Inadequate per capita allocations for drugs and medical supplies, increasing out of pocket expenditures of the poor.	Inadequate per capita allocations for drugs and medical supplies, increasing out of pocket expenditures of the poor.		
Availability of equipment	No cost recovery; no cost sharing; no opportunity for hospitals to raise funds for non-salary recurrent costs. No recent investments in system-wide upgradation of equipment and infrastructure.			
Monitoring and Evaluation	Inadequate funding of data warehousing and analysis facilities.	Inadequate funding of data warehousing and analysis facilities.	M&E in place only for some programs. Information patchily used as a management tool. No feedback loop or flexibility within the system to make mid-course corrections.	No reliable M&E for most programs. Information not systematically used as a management tool. No feedback loop or flexibility within the system to make mid-course corrections.

Health Sector Policy and Strategic Management Level

Constraint	Financial		Other	
	Tamil Nadu	Karnataka	Tamil Nadu	Karnataka
Willingness to adopt evidence-based interventions				Cultural issues interfering with willingness to adopt certain interventions; for example, targeted interventions among CSWs, due to taboos.
Availability of technical assistance			Poor access to technical assistance in state health systems development.	Poor access to international best practice, both in nutrition and AIDS control programs.
Capacity to adopt such interventions			Determined largely by bureaucratic and political leadership: any change in individuals can be a major setback.	Determined largely by bureaucratic and political leadership: any change in individuals can be a major setback, as in the KHS DP.

Governance and Overall Policy Framework

Constraint	Financial		Other	
	Tamil Nadu	Karnataka	Tamil Nadu	Karnataka
Political stability and government effectiveness; sustained long-term commitment to programs			Lack of interest at the political and bureaucratic levels to undertake comprehensive health sector reform program, due to the perception that overall the system is delivering adequately.	Strong commitment at the political and bureaucratic levels to address important issues: disadvantaged populations, regional imbalances etc. However, this commitment is not necessarily reflected in budget allocations. Unwillingness of bureaucrats and politicians to recognize the urgency of a quick response (for example, AIDS control). Frequent turnover of key staff: Principal Secretary Health, Project Directors.
Priority attached to social sectors Priority attached to meeting basic needs of the poor				
Resource allocation issues	Low total allocations to health.	Low total allocations to health. Skewed distribution away from primary health care.		

Nutrition Program (Tamil Nadu Integrated Nutrition Project/Integrated Child Development Services)

Background

Nutritional status in India overall has improved; the country has become self-sufficient in food; and the extreme ravages of malnutrition are now relatively rare. Yet, improvements in nutritional status have not kept pace with progress in other areas of human development, and it is now becoming clear that malnutrition is now seriously retarding improvements in human development more broadly. For example, there is growing evidence that further reductions in infant and child mortality are going to be increasingly hard to achieve. In spite of this, GOI spending on nutrition programs is far less than what is required to reduce the extent of malnutrition among under-5 children and pregnant and lactating mothers: average annual expenditure by the states and GOI on direct nutrition programs (mainly ICDS and Noon Midday Meal Program) amounted to 0.15% of GDP between 1985 and 1990 (12). This was then expanded, and by 1995, expenditure amounted to 0.19% of GNP. In contrast, Sri Lanka, a country recognized to have drastically reduced malnutrition in its population, spent about 1% of GNP throughout the 1980s. The World Bank recommends that India would need to spend a minimum of 0.5% of GNP, given the magnitude of its problem.

Tamil Nadu and Karnataka have had a significantly different experience in addressing this issue, and significantly different outcomes. Tamil Nadu launched the Tamil Nadu Integrated Nutrition Project (TINP), with World Bank assistance, in 1980. Since then there have been two further projects, and the Tamil Nadu success story in containing severe malnutrition, reducing milder forms of malnutrition, reducing the IMR and promoting innovative programs in early childhood

development has been extensively documented. Karnataka has implemented the Integrated Child Development Services program (ICDS) since 1975, with mixed results.

Governance and Overall Policy Framework

An in-depth critique of India's nutrition program conducted by the World Bank in 1998 found that, at the national level, nutrition policies and plans have been generally sound, but their implementation has been woefully inadequate (12). One of two essential elements found to be missing was an adequate and sustained commitment to facing this massive challenge. Although a National Nutrition Council was constituted in 1995, this Council is yet to meet. The proposed state-level Nutrition Councils have not been convened. There is, therefore, no body charged with the task of leading, monitoring and sustaining national, state and local action to address the problem of malnutrition. Apart from strengthening the Department of Women and Child Development at the central and state levels, there is a need to build "an unshakeable determination on the part of policy makers, program managers, functionaries, and beneficiaries to increase the quality, cost-effectiveness, and impact of nutrition programs" (12).

Compared to this dismal national scenario, Tamil Nadu has a long history of providing organized child care services with emphasis on nutrition. As far back as 1956, a school midday meal scheme was operating in Madras state, covering about 200,000 children. By 1970, the Special Nutrition Program was introduced to cover children below the school age; and when ICDS was launched in 1975, Tamil Nadu started three projects. TINP was also started on a pilot basis and then expanded. In 1982, the Noon Meals Program was started, before which, in 1980, TINP I was funded by the World Bank – the first ever nutrition project of that type to be funded by the World Bank in any region. This was followed by TINP II, as well as expansion of the ICDS program, so that by 2000, between ICDS (113 blocks) and TINP (318 blocks), all rural blocks in

Tamil Nadu are covered by a comprehensive nutrition program. This level of sustained and long-term commitment to childhood nutrition issues is unprecedented in the rest of the country.

An important indicator of commitment is the level of resources the government is willing to set aside for certain programs. Among 12 states surveyed in 1994-95, the per child expenditure in Tamil Nadu was the highest at Rs. 317, as against, for example, Rs. 31 in Rajasthan and West Bengal. In Karnataka, it was estimated in 1993 that 54% of children under-5 were severe and moderately malnourished. Nutrition spending in Karnataka amounted to about 0.10% of SDP. For the same period, about 48% of children under-5 were estimated to be severe and moderately malnourished in Tamil Nadu. Nutrition spending in Tamil Nadu amounted to about 0.58% of SDP.

Health Sector Policy and Strategic Management

The ICDS, which now covers 70% of the country, provides six services to 0-6 year old children and their mothers: (i) supplementary feeding; (ii) immunization against the preventable diseases of childhood; (iii) health check-ups; (iv) referral; (v) health and nutrition education to adult women; and (vi) pre-school education for 3-6 year olds.

ICDS also includes, in less than 10% of the blocks covered, schemes for adolescent girl nutrition, health, awareness and skill development; and in some areas, women's income generating programs. All ICDS services are delivered through a village center, the anganwadi, by a trained village woman, who is assisted periodically in health tasks by the auxiliary nurse midwife (ANM) from the health sub-center. The program is targeted at poor areas, and increasingly at poor households. Program guidelines call for food supplements to be given preferentially to

children and pregnant women from households at high risk of malnutrition – those of marginal farmers, landless laborers, scheduled castes and scheduled tribes.

From a technical point of view, ICDS seeks to provide both nutrition and health services for young children and pregnant mothers and early childhood development services for pre-school children. As pointed out by Levinson (1998) nowhere in the world has a single program managed to do both successfully. The skills needed in providing nutrition and health services, and providing pre-school education are very different, and are very unlikely to be combined in one worker (13). As a result, young children and mothers, whose nutritional needs are urgent, are seriously underserved; on the other hand, the single worker responsible for the program at the grassroot level is seriously overworked. A second worker has been built into the program design of ICDS III, but this has not yet been done in Karnataka.

TINP was first launched in 1980 in Tamil Nadu, and followed by TINP II. Subsequently, Tamil Nadu has integrated its TINP and ICDS blocks, so that a common program is now operating in all rural blocks. However, the program in Tamil Nadu is strongly influenced by the TINP, and has the following features: (i) growth promotion; (ii) selective supplementary nutrition; (iii) early childhood care and pre-school education; (iv) nutrition and health education; (v) health services by health personnel; and (vi) referral.

While this list looks somewhat similar to the ICDS activities listed above, there are two important differences having to do with the technical feasibility of the model. The first has to do with selective supplementary nutrition: the core TINP strategy was based on *nutritional risk*, and involved regular growth monitoring and health check-up of all children in the relevant age group, and therapeutic supplementary feeding of moderate and severely malnourished children, growth-

faltering children and pregnant mothers; under ICDS, growth monitoring was not systematically done, nor was it linked to supplementary feeding. Targeting was based on *socio-economic* risk, and ICDS, as a result, is seen as a feeding program for the poor, and families seen to be benefiting from it are stigmatized. Secondly, TINP adopted the two-worker (plus helper) model with the introduction of the pre-school component, thus avoiding the pitfalls of ICDS described above.

Health Services Delivery and Outcomes

In order to maintain the focus on the main purpose of this paper, this section will report on those aspects of program implementation that have been instrumental in making a significant difference between outcomes in Tamil Nadu and Karnataka. The program has other components, such as early childhood education, which are not covered here since they do not fall into this category. The components covered are those in which effective initiatives have been taken to overcome constraints to implementation.

To accurately compare implementation and outcomes is difficult: the financing heads for the program, and the measures of output are very different. As can be noted in the table below, the ICDS program in Karnataka differentiates only between administrative and feeding costs; and the source of funds (central budget for the former, and state budget for the latter); in Tamil Nadu, the emphasis is on differentiating between programmatic inputs. This reflects the difference in implementation arrangements between the two programs. It has been noted elsewhere that the monitoring and evaluation system under ICDS does not reliably gauge the impact of ICDS on its primary objectives (12). This is one of the central shortcomings of the ICDS program, since lack of reliable data hamper advocacy efforts, as well as efforts to improve quality of service delivery.

Budget Allocation to Nutrition Program: 1999-2004 (12)

Rupees Million

Component	Tamil Nadu	Karnataka
<u>Service Delivery</u>		
• Service Quality	165.8	NA
• Women's Empowerment	28.5	NA
• Staffing and Infrastructure	400.7	734.8
<u>Program Support</u>		
• Management and Institutional Development	116.7	NA
• Community Mobilization and IEC	50.0	NA
• Monitoring and Evaluation	33.8	NA
• Training	16.9	NA
• Supplemental Feeding		865.2

Program Outcomes (14)

Indicators	Tamil Nadu	Karnataka
<u>Coverage</u>		
• No. of anganwadi centers	29,982	40,014
<u>Beneficiaries</u>		
• No. of children 6-36 months	1,449,556	1,143,045
• No. of children receiving supplemental food	303,740	2,303,968
• No. of AN and PN mothers receiving supplemental food	344,840	389,688
<u>Nutritional status of children 1999</u>		
• Normal	52.1%	41.8%
• Grade I	37.6%	39.2%
• Grade II	9.8%	18.3%
• Grades III and IV	0.5%	.5%

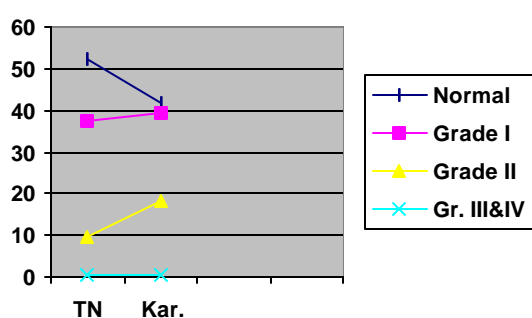
Program Management: An institutional assessment comparing ICDS and TINP pointed out that TINP has managed to avoid many of the institutional constraints of ICDS (15). This was partly because TINP was implemented in a state with relatively strong managerial capacity; but also because of specific design differences:

- a. Expansion occurred gradually, over a period of 15 years, at a rate consistent with growth in institutional capacity to manage the expanded program. Centers were opened only after workers had been trained, and components such as pre-school for 4-6 year olds were added only after appropriate capacity building. In the case of Karnataka, the number of talukas almost doubled in a period of five years, from about 94 in the period 1975-1990, to 185 in 1995. This has overwhelmed the capacity of program managers to run an effective program, and huge numbers of centers are being run by untrained workers.
- b. TINP was adequately staffed. At the district level, TINP had a stronger technical presence than ICDS; and at the block level, there was a trained Community Nutrition Instructress in charge of training and supervision. At the village level, a two-worker plus one helper model was adopted after the pre-school program was added on. Under ICDS, the staffing pattern was inadequate to run the expanded program, and even sanctioned posts were not filled. Recently (under the Women and Child Development program), a second worker has been sanctioned at the village level, but Karnataka continues with the one worker and one helper model.

Targeting: Reaching those most at Risk: There is now consensus that reaching children aged 6-24 months and pregnant women most at risk is essential for preventing malnutrition.

Unfortunately, ICDS is not having the intended nutritional impact for several reasons: it is not

well targeted (16). Even if it were well targeted at those below poverty line, it would still reach only about 50% of those in need. As seen in Table --, there are almost eight times more beneficiary children between the ages of 0-36 months in Karnataka as in Tamil Nadu who are receiving supplemental feeding. In spite of this, Tamil Nadu's results are better: almost 52% children in the normal range, as against about 41% in Karnataka; and more importantly, about 9% children in Grade II malnutrition, as against twice that number – over 18% - in Karnataka.



However, there is also a larger problem. ICDS food costs now account for a two-thirds of total program costs (Radhakrishna, 1998). While Karnataka has been providing the necessary funds, through the ZPs, due to the lack of targeting of the overall program, the supplemental feeding program is not having the desired results. For example, the field level worker and her helper are also being fed under the program – this may not add significantly to program costs, but emphasizes the “feed the poor” orientation of the program. There is evidence from other similar “welfare” schemes meant to benefit the poor that targeting by income level just does not work: for example, the Integrated Rural Development Program, which had many benefits meant for the poor. Later analysis showed that the program was not cost-effective, and the benefits were short lived. A program introduced later, which targeted families that had demonstrated an interest and ability for benefiting from savings and credit schemes was much more successful at reaching the

objective of poverty alleviation. Targeting by program objectives, as in TINP (reducing malnutrition), has been demonstrated to be more effective.

Monitoring and Evaluation (M&E): As has been noted before, the M&E system under ICDS has not been functioning well. Large amounts of data were collected which were found by an independent evaluation to be unreliable; in any case these data remained unutilized for planning or decision-making. A concurrent evaluation of ICDS was undertaken by the National Council for Applied Economic Research in 1998; however, this is no substitute for regular program monitoring. Since then, some improvements have been made in monitoring formats and in development of software for data analysis. Improvements are now needed in quality of data and its effective use in self-assessment, planning, supervision and as a management tool. Field workers interviewed in Karnataka for this paper revealed that, in their own assessment, the data was not robust.

Some of the recommendations for the improvement of M&E under ICDS have been made on the basis of the successful experience of TINP in this area (12). The TINP model focused on:

- The village level worker monitoring a few key monthly monitoring indicators;
- Community growth charts for community-wide monitoring of under-threes, maintained by the community under the guidance of the village worker;
- Monthly monitoring reports to be collected by supervisors on payday, followed by a discussion of the worker's performance;
- Reducing the number of registers, and providing good training to workers on the maintenance of records.

By following the above method, TINP's service statistics were determined to be reliable by an independent evaluation. At the village level, performance information is shared with the community with the use of growth charts and key indicators, which are displayed in the village center, and this information is also fed upward to management.

Training: One of the casualties of the rapid expansion of ICDS was the training function. The existing capacity was already poor: operational budgets were extremely low, trainers poorly trained; and links between ICDS training centers and field operations extremely weak. The universalization of the program overwhelmed this already weak training capacity. Any improvement in the quality of ICDS services would have to rest on the complete revamping of the training of the village level worker and her supervisors. This revamping has been started with the WCD project, and the launching of the revised Udisha training program. Most important is training in growth monitoring: at present, due to poor capacity for growth monitoring among field workers, all children are being fed, regardless of need. This is not only driving up program costs, but also diverting the program's focus on those most in need.

The TINP system of block level training of village level workers by the Community Nutrition Instructress, a block level trainer, who is also a second level supervisor, is one of the most successful and cost-effective methods of training a large number of village level workers in any development program. This approach has two advantages: it involves the supervisor in the worker's training, so that they have a good understanding of the workers strengths and weaknesses, and can use supervision visits as opportunities for refresher training; and it allows the village level worker to attend trainings during the day and return home at night, rather than have to be away from home for prolonged periods as in the centralized training model adopted by ICDS. In addition, in Tamil Nadu, a state level Training Task Force has been formed to

better implement and monitor training; a separate mobile training team has been set up to provide training for village level workers; and Block Level Training teams have also been formed.

Community and Household Level Issues

Decentralized management: ICDS is a highly centralized program, and its top-down approach is a major reason why the program is seen by beneficiaries, bureaucrats and politicians alike as a government feeding program. In addition, ICDS has followed a standard approach to implementation in all blocks, despite substantial differences in levels of malnutrition and its social and economic determinants (17). Recently, GOI has announced the devolution of program planning and management to the states, as well as made efforts to decentralize the training function. This, as well as the emergence of the PRIs as implementing partners, to help to make ICDS more responsive to local needs. In the case of TINP, since it was a state-level program, planning was based on needs within the state. Detailed implementation plans were developed by involving communities before introduction of services, to ensure that the program reflected local needs.

Community Ownership: The lack of community participation is perhaps the single most serious shortcoming of the ICDS program (18). Beneficiary assessments have confirmed, generally, community apathy and mistrust of the program. Reasons for poor community involvement include the rapid top-down expansion of the program, and the lack of political and bureaucratic will in encouraging community participation. Under TINP, several initiatives were taken to ensure greater community participation and ownership of the program, right from the planning stage. Apart from participating in developing community level plans, the following steps were also taken:

- Selection of the village level worker by the community;
- Formation of working groups, primarily of women and adolescents, which were assigned significant responsibilities in ensuring wide community participation in the activities of the center;
- Regular monitoring of services by the community, including of impact, using community growth monitoring and center information charts;
- Increasing community responsibility for the management of the center, maintenance of the building and procurement of materials.

In addition, a system of concurrent social assessment has been implemented to identify specific interventions to address block specific problems.

**Table: Constraints to Scaling up
TINP/ICDS**

Constraint	Financial	Other
Governance and Overall Policy Framework	Inadequate budgetary allocations to cover program costs.	Lack of sustained political will and commitment to eradicating malnutrition.
Health Sector Policy and Strategic Management	No provision for a second worker at each anganwadi center (calculated at 9% of total program costs).	Focus on poverty-targeting rather than on targeting children at nutritional risk. Lack of a structured training program in growth monitoring.
Health Service Delivery		Lack of capacity for accurate monitoring and tracking of program outcomes. Supplemental feeding not based on growth indicators. Ineffective training and supervision of field workers.
Community/Household Demand/Impact		Centralization of management, no devolution of powers to the field worker level. Lack of involvement of community in program implementation.

AIDS Control Program

Background

Following the identification of AIDS cases in the USA in 1981, the Indian Council of Medical Research (ICMR) established an AIDS Task Force in 1985. By the next year, sero-surveillance centres for detecting HIV infection in India were set up in selected medical colleges in the metropolitan cities of India. One such surveillance centre in the Madras (Chennai) Medical College identified the first HIV sero-positive individual in India in 1986 among the commercial sex workers (CSWs) of Chennai, Tamil Nadu. In the same year, other HIV positive persons were

identified in Vellore, Tamil Nadu and in Mumbai, Maharashtra. The first AIDS patient in India was also reported in 1986.

Governance and Overall Policy Framework

In response, GOI formed the National AIDS Committee (NAC) in 1986, and subsequently launched the National AIDS Control Programme (NACP), focussing on increasing awareness of HIV/AIDS, screening of blood for HIV and testing of individuals practising risk behaviours, in 1987. GOI also expanded the sero-surveillance centres to all the States and major cities of India. Between 1986 and 1990, HIV infection had increased rapidly from 0.2 percent (1986) to 1.3 percent (1990). In 1989, the Government of India, realizing the need for accelerating and intensifying AIDS control efforts, prepared a Medium Term Plan (1990-92) which focused on those states and cities considered the worst affected by the HIV/AIDS epidemic. Initial activities under this plan focused on the strengthening of program management capacities, targeted information, education & communication (IEC) campaigns and surveillance. Implementation of preventive activities such as blood safety measures, STD control and condom promotion gained momentum only towards the end of this medium term plan period. In 1991, a “Strategic Plan for the Prevention and Control of AIDS in India” was prepared for the five-year period of 1992-96. This led to the first National AIDS Control Project (NACP) which received substantial support from the World Bank, the WHO and other bilateral and multilateral donors. Subsequently, in 1999, GOI formulated a National AIDS Policy Document (NAPD), which was approved by the Union Cabinet for adoption as a National Policy for the prevention and control of AIDS. The overall goal of this National Policy is to contain the further spread of HIV at a fairly low level of HIV prevalence. Following this, a second phase of the NACP was launched, and is currently under implementation.

At the national level, therefore, there was a fair amount of commitment to addressing the looming epidemic. However, this was not echoed at the state level, and in many cases, lack of advocacy among the top political leadership and the bureaucracy resulted in the project not being accorded sufficient importance. The planning and implementation was top down during the first phase of the NACP, and the centralized planning and the lack of ownership on the part of states lead to uneven implementation of the project activities in different states. During the preparation of the second phase of the NACP, with the knowledge of major differences in the nature and level of the epidemic in different parts of India, a serious effort was made to decentralize project formulation and implementation to the state and district levels.

Health Sector Policy and Strategic Management

The major features of the NACP have been in line with prevailing technical paradigms and best practice established internationally, and include:

Priority Targeted Interventions among High Risk Populations: (i) priority interventions among poor, marginalized groups practicing high risk behaviors such as CSWs, transport workers, MSMs and IDUs by NGOs; (ii) controlling the spread of sexually transmitted diseases through strategies appropriate for the settings; and (iii) promoting the use of condoms for safer sexual behavior among the entire sexually active population.

Prevention among Low Risk Populations: (i) reducing blood-borne transmission through strengthening of blood banks and ensuring mandatory screening of blood for HIV, Hepatitis B and C, malaria and syphilis; (ii) raising the awareness level among the people about all aspects of HIV/AIDS such as its modes of transmission and ways to prevent transmission; and (iii) setting up voluntary testing centres in all the districts of India.

Low-Cost Care for PLWAs: (i) developing the capacity for low-cost care for people living with HIV/AIDS; and (ii) supporting the development of peer networks and protecting the human rights of PLWAs.

Technical Support: One of the reasons for the poor performance of some states under NACP-1 was the lack of technical support to the program managers. Due to the crucial role of behavioral patterns in HIV transmission, AIDS control efforts needed to be quite different from other disease control programs. This deficiency in NACP-1 has now been remedied by the technical resource groups (TRGs) to provide technical assistance on several key areas to the program managers.

Health Services Delivery and Outcomes

Tamil Nadu was a pioneer in AIDS control efforts, and the success of the Tamil Nadu model has been well documented. The setting up of the “society” to facilitate flexibility and autonomy in implementation; innovations in program management; initiation of targeted interventions; regular monitoring and evaluation; building up of community awareness and support: all these strategies contributed to Tamil Nadu’s being able to demonstrate quick results in containing the epidemic, and at a relatively low cost. Many of these strategies were adopted at the national level, to be replicated in all states, in the Second AIDS control project. However, in Karnataka, as in other states, due to inherent systemic and other constraints, the results have not been as good.

Trend in Utilization of Funds

(Rupees Million)

Year	Tamil Nadu	Karnataka
1992-93	0.088	
1993-94	7.850	
1994-95	22.779	
1995-96	67.973	
1996-97	129.780	
1997-98	172.259	
1998-99	146.076	
1999-2000	130.091	

Source: TNSACS

Program Outcomes

	Tamil Nadu	Karnataka
Levels of Awareness		
• General Population 1998	97%	
• CSWs 1999	98%	
• Transport Workers 1999	96.5%	
• Male Factory Workers 1999	98.8%	
• Female Factory Workers 1999	90.7%	
Condom Use 1999		
• CSWs	88.1%	
• Transport Workers	79.6%	
NGOs funded for Targeted Interventions (1998)	106	

Source: APAC-BSS Data

Strengthening Management Capacity: At the national level, the National AIDS Control Organisation (NACO) was set up in 1992, with full financial and administrative powers, to implement the five year strategic plan and NACP-1. NACO is headed by the Project Director (PD) who is a senior officer of the Indian Administrative Service (IAS). PD, NACO is assisted by a team of about 40 technical and administrative staff. At the state level, State AIDS Cells (SACs) were set up, headed by a senior doctor in the rank of Additional or Joint Director from the State Health Service. However, there were inherent problems in the administrative set-up at

the state level. An important reason for the poor implementation in several states was the bureaucratic delay in the release of NACO funds from the State Finance Departments to the SACs. In addition, within the state health directorates, the SACs were not given adequate importance or status; consequently, officers on the verge of retirement were often posted as the State AIDS Program Officers (SAPOs). Further, in many states, the posts sanctioned by NACO were not filled up at all, hampering effective implementation of the project activities.

Given this constraint, the Government of Tamil Nadu converted its SAC into a registered society in 1994 – the Tamil Nadu State AIDS Control Society (TNSACS) – to provide greater autonomy and flexibility in the implementation of AIDS control activities. Since its inception, TNSACS is headed by a PD, who is a senior IAS officer in the rank of Secretary to the State Government. This "society" model with an IAS officer as Project Director has worked very well in terms of flow of funds and speedy implementation of project activities due to its autonomy and flexibility. In March 1998, NACO prescribed this as a model for all States and large municipal corporations.

Building Surveillance Capacity: Surveillance has been considered a priority because of the poor availability of data about the HIV/AIDS epidemic in India. However, many states, including Karnataka, did not conduct sentinel surveillance among the high risk (STD clinic attendees in all states and IDUs in northeastern states) and the low risk populations (ante-natal clinic attendees) as required under the project. This resulted in inadequate data about trends in HIV prevalence among these groups in some states - consequently, the seriousness of the epidemic was not brought home in many parts of India. In Tamil Nadu, on the other hand, surveillance was done systematically, and data was maintained and used to track the epidemic. TNSACS also collaborated closely with the USAID funded APAC project to conduct the baseline and two successive waves of behavior sentinel surveillance (BSS), which has proved to be a rich source

of data on levels of awareness in the community and consequent behavior. For example, the APAC study showed that the epidemic is no longer confined to the people practising high risk behaviours – it has spread to the general population, as shown by the increasing HIV prevalence among pregnant women attending ante-natal clinics. Also, that in Tamil Nadu, the HIV epidemic is no longer an urban problem: HIV prevalence in the rural areas is higher than that in the urban areas, as shown by the community prevalence study of APAC. Thirdly, their data showed that, while a much larger proportion of men was infected in the earlier years of the epidemic, the proportion of infected women is increasing rapidly. Such data has helped TNSACS to set priorities for focused interventions.

Promoting Public Awareness and Community Support: In the absence of a cure or a vaccine, raising the levels of awareness of people about the modes of transmission of HIV and the methods of prevention was accorded a high priority under the programme. A six-pronged strategy including mass media, advocacy, NGO involvement was implemented all over the country. Tamil Nadu launched aggressive and high visibility awareness campaigns in the mass media like television, radio, newspapers, through advertising agencies selected in a competitive and transparent process. The Prevention Indicator Survey conducted in four States (Maharashtra, Tamil Nadu, West Bengal and Delhi/Haryana) showed that knowledge about HIV/AIDS and two methods of HIV/AIDS prevention ranged between 54 and 80 percent in the urban areas of the four States and between 13 and 64 percent in the rural areas. Levels of awareness in Tamil Nadu in both urban and rural areas are significantly higher than in the other three states.

Targeted Interventions: Best practices from around the world indicate that interventions targeting the sexual or other high risk behavior of poor, marginalized populations at the highest risk of HIV infection are the most effective in terms of controlling the epidemic at a macro level. One of

the major strategies of the NACP is to implement targeted interventions among groups practicing high-risk behavior. Apart from a few notable exceptions in West Bengal and Tamil Nadu, such interventions have not been implemented in most states, resulting in HIV prevalence rates climbing rapidly in these groups.

Clinical Management of People Infected with HIV: While the government was aware of issues relating to people already infected with HIV, many states did not implement care activities. In Tamil Nadu, on the other hand, due to the leadership of a Project Director who was able to effectively influence the political leadership as well, and a high level of community awareness, such measures were implemented seriously. As a result, the Government Hospital for Thoracic Medicine (GHTM) at Tambaram, a suburb of Chennai, has emerged as a center of excellence in treating opportunistic infections of AIDS patients at a low cost and with compassion.

Consequently, AIDS patients from several states of India, who have been denied services, have been coming to this hospital for care. While the major expenditure on the infrastructure and staffing is met by the Tamil Nadu Government, additional costs on HIV testing and drugs for opportunistic infections are met by TNSACS under NACP. Counselling for PLWAs by developing a network of counsellors was another important activity under this component.

TNSACS has been nurturing and supporting networks of PLWAs such as the Indian Network of Positive People (INP+) and the Tamil Nadu Network of Positive People (TNP+), both functioning from Chennai. Similar support groups for PLWAs have since been formed in several states.

Community and Household Level Issues

Since HIV in India is spread mainly by heterosexual sex, which is among the most private acts of people's lives, the community at large has to be involved in making the AIDS control program a

success. The most committed policies and programs of the government or the active participation of the non-governmental sectors alone cannot result in a major change in people's attitudes and behavior in matters of sexuality and sex. Therefore, securing the participation of the local community and community representatives is an important requirement for the AIDS control program. In addition, the private sector is believed to be a dominant source of primary treatment of STIs. Involvement of private physicians would help to enhance the coverage of STI services and provide an opportunity for timely intervention, in particular the syndromic management. The strategy adopted by the NACP to enhance community involvement, ownership and response to the program was the following:

- Increased access through expansion/outreach to poor and marginalized populations
- Increased awareness of program outcomes, and concomitant behavior change
- Reduced cost to the poor of availing of program benefits/increased willingness to pay for services
- Increased involvement of community/CBOs/ NGOs in program planning and implementation

In order to enhance the community's response to the epidemic, TNSACS adopted the following program, which has now been adopted by NACO for implementation in all states:

- Appointment of an NGO advisor, who is an experienced professional with extensive field experience, to provide guidance in NGO involvement;

- An open and transparent procedure to invite NGO proposals by placing advertisements in the local press.
- All the proposals received from the NGOs would be placed before a Technical Advisory Committee, consisting of the technical officers of the SACS and the NGO members of the Executive Members of the SACS. The NGO Advisor would be the convenor of the TAC.
- Standard selection criteria based were adopted to approve NGO proposals.
- Development of a state specific strategy and implementation plan for initiating NGO activity.
- Capacity building and ongoing monitoring and evaluation for NGOs.
- Setting up an NGO forum to provide opportunities for dialogue and collaboration between national and international NGOs, the private sector, donors and government.

Setting up this transparent mechanism for NGO involvement greatly enhanced the credibility of the program; and many targeted interventions and community involvement initiatives have been successfully initiated in Tamil Nadu. This has had the twin impact of building up NGO capacity for further involvement in the sector; and raising community involvement so that there is pressure on the program to deliver services effectively at the grassroot level. From funding about 17 NGOs in implementing targeted interventions in 1994-95, TNSACs has gone up to 106 NGOs funded in 1997-98. This has been in a situation where other states had not begun to involve NGOs in the program at all.

**Table: Constraints to Scaling up
AIDS Control Program**

Constraint	Financial	Other
Governance and Overall Policy Framework		Political will and commitment. Unwillingness of bureaucrats to involve themselves in a program perceived as dealing with taboo subject. Lack of sense of urgency to tackle impending epidemic.
Health Sector Policy and Strategic Management		
Health Service Delivery		Inadequate capacity in terms of people who could manage the process, as well as organizations such as NGOs, to effectively implement well-designed programs, for example, targeted interventions, care. Inadequate capacity for maintaining an accurate data base and tracking the epidemic.
Community/Household Demand/Impact		Non-availability of effective NGOs in high-risk areas due to lack of funding for such activities in the past. Lack of awareness amongst community members and implementors of the risk, and unwillingness to admit that this is possible in their community.

Secondary Health System

The capacity of the health system across India to provide an adequate and necessary package of services that would combine both public health and clinical services remains limited.

Investments in primary care, both in terms of infrastructure and services, have been emphasized. As a result, investments in the secondary health care system, or the first referral level of health care, have been largely neglected, and this has resulted curative care being largely catered to by the private sector, largely paid for by out-of-pocket expenditure. This has placed a disproportionate burden on the poor.

The Karnataka Health Systems Development Project (KHSDP) was launched in 1996 as a state level project, with IDA assistance, with the objectives of: (i) improving efficiency in the allocation of health resources through policy and institutional development; and (ii) improving the performance of the health care system through improvements in the quality, effectiveness and coverage of health services at the first referral level. The impact of the project has been documented, and the findings show that there has been considerable impact in several areas.

Governance and Overall Policy Framework

During preparation of the State Health Systems Development project in Karnataka, an intensive analysis was undertaken by the state government of health sector issues in Karnataka, and measures that needed to be taken in order to address these issues effectively. Based on this analysis, the GOK agreed to adopt a package of reforms that included:

Increased Financing and Improved Resource Allocation for the Health Sector by (a) ensuring adequate budgetary allocations to the health sector, at least at FY94 levels; (b) increasing the share of health sector resources to the primary and secondary levels; and (c) safeguarding the

operations and maintenance budget to ensure adequate supplies of drugs and essential medical materials.

Strengthened Capacity for Sector Analysis by establishing a Strategic Planning Cell (SPC) to undertake analyses of important health sector issues and provide advice to the government on that basis.

Enhanced Role of the Private and Voluntary Sectors in Health Care Delivery and Management by contracting-out selected services, and promoting linkages between the government and private sectors, particularly in the primary health sector.

The government's commitment to this reform package has been monitored since the inception of the project, and all elements of the package have been implemented. The most significant development has been with regard to the capacity for strategic planning. The initial response to the setting up of the SPC was not very positive, but over time, the SPC has begun to coordinate, analyze and provide feedback on hospital level data, as well as provide guidance to the administration and political functionaries on new directions that need to be taken. The SPC was given a major push after the change of government a year ago when a Health Task Force was set up with Dr. Sudarshan as its Chairman. The task force has been charged with the responsibility of making the health system in Karnataka more responsive to the health needs of the people, and has become the de facto SPC. The task force is a very high level body, and is backed by the current Chief Minister. It has recently published a comprehensive report on the Karnataka health system: *Towards Equity, Quality and Integrity in Health (2001)*, and is currently developing a plan for integration of primary and secondary health care services. In Tamil Nadu, there had been initial resistance to adopting the reform measures recommended by the World Bank.

However, after the program was implemented in several states, and evidence of the impact began to be shared with other states, Tamil Nadu is now in the process of planning a state health systems development project for IDA funding. Currently, the system in Tamil Nadu suffers from lack of documentation and rigorous assessment of program initiatives. As a result, there is very little empirical basis for making policy decisions. Studies also show that the reliability of regular data sources is not very high.

Health Sector Strategic Management/Service Delivery

Apart from renovating and rebuilding the crumbling secondary hospital infrastructure (financing was provided for the renovation/extension and equipping of 21 district, 107 taluka and 74 community hospitals), technical assistance was provided to put in place systems for the following issues, which made an important contribution to project outcomes:

Capacity building of management and staff: The administrative and technical skill of staff has been upgraded through a variety of measures. The autonomy of the health department in implementing its programs has been enhanced by bringing the procurement of drugs and the maintenance of infrastructure under the control of the department, and away from General Stores and the Public Works Department, as had originally been the case. A high level body has been created, which approves plans and expenditures, and thus obviates the necessity of going to the state Finance Department for approvals, a process that usually causes inordinate delays. At the district level, the post of Resident Medical Officer has been created at each district hospital, thereby freeing up the District Surgeon from routine administrative tasks, and allowing him to focus on technical and quality issues. The RMO has also been made responsible for liaising with the Zilla Parishad to bring about convergence between primary and secondary levels of health

care at the district level. In addition, a detailed training program been implemented, for technical and managerial capacity building of all doctors and administrators.

Drug procurement and distribution: A drug list for different types of secondary hospitals has been prepared and approved. The procurement is done centrally by the KHSDP, but has been streamlined, and based on needs at the hospital level. The HMIS has been linked with the pharmacy at each hospital, and the central procurement unit is alerted well in advance of drug and medical supplies requirements. In addition, the funds collected through the implementation of user charges are maintained at the hospital level, and are being used for procurement of small amounts of necessary drugs and supplies. In the case of drug procurement, the agency set up by the Tamil Nadu government, TN Medical Services Corporation, has served as a model for drug procurement for many other states. However, no user charges are being recovered in public hospitals in Tamil Nadu, and the funds being utilized at the hospital level in Karnataka for maintenance, minor repair and procurement of drugs and materials are not available in Tamil Nadu hospitals.

HMIS: The idea of using HMIS as a tool for management of the health system has been introduced under the project. Previously, data had been gathered at the hospital level, but the data had neither been properly analyzed nor utilized at any level to gauge the effectiveness of the system. The new HMIS links up information collected by the primary, secondary and tertiary levels of care; the bulk of the data was analyzed at the district level, and used by the District Surgeon to provide prompt feedback to doctors and administrators; selected performance indicators are fed up to the state level HMIS unit, as well as the SPC, and then used to analyze sector-level issues, and to guide any mid-course corrections. This type of systematic data

analysis and feedback is not being done in Tamil Nadu, although general statistics are being regularly generated and used.

Referral: In Karnataka, the structure of service delivery had not been rationalized, with the result that there was a great deal of overlapping in the functioning of different tiers of the health system. There was no referral mechanism in place, and patients were being treated for minor ailments at tertiary and district level facilities at high cost. A detailed exercise was conducted to streamline service delivery and define services to be provided at different levels of care - primary, community, taluka, district, and tertiary. Based on this, a referral system has been implemented, that includes laying out referral procedures and adequate training for all staff in the use of those procedures; rationalization of staffing at different levels of hospitals to ensure that necessary services can be provided; and an IEC program to make patients and the community aware of the referral program, and the types of service available at each level of care. In Tamil Nadu, lack of policy guidelines has also led to serious inequity in the distribution of secondary healthcare facilities across districts. There are still no guidelines on facilities that should be available in these hospitals. In addition, they also suffer from serious "misallocation" of human resources. There seems to be no relation between the bed-size and workload. Staff rationalization, which is becoming increasingly difficult to manage, is a serious issue (11).

Surveillance of major communicable diseases: In most states, the capacity to undertake health planning, monitor the evolving epidemiological profile, analyze the health manpower situation and the most cost-effective means of achieving the best results from limited resources is weak. Since most major disease control programs are implemented as centrally sponsored schemes or vertical programs of GOI, several parallel structures exist for the collection of surveillance data for different communicable diseases – for TB, malaria, leprosy, and so on. This data gets

aggregated at the state level, and then passed on to GOI, and much of the utility of the data is lost due to the inevitable delays in analysis and feedback entailed in such a system. Under the project, an attempt has been made to better coordinate within the state the data from different disease control programs, and use the data in a timely way. District Surveillance Units have been set up, which collect data at the district level, analyze the data and provide information on trends. A new initiative has been to involve community level workers, such as the anganwadi worker, school teacher, as well as the village panchayat members, in community level surveillance of selected diseases. At the state level, a new State Surveillance Unit has been set up, with a Joint Director in charge, who coordinates the activities of the JD Communicable Diseases, JD Malaria, JD TB etc.

Medical Waste Management: Safety in handling of medical waste is not a priority in Indian hospitals. A study of waste disposal in a rural hospital revealed that: normal waste was disposed in an open ground and burned at infrequent intervals; needles and plastic syringes were discarded along with general waste; used surgical dressing, pads, cotton and gauze were disposed in an open ground; liquid waste and chemical waste was discharged directly into the sewer; only biological waste was treated more carefully and incinerated. In Karnataka, it was decided that all hospitals would be provided with the equipment necessary to start segregation of hospital waste. This waste is temporarily stored at the hospital, and then transported to landfills specifically designated for medical waste. In smaller institutions, where the volume of waste generated is relatively smaller, deep pits were dug in their backyards for the purpose. Adequate capacity building has been undertaken at all institutions to make the system operational. In Tamil Nadu, on the other hand, the guidelines issued by the Central Pollution Control Board are being followed, which require incinerators to be installed in all facilities above 50 beds, despite the

clearly adverse environmental impact of implementing such a guideline. Authorities implementing the health systems projects in different states did dialogue with the CPCB, and it was agreed that alternative methods of waste disposal could also be considered. However, alternatives to incineration are currently being explored only in states implementing the project.

Community and Household Level Issues

A Social Assessment (SA) was undertaken during project preparation, including a beneficiary needs assessment, to guide the planning process. The SA undertook the following:

- A social context and institutional analysis, identifying specific areas within the state that are geographically, socially and culturally distinctive;
- An analysis of health needs, disaggregated by income level, gender and social grouping;
- An assessment of health seeking behavior, particularly among women and tribal populations;
- A review of the role of the private sector in health care provision.

The SA revealed several important dimensions of health care provision and utilization that would need to be addressed by program design and implementation plans:

Profile of Users of Secondary Hospitals:

- On average, the distribution of users by caste, literacy level and place of residence was comparable to the average distribution within the population. An analysis of patients by family income indicated that over 45% of the patients have an annual income less than Rs. 15,000 (close to the official poverty line) and 90% of the patients had an income less than

the taxable limit of Rs. 50,000. However, the proportion of literate and higher caste and income groups increased at district level facilities, indicating that less advantaged patients had limited access to these facilities. Patients at district hospitals were also predominantly male.

- A large proportion of patients at community hospitals were there for acute medical conditions such as fever, diarrhea etc. Taluka hospitals were used predominantly for injuries. However, even at district hospitals, more than 50% of the cases were for acute medical conditions, and the rest for chronic medical conditions, surgery, obstetric and orthopedic conditions. Less than 2% of those interviewed reported having been referred from a lower level facility.
- More than two-thirds of respondents resided within a 10km. Radius of the facility, and about a third lived within walking distance. Those within walking distance were the highest among users of primary health centers and community hospitals, and lower at higher level hospitals. Distance to be traveled was an important determinant of hospital utilization.

Health Awareness and Related Behavior:

- Physical Access: Distance to be traveled, the availability of hospitals, doctors, and drugs: all these were found to be major determinants of the community's health seeking behavior.
- Social Access: There were significant social barriers to health seeking behavior. Tribals, for example, had a special set of beliefs that prevented their approaching the government health care network. Illness was perceived as an inability to discharge one's duties, and care was not sought prior to this. At that point, the traditional healer was consulted first,

and substantial costs incurred in various healing practices prescribed by the healer. After this was followed for several days, if the healer's advice proved ineffective, the patient was brought to the nearest health center, or taken to a private doctor. Moreover, doctors generally were insensitive to tribals, due to their appearance, customs, different language spoken etc., and encounters with doctors was generally a very negative experience for tribals. In the case of women as well, the recognition of illness and the support within the household and community to the woman's availing of health care was less than in the case of men. Given that the NCAER survey (1993) found that morbidity among women aged 15-59 is 10% greater than for men, it is disturbing to note that only 786 women were hospitalized for every 1,000 men. Clearly, there was a need for intervention to increase access to such groups.

- **Economic Access:** Substantial costs were being incurred on fees, drugs and transport by patients. As a result, patients were likely to delay treatment, and as a result incur even higher costs due to the seriousness of the condition. Many patients had to take recourse to private practitioners due to inaccessibility of government facilities, and this drove the costs even higher. It was found that, of out-patients visiting a private practitioner, 58% spent between Rs. 100-Rs. 200, 23.9% spent between Rs. 200-Rs.300, and 6.9% spent more than Rs. 300 on medicines in the preceding three months. By comparison, the numbers for government hospitals are 28.3%, 12% and 5.4% respectively. In short, only about 10% of out-patients to a private doctor spent less than Rs. 100, as against almost 55% of out-patients at a government facility. Most patients expressed the need for reliable and low cost government services, since the cost of visiting private practitioners was prohibitive.

Causes for Under-Utilization of Secondary Hospitals :

- **Shortage of staff:** Non-availability of staff, particularly doctors, was stated to be the most important reason for preferring private facilities over government facilities. Most positions in many rural areas were either vacant, or the persons posted were away on long deputation at the district hospital, or were simply absent without leave. Especially in emergency situations, the easy accessibility and availability of private doctors, quite often quacks or under-qualified practitioners, made them the preferred option.
- **Shortage of Medicines:** Shortage and unavailability of common medicines at hospitals were a major disincentive. The community expressed a willingness to pay for medicines.
- **Poor Access:** Some district hospitals are located such that they are inaccessible to a large portion of the district's population. In fact, patients sometimes preferred to go to hospitals in the neighboring district due to their location. Many community and taluka hospitals were also poorly located, with poor transportation and communication links. Due to this, and the lack of residential facilities at some of the smaller hospitals, doctors were unwilling to be posted to these facilities.

Project Initiatives to Address Social Issues: Given all this background information provided by the SA, the project has adopted a two-pronged approach: (i) to increase outreach activities, and enhance access to some of the most disadvantaged populations; and (ii) to undertake activities that would enhance demand from the community for health services. With regard to (i) increasing outreach activities, the government has initiated several partnerships with NGOs in rural areas, and contracted them to provide health services in areas where government personnel are difficult to place. One example is in Mysore district, where the Vivekananda Ashram has

been given the responsibility of running a PHC and CHC. The response to this initiative has been very positive and many health NGOs are coming forward to take up similar activities in other areas. In terms of (ii) enhancing demand for health services, the government has initiated the Yellow Card Scheme. The Scheme involves holding periodic camps in remote SC/ST hamlets, where physical access to government health facilities is difficult. The camp is organized by the PHC Medical Officer, with the support of the village level health worker, and the village panchayat. Many such camps have been held across the state, financed under the KHSDP, and the response to these camps has been growing. However, in absence of a good baseline or rigorous monitoring, it is difficult to tell whether such camps have made a difference in either the health status of SC/ST groups, or in their health seeking behavior. A good baseline survey would have provided valuable information on the impact of the scheme.

**Table: Constraints to Replication
State Health Systems Development**

Constraint	Financial	Other
Governance and Overall Policy Framework	Inadequate budget allocations to health. Skewed distribution of resources within the health sector, away from primary health care, which accounts for major burden of disease.	Lack of commitment to rationally plan and utilize scarce resources. Lack of vision/commitment to undertake health sector reform.
Health Sector Policy and Strategic Management	No resources to access international expertise in health sector reform.	Non-availability of technical assistance to adopt best practices in various technical areas.
Health Service Delivery	Inadequate resources to upgrade infrastructure, equipment and provide drugs and materials.	
Community/Household Demand/Impact		Inadequate analysis of community demand patterns. Inadequate information on patient perceptions of quality of care. Excessive focus on hospital-based interventions, rather than community outreach programs. Lack of involvement of CBOs in health service delivery, particularly in remote areas.

Bibliography

1. See footnote, Page 1.
2. World Bank Staff Appraisal Report; Report No. 15106-IN: State Health Systems Development Project II; 1996.
3. Who Benefits from Public Health Spending in India?; NCAER, New Delhi; 2000.
4. Raghuram, S and M. Ray: The State and Civil Society: Meeting Health Needs, Reaching Equity in Shobha Raghuram (Ed.) Health and Equity - Effecting Change; Hivos Netherlands; 2000.
5. Duggal, R: Health Sector Financing in the Context of Women's Health in Swapna Mukhopadhyay (Ed.) Women's Health Public Policy and Community Action; New Delhi; 1998.
6. Year Book 1995-96 – Ministry of Health and Family Welfare, GOI SRS, Fertility and Mortality Indicators, 1993; Economic Survey 1997-98
7. Dreze, J and Amartya Sen: Indian Development; Selected Regional Perspectives; Oxford University Press, 1999.
8. Human Development in Karnataka: Planning Department, Government of Karnataka; 1999; Table 3.4
9. STEM study; 1995.
10. Combined Finance and Revenue Accounts, Comptroller and Auditor General of India, respective years. From National Profile on Health Development and Women, WHO; 2000.
11. Maraleedharan, VR: Public Health Care System in Tamil Nadu: A Critical Overview of its Strengths and Weaknesses; Background paper for CMH-India; 2001.
12. World Bank Report No. 18667-IN: India Wasting Away – The Crisis of Malnutrition in India; Washington DC; 1998.
13. Levinson, James F.: India – Sector Review of Nutrition Program, Background Paper; 1998.
14. ICDS Project Document, 2000
15. ICDS III Project, Tamil Nadu 2000; Department of Women and Child Development, Karnataka 2000
16. Heaver, RA: Institutional Assessment; Unpublished background paper; 1997.
17. Balachander, J: ICDS: Potential Areas of Improvement; Background Paper; 1996.
18. Chatterjee, 1996.