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Health Sector Reforms in India: A Situation Analysis

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Abstract

The process of economic reforms in the 1990s has resulted in a paradigm shift in the health sector in India. This paper is a modest attempt to address these concerns by focussing on aspects of health equity interplay between private and public sector service providers, and determinants of service providers.

Our finding indicates that to a large extent, accessibility and quality of services govern the choice of health service provider. We also find that the existence of an efficient public health system can act as a major anchor for equity in the health service system

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1. Introduction

The health has always been in the centre-stage of India's development strategy in the post-independent period. Primary Health Centres came up in India from 1952 onwards. Over the years, different health programmes have been launched. Currently, public health care system operates through multiple regulations, schemes and programmes, which are implemented by various bodies of central and state governments.

Since the onset of reforms in 1991, a debate has arisen on the issue of government's involvement in the provision of health services. The arguments in favour of this are many and well known (Gupta *et al*, 2002). The broad criticisms that arise from studies on developing countries including India are the prevalence of inefficiencies in the government health systems. The outcomes of these inefficiencies have been observed in the form of mis-targeting, and deterioration in quality of publicly provided services. No doubt, the reduction in health sector's budget by central/ state governments due to the process of structural adjustment in the 1990s compounded the problem (Selvaraju, 2003). To address these shortcomings of the health sector, recommendations from various quarters have argued for cuts in government spending on health services, opening up of medical care to private sector and the introduction of cost recovery mechanisms in public hospitals (Pradhan and Roy 2003). Broadly speaking, the government has now adopted and implementation these recommendations.

It must be emphasized that an effective regulatory framework, a sound competition policy and an effective enforcement mechanism are necessary conditions for successful private participation. Recently, India has established a competition commission. However, the focus of the new commission is more on the industries than on the health sector. India also has a number of sectoral regulatory bodies but none for health sector. It should be noted that the implementation record for the new competition policy is not very promising. In fact, consumers are often resorting to judiciary to enforce commitments from the private bodies. In Box 1, we lists out some of these lacunas with regard to health sector.

Box 1: Inefficiencies of Enforcement Mechanism

1. A study conducted by CEHAT, an NGO, in 1994 at Satara, a suburb of Mumbai revealed that none of the private hospitals were registered with any health authority.
2. A study conducted by CEHAT in Chennai showed that caesarians account for 60 per cent of total deliveries in private hospitals against 10 per cent in public hospitals. But this is not regarded as malpractice.
3. Since the early 1990s, many private hospitals have opened up in Delhi. They were provided land at subsidised rates in lieu of providing free medical care to 25 per cent patients in form of hospital beds and other facilities. These hospitals have generally violated these norms. In the end, the judiciary seized of the matter and Delhi government has to follow suit.
4. Although India has a well-developed pharmaceutical industry, it is being controlled by weak and inefficient regulatory machinery. Consequently, there is a large market for spurious and substandard drugs in the country.

The prevalence of inefficiencies in public health system is a fact. However, there is a strong belief that in absence of a well-functioning public health system, the demand for services from the private health care sector can be highly inelastic. People may be compelled to either pay high prices charged by private sector or opt out of health services altogether (Sen et al, 2002).¹ This is more pertinent in case of India where a large proportion of the population belongs to the lower ends of the socio-economic hierarchy. In this context, the present paper presents a *situation analysis* of the health system in two Indian states (a ‘good performer’ and a ‘bad performer’ in respect of health status) with focus on (i) health equity (ii) comparative study of private and public sector service providers and (iii) determinants of service providers.² The paper has used primary data from large-scale health survey undertaken by the National Sample Survey Organisation (NSSO) during July 1995 – June 1996.

It is not easy to rank states by health status since health status is usually defined in terms of a large number of indicators. One solution is to construct a single composite index such as Principal component analysis (PCA), which would ideally represent the chosen set of indicators. In our analysis, we have used PCA to rank the states on the basis of the following three health indicators: infant mortality rate, maternal mortality rate and life expectancy. The PCA ranking scores have led us to select Kerala, a good performer, and Madhya Pradesh (MP), a bad performer as the two sample states for the study .

The two states selected are very much different in terms of geographical coverage, demographic characteristics and socio-economic status (Table 1). MP is a much larger state than Kerala but the population density of Kerala is higher than that of

MP. The percentage of lower caste people, Schedule Caste (SC) and Schedule Tribe (ST), is higher in MP at around 35% than in Kerala at around 11% in 2001. In terms of growth of Net State Domestic Product (NSDP), and literacy rate for male and female, Kerala is placed in higher position than MP. Moreover, availability of public health facilities like hospitals and beds per 10-lakh population is also much higher in Kerala than in MP.

Table 1: Socio-Economic Profile of Kerala and MP

Indicator	Year	Kerala	MP#
Area (in sq. kms)	2001	38863	308245
Total Population	2001	31841374	60348023
Density of Population (per sq. kms.)	2001	819	196
Percentage of Rural Population	2001	25.96	26.46
Percentage of SC and ST Population	2001	10.90	35.50
Annual Compound Growth Rate of NSDP at constant prices(%)	Between 1993-94 and 2003-04	5.39	4.51
Literacy Rate_ Persons (%)	2001	90.9	63.7
Literacy Rate_ Male (%)	2001	94.2	76.1
Literacy Rate_ Female (%)	2001	87.7	50.3
Number of Public Hospitals per million Population	2002	66	2
Number of Public Dispensaries per million Population	2002	2	2
Number of Beds in Public Hospitals per million Population	2002	3455	348

#The state has been bifurcated into MP and Chattisgarh states in November 2000.
Source: Central Statistical Organisation, Government of India (GOI).

The paper is structured as follows. The next section describes the important health schemes and programmes and the current regulations of the government. Section 3 examines the equity aspects of certain health-related indicators. In section 4, a comparison between the public and private health care service providers has been made relating to health-related expenditures and quality of service. The determinants of choice of health care provider have been analysed in section 5. Finally, section 6 provides concluding remarks.

2. Programmes and Regulation in the Health Care Sector in India

According to Article 47 of the Constitution of India, health is a state subject. However as per Indian constitution, both central and state governments have the power to regulate the following health care items: (i) drugs and poison, (ii) legal, medical and other

professions and (iii) prevention of the spread of infections of communicable diseases or pests affecting human beings, animals and plants from one state to another. Items like public health, hospitals and sanitation fall in the state list of the constitution. The central government has the Ministry of Health and Family Welfare, which manages health, programmes in the country. It is also responsible for developing and monitoring national health policies, standards and regulations, for providing funds to states and linking the states with funding agencies.

Several programmes have been launched by the central government with focus on preventive and curative health care as well as on family planning. The programmes cover diseases like malaria, filaria, kalazar, vector borne disease, tuberculosis, blindness etc apart from population control, reproductive and child health care, and immunisation. The impact of these programmes has been moderate, though in case of leprosy the impact has been very much encouraging. Sadly in India, drinking water and sanitation is still outside the purview of health ministry. But country experiences indicate that public health need to be inclusive of water supply and sanitation for significant improvements in health indicators.

It must pointed out that the spread and fruits of these programmes have not reached uniformly across India. To a large extent, the same depends on socio-economic parameters as well as economic wellbeing (Banerjee et. al., 1999). By and large, the above programmes have not factored this into account during the implementation process.

The state governments are primarily responsible for management of health care system at the respective states and are also the implementation authority of various health-related programmes launched at the central level. The performance of health programmes have been found to be better in states which are better politically managed rather than states which suffer from inept political management and instability (Das et al, 2000). Co-ordination among various departments, programmes and schemes is an important prerequisite for a well functioning health system.

Many states in India have adopted the private-public partnership (PPP) mechanism for providing health care. However, none has formulated comprehensive sector-wide policy (Bhat, 2000). By and large, private sector health care system is not

well regulated in Indian states through setting up of ceiling for prices and quality norms (Yesudian, 1999).

In the regulation side, it is surprising to know that more than 20 per cent of illness cases in rural /urban India are treated by either traditional healers or unqualified private doctors (Gupta et al, 2002). This is despite the fact that the Medical Council of India under Indian Medical Council Act, 1956 has been made responsible for registration of doctors and their qualifications, maintaining uniform standard of medical education and maintenance of Indian Medical Register. Another important issue of regulation is the quality of drugs. The Central Drugs Control Organisation (CDCO) along with Drug Control Organisation in the states are responsible for safety, efficacy and quality of drugs, their import, manufacture, distribution, sale and standards. However, the trade of spurious drugs is quite significant in rural as well as urban India.

3. Health Equity

At the outset, health inequality can be judged by different criterions. Economic class is one of such important dimension. In India, there has been a striking economic class differentials in the use of health services with respect to curative care (Sen et al, 2002). Another important aspect of health care system is preventive and promotive care, which is often lacking in developing countries like India (Baru and Sadhana 2000, Gill and Ghuman 2000). Household income also has a significant impact on the utilisation of preventive care (Gumber et al, 2001 Pradhan and Roy, 2003). Moreover, socio-economic status of household as well as rural-urban affiliation plays important roles in health inequality measurement.³

To understand the health equity aspects in the two states, we have made an attempt below to determine the extent of differentials among various economic classes and rural and urban population with respect to following curative and preventive care health indicators:

Preventive Care

- Percentage of children (age between 0-4 years) administered with BCG, DPT and OPV immunisation vaccines

- Percentage of children (age between 0-4 years) administered with measles vaccines and registered for paediatric care

Curative Care

- Percentage of spells of ailment treated to total spells of ailment reported during the last 15 days preceding the date of survey by the members or deceased members of the household.⁴

The NSSO surveys, instead of income class, only provide data tabulated across the monthly per capita consumption expenditure (MPCE) fractiles of households. In the absence of income data, the empirical analysis of this paper has grouped MPCE into four quartiles as a proxy for economic (income) class.⁵ The variation in all the above health indicators across the quartiles and between rural and urban areas in both the states has been captured through descriptive tables. Furthermore, we have used statistical tools for measuring inequality. Out of the various inequality measures that are available in the literature, we have preferred to use the following inequality measures- Gini coefficient and Generalised Entropy (GE(1)) measures due to their wide acceptability.⁶

Results on Immunisation and Paediatric Care

A high percentage (around 90 per cent) of the children in the age group of 0-4 years have been immunised in Kerala and MP for BCG, DPT and OPV except in the case of BCG in rural MP where only 64 per cent of the children are immunised as compared to 86 per cent in urban areas (Table 2).

The percentage of children (in the age group 0-4 years) vaccinated against measles is quite low in both the states (Table 2). Only 50 per cent of the total children in the age group of 0-4 years are vaccinated against measles in rural Kerala as compared to 61 per cent in urban areas. In MP, rural areas are lagging behind urban areas where 45 per cent of the children are vaccinated as compared to 63 per cent in urban areas.

With regard to paediatric care, only 50 per cent of the children (in the age group 0-4 years) are registered in rural areas of MP and 57 per cent in rural Kerala (Table 2). Urban areas of both Kerala and MP have slightly more than 60 per cent of the children registered for paediatric care.

Table 2: Percentage of Children (in the Age Group 0-4 Years) who have Undergone Immunisation Programme and Registered for Paediatric Care

State	Area	Quartile	BCG	DPT	OPV	Measles Vaccine	Paediatric Care
Kerala	Rural	1	93.53	97.70	97.08	51.15	55.95
		2	93.99	97.60	95.19	53.13	58.41
		3	90.54	94.32	93.69	47.00	55.21
		4	93.07	97.84	96.54	47.19	59.31
		Total	92.93	96.95	95.70	50.17	57.03
	Urban	1	98.32	88.97	87.77	67.63	61.15
		2	98.08	89.46	89.78	56.55	53.04
		3	99.03	92.27	92.27	61.84	65.70
		4	99.34	84.77	85.43	54.30	76.82
		Total	98.53	89.15	88.88	61.49	61.86
MP	Rural	1	56.46	97.72	97.00	35.57	46.48
		2	70.29	98.59	98.05	48.54	51.90
		3	69.01	98.59	98.16	50.05	50.16
		4	70.47	97.72	96.74	53.18	57.10
		Total	64.99	98.14	97.50	44.82	50.30
	Urban	1	81.24	73.07	73.62	56.73	62.91
		2	88.54	77.74	77.57	65.95	65.61
		3	92.16	81.37	82.35	69.61	66.18
		4	93.52	84.62	82.59	68.83	59.92
		Total	86.73	77.25	77.39	63.11	63.94

Source: Computed from NSSO, 52nd round (July 1995 - June 1996)

The inequality coefficients of immunisation for BCG, DPT and OPV turned out to be very low indicating almost no inequality and hence they have not been reported here. As far as the inequality measure in measles vaccination is concerned, the Gini coefficient is higher for rural areas as compared to urban areas of Kerala and MP at 0.50 and 0.56 respectively indicating high inequality in the proportion of children vaccinated against measles in rural areas (Table 3). Within group inequality has contributed more than 97 per cent of the total inequality across all the regions and states.

Table 3: Inequality in the Proportion of Children Administered with Measles Vaccine to Total Children (in the age group 0-4 Years) in a Household

State	Region	Group	Gini	GE (1)	Within Group Contribution (%)
Kerala	Total	Rural/Urban	0.45413	0.53753	99.01
	Rural	MPCE Quartiles	0.50267	0.62903	99.90
	Urban	MPCE Quartiles	0.38932	0.42710	99.04
MP	Total	Rural/Urban	0.49193	0.60513	97.51
	Rural	MPCE Quartiles	0.55624	0.73775	98.39
	Urban	MPCE Quartiles	0.36939	0.39276	98.85

Source: Computed from NSSO, 52nd round (July 1995 - June 1996)

The inequality coefficients for paediatric care reveals that inequality is more pronounced in the rural areas. The Gini coefficient for rural areas of Kerala and MP is 0.43 and 0.50 respectively as compared to 0.37 and 0.36 for urban areas (Table 4). Within group inequality has contributed more than 98 per cent of the total inequality across all the regions and states.

Table 4: Inequality in the Proportion of Children Registered for Paediatric Care to Total Children (in the age group 0-4 Years) in a Household

State	Region	Group	Gini	GE (1)	Within Group Contribution (%)
Kerala	Total	Rural/Urban	0.40413	0.50354	99.82
	Rural	MPCE Quartiles	0.42646	0.54246	99.91
	Urban	MPCE Quartiles	0.37432	0.45383	98.54
MP	Total	Rural/Urban	0.45289	0.57573	98.73
	Rural	MPCE Quartiles	0.50123	0.66458	99.63
	Urban	MPCE Quartiles	0.36076	0.42561	99.78

Source: Computed from NSSO, 52nd round (July 1995 - June 1996)

Results on Illness Cases Treated out of the Total Reported Cases

Overall, the proportion of cases treated out of those reported ailing is quite high for both Kerala and MP (Table 5). In the urban areas of Kerala and MP, over 90 per cent of the cases reported ailing in the last 15 days have been treated. In rural areas of Kerala, this figure stands at 88.6 per cent whereas in MP, it is around 85 per cent. The inequality coefficients for this indicator turned out to be very low indicating almost no inequality and hence they have not been reported here.

Table 5: Percentage of Spells of Ailment Treated out of Total Ailment Reported during the Last 15 Days (Preceding the Date of Survey)

Quartile	Kerala		Madhya Pradesh	
	Rural	Urban	Rural	Urban
1	86.33	89.57	82.72	91.30
2	90.23	90.55	85.38	93.37
3	86.99	93.17	84.36	92.90
4	91.30	87.21	89.30	98.21
Total	88.69	90.22	85.43	93.84

Source: Computed from NSSO, 52nd round (July 1995 - June 1996)

4. Private and Public Health Service Providers: A Comparison

Privatisation in the health sector is now a fact. Earlier, we have noted some of the concerns regarding the privatisation path that India has taken. In this context, the present section seeks to make a comparison between public and private health service providers with respect to accessibility, quality of treatment and costs in the two selected states.⁷

4.1 Health Care Use: Public Private Mix

The relevant data are shown in Table 6. As this table shows, private service providers are used by majority of the people for inpatient as well as outpatient care in Kerala. A similar trend is discernible with respect to outpatient care in rural as well as urban MP. In case of inpatient care, majority of the people of MP still accesses the public health service provider. At the all India level, the mid-1990s NSSO survey results depict a similar pattern as that of Kerala. However, in mid-1980s the usage pattern was similar to that of MP.

Table 6: Percentage of All Ailments Treated in Public and Private Health care Facilities

State	Rural				Urban			
	Inpatient		Outpatient		Inpatient		Outpatient	
	Private	Public	Private	Public	Private	Public	Private	Public
Kerala	62.80	37.20	72.30	27.70	63.00	37.00	74.20	25.80
MP	37.80	62.20	80.00	20.00	37.90	62.10	76.70	23.30

Source: Computed from NSSO, 52nd round (July 1995 - June 1996)

4.2 Accessibility and Quality of Treatment

The NSSO survey does not provide adequate information regarding distance of the health facility centre and quality of treatment. The survey only enumerates the reasons for receiving treatment from non-government (private) service providers. These have been used to compare the public and private service providers in terms of accessibility and quality of treatment.

Access is an important determinant for the choice of the service provider. The easier access to private doctor/facility governs the choice of the service provider in 43.7% (33.2%) of the respondents in rural (urban) areas of Kerala (Table 7). The situation is more severe in case of rural MP where 63 per cent of the respondents indicate that accessibility is the major reason governing their choice for a private source apart from the level of dissatisfaction with the treatment in a government facility. With regard to the quality of treatment, more than 30 per cent of the respondents in both rural and urban Kerala have reported to be dissatisfied with the treatment of the public service provider (Table 7). Similar trend is also observed in MP.

Table 7: Percentage Distribution of Reasons for Receiving Treatment from Private Sources Cited by Members Ailing for last 15 days (Preceding the Date of Survey)

Reasons	Kerala		MP	
	Rural	Urban	Rural	Urban
Govt. Doctor/ Facility Too Far	12.8	7.8	39	6.7
Not Satisfied With Treatment	32.4	34.2	23.8	37.1
Long Waiting	3.7	5	0.4	5.2
Lacks Personal Attention	4.7	6.1	2.3	3.8
Bad Treatment	2.8	0.8	1.8	2.1
Doctor/ Staff Corrupt/ Charge Money	0.3	1.1	1.1	1
Medicines Not Available or Ineffective if Available	2.5	4.6	6	11.9
Private Doctor More Easily Available	30.9	25.4	23.8	26.6
Others	9.7	14.9	1.8	5.7
Total	100	100	100	100

Source: Computed from NSSO, 52nd round (July 1995 - June 1996)

4.3 Medical Expenditure and Transport Cost

The public inpatient care medical expenditure per spell of ailment is almost half that of private ones in both states (Table 8).⁸ The outpatient care medical expenditure is nearly similar between public and private service providers except in case of urban MP where it is more costly in case of public service provider (Table 9). The interesting point

to note here is that the medical expenditure in the private sector in Kerala, a better managed state compared to MP with respect to government health facilities, is substantially lower than the private sector expenditure in MP (Table 8 and 9).

Transport cost incurred for accessing public inpatient care is lower compared to the private service provider except for rural Kerala. On the other hand, with respect to outpatient care, patients incur substantially higher transport cost in accessing the public service providers in both the states barring urban Kerala. This, in a way, reflects the proximity problems of public service providers for outpatient care.

Table 8: Average Medical Expenditure for Treatment during the Stay in Hospital and Transport Cost other than Ambulance for Inpatient Care (Rs. per spell of ailment)

State	Type	Rural	Rural	Urban	Urban	Rural: Urban	Rural: Urban
		Medical Expenditure	Transport Cost	Medical Expenditure	Transport Cost	Medical Expenditure	Transport Cost
Kerala	Private	3029.51	122.66	2453.15	94.94	1.23	1.29
	Public	1549.85	146.49	1598.71	92.45	0.97	1.58
	Public : Private	0.51	1.19	0.65	0.97		
MP	Private	4009.77	212.89	4859.14	262.80	0.83	0.81
	Public	1904.36	191.73	2289.18	149.86	0.83	1.28
	Public : Private	0.47	0.90	0.47	0.57		

Source: Computed from NSSO, 52nd round (July 1995 - June 1996)

Table 9: Average Medical Expenditure Incurred during the last 15 Days (Preceding the Date of Survey) for Treatment and Transport and Lodging Charges for Outpatient Care (Rs. per spell of ailment)

State	Type	Rural	Rural	Urban	Urban	Rural: Urban	Rural: Urban
		Medical Expenditure	Transport and Lodging Charges	Medical Expenditure	Transport and Lodging Charges	Medical Expenditure	Transport and Lodging Charges
Kerala	Private	128.19	20.76	140.93	22.55	0.91	0.92
	Public	130.29	34.30	114.00	15.53	1.14	2.21
	Public: Private	1.02	1.65	0.81	0.69		
MP	Private	205.03	13.58	284.75	77.36	0.72	0.18
	Public	200.62	20.45	548.54	87.90	0.37	0.23
	Public: Private	0.98	1.51	1.93	1.14		

Source: Computed from NSSO, 52nd round (July 1995 - June 1996)

5. Choice of Health Care Provider

The reasons for greater preference towards private services are perceived better quality of treatment, faith in the service, proximity to the household and convenience of timing. By better quality of health service, people perceive early cure, good supply of drugs, personalised services, good doctor and good nursing care. There is also lack of responsibility and accountability on the part of doctors in public health care system (Gill and Ghuman 2000). Besides these, the choice of the type of health care also depends on socio-economic parameters- age, gender, caste, education and rural-urban affiliation of the patients and income. Below, an attempt has been made to identify the determinants of choice of service provider through the following probit model:⁹

$$P = \alpha_1 + \alpha_2 G + \alpha_3 S + \alpha_4 C + \alpha_5 I + \alpha_6 A + u_r$$

Where,

P = 1, if the provider is public

= 0, if provider is private

G = age of the patient, S= gender, C= caste, I= income, A= rural-urban affiliation

The relevant results are shown in Table 10.

Outpatient

The estimates reveal that for Kerala as age of the patient increases the probability of choosing public health care increases. This may happen presumably because the aged people can easily adjust with inconvenient timing and long waiting time for outpatient care. The SC and ST patients, who belong to the lower social groups, have greater probability of choosing public health care vis-à-vis patients from general caste in both the states. Moreover in Kerala, the probability of choosing public health care provider is very less among high-income people. This is probably due to the fact that richer people have the affordability to pay the higher charges of the private health service provider. On the other hand, the probability of choosing public service provider is lower among the people in the rural areas as compared to those residing in the urban areas of MP. This may be

due to the lack of availability and poor infrastructure in rural areas compared to urban areas of MP.

Inpatient

The results demonstrate that the probability of choosing public health care provider is higher if the patient is SC or ST rather than from general caste. Also, richer people have the preference for private service provider. Interestingly, rural people of MP have higher probability of selecting private service provider. This may be due to the non-availability and/or poor quality of treatment in public places in rural areas compared to urban areas of MP.

Table 10: Maximum Likelihood Estimates of the Determinants of Choice of Service Provider for Outpatient and Inpatient Care

	Kerala		MP	
	Outpatient #	Inpatient #	Outpatient #	Inpatient #
age (in years)	0.00067*	0.00074	0.00025	0.00122**
Sex (Male=1, Female = 0)	-0.01195	-0.02903	0.02558	0.02620
Caste (SC/ST = 1, Others = 0)	0.09338***	0.14438***	0.06822***	0.07933***
MPCE (in Rs)	-0.00020***	-0.00012***	-0.000003	-0.00036***
Rural-urban affiliation (Rural =1, Urban = 0)	0.00067	-0.01013	-0.04872**	-0.07883***
Log-likelihood	43.46	40.14	13.11	65.90
Prob>Chi2	0.0000	0.0000	0.0224	0.0000
No. of Observations	2096	1804	1729	1502

* Significant at 10% level, ** significant at 5% level and *** significant at 1% level

Marginal effects, not coefficients, have been represented in the columns

6. Conclusion

The process of economic reforms in the 1990s has resulted in a paradigm shift in the health sector in India by opening up the health sector to private sector, introducing cost recovery mechanism in public sector and by increasing efforts to make public health facility more efficient/accountable. There are legitimate concerns in India regarding the implications of this shift. This paper is a modest attempt to address these concerns by focussing on (i) aspects of health equity (ii) interplay between private and public sector service providers with respect to medical expenditures and quality of treatment and (iii) determinants of service providers. Two Indian states, Kerala and MP, significantly

different in respect of health status, are selected for the purpose of analysis. Our analysis is based on 52nd Round NSSO's data on health survey.

Our finding suggest that the spread of immunisation among the children in the age group 0-4 is satisfactory, though the spread is dependent on rural /urban agglomeration, and state of the public service provider.

Our inequality analysis reveals that major portion of health inequality is accounted for by the inequality within groups rather than between groups. The high contribution of within group inequality to total inequality with respect to all the relevant health indicators indicates a high level of heterogeneity within the groups than across groups. The Gini coefficients for the select health indicators in the study bring out that inequality in health is more pronounced in the rural areas as compared to urban areas for both the states.

Accessibility and quality of treatment are the two very important issues considered in the paper for comparing the private and public health service providers. Our finding indicates that to a large extent, these two factors govern the choice of health service provider. This is more so in case of our chosen state MP, with poor public health infrastructure.

The analysis of medical expenditure per spell of ailment reveals that in case of inpatient care it is almost half in case of public service providers (as compared to private ones) in both the states. The important point to note is that the medical expenditure in the private sector in Kerala, a state with a comparative better public health facilities, is substantially lower than the private sector expenditure in MP. Thus existence of an efficient public health system can act as a major anchor for equity in the health service system .

The econometric analysis with respect to choice of health care provider suggests that caste and income of the patients are important determinants. It has been found that in both Kerala and MP, lower caste and poor people have higher chances of getting treated in public sector rather than in private sector for both outpatient and inpatient care. It implies that in both the states, irrespective of their high or low health status, lower caste and poor people get discriminated in the private sector.

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Endnotes

¹ Recent NSSO survey data clearly reveal that the privatisation of health care system in India has contributed to the increases in health costs

² Since initial condition matter, the analysis has been at the state level and not at all-India level.

³ See Gumber et al, 2001, Duggal et al, 1995, Nandraj and Duggal, 1997 and Sule, 1999.

⁴ NSSO data is generally poor with respect to curative care. So, we have used this as the only indicator for analysis for curative care.

⁵ The interested readers can obtain the definition of quartiles for each state from the authors.

⁶ See Litchfield (1999), Cowell and Jenkins (1995) and Cowell (1995).

⁷ The public facilities include government hospitals, dispensaries, community health centres, primary health centres and sub-centres while the private health facilities include private hospitals, nursing homes, private clinics and dispensaries.

⁸ Medical expenditure includes bed charges, medicine costs, doctors' fees, ambulance charges and other charges which are part of treatment.

⁹ We have used the same NSSO data set for our analysis.