Chapter - 4

Accessibility character of private and public sector health care institutions

Accessibility character of health care institutions is an important consideration for policy. Public policy is concerned with equitable access to health care services by socioeconomic status and geographic location. This study provides us with important information about access characteristics of private and public HCIs. These are; (a) geographic spread of HCIs, (b) socioeconomic characteristics of patients. Many other studies provide us with information about accessibility characteristics of private and public sector HCIs. We first address the issue of geographic distribution followed by socioeconomic character of patients in different HCIs. Within each section we first review the findings from other studies mostly in India and also some evidence from the US. Thereafter, we present findings from other studies. We close the chapter with a summary of evidence about accessibility characteristics of private and public HCIs.

I. Geographic distribution of health care institutions

Distance and travel time are important considerations in shaping people's pattern of resort for medical care. Ceteris paribus, a near by health care institution is preferred by people over the ones at a distance. Hence, geographic spread of health care institution affects the accessibility character of HCIs.

A. Review of literature about geographic distribution of health care institutions:

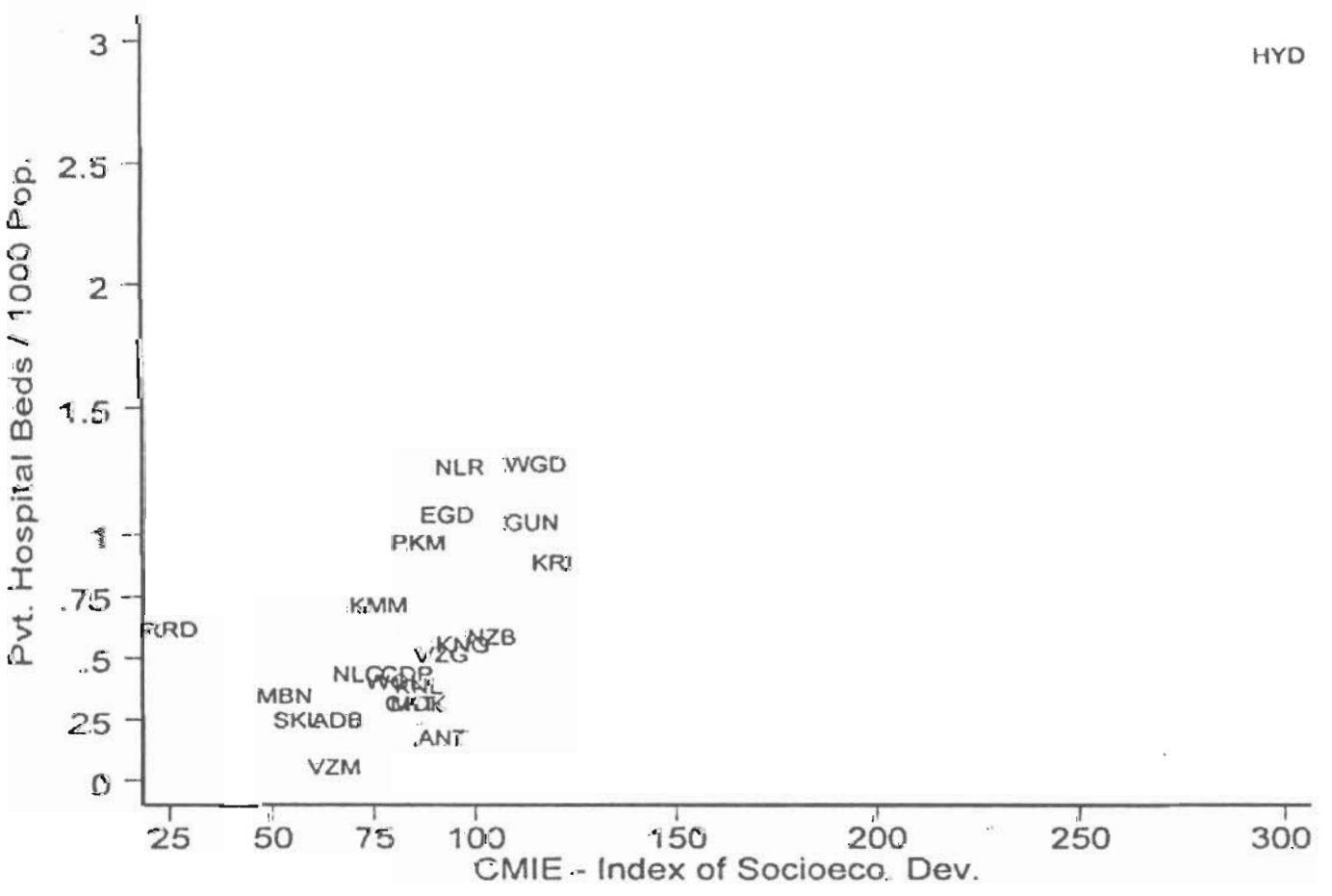
Table-4.1: Differences in availability of private hospital capacity in some developed and backward areas of Andhra Pradesh, 1986.

Economic development status and District name		Public Beds	Pvt. Beds	Pvt. beds / 1000 Pop.	Pvt.-Pub Bed Ratio
Developed	Krishna	1591	3475	0.99	2.18
	Guntur	1062	3024	1.00	2.85
Backward	Mahbubnagar	528	736	0.30	1.39
	Medak	382	357	0.20	0.93

Source: Collected from AP Nursing Homes Association, 1986, by Baru (1993) Tables-11&12

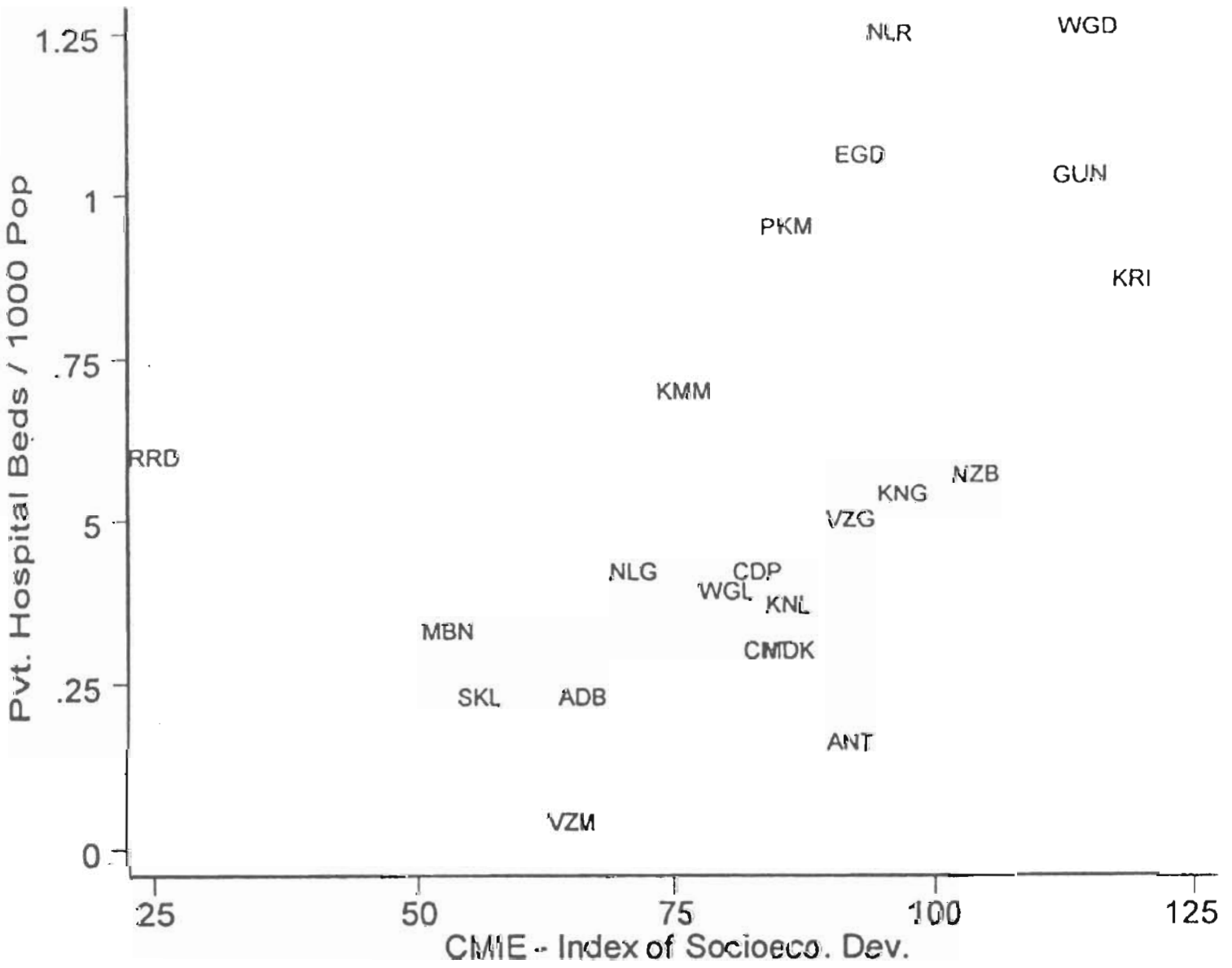
Differences in geographic spread of private and public sector HCIs in India have been reported earlier. A study of inter-regional variations in health services by Rama Baru (1993) found that growth of private nursing home was significantly more in economically developed districts compared to backward districts. She compared two economically advanced districts in AP, namely Krishna and Guntur with two backward districts, namely Mahboobnagar and Medak. She found that economic development is an important determinant of the health care capacity both in public as well as the private sector. We have taken the hospital bed data collected by Baru (1993) and computed two indicators, namely the private hospital beds per 1000 population (Pvt. beds/ 1000 Pop.) and the private - public bed ratio (Pvt-Pub. bed ratio). The Pvt. beds / 1000 population is an indicator of absolute hospital bed capacity in private sector. The Pvt.-Pub. ratio is a relative indicator of private hospital bed capacity with respect to the public hospital bed capacity. Table-4.1 shows that the private hospital capacity in the developed area was much higher than in the backward districts. In 1986, there was about one private hospital bed per 1000 population in the two developed districts of Krishna and Guntur. In the backward districts of Medak and Mahbubnagar, there was only 0.2 to 0.3 private hospital beds per 1000 population. The private hospital bed capacity in developed districts was about three to five times that of the backward districts. Looking at the Pvt.-Pub. ratio, we see that the private hospital bed capacity in the two backward districts was either the same as the public hospital capacity or a little more. On the other hand, the developed districts had private hospitals beds about two to three times that of their public hospital capacity.

Figure-4.1: District socioeco. dev. index and private hospital beds in AP, 1993-96.



The AP Heath Institutions Database (APHIDB) maintained by the IHS is based on a survey of private and public health care institutions taken up by the Government of AP in the year 1993. Subsequently the IHS updated these data to some extent between 1993 and 1996. Mahapatra (1998) found a strong correlation between an index of socioeconomic development with the private hospital bed per 1000 population in respective districts of AP. The index of socioeconomic development computed by the Centre for Monitoring of Indian Economy (CMIE) was used. The correlation between the CMIE - Development Index and Private hospital beds per 1000 population was 0.87. We have plotted these data in Figure-4.1 and Figure-4.2. Figure-4.1 plots the index of socioeconomic development and private hospital bed per 1000 population data for all 23 districts in AP. The Hyderabad district has a very high socioeconomic development index and also a very large private health sector, as a result other district labels are not clearly visible. Figure-4.1 clearly shows the linear relationship between index of socioeconomic development and the private hospital capacity in the area. In Figure 4.2 we have dropped the Hyderabad observation to show more clearly the labels of other data points.

Figure-4.2: Socioeconomic development index and private hospital beds in districts of AP, except Hyderabad district. 1993-96.



Structure and dynamics of private health sector. Implications for India's Health Policy; IHS Hyd 2002.

B. Findings from the present study about geographic spread of private and public HCIs in AP

Basic information about location of the sampled HCIs was tabulated by city or village and by postal index number (PIN) areas. The 256 sample institutions come from 84 distinct cities or villages of the three chosen areas. The private HCIs in the sample are from 19 distinct cities or villages. The public HCIs in the sample are from 76 distinct cities or villages. Looking at the spread of institutions by postal index number areas, we find that they come from 115 distinct PIN areas. The private sampled HCIs come from 68 distinct PIN areas and the public HCIs come from 74 distinct PIN areas. Recall that the sample was drawn from three areas by design. Spread of the sampled institutions across many PIN areas suggests that the random sampling succeeded in selecting HCIs from different localities within these three areas. When we compare spread of private and public HCIs in the sample in terms of their number of cities or villages we find that the private HCIs come from a very limited number of cities or villages (19). Compare this with the spread of public HCI sample in 76 cities or villages. If we compare in terms of PIN areas the difference in spread by number of PIN areas is not much. This is because the same city can have many PIN areas. Many villages may fall in the same PIN area. Since private HCIs tend to be located in urban areas, they spread across the many PIN areas in the cities.

The patient exit interview included a question about convenience of location. Table-4.2 shows frequency of excellent ratings by patients about convenience of location. The private clinics clearly received some appreciation regarding convenient location. About 10 to 11% of private clinic patients rated convenience of location as excellent compared to only 1% in case of PHCs. Small private hospitals also received better feedback on convenience of location compared to small hospitals in the public sector. In case of big hospitals, public institutions were rated to be better located than private institutions.

Table-4.2: Frequency of "Excellent" rating by patients for convenience of location by private and public HCIs

	# respondents		Location: "Excellent"	
	Private	Public	Private	Public
Clinics	554	521	10%	1%
Small hospitals	561	404	3%	0%
Big hospitals	56	120	0%	6%
All HCIs	1,171	1,045	6%	1%

Earlier we observed that public sector HCIs have a wider geographic spread. Here in Table-4.2 we have shown that private clinics tend to be more

conveniently located from the patient's perspective. There is, however, no contradiction between these two findings. Geographic spread of HCIs is a result of location decisions with respect to the city or village. Convenience of location gathered from the patient exit interview is about micro level location decision. Limited geographic spread of private HCIs suggest that these institutions tend to be concentrated mostly in urban and semi urban areas. Once a private practitioner or owner manager decides to locate his / her clinic or nursing home in a city or village, the micro level location decision takes into account various convenience factors. Even within the private sector, only the clinics are better tuned to locational convenience of patients. The clinics are small units, require less space and small investments. They provide primarily ambulatory services for which convenience of location is a very important consideration to attract patients. These factors may explain why the private clinics are rated comparatively better in terms of convenience of location.

II. Socioeconomic character of patients treated by private and public health care institutions

A. Review of overseas literature about socioeconomic character of patients treated by private and public health care institutions

In the United States, pro-poor orientation of HCIs is often measured by the extent of uncompensated care and service to Medicaid beneficiaries. Uncompensated care is defined as the sum of services for which the HCI decides to provide as a form of charity to the needy or services for which it does not receive any payment. In respect of patients having health insurance coverage, recovery of hospital charges is usually not a problem. Hospitals provide service to the insured and claim reimbursement by the insurer. Reimbursement by insurer would require appropriate documentation, conformity to utilisation review norms, and in some cases pre-authorisation. However hospitals are usually familiar about these procedures. Hence hospitals do manage to collect charges for most of the services rendered to insured patients. Thus uncompensated care arises in the context of services provided to uninsured persons. And these, in the US, are the socioeconomically poorer people. The state governments usually have programmes to pay for care to poor families, referred to as the Medicaid programmes. Charges from services to uninsured patients, for whom Medicaid benefits cannot be claimed show up as uncompensated care. Gray (1991) has reviewed available evidence on comparative performance of forprofit and nonprofit hospitals in the US. In Table-4.3 we have extracted information reviewed by Gray (1991) about uncompensated Medicaid discharges in the US, classified by type of ownership of hospitals. Clearly the public hospitals devote a much larger share of their admissions to Medicaid patients and those who cannot pay

(uncompensated), compared to forprofit and nonprofit hospitals. The propensity of nonprofit hospitals to admit these patients is intermediate between the forprofits and the public hospitals.

Table-4.3: Uncompensated (Uncomp.) and Medicaid discharges in the US classified by type of ownership of hospitals.

Period	Data source	Ownership	Uncomp.	Medicaid	Total
Jan 1981	US DHHS -	Forprofit	6%	9%	0
	Office of Civil	Nonprofit	8%	9%	0
	Rights,	Public	17%	12%	0
	(Gray, 1986, p101)	All	10%	10%	0
1979-84	US National	Forprofit	4%	7%	0
	Hospital	Nonprofit - Church afl.	6%	8%	0
	Discharge	Nonprofit - Others	6%	9%	0
	Survey, 1979-84	Public	11%	13%	0
	(Frank and others,1990)				

Source: Extracted from Gray 1991, Tables 5.1 and 5.2 p102-3

Eligibility for Medicaid coverage varies from state to state. HCIs would recover their charges for care to uninsured persons from the Medicaid program. Thus actual extent of uncompensated care by a HCI is a function of the extent to which that HCI is pro-poor (i.e., takes uninsured cases) and the Medicaid regime of the state. In states with liberal Medicaid programmes, incidence of uncompensated care would be low, since hospitals can recover their charges from the state. In states with restrictive Medicaid programmes the incidence of uncompensated care will be high. Gray (1991) selected states like Florida, Tennessee, Texas and Virginia, with mixed ownership of hospitals, and where the Medicaid program coverage is low. In these states, Gray argued, the potential uncompensated care burden for private hospitals is high. Hence comparison of the extent of uncompensated care in different type of hospitals may give some idea about the effect of ownership. Table-4.4 shows data for four states in the US around the early 1980s. These figures have been extracted from Gray (1991) who compiled them from various studies mostly using data from appropriate state level authorities. Clearly the public hospitals provide large amounts of uncompensated care compared to the nonprofit and forprofit hospitals. The nonprofit hospitals are intermediate between the public and forprofit hospitals. The differences between forprofits and nonprofits are much more substantial than what appears from the national level data shown in Table-4.3 earlier.

Thorpe and Phelps (1991) studied the response by nonprofit and forprofit hospitals to a program for partial reimbursement of charity care costs by the New York state. They found that "greater public hospital provision of indigent care reduces the level of uncompensated care provided by private hospitals." However, they observed, the reduction of uncompensated care by private hospitals is smaller in quantity compared to the corresponding increase in public hospitals. Hence, they concluded, public hospital provision of care for the poor does increase the overall availability of health care for the poor.

Table-4.4: Uncompensated care as % of gross patient revenues by ownership type of hospitals in selected states of the US.

State	Year	% revenue uncompensated		
		Forprofit	Nonprofit	Public
Florida	1982	4%	7%	12%
Tennessee	1983	8%	18%	19%
Texas	1983	4%	7%	32%
Virginia	1985	4%	7%	22%

Source: Extracted from Gray 1991, Tables 5.3 and 5.2 p104

Another study by Schlesinger and others (1987) cited by Gray (1991) gives further evidence of difference in pro poor orientation of forprofit, nonprofit and public hospitals in the US. Schlesinger and others (1987) study is based on a survey of a random sample of four thousand physicians by the American Medical Association (AMA). These physicians were asked whether the hospital with which they were principally affiliated had policies meant to "discourage admissions" of uninsured, Medicaid, or Medicare patients. Medicare patients are 65 years older and are well supported by the Federal Medicare program. So probability of revenue loss on account of Medicare patients is rather negligible. On the other hand, probability of revenue loss on account of uninsured and Medicaid patients is usually higher. Table-4.5 shows results from the Schlesinger and others (1987) study, as cited by Gray (1991). Since Medicare is well funded and reimbursement is usually not a problem, the difference on this account is small. A very large percentage of physicians working in forprofit hospitals are operating in an environment where the hospital administration has a policy of discouraging admission of uninsured and Medicaid patients. Even though the physicians perception may or may not reflect actual institutional policies, they suggest that physicians in forprofit hospitals may make fewer efforts to admit uninsured or Medicaid patients compared to those working in nonprofit and public hospitals.

Table-4.5: % of Physicians in US reporting that their hospital, discouraged admission of uninsured and Medicaid (poor) patients

Ownership	Uninsured	Medicaid	Medicare
Forprofit	43-52%	15-16%	4-5%
Nonprofit	19-20%	5-6%	1%
Public	9-14%	3%	1-2%

Source: AMA Survey, 1984 reported in Schlesinger et al. (1987) and cited by Gray (1991) Table-5.5 p 106.

Health care institutions may sustain implicit barriers to access by differentiating their case mixes. One belief is that forprofit hospitals have a tendency to treat conditions for which hospital charges can have high mark ups. This is referred to as "cream-skimming". Bays (1977) compared case mix between 19 forprofit and 22 nonprofit short term general hospitals in California for the years 1971 and 1972 and found that the data was consistent with the cream-skimming hypothesis. Forprofits were found to admit significantly fewer old patients. Poullier (1986) while reviewing the level and trends of public-private mix in industrialised countries observed "there is some more evidence that forprofit hospitals are cornering the more lucrative ends of the market and abandoning the less predictable emergency therapies and chronic cases to the nonprofit and public hospitals". Kuttner (1997) observes, in the US context, that forprofit health maintenance organisations (HMO) skim healthier Medicare patients dumping the sicker ones on the nonprofit and public hospitals. He investigated differences between a cheaper forprofit insurance plan and a comparable but more expensive nonprofit insurance plan in the US. The average age of the forprofit insurance plan was found to be 68 years compared to 78 years in case of the nonprofit plan. The forprofit insurance plan had comparatively younger population and paid out 65% of the premium revenue towards health care compared to 95% in case of the nonprofit plan.

B. Review of Indian literature about socioeconomic character of patients treated by private and public health care institutions

The AP Vaidya Vidhana Parishad (APVVP) manages first referral hospitals in the public sector. To improve the performance of its hospitals, APVVP commissioned the Institute of Health System (IHS) to conduct patient satisfaction surveys at regular intervals. Results from two patient satisfaction surveys are available. These are; (a) PSS99Jun i.e. patient satisfaction survey, conducted in June 1999 (IHS, 1999), and (b) PSS00Jun conducted in June 2000

(Mahapatra, and others, 2000). These two surveys covered Area hospitals with 100 or more beds and District hospitals with 250 or more beds. These correspond to the big public hospital category in this study. Table-4.6 shows the socioeconomic status of patients in APVVP hospitals. Most of the patients are from poor socioeconomic background. 71.2% of the patients came from households having white ration card. White ration card is issued to households with an annual income of less than a cut off level of Rs.12000 per annum. 65.8% are illiterate, and 38% are daily wage labourers. Clearly a very large proportion of APVVP patients are from poor socioeconomic background. The socioeconomic profile of APVVP patients did not change much between the two surveys.

Table-4.6: Socioeconomic status of patients sampled from first referral public hospitals in AP for patient satisfaction surveys (PSS).

Indicator	PSS99Jun (n=1179)	PSS00Jun (n=1466)	Indicator	PSS99Jun (n=1179)	PSS00Jun (n=1466)
Ration card type			Residence		
White (Poor)	77.27%	71.2%	Headquarters Mandal		53%
Pink	9.92%	8.6%	Other Mandals (Hinterland)		47%
Not Available	12.81%	20.2%			
Occupation			Educational Status		
Labourer	27.91%	38%	Illiterate	64.21%	65.8%
Housewife	18.15%	14.2%	Primary	23.41%	22.2%
Agriculture	10.43%	13.5%	Secondary	9.67%	9.1%
Service	7.55%	3.3%	College	2.71%	2.9%
Others	35.96%	31%			

Source: PSS1999 data is from APVVP Patient Satisfaction Survey -1999, IHS Report-2/1999. PSS2000 data is from APVVP patient satisfaction survey- 2000 June, IHS Report-../2001. n= Number of patients sampled.

Table-4.6 also shows a classification of patients by their place of residence, available only for the 2000 June survey. Place of residence of patients give some idea about the extent to which the hospitals are catering to the needs of rural areas. The extent to which a hospital is serving patients from outside its headquarter town gives us some idea about the geographic spread of its clientele. Almost half of the patients came from the headquarter mandal and the other half from the hinterland.

Table-4.7: Socioeconomically poor patients served by different type of health care institutions. Estimates for all India from morbidity and treatment surveys in NSS 42nd and NSS 52nd rounds.

		Rural				Urban			
	HCI Type	Lowest quintile		SC-ST		Lowest quintile		SC-ST	
		NSS42[a]	NSS52[b]	NSS42	NSS52	NSS42[a]	NSS52[b]	NSS42	NSS52
	Ambulatory care in different type of health care institutions								
Private Public	Hospital 2218	1790		2210	2854	3500		3810	
	PHC 2613	1670		1510	3160	140		230	
	Dispensary 2057	240		530	1379	260		280	
	Hospital 1760	1660		2070	1760	2560		2530	
	Nursing home 1294	750		840	1318	780		240	
	Charitable 1493	40		50	4008	300		130	
	Hospitalisations in different type of health care institutions								
Private Public	Hospital 2184	820	2567	3270	2553	1890	1956	2260	
	PHC 2521	1170	3073	8460	2048	2760	3294	3080	
	Dispensary 2071	840	2502	3730	1536	1430	1485	2800	
	Hospital 1581	390	1567	2000		760	1190	1230	
	Nursing home 1529	460	889	2240	1771	680	1253	1330	
	Charitable 1471	1110	2478	3220	1927	740	725	1690	

[a] Source: NSS 42nd round report Table-2.01, column-5 and Table-8.00, column-2,3 NSSO, 1992 Pages S-151, S-459. [b] Source: NSS 52nd round report , NSSO, 1998 Table-12 & Table-15 Pages A-65, A-76, A-170, A-181

The National Sample Survey Organization's (NSSO) surveys on social consumption includes health survey. These includes survey of morbidities and treatment of ailments by households. Two of the recent NSS rounds having a morbidity and household patterns of resort for treatment of ailments are; the forty second round conducted during July 1986 - June 1987 (NSS, 1992), and the fifty second round conducted between July 1995 - June 1996 (NSS, 1998). Table-4.7 shows the proportion of patients in different types of health care institutions belonging to households with the lowest quintile of monthly per capita consumption expenditure (MPCE), and scheduled castes and scheduled tribes. These are estimates for all India. Percentage of ambulatory, as well as hospitalization patients from the lowest quintile MPCE households are clearly higher in public HCIs compared to the private HCIs. Looking at caste status, we find that public sector patients are more likely to be from the scheduled castes or tribes compared to the private sector HCIs. These differences are there both

in rural and urban areas. Comparing the NSS42nd round with the NSS52nd round, we find the share of patients from lowest quintile MPCE household has come down both in public and private sector HCIs, except for the health centre in urban areas. Even then the share of lowest quintile MPCE household patients continues to be higher in public sector HCIs compared to the private sector. Share of inpatients from SCs and STs has increased in both private and public sector to some extent. Here again, patients using the public sector HCIs had more number of SCs and STs among them.

C. Findings from the present study about Socioeconomic character of patients treated by private and public health care institutions

Observed patient composition of health care institutions gives us some idea about the accessibility of their services to people from different socioeconomic background. The patient exit interview described later provides us with data about the socioeconomic status of patients served by the private and public sector HCIs respectively. Table-4.8 shows the data on socioeconomic status of patients. About 64% of patients served by the public sector HCIs are either illiterate or have only primary level schooling compared to 39% in case of private HCIs. About 33% of public HCI patients are likely to be Scheduled Castes or Scheduled Tribes compared to 16% in case of private HCIs. Public sector HCIs are more likely to be from households with low standard of living (88%) compared to the private sector (51%). Note that 50% of the private sector patients are from households with low standard of living index. The standard of living index (SLI) is computed from data on household assets. The low SLI households may include families below the poverty line as well as those who are slightly better off, i.e. the lower middle class. Data collected in this study does not allow us to disaggregate the households with low SLI into below poverty line families and those above it. If we take illiteracy as proxy indicator of poverty, then we see that nearly two thirds of public sector patients are illiterate compared to 40% in case of private sector. This would suggest that probably the low SLI patients in private sector consist of a larger component of above poverty line families compared to the low SLI household patients in the public sector.

The difference between public and private sector is maintained if we disaggregate these data by size of HCIs. In fact the difference in proportion of patients from low socioeconomic status treated by the PHCs, and private clinics is wider. For example 92% of PHC patients are from households with low standard of living index, compared to 46% in case of private solo clinics. Proportion of SC and ST patients in PHCs is 38% compared to 16% in case of private solo clinics. Illiterate and less than primary school educated persons constitute 69% of PHC patients compared to 42% in case of private solo clinics. Moving over to small hospitals, we find that 88% of patients in small public

hospitals are from households with low standard of living index compared to 54% in case of small hospitals and nursing homes in the private sector. About 31% of small public hospital patients are SCs or STs compared to 17% in case of the small hospitals and nursing homes in private sector. Looking at literacy, illiterate and less than primary school educated persons constitute 64% of patients in small public hospitals compared to 38% in private sector.

Table-4.8: Socioeconomic status of patients served by private and public sector HCIs in AP.

Socioeconomic characteristic	Private				Public			
	Clinics	Small H	Big H	All	PHCs	Small H	Big H	All
Literacy and years of schooling								
Illiterate	40%	36%	27%	37%	64%	58%	44%	59%
1-4 years	2%	2%	0%	2%	5%	6%	3%	5%
5-9 years	15%	18%	22%	16%	18%	15%	16%	17%
10-11 years	21%	19%	21%	20%	10%	15%	18%	13%
12 + years	23%	25%	30%	24%	4%	5%	19%	6%
Caste								
Scheduled Caste	11%	9%	11%	10%	20%	16%	16%	18%
Scheduled Tribe	5%	8%	0%	6%	18%	15%	5%	15%
Backward Castes	48%	45%	59%	47%	48%	47%	43%	47%
Others	36%	38%	30%	37%	14%	22%	37%	20%
Standard of living index (SLI)								
Low	46%	54%	63%	51%	92%	88.4%	71%	88%
Medium	53.6%	44%	32%	48%	8%	11.4%	29%	11.9%
High	0.4%	2%	5%	1%	0%	0.2%	0%	0.1%

About 24% of private sector patients are likely to have had more than 12 years of schooling compared to only 6% in case of the public sector. About 37% of private sector patients are from forward castes (i.e. other than SC, ST or BC) compared to 20% in case of public sector HCIs. The patients served by the private sector HCIs are more likely to be from the middle class (48% from households with medium standard of living), or upper class compared to the public sector.

D. Findings from the present study about accessibility of private and public HCIs

Table-4.9: Frequency of "Excellent" rating by patients for access availability questions.

↓Item	Private				Public			
	Clinics	Small H	Big H	All	PHCs	Small H	Big H	All
n→	554	561	56	1,171	521	404	120	1,045
Getting through for appointment	11%	3%	0%	7%	0%	0%	16%	2%
Waiting time for appointment	10%	3%	0%	6%	0%	0%	12%	1%
Waiting time for care	10%	3%	0%	6%	0%	0%	8%	1%

Another aspect of access is availability and responsiveness to request for appointment. The patient exit interview included four items to measure patients rating of access and availability. As seen from Table-4.9, the private sector HCIs do a little better than the public sector HCIs. The level of satisfaction about access availability and convenience was 57% among private HCI patients compared to 52% in public sector. Note, however, that the level of satisfaction in both the sectors was less than average, which according to the scoring system adopted is 60%. The level of patient satisfaction along the access availability dimension was less than 60% for both private and public HCIs. In Table-4.9 we reproduce part of Table-42 dealing with access and availability questions. The item about convenience of location has already been discussed earlier and is excluded from this table. Only those rating their experience as excellent are counted. The private clinics clearly received some appreciation regarding, getting appointment, and less waiting time. About 10 to 11% of private clinic patients gave excellent ratings in response to these three questions compared to hardly any such response from the PHC patients.

III. Summary of evidence about accessibility characteristics of private and public HCIs

Some general patterns have emerged from the review of available evidence on geographic spread and patient composition of health care institutions in private and public sectors, respectively. We found that public sector HCIs have a wider geographic spread compared to the private sector HCIs, which tend to be located in urban areas. 150 private HCIs randomly sampled for this study were from 19

cities or villages. The 106 randomly sampled public HCIs were from 76 cities or villages. Economic development of an area tends to improve the overall availability of health care facilities both in public and private sector. The geographic spread of private sector HCIs is more restricted compared to the public sector HCIs. The private sector HCIs have grown mostly in areas with higher levels of socioeconomic development. Although economic development does appear to influence to some extent the public sector health care capacity, geographic distribution of public sector HCIs appear to have been comparatively better than in the case of the private sector.

Available evidence on socioeconomic composition of patients suggest that the public sector HCIs tend to serve more number of socioeconomically poorer patients compared to similar sized institutions in the private sector. National level estimates for all India and state level estimates for Andhra Pradesh, available from various studies are consistent with this observation that the share of patients from socioeconomically poor households is comparatively higher in case of public sector HCIs. Within the private sector, the nonprofit health care institutions tend to be more accessible to socioeconomically poorer sections compared to the forprofit health care institutions. Review of studies in the US where a mixed health system is in place suggests similar differences in accessibility characteristics of forprofit, nonprofit and public health care institutions.