Chapter - 6

Efficiency of health care institutions (HCIs) in private sector

It is often argued that private HCIs are more efficient in production of health care. Hence provision of health care should be organised through the private sector. We first provide a review of studies mostly in the US comparing efficiency of private forprofit health care institutions with those in the nonprofit and public sector. Thereafter we provide data on hospital utilisation rates, collected by this study.

I. Studies comparing efficiency of private forprofit, nonprofit and public sector HCIs

The American Hospital Association data shows that bed occupancy is lowest among the forprofit hospitals compared to nonprofit and public hospitals (Table-6.1). Gray (1986, p77) informs that he accessed the AHA data centre and compared occupancy rates by ownership of hospitals for the year 1983. Overall hospital occupancy in 1983 was 73%. Occupancy rates in forprofit hospitals was 62 to 64% compared to 74 and 75% in similar nonprofit hospitals. In other words capacity in forprofit hospitals were less utilised in comparison to the nonprofit hospitals.

Table-6.1: Bed occupancy of for profit, nonprofit and publicly owned short term hospitals in the US.

Year	Public	Non profit	For profit
1996	62%		52%
1997	62%	64%	52%
1998	63%	64%	53%

Source: American Hospital Association, cited in http://www.plunkettresearch.com /health /health_statistics_3.htm as in July 2001.

The Institute of Medicine (IOM) in the US constituted a committee on forprofit enterprise in health care. This committee reviewed ownership related differences in hospital costs. Table-6.2 shows summaries of the eight such studies reviewed by the IMP Committee on forprofit enterprise in health care. Five studies

found that forprofit hospitals were more expensive compared to nonprofit hospitals. Two studies did not find any statistically significant difference in cost of care between forprofit and nonprofit hospitals. One study in Florida found that the forprofit hospitals were less expensive than the nonprofits.

Table-6.2: Summary of comparative studies of efficiency of forprofit and nonprofit HCIs reviewed by the Institute of Medicine study on forprofit enterprise in health care.

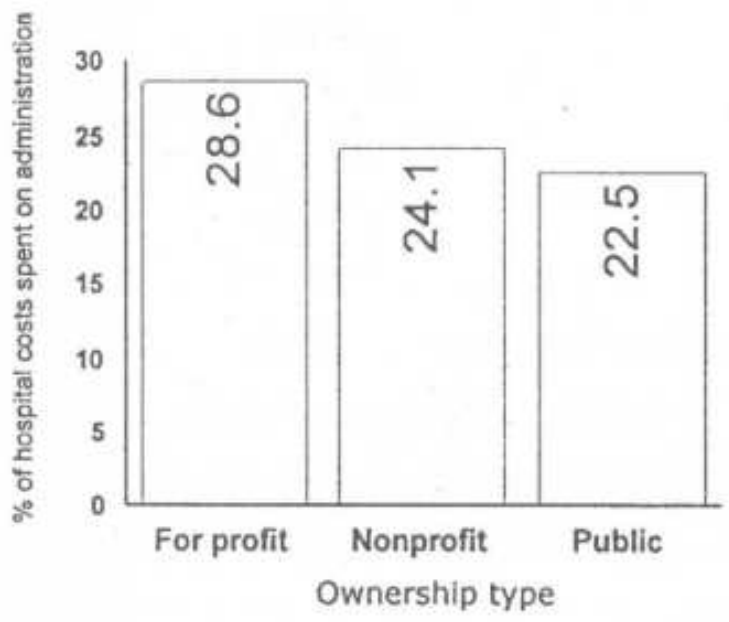
Location	Sample	Measure(s) efficiency	Results	Ref.
California, Florida, Texax, 1978	53 matched pairs of forprofit and nonprofit	Optg. cost / IP day IP care cost / IP day IP care costs / Adm.	Forprofit chains 8% higher than nonprofit hospitals No significant difference	Lewin et al. 1981
Florida	<400 beds	Optg. exp. / iP day. nonteaching	Forprofit chains 3% lower that nonprofit hospls.	Sloan and Vraclu 1983
		Optg. exp. / Adm.	Forprofit chains 4% lower than nonprofit hospls	
California, 1980	280 hospitals	Optg. ex. / IP day	Forprofit chains 6% higher than nonprofit hospitals	Pattison and Katz 1983
		Optg. Exp./Adm.	Forprofit chains 2% higher than nonprofit hospitals	
California 1977-1982	231 hospitals 76-230 beds	Optg. Exp./Disch.	Forprofit chain 4-7% higher than valuntary hospitals	Pattison 1986
All USA, 1979	2,231 community hospitals	Cost / IP day	Forprofit 10% higher than nonprofit hospitals	Becker & Sloan 1985
		Cost / Adm.	Forprofit 8% higher than nonprofit hospitals	
All USA 1980	80 matched pairs of hospitals	Cost / Adm.	No statistically significant difference	Watt et al. 1986a
		Cost / IP day		
All USA, 1980	561 general acute care hospitals	Optg. Exp./Adm.	No statistically significant difference	Watt et al. 1986b
All USA 1975-1981	AHA Annual survey data	Optg. Exp./Disch.	Forprofit chains 4% higher than nonprofit chain hospls.	Coelen, 1986

Source: Extracted from Table-4.1 in Gray B.H. Investor ownership and the costs of medical care. in: Gray B.H., Editor. For-profit enterprise in health care. Washington D.C.: National Academy Press, 1986.

Watt and others (1986) compared the economic performance of 80 matched pairs of investor-owned forprofit and nonprofit hospitals in eight states of the US during 1978 and 1980. The authors controlled for case-mix differences and adjusted costs to offset the tax burden of forprofits, tax concessions and charitable contributions received by nonprofits. They found that the forprofit hospitals were less efficient compared to the nonprofits. Their results suggest that both forprofits and nonprofits responded to the incentives of reimbursement policy by maximising their revenue, rather than minimising their cost of providing the services. Forprofit hospitals were more aggressive in pricing compared to nonprofits. There was no significant difference in charge-to-cost markups for routine services. But forprofits charged higher prices for ancillary services, which are less easy to compare from hospital to hospital. The difference in charges for ancillary services could not be attributed to differences in case-mix. The authors found that Medicare case-mix index was similar for both types of hospitals in their sample. The forprofit hospitals charged about 22% more per admission compared to nonprofits. Investor-owned forprofit hospitals, according to these authors, did not have lower costs of providing patient care services than did comparable nonprofit hospitals, and hence were not more efficient.

Size of administrative cost is another indirect evidence of organisational efficiency. Woolhandler and Himmelstein (1997) compared administrative cost of forprofit, nonprofit and public hospitals in the US for the year 1994. Figure-6.1 drawn with their data shows that administrative costs were higher in for profit hospitals compared to nonprofits and public hospitals. They also examined the rate of increase in administrative costs and found it to be higher in case of forprofit hospitals. Some critics (Hassan,1996) point out that nonprofits show some expenses like claims processing, provider relations, etc. in medical expenses. Hence the administrative costs of forprofits appear higher. Woolhandler and Himmelstein's analysis is based on data collected by the US government according to detailed accounting guidelines issued by Medicare to all participating institutions. Hence the scope for large scale differences in accounting of expenses would be limited. For the sake of argument, let us assume that administrative expenses are similar irrespective of institutional ownership. That would not support the belief that private HCIs are more efficient compared to nonprofits and public HCIs.

Figure-6.1: Administration as % of total hospital costs, in US, 1994.



Source: Data from Woolhandler and Himmelstein, 1997, Table-3.

Silverman and others (1999) compared total per capita Medicare spending in areas of US served by forprofit, mixed, and nonprofit hospitals. Using multiple linear regression they controlled for hospital service area characteristics like; (a) census region of the United States, (b) percentage of population living in urban areas, (c) percentage of beds in hospitals belonging to hospital chains, (d) percentage of beds affiliated with medical colleges, (e) adjusted Medicare mortality rate, (f) percentage of Medicare beneficiaries enrolled in HMOs, (g) number of physician per capita, and (h) number of hospitals in the service area. They examined data for the years 1989, 1992, and 1995. In each year total per capita spending was greater in the forprofit areas, intermediate in the mixed hospital service areas and lowest in the nonprofit service areas. Increase in per capita Medicare spending over time, was significantly larger in the forprofit service areas than in the nonprofit areas. They also examined the increase in a few service areas where all nonprofit hospitals had converted to forprofit ownership and vice versa. Hospital service areas in which all hospitals converted from nonprofit to forprofit ownership during the period from 1989 to 1995 had larger increases in spending than areas in which all hospitals retained their nonprofit status. Silverman and others opine that these larger increases in spending appeared to occur after conversion to forprofit ownership.

Martin Zelder (2000) reviewed 14 articles comparing forprofit and nonprofit hospital performance. This review includes the study by Silverman and others (1999) but does not include the study by Watt and others (1986) cited earlier. This review was in the context of a proposal in Alberta, Canada to contract with forprofit private hospitals to provide surgical services. Zelder was arguing in favour of the proposal to purchase services from forprofit hospitals. Zelder reported that four of studies reviewed by him found that for nonprofits performed better, three studies found that forprofits perform better and the rest seven found

no difference in performance based on ownership. Zelder's own review of the three studies in favour of forprofit hospitals do not clearly support his interpretation of higher efficiency. For example, the study by Clarkson (1972) found that forprofit administrators devoted significantly more time to supervisory control of employees, and were significantly less likely to grant automatic salary increases than their nonprofit counterparts. In addition to Zelder reports, Clarkson found that nonprofit hospitals had more varied provision of services, for example personnel per bed than did forprofits. This does not in any mean that forprofit hospitals are more efficient. Too much of administration can be as bad for efficiency as too little. Administrators breathing down the neck of employees reporting to them, may make the life of employees miserable but do not make the institution more efficient. Unwillingness of supervisors in forprofit institutions to raise salaries does not mean that the institution is more efficient. We need more information to interpret this data. Administrators may be unwilling to raise employee salaries but quite willing to raise their own perks. This would be consistent with higher administrative costs in forprofit hospitals found by Woolhandler and Himmelstein (1997). The second study relied by Zelder to support better efficiency in forprofit argument was by Wilson and Jadlow (1982). These authors compared provision of nuclear medicine services between forprofit and nonprofit hospitals. The forprofits were found to produce maximum possible nuclear medicine service output given its choice of input mix. It is well known that forprofits tend to maximise use of hightech capital intensive facilities. Maximising specific services is not inconsistent with lower overall efficiency. The third study cited by Zelder was by Hoerger (1991) who studied variability in profits. He found that forprofits experiences more variability in profits in response to favourable and unfavourable shocks in the market compared to nonprofits. He then argues that the nonprofits must be having more slack otherwise how could they manage with less variation when confronted with market shocks! In other words he assumes that the forprofits must have been efficient in responding to the shocks. On the other hand the contrary is quite plausible. The nonprofits may be more efficient in responding to market shocks due to various strategies including, for example, broad range of revenue base, compared to forprofits. Hence Hoerger's study (1991) can be used to argue exactly the opposite of what Zelder would like to read from it.

Silverman and others (1999) study cited earlier examined total per capita costs of Medicare patients. Zelder questions the result from this study on the ground that we do not know whether the difference in cost was from greater cost per service or more service provision. The Silverman study did control for Medicare mortality rates in respective areas in addition to many other service area characteristics. We believe methodologically, the Silverman and others study (1999) is much better placed to compare efficiency by ownership type

than the three studies relied by Zelder and discussed above. In any case our aim here is quite limited. Based on available evidence it will be reasonable to conclude that there is no evidence to suggest that private forprofit health care institutions are more efficient compared to nonprofit health care institutions. Note that Zelder was clearly looking for studies to support his position in favour of forprofit hospitals. Even then the 11 out of 14 studies reviewed by him suggested that there was no efficiency advantage of forprofit health care institutions.

II. Findings from the present study about capacity utilisation by private and public HCIs in AP

Table-6.3: Hospital activity and utilisation indicators of private and public hospitals

Activity	Private				Public			
indicator	Clinics	Small H	Big H	All	PHCs	Small H	Big H	All
Bed occupancy								
Mean	33	40	64	42	37	47	86	55
Median	25	40	60	40	32	50	86	54
Range	14, 60	4, 90	25, 99	4, 99	4, 95	41, 27	27,140	4,140
Turnover rate								
Mean	66	59	36	58	79	73	48	69
Median	50	36	30	36	40	36	25	31
Range	6,300	2,432	5, 90	2,432	6,325	6,616	6,257	6,616
Average length of stay								
Mean	5	5	6	5	3	5	17	6
Median	3	4	5	4	2	5	8	3.5
Range	1, 30	1, 21	4, 10	1, 30	1, 8	1, 15	2, 60	1, 60
Out patients per bed								
Mean	3,221	682	245	1,165	5,765	2,139	330	3,188
Median	1,400	540	183	600	5,150	1,680	330	2,091
Range	10, 18000	45, 4320	13, 81110	1, 18000	500, 13500	108, 9320	8, 715	8, 13500

All statistics computed with respect to the HCIs who reported some figures. Non reporting HCIs have been excluded. Thus the mean, median and ranges are for the reporting HCIs only. H = Hospital.

The survey sought to gather data on the level of hospital activities and capacity utilisation indicators like bed occupancy, turnover rate etc. Most private hospitals do not maintain enough records to give exact statistics. So the figures

obtained from them are estimated by the concerned owner managers interviewed as a part of this study. Although the public sector hospitals do maintain regular records, the statistics for the APVVP hospitals are most accurate. For other hospitals, computational errors, omissions and double counting can not be ruled out. Hence the figures reported here in Table-6.3 should be interpreted with caution. Some broad conclusions can be made. But too much importance should not be attached to small differences in these figures. With this caveat let us now take a look at Table-6.3. Bed occupancy is almost similar for both public and private hospitals. Occupancy clearly increases with size of hospitals, both in the public and private sector. The private hospitals show marginally higher turnover rate compared to public hospitals. We can not, however, attach much significance to such small differences, given the level of accuracy of these statistics. Length of stay is around 3 to 6 days for most hospitals. The big hospitals in the public sector show a higher length of stay, probably accountable to inclusion of orthopaedic cases and other chronic diseases. Overall, both private and public sector hospitals show similar levels of capacity utilisation. Public sector HCIs appear to handle a larger number of outpatients compared to private sector, as can be seen from the out patient per bed statistics.

III. Summary of evidence about efficiency of private forprofit, nonprofit and public HCIs

Review of available literature does not support the hypothesis that private forprofit hospitals are more efficient. Contrary to popular belief, administrative costs tend to be slightly higher in forprofit hospitals compared to nonprofit and public HCIs. The overall cost of health care in areas largely served by private forprofit HCIs is generally more compared to areas largely served by nonprofit and public HCIs. Both forprofits and nonprofits responded to incentives of reimbursement policy by maximising their revenue, rather than minimising their cost of providing the services. But forprofit hospitals are usually more aggressive in pricing compared to nonprofits. One such aggressive pricing strategy is to keep the charge for routine services competitive and charge higher prices for ancillary services, which are less easy to compare from hospital to hospital.

The only efficiency related information collected by this study were the utilisation rates like bed occupancy, turnover rate, outpatients per bed, etc. Even these estimates are based on rough data, since the private HCIs do not generate statistics to arrive at accurate estimates of utilisation rates. There was no difference in utilisation rates between private and public HCIs, except for the outpatient load, which was considerably higher in the public HCIs.