Chapter - 7

Quality healthcare in private and public health care institutions (HCIs)

Quality of care delivered by health care institutions is a matter of public concern. Differences in quality of services, if any, by ownership of health care institutions have significant policy implications. Evidence from health seeking behaviour studies suggest that people who can afford, tend to resort to private health care institution. It is assumed that the private health care institutions must be providing better quality of services. Otherwise, why will the rich and middle class resort to the private health sector? Such an argument relies on the observed pattern of resort behaviour as a proxy measure of quality of care. Instead, it would be desirable to rely on more direct measures of quality of health care services. But the concept of quality healthcare tends to have different meanings depending on one's view point. Here we first discuss the concept of quality in health care and present a framework for assessment of health care quality. We then turn to quality of care related findings from the present study. Then we present findings from this study about certain structural and process features of private health care institutions in AP.

I. A framework for assessment of healthcare quality

Quality of health care concepts emerge from our understanding of goals of health care. The WHO framework (Figure-7.1) for health system performance assessment (WHO, 2000; Murray and Frenk, 2000) provides us with one view of health system goals and a measurement strategy. The defining goal of any health care service is to improve health of the recipient. Health would include survival and quality of life. Responsiveness is about the interpersonal aspects of care. It refers to client orientation and respect for persons. The health enhancing aspects of care has been referred to as technical quality of health care, and the responsiveness dimension has been referred to as interpersonal quality of care (Newbrander and Rosenthal, 1997). Fairness of financial contribution refers to equity aspect of the health system. Newbrander and Rosenthal refer to similar aspects of health care as the social aspect of quality, for example, efficiency and access. We believe, quality of care is widely perceived to refer to health enhancing aspects and responsiveness of the HCI.

Figure-7.1: Health system goals according to a WHO framework, 2000.

	Level	Distribution
Health (Survival + Quality of Life)	✓	✓
Responsiveness	✓	✓
Fairness of Financial Contribution		✓
	Quality	**Equity**

Based on: Murray Christopher JL, Frenk Julio. A WHO Framework for health system performance assessment. Bulletin of World Health Organisation 2000; 78:717-31.

Evidently, quality of care is a multidimensional concept consisting of objective and subjective elements. Hence quality of care is inferred from a variety of sources. The "structure, process and output" framework for assessment of quality of care originally recommended by Donabedian (1988) is widely followed (Newbrander and Rosenthal, 1996, Acquilina, 1992). Structure refers to provider characteristics assumed to be prerequisites for good quality medical care. For example credentials, accreditation, and license to practice, etc. The probability of good quality nursing care is assumed to be higher in case of an HCI employing enough nurses according to a staffing norm compared to a HCI that does not have enough nurses. Similarly between two HCIs employing similar number of nurses, the one employing only formally trained nurses is assumed more likely to provide better nursing care compared to an HCI employing untrained nurses. What constitutes adequate number of professionals required or for that matter, the qualification of respective professionals is a subject of standards. For example, in the US, the Joint Commission on Accreditation of Health Care Organisations (JCAHO) develops and periodically revises standards of physical plant, staffing norms, health care professional selection procedures, etc. The hospital licensing boards of each state also prescribe structural standards including for example building standards. Each Structural characteristics of an HCI may also affect the interpersonal aspect of care. For example, the number of telephone lines will determine the ease of access to the health care facility. Provision of waiting area and the sign postings can smoothen the process of outpatient consultation.

Processes of care refers to what is done to the patient. These are usually achieved through protocols established by the HCI to deal with technical and interpersonal aspects of health care. Adherence to evidence based protocols contribute to improved patient outcomes. For example, a study by Kahn and others (1990) developed explicit process criteria for patients hospitalised with congestive heart failure, myocardial infarction, pneumonia, and cerebrovascular accident. A better process criteria was found to be association with lower mortality rates 30 days after admission. For example, the JCAHO accreditation requires

that health care organisations follow certain minimum procedures to satisfy about suitability of professional staff. The procedures are designed to reduce the chance of giving hospital privileges to physicians with known history of medical malpractice. Thus, it will improve the average level of professional competence among the physicians and thereby contribute to better patient outcome. The JCAHO developed a set of Indicator Measurement Systems (IMS) to improve objectivity in measurement of the health care process quality (Nadzam and others, 1993). Practice guidelines are another example of defining the process of care and hence are cited as potential tools for enhancing quality assurance (Woolf, 1991). The Institute of Medicine (Field and Lohr, 1990) defines clinical practice guidelines as "systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances". Implementation of clinical practice guidelines is an important tool of improving the technical quality of health care. However practice guidelines can be useful only if there is an environment for systematic development, implementation and evaluation of practice guidelines. For example, Lomas and others (1989) studied knowledge attitude and practices of obstetricians before and after release of a consensus statement recommending decrease in use of Caesarean sections. They observed that clinical practice guidelines may predispose physicians to consider changing their behaviour. Actual change in physician behaviour depends on the overall incentives system and practice environment.

ISO 9000 series of standards are a set of generic standards on the quality process in an organisation. Since this series of standards refers to the quality process, it would be appropriate to discuss its usefulness as a signal of good quality health care. ISO 9000 series certification generally improves the credibility and standing of organisations operating in many fields. Hence, ISO 9000 series certification appears to be in fashion. There is an erroneous impression at least among some people, that ISO 9000 series certification of hospitals and health care organisations, is an evidence of good quality health care. Let us briefly examine the nature of ISO 9000 series and its appropriateness for judging quality of health care. This is a family of standards about the quality process. Three levels of quality assurance are defined. Although these are defined for all kinds of firms including manufacturing and service industry, we use the service perspective here. Thus we replace the word product with service in the following discussion about ISO 9000 series standards. ISO 9001 is meant for firms that design, develop, and deliver services. ISO 9002 is for institutions engaged only in service delivery. ISO 9003 is meant for institutions engaged in final inspection and testing. Hence ISO 9003 would not usually apply to services. In the health care service sector, design and development of health care intervention does not usually take place in a single institution. Research and practice in multiple centres, followed, ideally by randomised control trials generate the evidence that goes into design of health / medical care interventions. We can view the

process of development of clinical practice guidelines as one system for design of clinical interventions. Individual HCIs would not usually be in a position to satisfy ISO 9001 requirements for design and development of medical / health care interventions. Most HCIs would seek to conform to ISO 9002, implementation of which presumes existence of a well designed service. Thus adoption of ISO 9000 series of standards by HCIs would still require an environment for development of service delivery process norms, for example clinical practice guidelines for medical care. It may however, be feasible for a HCI to design and develop interpersonal aspects of health care. Here again it would be desirable for HCIs to demonstrate conformity to a widely shared and understood common standard of interpersonal quality of care. Then only patients and attendants will be able to compare the quality dimensions of service rendered by one HCI with another.

Recall that the ISO 9000 series of standards are about the quality process which should be distinguished from the production process. The later refers to the protocol established by the institution to produce a service. The former refers to the protocol established by the institution to comply with its own protocol to produce a service. The ISO 9000 series do not require conformity to any domain specific standard. Thus, it is open for the institution to define for itself what is meant by appropriate process. All that ISO 9000 series requires is that the institution complies with what it has documented for itself. Hence, ISO 9000 philosophy is often characterised as *"do it as you document it"* (Evans and Lindsay, 1999 p535). The ISO 9000 series was originally conceived for bilateral contract negotiations. One would imagine that the purchaser of services from a ISO 9000 firm would ask and get the suppliers' own documentation of its processes for production. Gradually, third party certification of these standards were sought to reduce the overheads of scrutiny by the purchaser. But the standard does not require the certified firm to publish the documentation of its production process. In the health care setting, individual patients and their attendants are purchasers of services. Since the ISO 9000 series do not require the certified HCIs to publish the documentation of their production process, there is no way a patient or attendant can evaluate their experience against a reference nor for that matter they can compare the processes put in place by different HCIs. Even if the documentation was published, individual patients will still be at a disadvantage since most of them will not have the time and resources to evaluate the documentation of medical technical processes. So, the economy will have to develop institutional mechanisms to assist the patients and attendants in evaluation of the medical technical processes followed by the HCIs. This is precisely what conventional accreditation systems for health care institutions do. The following quote from Evans and Lindsay (1999, p532) puts the ISO 9000 series standards in proper perspective.

' Many misconceptions exist about what ISO 9000 actually is. The standards do not specify any measure of quality performance; specific product quality levels are set by the company. The standards only require that the supplier have a verifiable process in place to ensure that it consistently produces what it says it will produce, thus providing confidence to customers and company management that certain principles of good management are followed. The standards emphasize documenting conformance of quality systems to the company's quality manual and established quality system requirements. As one consultant explained it, "Document it, and do it like you document it. If it moves, train it. If not calibrate it." A supplier can comply with the standards and still produce a poor-quality product as long as it does so consistently!'

This above critique is meant to understand the usefulness of ISO 9000 series of standards in the context of health care delivery. We have shown that the ISO 9000 series can not substitute conventional standards that define the normative process of health care service delivery. Rather their implementation would require that the concerned HCI first adopt relevant health care process standards. Then only the quality process can work to ensure institutional compliance of the health care process standards.

Outcome refers to the change in health status attributable to the health care in question. This is the most important indicator from the public health point of view. The American Medical Association (1986) defined high quality of care as "the care which consistently contributes to improvement or maintenance of the quality and / or duration of life". In other words, patient outcome is viewed as the ultimate measure of quality of medical care. Change in health status refers to improvement in survival as well as the quality of life. The Medical Outcomes Study (Tarlov and others, 1989; Stewart, 1992) conducted in the United States sought to measure outcomes of medical care. In this study, risk factors that may have an effect on patient outcome are measured at the time of patient intake and exit. Patient outcome is measured along multiple dimensions of functioning and well being. Patient outcomes from different health care institutions are compared after controlling for risk profile of patients at the time of intake. Note that simple measures of patient outcomes like hospita! death rates are not valid indicators of quality. Hospitals which provide good quality and specialised care tend to attract more serious cases. Thus, the hospital death rates would be higher in such institutions. To avoid this pitfall, the Medical Outcomes Study (MOS) controlled for risk factors while comparing patient outcomes. Another problem with using simple death rates is that it does not take into account the quality of life improvement resulting out of good medical care. To factor in quality of life improvements, the MOS measured functioning and well being along multiple dimensions including physical functioning, mobility, role functioning, etc. Comparison of patient outcomes from different type of health care institutions is resource intensive. While research studies have shown the feasibility and usefulness of patient outcomes as a measure of quality of

care, such approaches are yet to be adopted on a large scale in developed countries. A JCAHO article in 1994 (Iezzoni and Greenberg, 1994) reported that about 36 states in the US had some legislative mandate to examine hospitalisation outcomes and primarily mortality.

Table-7.1: Integrated framework for assessment of the quality of health care

Goal Framework	Operational alternatives	Scope (illustrative but not exhaustive)
Technical quality (Health attainment)		
Structure	Licensing / Regulation	Basic requirement to operate a health care institution. Safe disposal of biomedical waste Reporting requirements for surveillance of communicable diseases, vital statistics, cause of death reports, etc.
	State licensing Voluntary accreditation	Quality assurance. Purchase of services by governments. HCIs voluntarily seek accreditation to reassure their clients about the quality of their care. Purchase of services by employers, health insurance plans, public authorities, etc.
Process Outcome	Practice guidelines	Evidence based physician and patient decision making
	Medical outcomes research	Provide information about causative linkages of patient outcomes with health care process, so that HCIs can adopt appropriate measures to improve patient outcome. Benchmarks of risk rated patient outcome.
	Law requiring maintenance of medical records, abstraction and publication of clinical data, etc.	Enable purchasers dealing with network of HCIs to screen potential foci of poor medical outcome. Assist bulk purchasers of health care services like employers and insurance plans in choice of providers. Educate people about provider choice decisions. Facilitate medical outcomes research
Responsiveness (Interpersonal quality)		
Structure		Provision of common area, and patient conveniences Cleanliness, Facilities for attendant, etc.
Process		Grievance handling procedure Appointment and scheduling procedures, Timeliness norms, etc.
Outcome		Patient / Client satisfaction

Outcome of the interpersonal aspects of care is usually assessed by measuring patient or client satisfaction. Interpersonal aspects of care are relatively easily recognised and readily assessed by the patients and their attendants. A series of patient satisfaction questionnaires (PSQs) were developed as a part of the Rand Health Insurance Experiment (Newhouse, 1993, Ware, 1983) and developed further through the Medical Outcomes Study (Wilkin and others, 1992). National Committee for Quality Assurance (NCQA) in the US is a not-for-profit organization that seeks to improve patient care in partnership with managed care plans (Corrigan and Nielsen, 1993). The NCQA released in 1993 a core set of health plan performance measures titled the health plan and employer data and information set version 2.0 (HEDIS 2.0). The HEDIS includes a section on patient satisfaction. In India, patient satisfaction has been studied occasionally either as such or as part of broader studies on hospital performance (Menon, 1990, Sahu, 1992). Recently, the AP Vaidya Vidhana Parishad has commissioned studies for systematic measurement of patient satisfaction at regular intervals of time to aid in management of public hospitals (Institute of Health Systems, 1999; Mahapatra and others, 2001). The patient exit interview component of this study has already been described earlier.

Using the WHO framework of health system goals relevant to quality of care and Donabedian's framework for assessment of the quality of care, we propose an integrated framework for assessment of the quality of health care as shown in Table-7.1. Each of the two intrinsic goals, namely improvement of health and a satisfying interpersonal setting of care can be assessed by looking at the enabling structural systems, operating procedures and protocols of care, and the actual outcomes realised by the patients receiving care. Structural systems for achievement of health can exist at many levels. At the least, the HCIs should not hurt its patients, and should not be a source of risk to public health. For example, the state may have regulation to prevent exposure of patients, attendants and neighbours to communicable disease attributable to unhealthy disposal of biomedical waste. The state would usually require every health care institution to satisfy some reporting requirements for epidemiological surveillance. For example, the Public Health Act requires HCIs to report all cases of notifiable diseases handled by them. Reporting of vital events like births, deaths and causes of death may be mandatory. Satisfaction of these requirements would not amount to any positive statement of quality. However, non satisfaction of such requirements may mean that the HCI could be a source of risk to the public health. The state may accredit HCIs for the purpose of purchasing services for its programmes. While this is an improvement over minimalist licensing requirement, official accreditation processes tend to assume a ritualistic character and may lose some of its validity. Voluntary accreditation

systems appear to be the best available form of recognising if a HCI satisfies appropriate structural and process norms for health care delivery. They tend to respond to changes in technology and client expectations faster. Since these accreditation are voluntary, and the HCI has to pay to acquire these, the quality and validity of such accreditation processes tend to sustain through competitive mechanisms. Examples of voluntary accreditation systems in different countries are: (a) the JCAHO in the US, (b) the Canadian Council on Health Care Accreditation, and (c) the Quality Health in New Zealand. Accreditation systems usually cover much of the health care production processes in addition to the infrastructure facilities. However, implementation of practice guidelines is yet to form an integral part of the accreditation process. Adoption of practice guidelines by individual physicians and HCIs requires development of National infrastructure for development and dissemination of practice guidelines. For example, the US Agency for Health Care Policy Research (AHCPR) develops practice guidelines and disseminates to HCPs and patients. The AHCPR was set up by the US Congress to support research, data development, and other activities that will "enhance the quality, appropriateness, and effectiveness of health care services". The Agency is charged with the responsibility of developing: (a) practice guidelines, (b) medical review criteria, (c) standards of quality, and (4) performance measures. Use of risk rated medical outcomes profile of HCIs as a screening device to identify potential foci of poor quality health care has already been discussed. Interpersonal aspects of health care can also be inferred by looking at enabling infrastructure, procedures established by the HCI for this purpose and by measuring patient satisfaction. The infrastructure aspect is usually covered in conventional accreditation process. Some processes having a bearing on the interpersonal aspects of care may be covered by the accreditation process. For example, grievance handling procedure, informed consent procedures, etc. In addition HCIs may have to develop their own quality norms or look for generic customer satisfaction standards to demonstrate the interpersonal quality of their service. Patient or client satisfaction measurements provide a measure of the outcome of the interpersonal aspects of health care.

II. Review of overseas literature on health care quality and ownership of HCIs

Gray (1991, p96-99) reports that a study by the Institute of Medicine (IOM) in the US compared quality related performance of corporate and nonprofit hospitals using indicators such as (a) accreditation status, (b) board certification of staff physicians (c) number of nursing personnel, and (d) mortality from several elective surgical procedures. The IOM study found that differences were small. The IOM committee concluded that there was no overall pattern of either inferior

or superior quality in corporate or nonprofit hospitals. Convictions in medical injury cases is an indirect indicator of healthcare quality. Gray (1991, p368) informs about two studies that did not find any significant difference in medical injury convictions between forprofit and nonprofit hospitals. The first source cited by Gray is a study by Lewin and others using data from Jury Verdict Research Inc., on malpractice convictions between 1970-74. There were 23 malpractice convictions in a sample of 345 hospitals. The distribution of these 23 cases among forprofit, and nonprofit hospitals was similar to the proportion of hospitals in each category in the sample as a whole. The second source cited by Gray (1991, p368) is the National Association of Insurance Commissioners (NAIC) published data from 128 insurers on 71782 malpractice claims closed between 1975-78. Out of the 8042 closed malpractice claims whose ownership type was known, the distribution of malpractice claims was almost similar to their respective share of admissions. Hartz and others (1989) studied hospital characteristics associated with high hospital mortality among Medicare patients. Forprofit and public hospitals had higher mortality rates compared to nonprofit hospitals.

III. Health care quality in private and public HCIs in India

The health care quality assessment framework allows us to assess adequacy of quality subsystems in health care and comparative performance of different HCIs in the quality dimension. We need to view the findings about quality of care from this and other studies in India against the overall framework of quality assessment described above. We then discover that the lack of information about the quality of care in health care institutions in India. There is hardly any regulatory framework for quality assurance in health sector (Bhatt, 1997). State or municipal laws for licensing of hospitals exist only in a few states. These are: (a) the Bombay Nursing Home Registration Act, 1949; (b) the Delhi Nursing Homes Registration Act, 1953; and (c) the Karnataka Private Nursing Homes Act, 1976. However, implementation is lacking in most of these places (Nandaraj, 1998, 1999). The AP Vaidya Vidhana Parishad, which manages the first referral public hospitals in Andhra Pradesh has developed quite a few standards and is making efforts to implement them (Srilatha, 1998). The Bureau of Indian Standards generally deals with standards and specification of medical supplies, biomedical equipment, etc. Structural and process standards developed by the BIS in the area of health care include the following:

1. Classification and matrix for various categories of hospitals (IS12377-1988).

2. Basic requirement for hospital planning (IS 12433-1988).
3. Quality management procedures for out-patient department (OPD) and other emergency services - guidelines (IS13808-1993).
4. Quality management procedures for diagnostic and blood transfusion services - guidelines (IS13809-1993).

Some voluntary efforts have been made to develop structural standards for health care institutions. The Institute of Health Systems, has been studying the need for accreditation systems (IHS 1996; Mahapatra and Shailaja, 1994; Nandaraj, 1998) and has developed some standards for reproductive health care services (IHS, 1998). The Centre for Enquiry into Health and Allied Themes (CEHAT) in Mumbai has been studying the need for accreditation (Nandaraj and others, 1999) and have developed certain physical standards for private health care institutions based on case studies in Maharashtra (Nandaraj and Duggal, 1997).

The above efforts for development of standards and quality assurance system is a positive development. At least some capacity appears to exist. But a sustained country or state wide health care quality assurance system is yet to develop. An encouraging development is the rise in awareness about the need for state licensing and accreditation systems. For example, the AP Legislative Assembly House Committee on corporate hospitals recommended for state licensing of private hospitals and nursing homes (Reddy, Sivaram and others, 1996). A consensus development workshop on private health sector in Andhra Pradesh, held at Hyderabad was attended by key persons from private and public health sector (Mahapatra and Nagarjuna, 1998). There was a consensus among the workshop participants about the need for a healthcare quality assurance system.

India is yet to develop any national program for the development of practice guidelines, medical review criteria, etc. Research capacity for measurement of medical outcomes and risk rating of patients is yet to develop in the country. Most quality of care related information in the country is about the interpersonal aspects of care. Without the integrated framework for assessment of health care quality, one may assume the information on interpersonal aspects of care to be the whole information on quality. So the important policy recommendation emerges even without looking at the available information on interpersonal quality of care. That is the need for systematic development of a quality of health care assessment infrastructure in the country.

Table-7.2: Quality of care received by ever married women during their most recent visit to a private or public sector health facility, India, 1998-99.

Quality of service indicator	Andhra Pradesh		India	
	Private	Public	Private	Public
Received the required service	99.6%	98.1%	99.7%	98.9%
Median waiting time (minutes)	29.3 min	29.6 min	29.0 min	29.3 min
Staff spent enough time	97.9%	93.2%	97.5%	90.3%
Staff talked nicely	71.6%	57.7%	78.4%	62.7%
Staff respected their need for privacy	85.2%	80.2%	83.9%	68.2%
The facility was very clean	7155%	51.9%	75.3%	52.1%

Source: India NFHS-2 Table-9.6, IIPS & ORC Macro, 2000- India, and Andhra Pradesh NFHS-2 IIPS & ORC Macro, 2000 AP

Evidence from various studies in India point out to the poor quality of care provided in the private sector (Nandaraj and others, 2001). The National Family Health Survey, 1998-99 (NFHS-2) asked women who had visited a health facility in the previous one year certain questions to ascertain their perceptions of the quality of care provided by the concerned health care institutions. Table-7.2 shows the survey results for Andhra Pradesh (Andhra Pradesh NFHS-2, IIPS ORC Macro, 2000) and India (India NFHS-2, IIPS ORC Macro, 2000). Mostly, Likert type category rating scales were used. Table-7.2 shows the perceptions of the ever married women respondents about the quality of service received by them during their most recent visit to a private or public sector health facility. Almost all respondents succeeded in receiving the care for which they had gone to the HCI concerned, both in private and public sector. There was hardly any difference in median waiting time in private and public sector HCIs. Satisfaction with the amount of time spent by the staff for the woman was generally high. Private sector HCIs did slightly better than the public sector in the matter of time spent by staff on the patient and also in respecting the patients need for privacy. The experience of women regarding the interpersonal communication (staff talked nicely), and cleanliness of the facility was much better in the private sector HCIs than the public sector.

IV. Structure and process quality characteristics of private health care institutions in AP

A. Premises and floor space

Data on floor space and land area are rough estimates. The survey did not provide for measurement or expert assessment by an engineer or architect.

These values are based on the enquiry and estimate by the generalist surveyor. Some HCIs did not provide any help in estimation of the floor space and land area and the surveyors did not feel comfortable to make a guess. Among those who reported, the range of values reported under floor space and land area included some values that appear to be very high. This could be a result of inaccurate guess by the surveyor or erroneous information by the informants. Since, estimation of small premises is easier, it would appear that the maximum end of the range of values may be suspected. Hence, it is difficult to assign a level of confidence to the mean and maximum values of floor space and land area. However, the median and minimum values are likely to be more accurate. Comparative study of minimum and median values of floor space and land area of private and public HCIs gives us some idea about the differences in premises between two categories of institutions. We did a resurvey of all the institutions where the values appeared unusually high or low. Although this process improved the validity of these estimates, all these figures are rough estimates by generalist surveyors. Estimates from public HCIs are based on records maintained by engineering department.

Table-7.3 provides some information about the premises in which the HCIs operate. Most big hospitals (100% public and 80% private) have their own buildings. Majority (about 75%) of small hospitals both private and public operate in their own building. Majority of PHCs / public dispensaries (72%) also operate in their own buildings. Nearly half of private clinics operate in the proprietor's own building and the other half rent space for the clinic. Those who rent space do so mostly from unrelated persons. Practice of renting space from promoters is not very prevalent. It would appear, that in case the promoters locate the HCI in their own building, they would report the premises as the HCIs own building.

Clearly, the HCIs in public sector are better endowed with land and floor space. Two plausible reasons may be at work. Firstly, public sector HCIs may be over providing floor space and land area. Secondly, private HCIs may be providing less than adequate space and land areas. Based on common experience and general knowledge of the situation, we conjecture that the public HCIs are usually well endowed with land. In many cases future requirements are taken into account while allocating public land for health care institutions. Mostly these lands are reclassification of existing public lands and hence the immediate budgetary requirement on account of land would not be a constraint for public HCIs. Excepting a few cases of concessional land grants, most private sector HCIs have to provide capital and recurring budget for land and floor space. That may explain the generally lower floor space and land area endowment of these HCIs. More detailed space audit and comparison with relevant physical standards will help clarify the matter and provide some insights for policy interventions in the matter of adequacy of floor space and land area of different types of HCIs.

For example, if HCI space audits were to consistently show that public HCIs tend to have excessive floor space, then an appropriate policy response would be to identify the types of policy decisions contributing to excess provision of floor space and take remedial measures. Another result from these studies may be about the utilisation of concessional land grants to private HCIs and its impact on maintenance of floor space and land area standards by these institutions.

Table-7.3: Premises ownership and scale of accommodation of private and public HCIs

↓ Premises	Private				Public		
characteristic	Clinic	Small H	Big H	Diag.	PHCs	Small H	Big H
n →	71	69	10	139	53	41	12
Located in own building	52%	71%	80%	27%	68%	90%	100%
Rented from							
Promoters	3%	3%	0%	14%	2%	0%	0%
Unrelated persons	44%	25%	20%	58%	19%	10%	0%
Other arrangements	1%	1%	0%	1%	11%	0%	0%
Floor space own or rented (in square feet)							
Mean fl. space / HCI	639	3,784	90,904	1,066	2,198	8,755	423,436
Med fl. space / HCI	400	2,400	20,000	600	1,129	5,384	278,348
Min fl. space / HCI	60	110	4,000	1	1,000	1,089	15,662
Max fl. space / HCI	8,000	43,560	393,700	800	14,352	27,180	2,090,880
Mean fl. space / bed	233	206	345	24	516	377	1,608
Med fl. space / bed	120	150	95	4	514	300	771
Min fl. space / bed	40	3	33	1	176	47	157
Max fl. space / bed	1,333	1,452	1,312	150	1,320	1,117	4,966
Land (square yards) and Floor Space Index (FSI: floor space in sft / land in sqyd)							
Mean land area / HCI	402	1,348	6,816	355	3,543	11,613	123,908
Med land area / HCI	300	600	4,920	210	1,000	4,840	41,140
Min land / HCI	33	100	2,420	1	34	150	7,260
Max land / HCI	2,420	24,200	24,200	2,400	19,360	217,800	774,400
Med FSI of HCIs	1.25	3.13	2.35	3	1.67	1.22	8
Min FSI of HCIs	0.31	0.13	1.5	0	0.1	0.09	0.28
Max FSI of HCIs	16	30	81.34	13	112.85	34.79	54

Let us examine the absolute figures of floor space availability. Instead of comparing between private and public sector, we seek comparison with some norm. The Bureau of Indian Standards has published a standard of physical

requirements for a 30 bedd community hospital. (IS12433/1988). This may not be the most appropriate standard for comparison of all categories of private and public hospitals. In fact, there is some evidence that the space norms set by this standard tend towards over provision (APVVP, 1990). Nonetheless, this BIS norm is the only published source in India available to us for comparison. This BIS norm suggested a floor space of 645 sft (60 Sq. Mtrs) per bed. As seen from the mean, and median floor space statistics, most private health care institutions appear to fall short of this norm. As seen from the maximum floor space data, some private hospitals, do exceed this norm. In the public sector, PHCs and the big hospitals appear to be well endowed with floor space. Many of the small hospitals may be experiencing some shortage of floor space. The gap between the BIS floor space norm and mean / median floor space in small public hospitals is considerably less, than what it is for private hospitals of comparable size.

The land norm recommended by the BIS standard is 4840 Sq.Yd (One Acre) for a 30 bedded hospital. The median land area of small public hospitals included in this study exactly matches this norm. The median land area of small private hospitals included in this study was 600 sq. yards, which is much less than the norm of 4840 Sq. Yd. Compare the mean and the median land area of private health care institutions in all three categories with the BIS norm. Clearly, the private health care institutions are located in congested areas, with comparatively less land around the Institutions. This is consistent with our common sense understanding of private health care institution locations and the motivations to minimise real estate costs.

B. Practice guidelines and medical records

Adherence to practice guidelines and maintenance of medical records are important quality of care attributes. Practice guidelines may predispose doctors to consider changing their behaviour (Lomas and others, 1989). Practice guidelines can contribute to higher quality of care, increased access, professional autonomy, patient empowerment and cost-effective care (Field, Lohr and Institute of Medicine, 1990). Some countries have developed institutional mechanisms for development and dissemination of practice guidelines to improve quality and appropriateness of care. For example, the United States Agency For Health Care Policy Research (AHCPR) was entrusted by the US Congress to develop and periodically review clinically relevant guidelines, standards of quality, etc. (Schoenbaum and others, 1995). Institutional mechanisms for development and dissemination of practice guidelines are yet to develop in India. We included, however, certain questions on practice guidelines, medical audit etc. to gauge the attitude of hospital managers on quality of care issues. Table-7.4 shows the response to quality of medical care issues. The question on medical audit was included in the owner manager questionnaire which was administered to private

sector HCIs only. Hence, we do not have response to this question from the public sector. All big hospitals in the private sector reported that they do conduct medical audit to review circumstances of deaths in the hospital. None of the small hospitals reported such a practice. Only 20% of clinics reported to do medical audit in case of deaths in their care. Only 19% of private HCIs reported that they use written medical protocols. A little more than half (57%) of public HCIs reported that they use written medical protocol. Note that these are all unverified responses. Actual practice may differ from these claims. However, we can rely on these responses to infer about attitude of managers and medical personnel in respective institutions to various quality of care related practices like medical audit of deaths in hospital, use of written medical protocols and maintenance of medical records. About 57% public hospitals reported that they use written medical protocol and therapeutic guidelines. Only 19% of all private health care institutions reported that they use written medical protocol. Similar percentage (50%) of big hospitals in both private and public sector reported that they use written medical protocol or therapeutic guidelines. The difference in reports about use of written medical protocol between private and public sector appears largely due to the private clinics and small hospitals. Note, however, that the study design did not seek to verify these reports by the concerned respondents. So these are indeed perceptions of the respondents about their respective institutions. The perceptions we expect are based on their belief about their institution and actual experience.

Table-7.4: Practice guidelines, medical audit and medical records, in HCIs (H = Hospitals)

↓ Practice	Private				Public			
	Clinics	Small H	Big H	All	PHCs	Small H	Big H	All
n →	71	69	10	150	53	41	12	106
Conducts medical audit to review circumstances of death	20%	0%	100%	40%				
Use written medical protocol / therapeutic guidelines	10%	23%	50%	19%	55%	61%	50%	57%
HCIs reporting that they maintain medical records	44%	84%	80%	65%	92%	95%	100%	94%
HCIs reported to have kept medical records since inception	13%	23%	20%	18%	40%	44%	33%	41%
Range retention period by those who do not keep for ever.	1 - 20	0.5-10	5-10	.5-20	0.5-10	1-10	5-20	.5-20

We also asked about retention of medical records. Medical records are basic to standards based performance measurement. Medical records may also be required by the patient at a later date to inform subsequent medical care. Hence, maintenance of medical records is an important quality of care attribute. Almost all public sector HCIs (94%) reported that they keep medical records. Only about 80% of small and big private hospitals reported that they maintain medical records. Only about 44% of private clinics reported to be maintaining medical records. Some private HCIs reported to have maintained medical records from their inception. Most others reported retention periods ranging from six months to twenty years. The range of retention period reported by public hospitals was also similar.

V. Patient satisfaction in private and public health care institutions in AP

There is an impression that patient satisfaction is better in the private sector. To explore the existence of differences in level of patient satisfaction, between the private and public HCIs, a patient exit interview component was built into the study. Patients' satisfaction is an indirect measure of quality of care in various dimensions. There is increasing evidence to suggest that patient's satisfaction is usually correlated with effectiveness of treatment (Wilkin and others, 1992). Cleary and others (1992) teased out data from a survey of 6455 adult discharged patients in USA to assess the impact of different factors on patients evaluations of hospital quality. They asked "What causes patient satisfaction? Is it determined by the type of patient receiving care or by the type of care that is delivered?" They found that "patient's evaluation of quality is more a function of what is done for the patient than what kind of patient is being treated". Hence, patient satisfaction survey can be used as a valid measure of quality, particularly of the interpersonal aspects of health care. Note, however, that peoples pattern of resort at the time of illness, i.e. patients decision about which health care institution to go is another indicator of people's preference for different kind of satisfactions. Various factors may contribute to the pattern of resort decision. A patient exit interview measures satisfaction by those who decide in the first instance to access services from that particular institution. That's why patient satisfaction survey generally produce fairly high levels of satisfaction scores, since the fact of having chosen the institution for care implies that the patient had a positive disposition (for what ever reasons) to those institutions. Nonetheless, patient satisfaction surveys allow us to compare the level of satisfaction between the institutions and groups of institutions. Certain aspects of hospital service like the hotel services, hygiene factors of hospital stay and important aspects of patient management, choice of therapeutic alternatives by the patient and his / her attendants can be better assessed by patient satisfaction surveys.

The following procedure was used for sampling patients from health care institutions. The in-patients selected for the exit interviews were people who had been admitted for more than a week i.e. discharged after one week of stay in the hospital. The sample size was 10 patients from each institution. In case of not reaching the target of 10 patients with a minimum stay of one week the norm was relaxed, so that patient with three days of stay were also included in the interview. From clinics, out-patients were chosen for the exit interview.

The present questionnaire is based on the Client Satisfaction Questionnaire (Attkisson and others, 1982, Larsen and others, 1979) as described in Wilkin and others (1992). The Client Satisfaction Questionnaire (CSQ) is designed to gather assessment by patients of specific health plans and programmes. Here, we wanted to measure client satisfaction with respect to the immediately preceding encounter. Hence, we reworded the CSQ questions to refer to the encounter. Items that did not apply to the immediately preceding encounter were dropped. Some items from the Quality of Service in Texas (QOST) instruments were also included. To understand socioeconomic status of patients served by different types of HCIs, the instrument included questions about household assets for computation of a standard of living index as in case of the National Family Health Survey (NFHS, IIPS, 2000) household questionnaire. The questionnaire is divided into nine sections. Section 1 records information about the interview. Section 2 records data on the provider institution from where the patient is sampled. Section-3 records if the informant is the patient himself / herself or an attendant and the relationship with the patient. Section-4 identifies the patient and gathers demographic information about the patient. Sections 5 & 6 collect socioeconomic data for computation of standard of living index and are based on the NFHS. In sections 7 to 9 the interviewer asks for the patient's rating about the quality of services provided by the health care institution. A five point rating scale consisting of Poor, Fair, Good, VGood, and Excellent is used. Arbitrary weightages on an increasing scale from 1 to 5 is given to each category of response. Thus a score of 5 means excellent and a score of 1 would mean a poor response. To convert the questionnaire into Telugu (local language), translation and retranslation procedure described by Leplege and Verdier (1995) was used. The questionnaire in English was first translated to Telugu by a team of IHS faculty who are conversant with both the languages. Retranslation was done with the help of an external language expert conversant with Telugu and English. The retranslated instrument was compared with the original questionnaire. The Telugu version was accepted for use, since the retranslated questionnaire closely matched with the original one.

The survey started in the first week of June 2000 . The entire survey took place between June to August. Hence, finding of the study would relate to the period June to August. The interviewers consisted of IHS faculty and research assistant who are trained in conducting interviews. The surveyors visited the

hospitals and explained the purpose of their visit to the concerned authorities. The surveyors interviewed the patients or the attendants depending upon the availability. In case of minors the attendants were interviewed. Data entry was done using an application specially developed by IHS for the purpose. The data was verified by taking printouts of the filled-in questionnaire and physically checked with the original forms. The corrections were made on the questionnaire. The corrected version was updated in the database.

Table-7.5: Patient exit interview - place of interview and respondent characteristics

Activity indicator	Private				Public			
	Clinics	Small H	Big H	All	PHCs	Small H	Big H	All
Interviews	554	561	56	1,171	521	404	120	1,045
Patient	69%	60%	73%	64%	78%	76%	73%	77%
Attendant	31%	40%	27%	36%	22%	24%	27%	23%
Place of interview								
At home	15%	17%	0%	15%	13%	11%	21%	13%
In hospital	85%	83%	100%	85%	87%	89%	79%	87%
Gender composition								
Male	51%	38%	39%	44%	46%	44%	62%	47%
Female	49%	62%	61%	56%	54%	56%	38%	53%
Age group. 1991 census data in parenthesis								
0-4 years (11%)	10%	5%	5%	7%	8%	5%	0%	6%
5-14 years (25%)	7%	6%	4%	7%	14%	11%	1%	11%
15-44 years (46%)	58%	72%	61%	64%	52%	60%	67%	57%
45-59 years (11%)	18%	10%	21%	15%	18%	14%	12%	16%
60+ years (7%)	7%	7%	9%	7%	8%	10%	20%	10%
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%

Altogether 2216 patients were surveyed (Table-7.5) consisting of 53% patients from private sector and the rest 47% from the public sector. The sample comprised of 53% females and 47% males. Sex composition of the sample remained same for the private and public sectors overall. But there was some difference between different categories of hospitals. The patients sampled from small and big private hospitals had more females (61-62%). The sample from big public hospitals had more males (62%) but the small public hospitals sample had more females (56%). Most of the interviews (79 to 100%) took place in the hospital concerned. For nearly about two third of the sample, the patient himself / herself answered our questions. For the rest about one third of sampled patients, an attendant replied on behalf of the patient.

Socioeconomic status of patients served by the private and public sector HCIs can be assessed from the data on caste status and the standard of living index. The share of scheduled castes and scheduled tribes among the public sector patients was comparatively higher (SC=18%, ST=15%) than the private sector (SCs=10%, and STs=6%). About 88% of patients from the public sector institutions had a low standard of living index, compared to 51% in case of the private sector. The private sector has a larger share of persons with medium and high standard of living index. About 48% of private sector patients had medium standard of living index. Recently, a study by Ajay Mahal and others (2000) has estimated that "the upper expenditure quintiles accounted for a disproportionate number of in-patient days of stay in public facilities." But the data from this study does not agree with their estimate.

Section-7 of the patient exit interview questionnaire sought patient ratings with respect to various aspects of service. These questions were framed as "How satisfied are you with ....?". The respondent had five categories ranging from poor to excellent to rate his / her assessment. The categories have been assigned an increasing weightage ranging from 1 to 5 for poor to excellent ratings, respectively. Thus a "Fair" response is assigned 2, "Good" is assigned 3, and "Very good" is assigned 4. Level of satisfaction is measured by the sum of actual scores across all items in the scale (or sub scale) by an average respondent, expressed as a percentage of the maximum potential score. Since the least satisfaction category (Poor) is assigned a value of 1 the minimum level of satisfaction in this scale would be 20%. The feasible range of the level of satisfaction measure is 20% to 100%. If all patients exiting from a health care institution rate their satisfaction in respect of each of the 11 items as poor, then the level of satisfaction will be 20%. If they rate each of the 11 items as excellent then the level of satisfaction will be 100%. We could assign a weight of zero to the satisfaction category labeled as "Poor" and four to the category labeled as "Excellent". That would give a satisfaction level scale with a range of 0 to 100%.

We did not feel it necessary for various reasons. Firstly, the very fact that the patient resorted to the concerned institution for care means that there is positive satisfaction. Secondly, the label "Poor" satisfaction does not necessarily mean zero satisfaction. Finally, patient satisfaction is a relative measure of gap between expectations and perceived fulfillment. Our purpose is to explore if there are any gaps between expectations and perceived realisation between the private and the public sector and between different categories of health care institutions. These comparisons will remain unaffected between the two scaling alternatives discussed above.

Table-7.6 shows level of patient satisfaction in various types of health care institutions. Most importantly, the level of satisfaction in both the sectors leave much scope for further improvement. Given the construction of the scale and the scoring system followed, it is easy for many HCIs to show 60% level of satisfaction. If all patients rated their satisfaction with respect to each item under the middle category labeled as "Good" then the level of satisfaction would be 60%. The measured level of satisfaction ranges from 46 to 66% across all types of HCIs. Now turning to intersectoral differences, we find that there is hardly any difference in level of patient satisfaction between the private and the public sector. The composite satisfaction score for private HCIs was 58% of the maximum possible score compared to 57% in case of public hospitals. The overall level of satisfaction in private clinics and the public sector health centres was similar. In case of big hospitals, the overall satisfaction level was also similar between private and public sectors. Patients from small hospitals in the private sector rated their satisfaction level a little better than the small hospitals in the public sector (60% in private compared to 55% in public sector).

Table-7.6: Patient satisfaction levels in private and public health care institutions.

Potential			Sub scale /	Private (n=1171)				Public (n=1045)			
It.	Min	Max	Aspect of service	Clinics	Small H	Big H	All	PHCs	Small H	Big H	All
12	12	60	Composite score	56%	60%	57%	58%	55%	55%	58%	57%
4	4	20	Access availability & convenience	59%	56%	50%	57%	51%	52%	56%	52%
3	3	15	Technical skill	46%	59%	61%	53%	58%	58%	60%	58%
3	3	15	Interpersonal	48%	60%	63%	54%	59%	59%	60%	60%
1	1	5	Communication	63%	60%	48%	61%	57%	57%	57%	57%
1	1	5	General comfort	66%	64%	61%	64%	60%	59%	57%	59%

It.=number of items in the questionnaire. H=Hospital.

Although the composite score of satisfaction was similar for both the private and the public sectors, there are important differences in the service characteristics. For example, patients from private HCIs gave higher rating to the access, availability and convenience aspect of the service, compared to the patients from public sector. The level of satisfaction with access availability and convenience aspect of services by the private sector was 57% compared to 52% in case of the public sector. The difference in access, availability and convenience is further accentuated if we compare private clinics (59%) with the PHCs in the public sector (51%). This finding is consistent with the common understanding that private clinics offer better timings and are generally more accessible. The public sector HCIs received better ratings with respect to technical skill and interpersonal aspects. The higher rating of the public sector in interpersonal aspects is a little surprising. We generally associate better interpersonal skills with the private sector. In this case the level of satisfaction with respect to interpersonal aspects was 54% for the private sector and 60% for the public sector HCIs. The private HCIs were rated better in communication and general comfort.

Table-7.7: Frequency of "Excellent" or "Very good" rating by patients for each of the 11 items in the quality of service questionnaire.

↓Item	Private				Public			
	Clinics	Small H	Big H	All	PHCs	Small H	Big H	All
n →	554	561	56	1171	521	404	120	1,045
Getting through for appt.	22%	17%	20%	20%	11%	11%	17%	12%
Waiting time for appt.	19%	11%	0%	14%	6%	7%	15%	7%
Convenient location	18%	13%	18%	15%	14%	13%	13%	13%
Waiting time for care	19%	12%	0%	15%	6%	6%	16%	7%
Manner of the physician	47%	44%	31%	45%	22%	31%	29%	26%
Technical skill of physician	44%	42%	27%	43%	23%	28%	30%	26%
Manner of the nurse	6%	15%	25%	11%	12%	13%	17%	13%
Technical skill of the nurse	5%	15%	23%	11%	13%	11%	16%	13%
Manner of other staff.	11%	12%	23%	12%	10%	9%	14%	10%
Technical skill of other staff	12%	12%	20%	12%	10%	9%	14%	10%
Explanation about treatment	20%	14%	2%	16%	11%	10%	10%	11%
The overall visit / stay.	29%	23%	29%	26%	13%	15%	16%	14%

appt.: Appointment

The differences between the private and the public sector becomes more visible if we examine responses to each item in the Quality of Scale. One advantage of examining the items singly is that we do not have to worry about assignment of arbitrary weights to different response categories, since there is no need to aggregate the responses across items. Instead, we can examine the frequency of positive satisfaction responses for each item. A disadvantage is that the validity and reliability of responses analysed at the item level may not be the same as in case of the composite score and sub scale scores. However, frequency of responses to a single item is easier to understand and may provide some additional insights about possible interventions to improve patient satisfaction. Table-7.7 shows the percentage of respondents who rated their satisfaction of respective items as "Very good" or "Excellent". These are the people who unequivocally rated the performance of concerned HCI as positive. Recall that the middle category of patient response was labeled as "Good" and assigned a score of 3 for computation of the level of satisfaction in Table-7.6. In Table-7.7 the responses in "Good" category have been dropped. Thus, comparison of the satisfaction levels in Table-7.6 and Table-7.7 should give us some idea about the intensity of satisfaction by the patients. Comparatively, higher frequency of superlative assessment by patients without any difference in the overall satisfaction level would mean that the higher number of superlative assessment given to one category of HCIs is compensated by more number of average assessments for the other category. We find that the intensity of satisfaction is comparatively higher for private HCIs. For example, 26% of patients from private HCIs rated the overall experience of their visit as Very good or Excellent compared to 14% in case of public HCIs. The difference is not much, with respect to convenience of location, manner or skill of other staff. Comparatively, more percentage of private sector patients rated their experience about the manner and skill of doctors, getting an appointment and waiting time as Very good or Excellent. Regarding manner and perceived technical skill of nurses, the intensity of patient satisfaction was slightly more in the private hospitals compared to the public hospitals. Private clinics did not do as well in patient rating of nursing care. This is probably due to non availability of nurses in most private clinics.

Table-7.8: Frequency of "Excellent" rating by patients for each of the 11 items in the quality of service questionnaire.

↓ 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 appt.	11%	3%	0%	7%	0%	0%	16%	2%
Waiting time for appt.	10%	3%	0%	6%	0%	0%	12%	1%
Convenient location	10%	3%	0%	6%	1%	0%	6%	1%
Waiting time for care	10%	3%	0%	6%	0%	0%	8%	1%
Manner of the physician	13%	5%	2%	9%	0%	0%	17%	2%
Technical skill of physician	12%	4%	2%	8%	0%	0%	17%	2%
Manner of the nurse	3%	3%	2%	3%	0%	0%	16%	2%
Technical skill of nurse	3%	3%	2%	3%	0%	0%	15%	2%
Manner of other staff	8%	3%	2%	5%	0%	0%	9%	1%
Technical skill of other staff	8%	3%	2%	5%	0%	0%	9%	1%
Explanation about treatment	8%	3%	0%	5%	0%	0%	7%	1%
The overall visit / stay	9%	3%	2%	6%	1%	0%	8%	1%

In Table-7.8 we give frequency of "Excellent" ratings to each item by hospital type. Difference between the responses in Table-7.7 and Table-7.8 give yet more evidence about the intensity of patient feelings with respect to various aspects of the health care services. Clearly, the frequency of "Excellent" ratings received by public HCIs is much less (1 to 2%) than similar ratings received by the private HCIs (3 to 8%). None of the small public hospitals and hardly any of the public sector clinics received an "Excellent" rating in any of the items. The public sector clinics received some "Excellent" ratings in respect of convenience of location and the overall visit. Overall, most of the few "Excellent" ratings received by the public sector HCIs was due to the big hospitals with 100 or more beds. If we look at the category of big hospitals, the public sector HCIs clearly received more "Excellent" ratings from their patients. The nursing service was more likely to be rated "Excellent" by patients from public hospitals compared to the private HCIs. This finding is consistent with common knowledge that private hospitals do not usually appoint adequately qualified nursing personnel. The comparative status of the private and the public sector is reversed in respect of clinics and small hospitals. About 8 to 10% of private clinic patients rated their satisfaction with various aspects of service as "Excellent".

Table-7.9: Level of patient satisfaction with respect to specific facilities.

Facility	Private (n=1171)				Public (n=1045)			
	Clinics	Small H	Big H	All	PHCs	Small H	Big H	All
Doctors	70%	67%	65%	68%	61%	63%	64%	62%
Nurses	30%	59%	63%	45%	58%	58%	61%	58%
Equipment	55%	58%	57%	57%	50%	53%	60%	52%
General comfort	72%	59%	60%	59%	50%	53%	59%	52%

n =number of respondents. Equipment = Medical, surgical and diagnostic equipment

Section-8 of the exit questionnaire asked patients "How will you rate the hospital / clinic in terms of the following facilities?" Opinion was sought on four specific facilities shown here in Table-7.9. The same "Poor" to "Excellent" rating scale was used . Assignment of weights to various categories and computation of the level of patient satisfaction follows the same principles as done to analyse section-7 data. The satisfaction levels range from 45 to 68%, suggesting that there was much scope in both sectors to improve their performance. Overall nursing services in public HCIs appear to have been rated better than that in the private sector. Actually, the level of satisfaction with nursing services was same for small to big hospitals in private and public sectors. Higher rating of nursing services in the public sector is attributable to the PHCs, which usually have some nursing personnel. Compared to this most private clinics (which also include nursing homes of less than 10 beds) usually do not have nurses. Hence they got a comparatively poorer rating. The satisfaction level with respect to doctors, equipment and general comfort was rated better by the private sector patients compared to those in the public sector HCIs.

Table-7.10: Patient response to yes / no questions about quality of services by respective HCIs

Sub scale / Aspect of service	Private (n=1171)				Public (n=1045)			
	Clinics	Small H	Big H	All	PHCs	Small H	Big H	All
Were you told the diagnosis?	98%	98%	98%	98%	96%	96%	83%	92%
Did doctor ask for a repeat visit?	70%	64%	59%	67%	54%	64%	63%	59%
Will you visit the hospital again?	98%	97%	91%	97%	99%	98%	98%	99%
Will recommend the hospital?	95%	94%	95%	94%	98%	98%	81%	96%
Was the billing fair?	92%	90%	70%	90%	Not applicable			

n = number of respondents. H=Hospitals

In section-9, some miscellaneous questions were posed to the patient to help characterise the health care services provided by various types of health care institutions. These questions, listed in Table-7.10, were in yes / no format. Two of these questions allow us to infer about patient satisfaction. The patient was asked if (s)he will visit the hospital again? The other question was if (s)he will recommend the hospital to others. Both public and private sector HCIs fared quite well. About 94 to 99% patients said they will visit again and will recommend to others. Public HCIs received a slightly more favourable response to these questions. We asked if the doctor asked for a repeat visit? Answers to this questions help us interpret response to the question "Will you visit the hospital again?". If the doctor had asked the patient to visit again, then an affirmative answer to the "visit again" question would not say much about the level of satisfaction. In this case frequency of positive response to the "visit again" question is much higher than the frequency of doctor's advice for a repeat visit. 67% of private HCI patients reported that the doctor asked for a repeat visit and 97% said that they would visit the HCI again if there is a need. In case of public sector 59% of patients said that the doctor asked them for a repeat visit and 99% said they would visit again if there is a need.

Answers to the question "were you told the diagnosis?" gives us some idea about the quality of communication and interpersonal aspects of care in various types of HCI. Performance of private and public HCIs are close, with the private HCIs showing slightly better ratings. About 90% of the private sector patients perceived that the billing for services received by them was fair. However, this figure drops to 70% in case of big private hospitals suggesting the need for greater transparency in billing practices by these hospitals. Lack of transparency in billing by private hospitals has also been reported by other studies (Baru and others, 1999). Though this question was put to the patients from public hospitals, most did not give a response, since the question of billing did not arise for them.

VI. Owner-managers' opinion about interventions for improvement of quality of care in private sector

We asked the owner-managers of private HCIs about possible interventions to improve quality of health care services. Table-7.11 shows owner-managers opinion about possible measures to improve quality of health care in the private sector. There appears to be wide support for measures like registration of hospitals (i.e. licensing), registration and renewal of registration of doctors, voluntary accreditation, hospital quality assurance procedures and continuing education programmes for doctors.

Table-7.11: Recommendations to improve quality of services in Pvt. HCIs. % Owner-managers reporting that they find the proposed measure very useful or useful.

# respondents				Possible quality improvement measure	% owner-mgrs agreeing				
CI	SH	BH	Diag		CI	SH	BH	All	Diag
67	64	8	172	Hospital registration	85	89	88	87	97
66	63	8	186	Renewing hospital registration	83	73	88	79	95
67	66	8	185	Registering doctors	91	92	88	91	94
67	62	8	185	Renewing doctors registration	81	77	88	80	87
67	61	7	181	Voluntary accreditation by independent NGO	60	61	71	61	73
66	60	8	176	Compulsory accreditation of hospls by gov.	58	42	50	50	72
66	63	8	180	Hospital quality assurance procedures	80	84	88	82	94
66	64	8	164	Continuing education pgm for doctors	91	95	100	93	98

VII. Summary of evidence about quality of services

We have proposed a framework for assessment of health care quality consisting of achievement of health attainment goal (technical quality) and responsiveness (interpersonal quality). Both technical quality and responsiveness ought to be measured using structure, process and outcome criteria. Unfortunately, the quality of healthc are assessment subsystem is yet to develop in India. There is hardly any licensing requirement for health care institutions in India. Health care accreditation systems are yet to develop. India is yet to develop any national programme for development of practice guidelines, medical review criteria, etc. Research capacity for measurement of medical outcomes and risk rating of patients is yet to develop in the country. Most quality of care related information in the country is about the interpersonal aspects of care. Without the integrated framework for assessment of health care quality, one may assume the information on interpersonal aspects of care to be the whole information on quality. So the important policy recommendation emerges even without looking at the available information on interpersonal quality of care. That is the need for systematic development of a quality of health care assessment infrastructure in the country.

Available evidence from the US suggests that there is no clear difference in quality of health care delivered by forprofit, nonprofit or public HCIs. Note, however, that the health care quality assurance infrastructure is well developed in the US. Studies in India suggest that technical quality of care may be slightly better in public sector HCIs and interpersonal quality may be slightly better in private sector. But the more important finding from Indian studies is the poorly developed health care quality practices both in private and public sector.

Only some rudimentary information on infrastructure, and process of care could be collected in this study. Approximate data on premises collected by this study showed that public sector HCIs are generally better endowed with land and floor space. Comparatively more number of public HCIs, particularly the PHCs and small hospitals reported that they use written medical protocols and therapeutic guidelines. More than 90% public HCIs reported that they maintain medical records, compared to only 65% in case of private HCIs. Comparison of the availability of auxiliary services in private and public HCIs gives a mixed picture. More public HCIs (85%) provided pharmacy services compared to private HCIs (42%). Prevalence of 24 hour emergency services was similar (about 40%) among private and public HCIs. Prevalence of telephone facility was much more among the private HCIs (88%) compared to public HCIs (29%). Results from the patient exit interview showed that the level of patient satisfaction was generally low in both private and public HCIs. Overall level of patient satisfaction was similar in the private and public sector HCIs. However, the private HCIs received better scores on access, availability and convenience, communication and general comfort. On the other hand, the public HCIs received better scores on the technical skill and interpersonal sub scales. The private HCIs received significantly more number of "very good" and "excellent" ratings on (a) manner of physician, (b) technical skill of physician, (c) getting an appointment, (d) convenient location. Most of these are on interpersonal aspects of care. The limited data available from this study suggests that the interpersonal quality of care in private HCIs is comparatively better than that in public HCIs, which tend to show slightly better ratings about infrastructure, and technical aspects of care. Most importantly, the level of patient satisfaction was generally low in both private and public HCIs, suggesting an environment of poor client orientation in the health sector.