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## Working Paper

Healthcare delivery and stakeholder's satisfaction under social health insurance schemes in India: An evaluation of Central Government Health Scheme (CGHS) and Ex-servicemen Contributory Health Scheme (ECHS)

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# Working Paper 252

Healthcare Delivery and Stakeholder's Satisfaction under  
Social Health Insurance Schemes in India: An Evaluation  
of Central Government Health Scheme (CGHS) and Ex-  
servicemen Contributory Health Scheme (ECHS)

**Sukumar Vellakkal  
Shikha Juyal  
Ali Mehdi**

**December 2010**



**INDIAN COUNCIL FOR RESEARCH ON INTERNATIONAL ECONOMIC RELATIONS**

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## Foreword

The Central Government Health Scheme (CGHS) and Ex-servicemen Contributory Health Schemes (ECHS) are unique in the nature of the comprehensive healthcare coverage they provide to their members who pay only a limited subscription to be eligible. Thanks to the growing demand for private healthcare services, the government has tied up with private healthcare providers to ensure high quality healthcare services to the beneficiaries. But this public-private partnership has recently run into rough weather with private providers openly expressing their dissatisfaction with the terms of payment for the services provided and some actually withdrawing from the schemes as they found the terms to be financially unviable. At the same time, various proposals have been put forward to reform these schemes, including by Planning Commissions and the Sixth Pay Commission, aimed primarily at reducing the volume of subsidy and achieving greater efficiency. It is in this context that ICRIER researchers have undertaken this study. The objective of the study is to suggest measures to streamline the working of these two schemes and achieve an outcome that balances the interests of the government, private providers and beneficiaries.

The study is based on primary surveys to assess the level of satisfaction of both the beneficiaries and private service providers. The surveys were conducted among CGHS-ECHS beneficiaries, empanelled private healthcare providers and CGHS-ECHS officials in 12 Indian cities. The survey helped examine issues relating to the terms and reference for the empanelment of providers, beneficiary satisfaction and the feasibility of suggestions to reform the schemes by privatisation, replacing them with health insurance or by increasing the financial contribution by beneficiaries.

Recently, several health insurance programmes have been introduced for the poorer sections of society. These include the Rashtriya Swasthya Bima Yojana (RSBY) at the national level, Rajiv Arogyasri Scheme in Andhra Pradesh, Kalaingar's Insurance Scheme in Tamil Nadu, Vajpayee Arogyashree in Karnataka, Mukhya Mantri BPL Jeevan Raksha Kosh in Rajasthan and the critical illness schemes in Delhi and Himachal Pradesh. All these health insurance schemes also have contracted private healthcare providers for quality health services to their beneficiaries. I hope that the findings of this study will merit careful consideration by the policy makers to reform the CGHS-ECHS and similar schemes.



**(Anwarul Hoda)**

Acting Director and Chief Executive

December 13, 2010

## Abstract

This study attempted to evaluate the working of the Central Government Health Scheme (CGHS) and Ex-servicemen Contributory Health Scheme (ECHS) by assessing patient satisfaction as well as the issues and concerns of empanelled private healthcare providers.

The study is based on a primary survey of 1,204 CGHS and 640 ECHS principal beneficiaries, 100 empanelled private healthcare providers and 100 officials of the schemes across 12 Indian cities.

We have found that patients are reasonably well satisfied with the healthcare services of both empanelled private healthcare providers and the dispensaries-polyclinics but are relatively more satisfied with the former than the latter. We also found that beneficiaries are willing to pay more for better quality services. Though the schemes provide comprehensive healthcare services, the beneficiaries incur some out-of-pocket health expenditure while seeking healthcare. Furthermore, beneficiaries are not in favour of the recent proposal to replace the schemes with health insurance for several reasons. The empanelled private healthcare providers are dissatisfied with the terms and conditions of empanelment, especially the low tariffs for their services as compared to prevailing market rates and the delays in reimbursements from the schemes.

We suggest that appropriate efforts be undertaken to enhance the quality of healthcare service provided in the dispensaries-polyclinics of the CGHS and ECHS as well as to address the issues and concerns of empanelled private healthcare providers to ensure better healthcare delivery and for a long-term, sustainable public-private partnership.

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**Key words:** CGHS, ECHS, patient satisfaction, willingness to pay, empanelled private healthcare providers

**JEL Classification:** H30, H51, H53, I19

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# **Healthcare Delivery and Stakeholder's Satisfaction under Social Health Insurance Schemes in India: An Evaluation of Central Government Health Scheme (CGHS) and Ex-servicemen Contributory Health Scheme (ECHS)<sup>1</sup>**

*Sukumar Vellakkal, Shikha Juyal, Ali Mehdi*

## **1. Introduction**

With the objective of ensuring access to good quality and comprehensive healthcare services to central government employees/pensioners and their dependants, the Central Government Health Scheme (CGHS) was set up in 1954. A similar scheme was launched for ex-servicemen (those who avail of pension) and their dependants in 2003. Apart from providing health services through in-house healthcare facilities such as CGHS dispensaries and ECHS polyclinics (hereafter called as 'dispensaries-polyclinics') and referral government hospitals/military hospitals, the ECHS (since its inception) and the CGHS (since 1998), entered into contracts with private hospitals and diagnostic centres (hereafter called as 'private healthcare facilities' or 'private healthcare providers') to provide healthcare to its beneficiaries. In other words, both schemes not only produce healthcare through their own healthcare facilities but also buy healthcare from private healthcare providers to ensure better access to healthcare for their beneficiaries.

Recently, considerable attention has been drawn to these contributory health schemes. In its mid-term appraisal of the Tenth Plan (2002-2007), the Planning Commission has aptly stated: "It is the time to restructure, reform and rejuvenate this (CGHS) contributory health scheme." Similarly, the Sixth Pay Commission (2009) has observed that "there is increasing pressure on CGHS which sometimes results in less than satisfactory services being provided to its beneficiaries and the need of the hour may, therefore, be to retain CGHS in its existing form while simultaneously providing optional in-patient department facilities through health insurance". Recently, there has been a lot of concern amongst empanelled healthcare providers on the terms and conditions of empanelment and some private hospitals have discontinued their empanelment from the schemes. In this context, this study attempts to evaluate both

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<sup>1</sup> The authors were with the Indian Council for Research on International Economic Relations (ICRIER) as Fellow, Research Assistant and Research Associate, respectively when this study was carried out. Comments are welcome at [vellakkal@gmail.com](mailto:vellakkal@gmail.com)



the schemes with special reference to service delivery and issues arising from the partnerships with private healthcare providers. Further, we also examine recent proposals on reforming the contributory schemes by replacing these with health insurance and suggest policy measures to improve the schemes.

This paper is organised under 7 sections. Section 1 presents the context while section 2 provides a brief profile of CGHS and ECHS. Section 3 discusses data sources. Section 4 deals with beneficiary satisfaction under the schemes where we discuss the relevance of patient satisfaction in health policy, various components of patient satisfaction and present the empirical evidence on the extent of satisfaction. In section 5, we examine issues related to the contracting of private healthcare providers. Section 6 examines some of the proposals on reforming the schemes while the last section (section 7) concludes with policy recommendations.

## **2. A brief profile on CGHS and ECHS schemes**

### ***2.1 Target Beneficiaries***

The following categories of population and their dependents residing in cities covered under CGHS are entitled to benefit from the scheme:

1. All central government servants paid from civil estimates (other than those employed in railway services and those employed under the Delhi administration except members of the Delhi Police Force).
2. Pensioners drawing pensions from civil estimates and their family members (pensioners residing in non-CGHS areas may also obtain CGHS cards from the nearest CGHS covered city).
3. Members of Parliament
4. Judges of the Supreme Court of India
5. Ex-members of Parliament
6. Former Prime Ministers
7. Former judges of the Supreme Court and High Courts
8. Employees and pensioners of autonomous bodies covered under CGHS (Delhi).
9. Ex-Governors and ex-Vice Presidents

10. Freedom fighters
11. Accredited journalists

The Central Government Health Scheme (CGHS), which was introduced initially in Delhi, was later on expanded to 28 cities in different parts of the country. As of March 31, 2008, CHGS has 0.85 million principal beneficiaries (cardholders) and a total of 3.2 million beneficiaries (including both the principal beneficiaries and their dependents) (India Stat).

Table 1 presents the number of beneficiaries in 24 CGHS cities.

**Table 1: City wise number of beneficiaries under CGHS (as on 31 March 2008)**

*(as on March 31, 2008)*

| City         | Serving Employees | Pensioners     | Others*      | Total           |
|--------------|-------------------|----------------|--------------|-----------------|
| Ahmedabad    | 27043(7074)       | 3873(1727)     | 173(119)     | 31089(8920)     |
| Allahabad    | 90622(16934)      | 12220(4951)    | 25(12)       | 102867(21897)   |
| Bangalore    | 97995(27439)      | 20265(11119)   | 837(526)     | 119097(39084)   |
| Bhopal       | 11280(2820)       | 4540(1135)     | 28(14)       | 15848(3969)     |
| Bhubaneshwar | 11135(2448)       | 1931(659)      | 126(28)      | 13192(3171)     |
| Chandigarh   | 12035(3241)       | 5740(2721)     | 14(7)        | 17789(5969)     |
| Chennai      | 132821(30806)     | 34345(15513)   | 2256(1261)   | 169422(47580)   |
| Dehradun     | 1488(407)         | 3153(1406)     | 6(4)         | 4647(1817)      |
| Guwahati     | 44297(11338)      | 1880(727)      | 330(174)     | 46507(12239)    |
| Hyderabad    | 181294(38970)     | 45876(17587)   | 7594(5510)   | 234764(62067)   |
| Jabalpur     | 79056(15201)      | 25905(10123)   | 160(86)      | 105121(25410)   |
| Jaipur       | 13982(3975)       | 3706(3174)     | 94(39)       | 17782(7188)     |
| Kanpur       | 99983(19960)      | 3706(7934)     | 345(111)     | 104034(28005)   |
| Kolkata      | 148398(40956)     | 54484(23805)   | 4535(2705)   | 207417(67466)   |
| Lucknow      | 114817(20430)     | 21246(4639)    | 192(109)     | 136255(25178)   |
| Meerut       | 27691(6140)       | 10670(4107)    | 322(72)      | 38683(10319)    |
| Mumbai       | 160998(39950)     | 27636(11028)   | 288(171)     | 188922(51149)   |
| Nagpur       | 70279(16395)      | 22458(9064)    | 155(96)      | 92894(25555)    |
| Patna        | 49006(9837)       | 7137(2334)     | 2167(1161)   | 58310(13332)    |
| Pune         | 100821(21307)     | 38129(19311)   | 376(198)     | 139326(40816)   |
| Ranchi       | 11482(2604)       | 3647(1316)     | 19(9)        | 15148(3929)     |
| Shillong     | 4924(1415)        | 459(175)       | 12(5)        | 5395(1595)      |
| Trivandrum   | 36182(9833)       | 14764(6807)    | 325(233)     | 51271(16873)    |
| Delhi        | 1079316(233860)   | 198920(95588)  | 15788(4906)  | 1294024(334344) |
| Total        | 2606945(583340)   | 566690(256950) | 36169(17583) | 3209804(857872) |

Source: [www.indiastat.com](http://www.indiastat.com) (Lok Sabha Unstarred Question No. 2402, dated 22.07.2009).

Note: \* MPs, ex-MPs, journalists, freedom fighters, general public

Figures in brackets show the number of principal cardholders.

Like the CGHS, the ECHS provides medical care to all ex-servicemen (ESM) pensioners including disability and family pensioners and their dependents, which includes wife/husband, legitimate children and wholly dependent parents. To be eligible for ECHS membership, a person must meet two conditions: (a) should have ex-servicemen status, and (b) should be drawing normal service/disability/family pension.

**1. Ex-servicemen pensioners** are those who meet one of the following criteria:

- i) One who has served at any rank, whether as combatant or as non-combatant in the regular Army, Navy and Air Force of the Indian union
- ii) One who has retired from such service after earning his/her pension
- iii) One who has been released from such service on medical grounds attributable to military service or due to circumstances beyond his/her control and is in receipt of disability pension
- iv) One who has been in the Territorial Army – pension holders for continuous embodied/disability attributable to military service/gallantry award winners
- v) Members of the Military Nursing Service (MNS)
- vi) Whole time officers (WTOs) of the National Cadet Corps (NCC) who are ex-servicemen/next of kin (NOK) and are in receipt of pension/disability pension/family pension
- vii) 588 Emergency Commissioned Officers (ECOs)/Short Service Commissioned Officers (SSCOs) who were permanently absorbed in the National Cadet Corps as whole time officers (WTOs) after their release from the armed forces
- viii) Service officers who, prior to completing their pensionable service, joined PSUs

**2. Family Pensioner:** The legally wedded spouse of armed forces personnel, whose husband/wife (as the case may be) has died either while in service or after retirement and is granted family pension. This also includes a child or children drawing family pension on the death of his/her pension drawing father/mother, as also parents of a deceased bachelor soldier, who are in receipt of family pension.

At present, the ECHS has 3.4 million beneficiaries that include 1.1 million principal beneficiaries and their dependents.

## 2.2 Subscription rates

Both schemes are financed by the Government of India. However, the principal beneficiaries have to make a contribution to become beneficiaries. The principal beneficiaries of CGHS have to make a regular monthly payment whereas the principal beneficiaries of ECHS have to make a one-time contribution at the time of joining the scheme. The rate of contribution varies according to the pay scale of the principal beneficiary. Table 2 gives the contribution structure.

**Table 2: Contribution by the Principal Beneficiaries towards CGHS and ECHS (in INR.)**

| Monthly Pay Scale (in INR) | CGHS*     | ECHS** |
|----------------------------|-----------|--------|
| Up to 3,000                | 15 (50)   | 1,800  |
| 3,001 to 6,000             | 40 (125)  | 4,800  |
| 6,001 to 10,000            | 70 (225)  | 8,400  |
| 10,001/- to 15,000/-       | 100 (325) | 12,000 |
| Above 15,001/-             | 150 (500) | 18,000 |

*Note: \*Monthly contribution, \* \*One-time contribution, Figures in the bracket are the revised rates of contribution of CGHS beneficiaries after the implementation of the Sixth Pay Commission's pay scale.*

## 2.3 Benefits under the schemes

Both schemes provide outpatient department (OPD) services as well as in-patient department (IPD) services to their beneficiaries. One of the unique features of CGHS and ECHS is that they provide uncapped healthcare services to their members. Moreover, these schemes cover different modes of treatment like allopathy, homoeopathy and other Indian systems of medicines like ayurveda, sidha, yoga and unani. The major components of the healthcare benefits under the schemes are as follows:

1. Dispensary/polyclinic services including domiciliary care
2. Family welfare and mother and child health (FW and MCH) services
3. Specialists' consultation facilities at dispensary, polyclinic and hospital levels including X-rays, ECG and laboratory examinations

4. Hospitalisation
5. Organisation for the purchase, storage, distribution and supply of medicines and other requirements
6. Health education to beneficiaries

#### ***2.4 Healthcare Service Delivery Channels***

Both schemes provide OPD services through their in-house healthcare facilities (CGHS dispensaries/ECHS polyclinics) and IPD services through referrals to government hospitals/military hospitals and empanelled hospitals/diagnostic/imaging centres.

CGHS beneficiaries are affiliated to a particular dispensary that is the closest to their residence. However, they can seek dispensary treatment services from the allotted dispensary only. ECHS members are allotted a parent polyclinic, one closest to their permanent/temporary residence. But irrespective of the parent polyclinic, an ECHS beneficiary can avail of treatment facilities in any of the ECHS polyclinics throughout the country. Moreover, in contrast to the CGHS, an ECHS member can be referred to a hospital by any polyclinic as per the referral policy, if required.

Considering the limited facilities in the dispensaries/polyclinics and overcrowding in service hospitals and in an attempt to provide high quality and timely healthcare to its members, both schemes have entered into partnerships with private hospitals and diagnostic/imaging centres. The treatment facilities provided by the empanelled private healthcare providers can be availed of through referrals from specialists in dispensaries/polyclinics/government hospitals. However, in emergency cases, there is no need for any such referrals to avail of treatment from these empanelled healthcare providers.

The empanelled hospitals and diagnostic centres are affiliated to the schemes through an agreement with the government. They provide IPD as well as diagnostic/imaging services to CGHS/ECHS beneficiaries, for which they charge a previously fixed rate.

## **2.5 Claim settlement**

The types of claims submitted for reimbursement under CGHS and ECHS have been classified into claims by individual beneficiaries, by authorised local chemists and by recognised hospitals/diagnostic centres. The operating characteristics of each of these vary, depending on the nature of the claim and procedural complexity, the number of claims received etc.

### **1) Claims by CGHS Individual Beneficiaries**

Claims pertaining to hospitalisation of central government employees and pensioners/in-service autonomous bodies under CGHS are processed and paid for by their respective departments. A separate head of account – medical treatment – has been introduced to order expenditure incurred for the purposes of claims. Pensioners, however, are entitled to cashless treatment facilities and the empanelled healthcare providers get their bills directly reimbursed from the government. A pensioner may put a claim for reimbursement under any of the following circumstances:

- i) In the case of an emergency, the patient has to undergo treatment from an unrecognised private hospital
- ii) If the required treatment is not available at CGHS/government hospitals or in private recognised hospitals and the patient has to undergo treatment at an unrecognised private hospital
- iii) In case credit facilities for the pensioners are being refused by the private recognised hospital or
- iv) In case the medicines are purchased from the open market during an authorised local chemist (ALC) strikes period.

Under certain emergencies like cardiovascular problems, cerebral vascular/stroke, acute renal failure and heat stroke, recognised private hospitals also provide credit facilities to all beneficiaries on the production of a valid CGHS card and the beneficiaries can claim reimbursement from the parent department/CGHS.

## **2) Claims by recognised private hospitals/diagnostic centres**

Recognised private hospitals/diagnostic centres have to provide credit to pensioners for services rendered and, in turn, claim reimbursement from the CGHS.

## **3) Claims by authorised local chemists**

- i) Medicines indented from the ALC and supplied at the dispensary and provided to the beneficiary are billed to CGHS by the ALC
- ii) When ALC is not able to provide the medicine indented from him, the beneficiary buys these from the open market and gets the cost reimbursed from the ALC

The methods of claims settlement under both the schemes are more or less similar.

## **3. Data**

As the main objective of the schemes is to ensure the provision of high quality healthcare services to its beneficiaries, we believe that information on the level of beneficiary satisfaction under the schemes can be considered an indicator of whether the schemes are in fact meeting its objectives or not and where interventions is necessary. In this study, we analysed the overall satisfaction of beneficiaries with the schemes based on self reported patient satisfaction,, a contingent valuation method to assess the willingness to pay for better healthcare services and measuring the comprehensiveness of the schemes in terms of its ability to reduce the financial burden of healthcare expenditure on beneficiaries. Thereafter, we assess the issues with contracting private healthcare service providers by examining issues and concerns of empanelled private healthcare providers under the schemes.

The data used in the study mainly comes from a primary survey conducted among the principal beneficiaries of CGHS and ECHS, empanelled private hospitals and CGHS-ECHS officials in 12 Indian cities. We adopted the stratified sampling method to select the respondents from CGHS and ECHS beneficiaries. We selected 12 cities

from the total of 24 CGHS cities. An effort was made to ensure that the selected cities have centres for ECHS as well. The 12 cities were selected on the basis of their size and geographical location. The cities were classified into small, medium and large, based on the number of beneficiaries and further classified into North, South, East and West to ensure balanced geographical coverage. Accordingly, the following cities were selected for the survey: Bhubaneshwar, Thiruvananthapuram, Ahmedabad, Chandigarh, Meerut, Patna, Jabalpur, Lucknow, Hyderabad, Kolkata, Mumbai and Delhi.

Given the study objectives as well as resource constraints, we arbitrarily fixed the total sample size as 1,204 principal beneficiaries of CGHS and 640 of ECHS, 100 empanelled private healthcare providers and 100 CGHS-ECHS officials consisting of city and dispensary level heads of CGHS and ECHS across the 12 cities. After the city-based stratification of respondents, we applied a proportionate random sampling method for the selection of beneficiaries. Since the CGHS beneficiaries consist of both serving personnel and pensioners, the sample was selected in proportion to their membership status. In addition, at least 1 per cent of the respondents from the CGHS held high office (MPs, ex-Prime Ministers, ex-Governors etc.); the remainder were covered according to their pay-scale contribution to CGHS. The principal beneficiary lists were provided by the dispensaries in the case of the CGHS, and by the central organisation of ECHS in the case of principal beneficiaries of the ECHS. The primary survey was conducted from October 2008 to January 2009. We have ensured that at least one of the family members of those who have been surveyed by us had utilised healthcare services in the past five years in both types of healthcare services. Nevertheless, to ensure easy access to our sample population and to ensure that they have utilised healthcare services, we have fixed dispensaries-polyclinics as the venue of the survey.

#### **4. Satisfaction of Beneficiaries with the Schemes**

Let us now discuss the overall satisfaction of beneficiaries with the scheme. As we mentioned above, we assess the beneficiary satisfaction using the following three methods – self reported patient satisfaction, contingent valuation approach using



beneficiaries' the willingness to pay for better healthcare and measuring the financial comprehensiveness of the schemes.

#### ***4.1 Self reported patient satisfaction***

Satisfaction is believed to be an attitudinal response to value judgments that patients make about their clinical encounter (Kane et al. 1997). Research has identified that patients are able to differentiate their feelings about separate aspects of care such as their satisfaction with nursing care, medical care, other hospital staff, discharge procedures and ease of getting information (Rubin, 1990). Additional research found that patients were also able to distinguish between technical competence, a good bedside manner and concern of staff (Rubin et al. 1990; Willson and McNamara, 1982). Standardised surveys of patient satisfaction have gained wide acceptance as a key component of healthcare quality assessment and healthcare system performance (Scanlon et al. 2001; Harris-Kojetin et al. 2001; Cleary and McNeil, 1988; Mukamel and Mushlin 2001; Simon and Monroe 2001).

There is growing interest in the use of patient outcomes to evaluate organisational and care delivery variables and patient satisfaction is a legitimate indicator of patient outcomes (Nelson et.al. 1989). The study by Jackson et al. (2001) concluded that "patient satisfaction has emerged as an increasingly important health outcome and is currently used for four related but distinct purposes (Locker & Dunt, 1978): (1) to compare different healthcare programmes or systems (2) to evaluate the quality of care (Rubin et al. 1993) (3) to identify which aspects of a service need to be changed to improve patient satisfaction (Jackson & Kroenke, 1997) and (4) to assist organisations in identifying consumers likely to disenrol from the schemes (Weiss & Senf, 1990)."

Despite the increased focus on satisfaction as an outcome measure and a growing body of research, satisfaction has remained difficult to define. However, in a review of patient satisfaction literature, Ware et al. (1978) defined eight dimensions of patient satisfaction that have been addressed in published studies: the art of care (encompassing, for example, personal qualities), technical quality of care (relating to provider professional competence), accessibility/convenience, finances, physical

environment, availability, continuity and efficacy/outcomes of care. Malkin (1991) pointed to the following dimensions that are important to consider in health care design: scale, relationship of indoor and outdoor space, materials, acoustics, lighting, legibility, variety, and special population needs (Annsloan Devlin and Allison B. Arneill, 2003). While numerous satisfaction surveys have been developed, most with acceptable psychometric properties, the factors individual patients use to deem themselves satisfied remain largely unknown. In the present study, we measure the comparative satisfaction levels of principal beneficiaries with dispensaries-polyclinics and empanelled private healthcare providers on four parameters: i) accessibility ii) environment iii) behaviour of doctors and iv) behaviour of staff (excluding doctors but including nurses) on a 3-point scale: bad, satisfactory, and good. Various indices on satisfaction are constructed by using principal component analysis. These are compared between the two types of healthcare services. Further, econometric estimations using linear regression as well as ordered logit regression models are applied to understand the impact of various employment grades of principal beneficiaries and type of contributory schemes on the level of satisfaction.

The key questions that will be answered in this section are the followings. Are patients more satisfied with private healthcare providers than with dispensaries-polyclinics? Is there any difference between the level of satisfaction between CGHS beneficiaries and ECHS beneficiaries? Similarly, is there any difference in the level of satisfaction between beneficiaries of various employment grades?

Let us discuss the relevance of each indicator of patient satisfaction and how these are measured in our study.

#### *4.1.1 Accessibility*

Access has sometimes been identified as one of the dimensions of quality of care (Maxwell, 1984). Accessibility is a significant factor because healthcare has to be within the reach of beneficiaries for them to be able to avail of it. Accessibility and availability of services and resources are also related to patient satisfaction. Among the more frequently studied accessibility/convenience variables are the time and effort required to get an appointment, distance or proximity to the site of care, time and

effort required to get to the place where care is delivered, convenience of location, hours during which care can be obtained, waiting time at the place where care is received, whether help is available over the telephone, and whether care can be obtained at home (John E. Ware Jr. et. al., 1977). Two aspects are important in judging accessibility – the time needed to see a doctor in an emergency situation and in a general situation. Longer waiting times in the physician's office decrease satisfaction with availability. Satisfaction ratings were negatively correlated with waiting times (Deisher, et al., 1965), and patients tended to be more satisfied in hospitals that scheduled more hours of professional nursing (Abdellah and Levine, 1957).

In general, barriers to access to healthcare are understood in terms of financial barriers and geographical barriers. As both the schemes offer comprehensive healthcare with the objective to remove the financial barrier of access to healthcare and ensure better healthcare to its beneficiaries, we do not consider the issue of financial barriers in access to healthcare in our study. Furthermore, in our survey, we have found that the distance to a healthcare facility is not a significant issue for the beneficiaries as far as access to healthcare is concerned. In fact, the beneficiaries of both the schemes are entitled to go to any empanelled private hospital for healthcare (and to any private hospital including non-empanelled hospitals in an emergency). However, even if distance to the healthcare facility is not an access barrier, one can presume that reaching a doctor in case of emergency and waiting time to get an appointment with doctor are important determinants of ease of access to healthcare. Therefore, we do not consider the distance to healthcare facility in this study. Instead, we consider other indicators of access to healthcare that determines the patient's satisfaction. These include i) reaching the doctor over phone in case of emergency ii) waiting time to get an appointment and iii) waiting time to see doctor after appointment.

#### *4.1.2 Environment*

The role of the environment in the healing process is a growing concern among health care providers, environmental psychologists, consultants, and architects (Devlin, 1992, 1995; Martin et. al., 1990; Ruga, 1989; Ulrich, 1992, 1995). Researchers find that changes and additions made to the health care facility's physical and social

environment with the patient in mind can positively influence patients' outcomes (Ulrich, 1984; Verderber & Reuman, 1987). Likewise, health care professionals find that "sensitive design can enhance recovery [and] shorten hospital stays" (Lemprecht, 1996, p. 123).

The concept of a healing environment suggests that the physical environment of the healthcare setting can encourage the healing process and patients' feelings of well-being. Understanding the effects of physical environment stimuli will allow us to design healthcare environments that generate these potential health benefits (Dijkstra, 2008). The fact is that patients mention the importance of such aspects of the environment as cleanliness, comfort, and privacy when asked about their rooms (Bruster et al., 1994). Bitner (1992) suggest that the "servicescape", that is, the environment in which service is experienced, is one of the key components in ensuring guest satisfaction. Several studies of satisfaction among hospital patients support this idea by identifying dimensions related to physical facilities at hospitals that contribute to patients' perceptions of the quality of care received (Hall and Dornan 1988).

Hutton and Richardson (1995) conclude that the exterior environment delivers a message about organisation, its services, and its quality long before the actual encounter takes place. Other researchers have suggested that physical appearance is a significant factor in the overall service rating in healthcare organisations (Reidenbach and Sandifer- Smallwood 1990; Woodside et. al. 1989).

Further, an atmosphere of low level of crowding is also expected to contribute to the perception of better satisfaction among beneficiaries. In the present study, we have taken the following components of environment for measuring patient satisfaction: i) ambience (comfort, hygiene, cleanliness, lighting, etc.) and ii) space, lack of crowding.

#### *4.1.3 Behaviour of Doctors*

Most behavioural health practitioners would agree that patient-provider relationships are an essential component of overall quality of care. Specifically, it is within the

context of the staff–client relationship that many of the treatment services take place; thus, the relationship itself is considered an instrument of service provision (Andrew et. al., 2002). For this reason, any element that might interfere with a staff person’s ability to foster relationships with clients would be expected to diminish satisfaction with those services.

Over the past few years, an extensive body of literature has emerged advocating a ‘patient-centred’ approach to medical care. The ‘patient-centred’ approach has been widely defined as ‘understanding the patient as a unique human being’ (Edith Balint, 1969), ‘a style of consulting where the doctor uses the patient's knowledge and experience to guide the interaction’ (Byrne and Long, 1976), an approach where ‘the physician tries to enter the patient's world, to see the illness through the patient's eyes’ (McWhinney, 1989), and ‘an approach closely congruent with, and responsive to patients' wants, needs and preferences’ (Laine and Davido, 1996). Giving information to patients and involving them in decision-making have also been highlighted (e.g. Lipkin et. al., 1984; Grol et. al., 1990; Wineeld et. al., 1996). The most comprehensive description is provided by Stewart et al. (1995a) whose model of the patient-centred clinical method identifies six interconnecting components: (1) exploring both the disease and the illness experience (2) understanding the whole person (3) finding common ground regarding management (4) incorporating prevention and health promotion (5) enhancing the doctor-patient relationship and (6) ‘being realistic’ about personal limitations and issues such as the availability of time and resources. Beatrice et al. (1998) cited seven areas of patient-centred care: (a) respect for patients’ values, preferences, and expressed needs (b) co-ordination and integration of care (c) information and education (d) physical comfort (e) emotional support and alleviation of fear and anxiety (f) involvement of family and friends and (g) transition and continuity of care (Ann Sloan Devlin, Allison B. Arneill, 2003).

More recent developments (Roth & Fonagy, 1996) emphasise the importance of aspects of the professional-patient relationship, including (a) the patient's perception of the relevance and potency of interventions offered (b) agreement over the goals of treatment and (c) cognitive and affective components, such as the personal bond between doctor and patient and the perception of the doctor as caring, sensitive and sympathetic (Bordin, 1979; Squier, 1990). Although there is some consensus as to

what types of behaviours reflect patient-centeredness, there is also significant disagreement on the inclusion of particular behaviours and the role of the patient; common to most systems are doctor behaviours that encourage patient talk (including question-asking), general empathetic statements, non-medical discussions and affective statements (Nicola Mead and Peter Bower, 2000).

Most of the essential diagnostic information arises from the interview and the physician's interpersonal skills also largely determine the patient's satisfaction and compliance and positively influence health outcomes. Such skills, including active listening to patients' concerns, are among the qualities of a physician most desired by patients. Increasing public dissatisfaction with the medical profession is, in good part, related to deficiencies in clinical communication (Michael Simpson et. al., 1991). The quality of the patient-physician relationship has been suggested as a determinant of the degree of compliance to treatment by the patient, the level of patient satisfaction and degree of “doctor shopping” (Orna Baron et al., 2001).

Since the relationship between doctors and patients are important for better delivery and outcome of healthcare in a patient-centric system, the behaviour of doctors towards patients has considerable importance in beneficiary satisfaction. In this study, we measure beneficiary satisfaction in terms of the behaviour of doctors under the following six headings:

- i. Listening to the health problems of patients
- ii. Explaining health problems to patients
- iii. Proper examination and diagnosis
- iv. Explaining the prescription to patients
- v. Allotment of sufficient time to patients and
- vi. Overall friendliness and care

#### *4.1.4 Behaviour of Other Staff*

Like the behaviour of doctors towards their patients, the behaviour of other staff at healthcare facilities is also an important determinant of patient satisfaction. It is a subjective component as well; it could be argued that these indicators are not directly

related to the quality of treatment or medical infrastructure *per se*, but are based on the non-technical perceptions of the patients. In this study, we consider two indicators of staff behaviour – behaviour of both the administrative and nursing staff and grievance redressal.

As mentioned earlier, the survey questionnaire measured the response of beneficiaries towards their satisfaction with healthcare services on a 3-point scale of bad, satisfactory, good and we have arbitrarily coded these responses with the numerical values of 0, 1 and 2, respectively. Thereafter, we have constructed a satisfaction index after taking the average and then rescaled them on a 0-1 scale for ease of interpretation. Table 3 below presents the various indicators and its components.

**Table 3: Indicators of patient satisfaction**

| <b>Indicators</b>                     | <b>Components</b>  |
|---------------------------------------|--|
| <b>Accessibility</b>                  | • Reaching the doctor over phone in case of emergency      |
|                                       | • Waiting time to get an appointment                       |
|                                       | • Waiting time to see doctor after appointment             |
| <b>Environment</b>                    | • Ambience (comfort, hygiene, cleanliness, lighting, etc.) |
|                                       | • Space, lack of crowding                                  |
| <b>Behaviour of Doctor/Consultant</b> | • Listening to patient's problems                          |
|                                       | • Explaining the problem to patient                        |
|                                       | • Examination and diagnosis                                |
|                                       | • Explaining prescription to patient                       |
|                                       | • Total time allotted to patient                           |
|                                       | • Overall friendliness/care                                |
| <b>Behaviour of staff and nurses</b>  | • Behaviour of staff                                       |
|                                       | • Grievance redressal                                      |

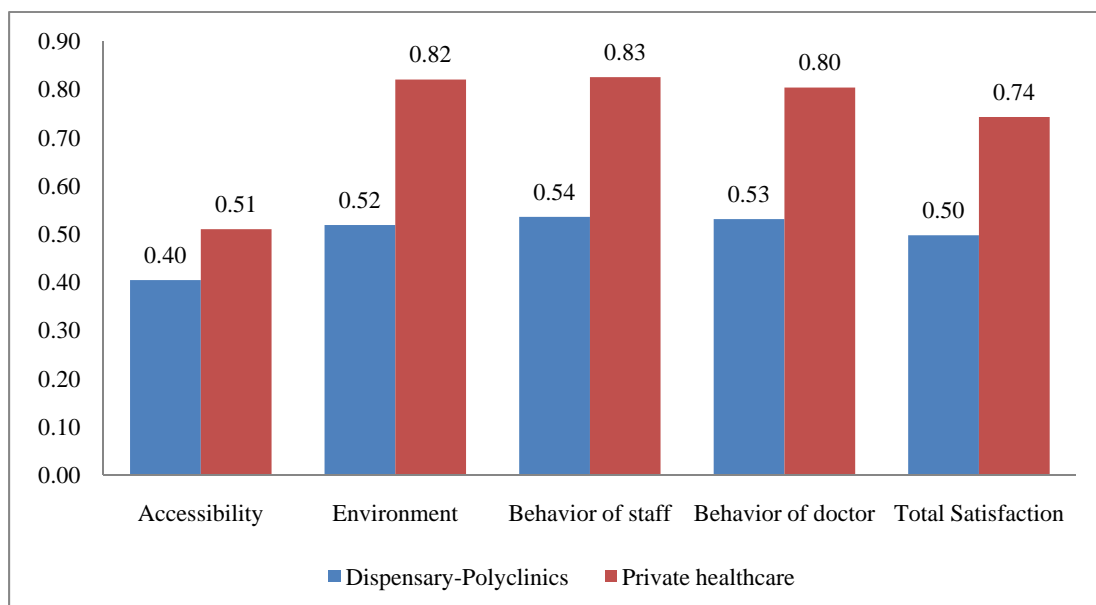
(Response values: Bad= 0; Satisfactory= 1; Good= 2)

Thus, using the average of the response values (Bad= 0; Satisfactory= 1; Good= 2), we have constructed the composite satisfaction indices for the four key indicators (accessibility, environment, behaviour of staff, and behaviour of doctors) as well as an aggregate composite index of satisfaction out of these four indicators, separately for dispensaries-polyclinics and private healthcare services.

We could have applied the principal component analysis for calculating the index; however, since we have attributed equal weights to all the indicators of satisfaction, the application of principal component analysis seems irrelevant in this context. Therefore, we have computed each satisfaction index by calculating the average of the responses and thereafter, adding each satisfaction index and then averaging this to arrive the composite index. For example, we calculated the satisfaction index of ‘accessibility’ by separately calculating the average response (Bad= 0; Satisfactory= 1; Good= 2) of each of its sub-indicators such as ‘reaching the doctor over phone in case of emergency’, ‘waiting time to get an appointment’ and ‘waiting time to see doctor after appointment’ and then calculated the average of these three sub-indicators to arrive at the composite index of ‘accessibility’. Similarly, we have calculated the composite index for the rest of the three indicators: ‘environment’, ‘behaviour of staff’, and ‘behaviour of doctors’. Finally, we have taken the average of these four key indicators of satisfaction to arrive at the index for ‘total satisfaction’.

As mentioned already, we have 10 satisfaction indices of which five are for the services of dispensaries-polyclinics and the rest are indices for the services of private healthcare services; Figure 1 below presents the mean of each of the satisfaction indices.

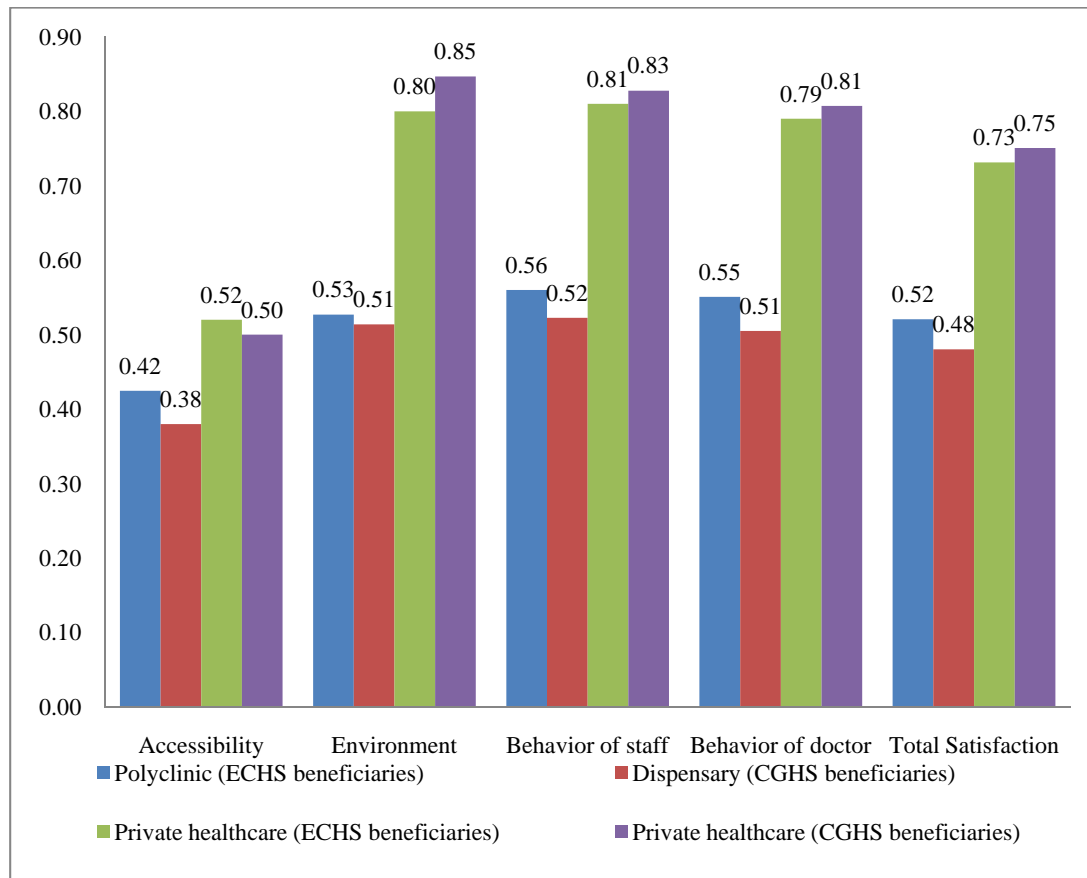
**Figure 1: Satisfaction indices on patient satisfaction between dispensaries-polyclinics and private healthcare (mean)**



*Source: Calculated by the authors from primary data.*



**Figure 2: Satisfaction indices on patient satisfaction: CGHS and ECHS beneficiaries wise**



*Source: Calculated by the authors from primary data*

*Note: The satisfaction index ranges from 0 to 1.*

From the above figure, we can infer that, in general, patients are relatively more satisfied with the services of empanelled private healthcare providers than with that of dispensaries-polyclinics. We also observe that except for the index of accessibility, private healthcare scores very high on all the other three indicators as compared to dispensaries-polyclinics. This finding conforms to the presupposition that the private sector is considered to be more efficient in delivering services than the public sector.

Further, we also observe that CGHS beneficiaries are less satisfied than the ECHS beneficiaries are, across the polyclinics-dispensaries services. One reason for the higher level of satisfaction with ECHS facilities is that it has been set up recently and the existing infrastructure, therefore, may be new.

## Econometric estimation

With the help of econometric methodology, we estimate the factors affecting the level of patient satisfaction and the willingness to pay (WTP) of beneficiaries for better quality of services.

We estimate linear regression models separately for each of the 10 indices of patient satisfaction, which are the dependent variables. We estimate the factors affecting the satisfaction level using the following equation:

$$Y = \beta_0 + \beta_1 AGE + \beta_2 SERV + \beta_3 (AGE * SERV) + \beta_4 SCHEME + \beta_5 EMPGRADE + \varepsilon .(1)$$

where

AGE denotes the age of the respondent

SERV is a dummy variable and denotes serving employees, where SERV =1 if the beneficiary is a serving employee; 0 otherwise (i.e. pensioner)

SCHEME denotes scheme dummy and assumes the value 1 if the beneficiary belongs to the CGHS, and 0 if the beneficiary belongs to the ECHS

EMP\_GRADE represents the five ‘employment grades’. For ease of analysis, we have collapsed the bottom two employment grades (lowest grade and low grade) in to one and named it ‘Lower Grade’; similarly, the top two grades (high grade and highest grade) have been collapsed into one and termed ‘Higher grade’. Subsequently, we have categorised the grades into three dummies: (lower grade =1, Medium grade=1, Higher grade=1; the ‘lower grade’ is the reference category in our estimation). The equation has been estimated separately for each employment grade.

The independent variables, as listed above, are age, employment status of the beneficiary, i.e. whether the beneficiary is a serving employee or pensioner, an interactive variable between age and serving employees, scheme dummy, i.e., whether the beneficiary belongs to CGHS or ECHS, and the employment grade of the beneficiary. The detailed results from the econometric estimation are furnished in the appendix section. To ensure the robustness of the estimate, we had also run ordered logistic regression models.

**Table 4: Descriptive statistics (n=1846)**

| Indices of satisfaction of beneficiaries across various employment grades | Dispensaries-polyclinics | Private hospital |
|---|--------------------------|------------------|
| Mean of Satisfaction Index: Access to healthcare                          | 0.42 (0.25)              | 0.52 (0.28)      |
| Lower grade   | 0.33 (0.22)              | 0.50 (0.31)      |
| Medium grade  | 0.44 (0.23)              | 0.50 (0.28)      |
| Higher grade  | 0.53 (0.27)              | 0.56 (0.27)      |
| Mean of Satisfaction Index: Environment                                   | 0.52 (0.25)              | 0.82 (0.25)      |
| Lower grade   | 0.52(0.26)               | 0.81 (0.25)      |
| Medium grade  | 0.52 (0.25)              | 0.81 (0.25)      |
| Higher grade  | 0.53 (0.26)              | 0.84 (0.21)      |
| Mean of Satisfaction Index: Behaviour of staff                            | 0.54 (0.25)              | 0.83 (0.25)      |
| Lower grade   | 0.47 (0.25)              | 0.82 (0.26)      |
| Medium grade  | 0.56 (0.24)              | 0.83 (0.25)      |
| Higher grade  | 0.62 (0.24)              | 0.83(0.24)       |
| Mean of Satisfaction Index: Behaviour of doctors                          | 0.53 (0.22)              | 0.80 (0.22)      |
| Lower grade   | 0.46 (0.18)              | 0.75 (0.20)      |
| Medium grade  | 0.58 (0.22)              | 0.80 (0.23)      |
| Higher grade  | 0.59 (0.20)              | 0.82 (0.20)      |
| Mean of total satisfaction Index (1+2+3+4)                                | 0.50 (0.19)              | 0.74 (0.21)      |
| Lower grade   | 0.42 (0.16)              | 0.72 (0.21)      |
| Medium grade  | 0.52 (0.20)              | 0.73 (0.22)      |
| Higher grade  | 0.58(0.16)               | 0.74 (0.20)      |
| Age   | 54.55 (12.23)            |                  |
| Total sample size (N)   | 1804                     |                  |
| Proportion of CGHS beneficiary in the sample                              | 65%                      |                  |
| Proportion of ECHS beneficiary in the sample                              | 35%                      |                  |
| Distribution of sample beneficiary in terms of management grade           |                          |                  |
| lowest grade  | 0.14%                    |                  |
| Low grade   | 0.30%                    |                  |
| Medium grade  | 0.24%                    |                  |
| High grade  | 0.17%                    |                  |
| Highest grade   | 0.15%                    |                  |

*Figures in the parentheses show standard deviation)*

The table below (Table 5) presents results from the linear regression models and ordered logit models. Though we have estimated the equation separately for each of the ten satisfaction indices, we are presenting results only of the ‘total satisfaction index’, separately for dispensaries-polyclinics and private healthcare providers.

**Table 5: Results from Econometric estimation**

|                        | Linear regression models  |   | Ordered logistic regression models (odds ratios)                  |   |
|------------------------|---|---|---|---|
|                        | <i>Composite index of satisfaction (Dispensaries-polyclinics)</i> | <i>Composite index of satisfaction (Private healthcare providers)</i> | <i>Composite index of satisfaction (Dispensaries-polyclinics)</i> | <i>Composite index of satisfaction (Private healthcare providers)</i> |
| Constant               | 0.51(15.56)*  | 0.53 (12.86)*   | 0.98(-1.86)***  | 1.01(2.30)**  |
| Age                    | -0.01(-2.06)**  | 0.01(2.16)*   | -0.41(-1.38)  | 3.63(1.96)**  |
| Serving Employee       | -0.04(-0.90)  | 0.13(2.20)**  | 1.01(1.10)  | .98(-1.64)***   |
| Age * Serving employee | 0.01(0.76)  | -0.01(-2.00)**  | 0.75(-1.90)***  | 1.94(4.39)*   |
| Scheme dummy           | -0.04(-4.15)*   | 0.10(7.05)*0  | 1.16(0.96)  | 0.80(-1.33)   |
| Medium grade           | 0.11(7.90)*   | -0.01(-0.74)  | 3.46(5.56)*   | 0.93(-0.98)   |
| Higher grade           | 0.16(11.02)*  | 0.01(0.52)  | 3.45 (5.32)*  | 1.03(2.30)**  |
| Adj R-squared          | 0.137   | 0.079   | -   | -   |
| Cut 1                  | -   | -   | -1.92 (SE=.42)  | -.78 (SE=.41)   |
| Cut 2                  | -   | -   | 1.59 (SE=.41)   | .6098(SE=.41)   |
| LR chi2(8)             | -   | -   | 182.18  | 76.36   |
| Prob > chi2            | -   | -   | 0.000   | 0.000   |
| Log likelihood         | -   | -   | -1501.75  | -1445.38  |

*Level of significance: \* 1% level; \*\* 5% level; \*\*\* 10% level*

*In employment grades, very low grade is treated as the reference category)*

In the models, we find that there is a statistically significant difference between the total satisfaction level between ECHS and CGHS beneficiaries across the polyclinics-dispensaries, and the CGHS beneficiaries are less satisfied than the ECHS beneficiaries. Similarly, we also find that the employment grade of the beneficiary has an impact on satisfaction levels, especially in the polyclinics-dispensaries. Among the total three employment grades, our estimates reveal that as compared to ‘lower

grades', the beneficiaries belonging to the top two employment grades are more satisfied. But, there is no such statistically significant difference between the different grades in satisfaction level of patients with private healthcare providers.

#### ***4.2 Willingness to Pay (WTP) for Better Quality of Healthcare***

Apart from using various composite indices of satisfaction, as a proxy for the level of patient's satisfaction, we applied the contingent valuation method by eliciting their 'Willingness To Pay' (WTP) – this is the additional monthly financial contribution towards the scheme beneficiaries are willing to pay for better quality of healthcare services. We consider the WTP as a proxy for their desire to receive better quality of services than that they receive now. It implies that those who are WTP expect to have higher levels of satisfaction than their current levels. We asked beneficiaries on their WTP for better quality healthcare under the schemes. Those who were willing to increase their contribution were asked how much per month they would pay in addition to their current contribution. The survey question was: "For providing better quality of healthcare services under the schemes, how much are you willing to contribute per month, in addition to the current contribution?" To overcome the starting-point bias while revealing their willingness to pay, we applied a bidding game method. We used three levels of bids of the bidding game version of WTP.

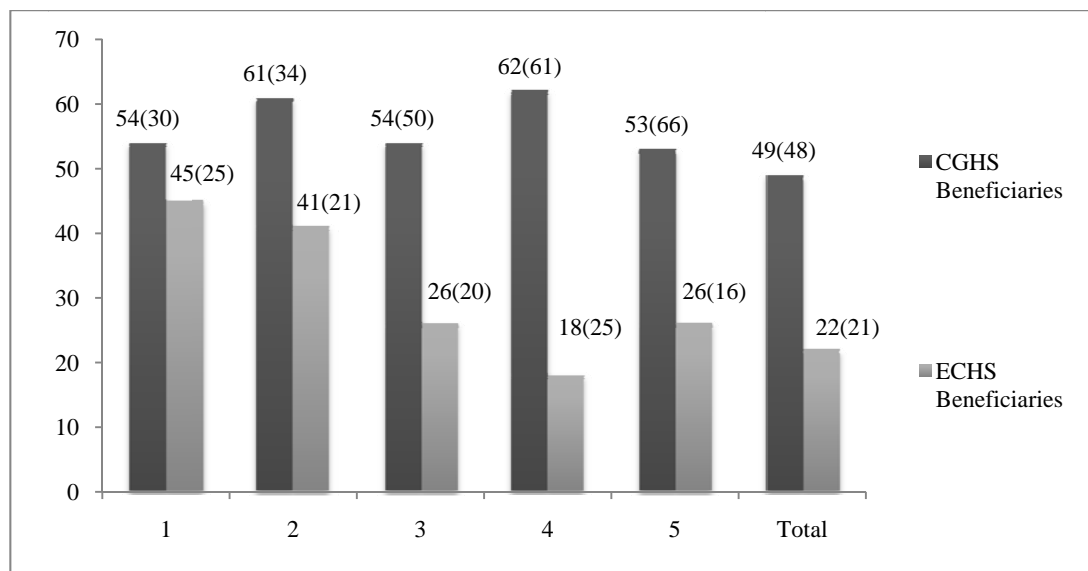
- **WTP Version 1:** WTP base amount is Rs.100 and the bid amount is Rs.10 (10 per cent of the base amount).
- **WTP Version 2:** WTP base amount is Rs 150 and the bid amount is Rs.15 (10 per cent of the base amount).
- **WTP Version 3:** WTP base amount is Rs.200 and the bid amount is Rs.20 (10 per cent of the base amount).

On a randomly rotational basis, the interviewers presented each WTP version to respondents. To elicit the WTP value under the bidding game method, we start with one value of WTP; if the respondent agrees to the amount, the bid is increased until respondent says 'No' and the value of respondent's WTP is the final 'Yes'. On the other hand, if the respondent does not agree to the base WTP, the amount is reduced by one bid, and the process repeated until the respondent says 'Yes' and this amount

is taken as the WTP of the respondent. Further, we also asked beneficiaries whether they think that their current contribution to the scheme is low or not.

We have found that a majority of CGHS beneficiaries consider that their current contribution is low and they are willing to contribute more, but this was not the case with ECHS beneficiaries. We found that 71 per cent of CGHS beneficiaries but only 28 per cent ECHS beneficiaries were willing to pay an additional monthly financial contribution for better quality healthcare under the schemes. The following two figures, 3 and 4, show the grade-wise proportion of beneficiaries who are willing to make an additional monthly financial contribution towards the scheme and the amount of their WTP, respectively.

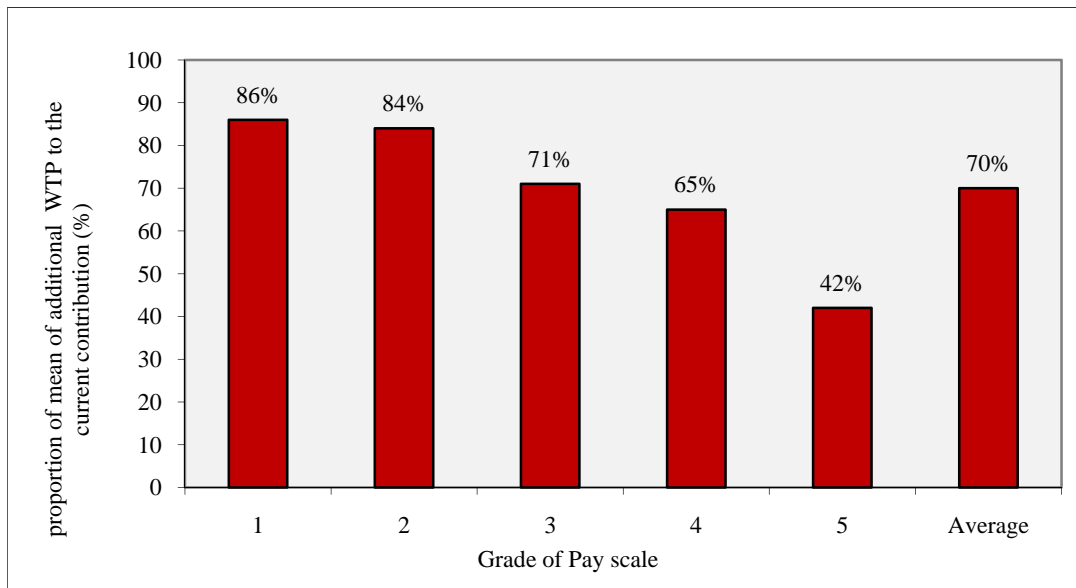
**Figure 3: WTP of CGHS and ECHS beneficiaries, by employment grade (%)**



*Source: Calculated by the authors from primary data; Note: all figures are in percentages; Figures in the bracket show the mean value of WTP in Indian rupees.*

Since CGHS beneficiaries make monthly contributions (in contrast to the one-time payment made by ECHS beneficiaries), we next examined the proportionate difference between the current contribution and their WTP an additional amount over their existing contribution by the CGHS beneficiaries. Figure 4 below shows the proportion of the additional WTP amount to the current monthly contribution of the CGHS beneficiaries, by employment grade.

**Figure 4: Proportion of mean of additional WTP to the current contribution (CGHS beneficiaries)**



*Source: Calculated by the authors from primary data*

As shown in Figure 4, on average, the amount of WTP by CGHS beneficiaries is 64 per cent higher than their current contribution. It can be seen that ratio of the mean of the additional monthly WTP to the existing monthly financial contribution decreases from low grade to high grade, which is in contrast to the trend in terms of the absolute amount of WTP where higher grade is related higher amount of WTP.

However, we should bear in mind some of the limitations of the WTP approach in this context. Over all, there is a common perception among government servants that they are entitled to free healthcare without any financial contribution towards the schemes. Furthermore, what is the guarantee that increased contribution would result in better quality of care in a government setting? These factors may affect our method of elicitation of the WTP of beneficiaries for better healthcare service. Given these limitations, we still have the evidence that the beneficiaries are willing to pay for better healthcare services, which can be interpreted as a quest for accessing high quality healthcare.

#### ***4.3 Comprehensiveness of the schemes in terms of its ability to reduce the financial burden of healthcare expenditure***

As we have noted in the earlier section, both the schemes offer a large number of healthcare benefits to its beneficiaries. Starting from basic consultation services, the

schemes provide inpatient and specialist care in both government and private hospitals. In addition to the utilisation of services at the dispensary and polyclinic levels, our data indicate that 38 per cent of CGHS and 23 per cent of ECHS beneficiaries have utilised private healthcare service in the past one year. Among those who have availed of private healthcare services in the past one year, we have looked at the out-of-pocket expenditure for healthcare services. This has been done by classifying healthcare expenditure under the following headings of direct health expenditure: outpatient consultations, in-patient care (consultations, nursing charges, and room charges), drugs/ medicines and lab tests, imaging (X-ray, scan etc.) (see Table 6).

**Table 6: Out of pocket health expenditure while seeking private healthcare in the past one year by beneficiaries under the schemes**

| <b>Type of Health Expenditure</b>   | <b>CGHS beneficiaries</b>  |   | <b>ECHS beneficiaries</b>  |   |
|---|--|---|--|---|
|   | <i>Percentage of beneficiaries who had incurred out-of-pocket health expenditure</i> | <i>Proportion of out of pocket expenditure to total health expenditure (%) (mean)</i> | <i>Percentage of beneficiaries who had incurred out-of-pocket health expenditure</i> | <i>Proportion of out of pocket expenditure to total health expenditure (%) (mean)</i> |
| Outpatient Consultation   | 37   | 25  | 59   | 90  |
| Inpatient care (Consultation, Nursing and Room charges)                       | 27   | 31  | 43   | 33  |
| Drugs/Medicines   | 40   | 25  | 61   | 21  |
| Lab Test, Imaging (X-ray, Scan etc)   | 42   | 35  | 32   | 19  |
| Total (incurred out-of-pocket expenditure in at least any of the above heads) | 42   | 30  | 61   | 70  |

*Source: Calculated by the authors from primary data*

As can be seen from Table 6, even though these schemes offer uncapped and comprehensive healthcare services, on an average 42 per cent of CGHS and 61 per



cent of ECHS beneficiaries, who had accessed private healthcare in the past one year, had incurred out-of-pocket health expenditure that are not reimbursed. It constituted 30 percent and 70 percent of the total health expenditure of those CGHS and ECHS beneficiaries who incurred out-of-pocket health expenditure, respectively. One reason is the low rates given to empanelled providers; as a result, beneficiaries have to pay more to get better treatment. However, we cannot totally attribute such out-of-pocket spending on healthcare to low tariffs alone, as there are other possible reasons related to physical access to healthcare facilities. CGHS/ECHS dispensaries and polyclinics are centred in urban and semi-urban areas but the beneficiaries, especially pensioners and dependents, may live in villages. Though the pensioners living in non-CGHS areas are allowed a sum of Rs.100 per month to meet medical expenses that do not require hospitalisation, this may not be sufficient.

## **5. Issues and concerns of private healthcare providers**

The empanelled private healthcare providers seem to be dissatisfied with the schemes on various grounds and, as a result, some of the hospitals and diagnostic centres have even been dis-empanelling from the schemes. During our interaction with private healthcare providers as well as with the officials of CGHS and ECHS, we have observed that several hospitals and diagnostic centres have dis-empanelled from the schemes since they are dissatisfied with the terms and condition of empanelment. However, we do not have exact data on how many have dis-empanelled so far. As mentioned earlier, the empanelment of private healthcare providers emerged as a method to provide better healthcare services and hence, increase the satisfaction level of beneficiaries. Once beneficiaries have enjoyed private healthcare services and are happy with such services, the dissatisfaction and the subsequent dis-empanelment of private healthcare providers can lead to a negative impact on the ultimate objectives and purposes of the schemes.

Based on our survey among empanelled hospitals and diagnostic centres, we have identified the major issues and concerns of the empanelled private healthcare providers with CGHS and ECHS as the following: 1) low tariffs (rates) for empanelled healthcare services 2) delay in reimbursement of bills and 3) huge bank

guarantees for empanelment and the exit fee clause. Let us discuss each of these in detail.

### ***5.1 CGHS-ECHS Tariffs for Private Healthcare Services***

The main cause for dissatisfaction among empanelled healthcare providers has been centred on the CGHS-ECHS tariffs. Private hospitals and diagnostic centres are empanelled under the schemes based on an MoU in which they agree to provide certain healthcare services to the beneficiaries at pre-agreed rates. The rates are fixed on the basis of an open tender for each city. Accordingly, the lowest quoted competitive rates are fixed. The rates are revised every three years and were last revised in 2006. However, the issue for empanelled hospitals is that CGHS-ECHS rates are lower than both prevailing market rates for the general public and the rates for other similar schemes. Moreover, all small, medium and larger private healthcare providers are given the same rate for each service, irrespective of variations in quality and the actual cost of the service. Let us examine the extent to which CGHS and ECHS rates are lower than the other rates.

We have examined the extent to which CGHS/ECHS rates differ from the market rates that are charged from the general public. In this regard, we compared CGHS-ECHS rates with prevailing market rates for the general public. To understand the variations in rates across different types of healthcare providers, we also classified hospitals and diagnostic/imaging centres into small, medium and large, based on the number of beds and number of tests per day, respectively. Since private healthcare providers are empanelled under the schemes for various selected healthcare services, we took a sample of the 10 most utilised services for ease of analysis. Table 7 shows that the rates for the CGHS services are lower than the prevailing market rates for the general public. On average, the rates for hospitals and diagnostic centres are lower by a margin of 43 per cent and 52 per cent than the rates charged from the general public, respectively.

**Table 7: Percentage point difference of CGHS rates from the rates for service charged from general public, by type of healthcare providers (%)**

| 10 most utilised treatment/ investigations | Hospitals |           |          |       | Diagnostic and Image Centres |           |          |       |
|--|-----------|-----------|----------|-------|------------------------------|-----------|----------|-------|
|  | Primary   | Secondary | Tertiary | Total | Primary                      | Secondary | Tertiary | Total |
| 1  | -40       | -37       | -54      | -41   | -52                          | -50       | -59      | -52   |
| 2  | -39       | -36       | -37      | -37   | -49                          | -51       | -55      | -51   |
| 3  | -38       | -51       | -61      | -49   | -55                          | -46       | -41      | -49   |
| 4  | -47       | -39       | -51      | -43   | -60                          | -48       | -49      | -53   |
| 5  | -40       | -39       | -55      | -42   | -52                          | -41       | -46      | -46   |
| 6  | -41       | -43       | -55      | -45   | -49                          | -47       | -76      | -51   |
| 7  | -41       | -39       | -51      | -41   | -52                          | -46       | -71      | -51   |
| 8  | -47       | -47       | -51      | -47   | -68                          | -48       | -57      | -59   |
| 9  | -43       | -40       | -64      | -45   | -64                          | -54       | -50      | -57   |
| 10   | -25       | -47       | -60      | -44   | -60                          | -39       | -50      | -48   |
| Average                                    | -40       | -42       | -54      | -43   | -56                          | -47       | -55      | -52   |

*Source: Calculated by the authors from primary data*

The empanelled hospitals also provide healthcare services at pre-agreed rates to several public and private organisations such as Air India, ESI, RBI, and BHEL. The rates for services to these organisations are closer to prevailing market rates and our survey has revealed that they are only 10 per cent lower than the rates for the general public.

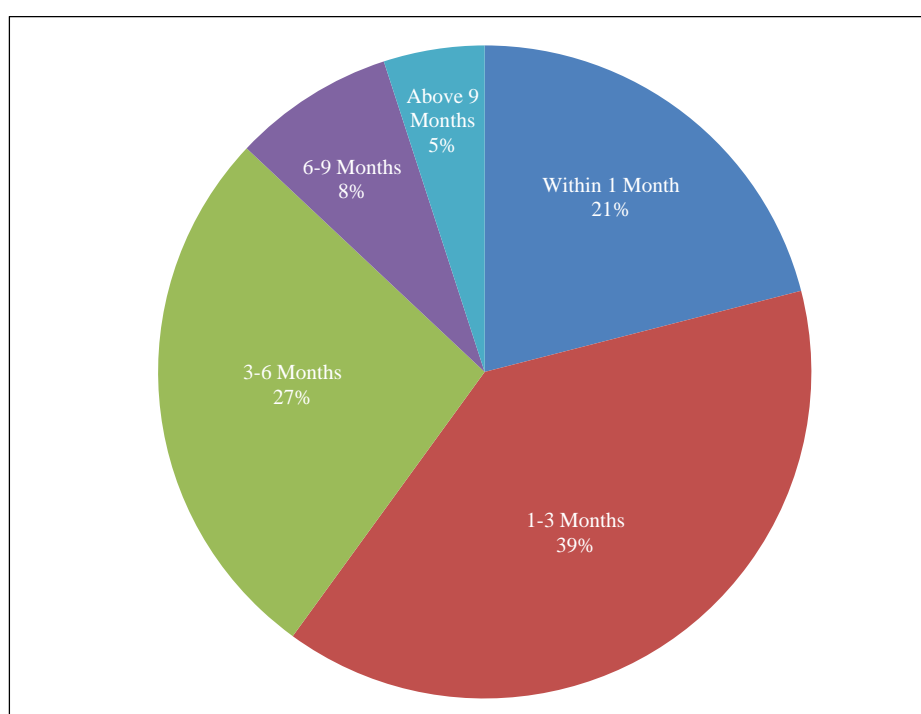
At the same time, we should consider related issues in comparing healthcare rates. How are the prices of healthcare services to the general public determined? By default, the answer is that prices are fixed based on the cost of service provision, but the prices may not be fixed purely on the basis of cost elements. In short, there are hardly any pricing criteria for healthcare services in India. Moreover, the officials of CGHS and ECHS argue that CGHS/ECHS patients ensure a huge market share to the empanelled private healthcare providers; hence, there is no rationale for fixing the CGHS/ECHS rates at par with prevailing market rates.

## **5.2 Delays in Claim Settlement**

Recognised private hospitals/diagnostic centres are required to provide services to pensioners on credit and claim reimbursements from the CGHS. All beneficiaries of

ECHS are entitled to credit facilities. Although pensioners under CGHS constitute around 30 per cent of total CGHS beneficiaries, there has been a huge increase in their rate of utilisation. For instance, according to the Ferguson report (2008), in 2003-04, pensioner claims exceeded the claims of the previous year by 72 per cent. It has been reported that there is considerable delay in getting reimbursement amounts from CGHS and ECHS and our estimates show that the average period is four months. Figure 5 gives the break-up of the delay in the settlement of claims of hospitals and diagnostic centres after submission of bills to the CGHS.

**Figure 5: Length of delay in Claim Settlements**



*Source: Calculated by the authors from primary data*

Several empanelled healthcare providers consider the delay in reimbursements a serious problem, making it unattractive for them to continue with CGHS and ECHS.

Currently, claim settlements are done through in-house facilities under both CGHS and ECHS. Our interactions with CGHS/ECHS officials, along with the survey of CGHS-ECHS officials and empanelled hospitals, showed that the delay in reimbursement is partly due to the mismatch between allocated budgets and revised estimates where budgetary allocations, revised or otherwise, fall short of actual

expenditure incurred. As a result of this under-allocation, there are long delays in making payments as well as outstanding, unpaid claims at the end of each financial year, which are carried over to the next year. Apart from budget constraints, multiple levels of scrutiny, lack of computerisation and lack of adequate manpower for processing these claims impede the speedy delivery of claim amounts. The same parameters are checked at multiple levels without any major value addition at these stages, except where technical expertise is required. Moreover, in spite of multiple levels of scrutiny of claims, five per cent of the bills are rejected at the Pay and Accounts Office (PAO) level due to inadequate documentation. The main reasons for rejections at the PAO level are the following: i. the claim is not signed by the claimant ii) the approving authority has not signed at all the required places (at times, the PAO insists that each and every page of the bill should be signed) iii) supporting vouchers/bills are inadequate and iv) there are calculation mistakes

#### *5.2.1 Feasibility of Third-Party Administrators (TPAs) for claim settlements*

One option for speeding up the bill settlement of empanelled healthcare providers can be the appointment of the third party administrators (TPAs). The CGHS has already appointed some TPAs on an experimental basis. At present, TPAs are important stakeholders in the Indian health insurance industry. TPAs are licensed intermediaries between insurance companies, healthcare providers and insured people. Their main task is settle claims in the health insurance business but they also provide various agency services in healthcare. At present, there are 28 licensed TPAs providing health services in India.

The annual report (2007-08) of the Insurance Regulatory and Development Authority (IRDA) indicates that there has been considerable improvement in the performance of TPAs in terms of the time taken for claim settlements. As can be seen from Table (Table 8) below, 76 per cent of the claims were settled within one month and 15 per cent within one to three months for the year 2007-08. Similarly, in the year 2006-07, 76 per cent of the claims were settled within one month and 20 per cent within one to three months. Table 10 also shows that compared to the previous year's level of 65 per cent claim settlements within one month, the performance of TPAs in claim settlement has shown a significant improvement. Since the lion's share of the claims

are being settled within one month, the underlying reasons for outstanding claims may be complicated and problematic, requiring careful scrutiny. In fact, the IRDA has been taking various steps to improve the performance of TPAs.

**Table 8: Period of claim settlements by TPAs**

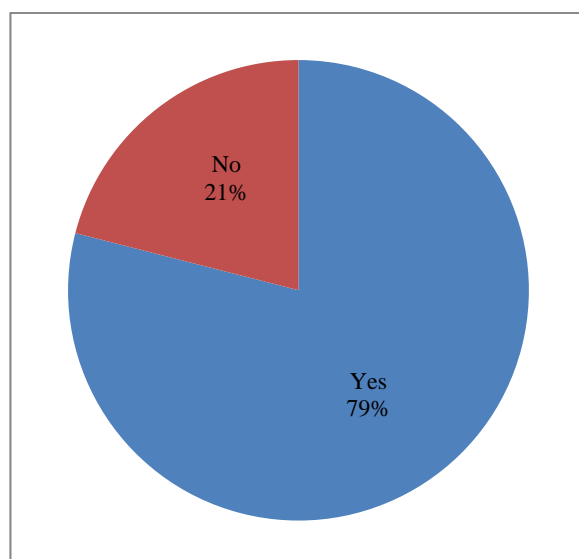
| Years   | Claims Received | Within 1 month       | Within 1-3 months  | Within 3-6 months | More than 6 months | Claims Outstanding |
|---------|-----------------|----------------------|--------------------|-------------------|--------------------|--------------------|
| 2007-08 | 1,986,859       | 1,513,375<br>(76.17) | 302,830<br>(15.24) | 48,908<br>(2.46)  | 12,660<br>(0.64)   | 156,861<br>(7.89)  |
| 2006-07 | 1,840,298       | 1,406,815<br>(76.44) | 367,298<br>(19.96) | 44,711<br>(2.43)  | 10,291<br>(0.56)   | 158,925<br>(8.53)  |
| 2005-06 | 1,126,895       | 730,269<br>(64.80)   | 291,766<br>(25.89) | 36,051<br>(3.20)  | 10,597<br>(0.94)   | 104,740<br>(9.29)  |

Source: IRDA Annual Reports 2007-08, 2006-07 & 2005-06.

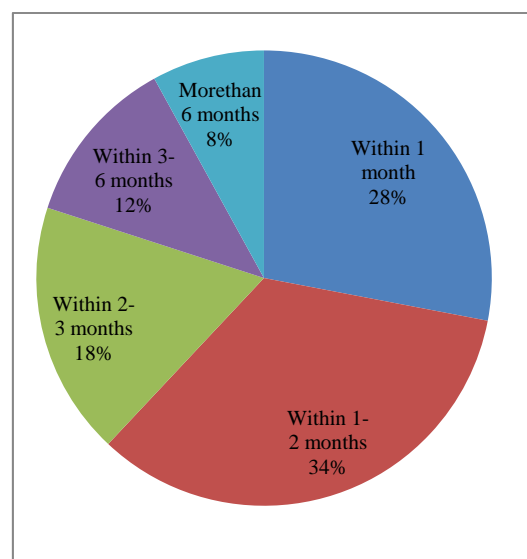
Note: Figures in parentheses indicate the ratio (in per cent) of claims settled to the total claims received.

Let us now discuss the experiences of hospitals with TPAs in settling claims under health insurance arrangements as well as their preference for TPAs for CGHS/ECHS claim settlements (Figures 6 and 7).

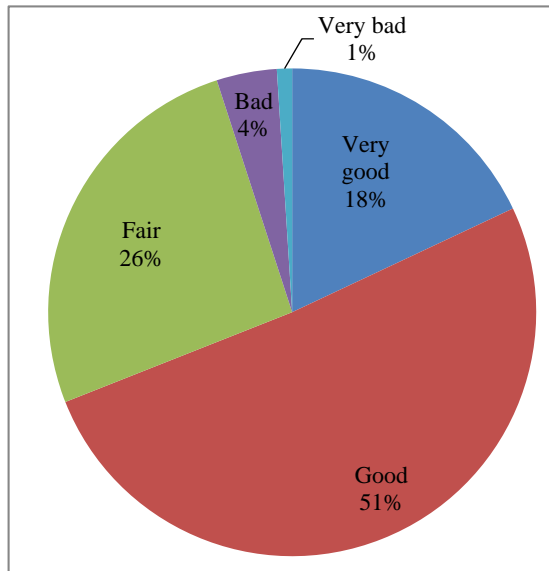
**Figure 6: Status of business deals of hospitals and diagnostic centres with TPAs**



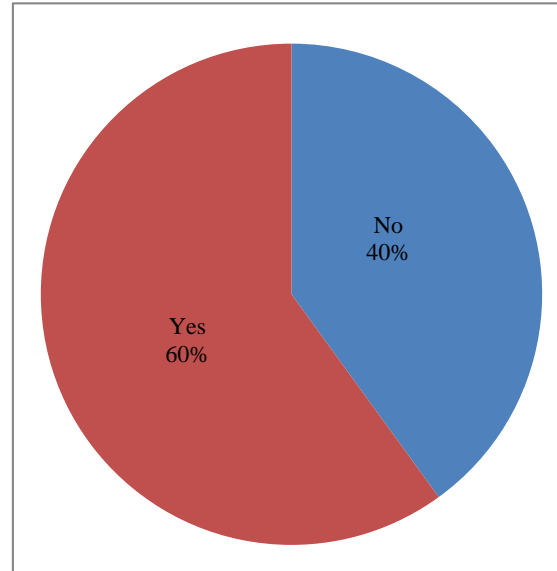
**Figure 7: Time taken by TPAs for claims settlement**



**Figure 8: Satisfaction levels of hospitals with TPA service**



**Figure 9: Preference for TPA service for CGHS/ ECHS claim settlement by hospitals**



*Source: Calculated by the authors from primary data*

The figures above show that 79 per cent of the empanelled hospitals already have a business relationship with various TPAs in other contexts. However, our survey among private healthcare providers indicates that only 28 per cent and 34 per cent of the claims are settled within one month and one to two months, respectively. Though the exact reasons for such an inconsistency between the data provided by IRDA (table 10) and the data reported by private healthcare providers during our survey is unclear, one possible explanation can be that there may be differences in the method of calculation of the time period of reporting by the TPAs to IRDA. For example, the TPAs might report the period immediately after the claim is cleared but the private healthcare providers might report once the claim amount is fully credited to their bank account. However, we can see that the lion's share of the total number of claims (80 per cent) are settled within a span of three months..

Further, on a three-point scale of responses (very good', 'good' and 'fair') on the level of satisfaction with TPAs, our survey has revealed that the private healthcare providers are reasonably satisfied. About 18 per cent of the private healthcare providers rated their level of satisfaction with their existing TPAs service as 'very good' while 51 per cent and 26 per cent their level of satisfaction as 'good' and 'fair' respectively. Furthermore, 60 per cent of the private healthcare providers prefer to

have TPAs for claim settlement under the CGHS-ECHS. While we do not have any evidence to show that TPAs are an ideal system of claim settlement, our analysis shows that, as compared to the current system of claim settlement under the CGHS, the TPAs system is relatively better.

### ***5.3 Bank Guarantee and Exit fee issues***

Empanelled providers are dissatisfied with the huge bank guarantee that they have to furnish to get affiliated to the schemes. The hospital/diagnostic centres have to furnish a continuous, revolving and irrevocable performance bank guarantee from a nationalised bank for an amount of Rs.1 million (Rupees Ten lakh), valid for a period of five years in the prescribed proforma. This requirement has been imposed to ensure due performance and for efficient service and to safeguard against any default. In the case of any violation of the provisions of the agreement, the provisions of liquidated damages will be applicable<sup>2</sup>.

Similarly, if they want to dis-empanel, they have to pay an exit fee as penalty. In case the notified rates are revised by the Ministry of Health and Family Welfare after empanelment and such revised rates are not acceptable to the empanelled hospital/centre, or the hospital/centre no longer wishes to continue on the list of empanelled hospitals/centres for any other reason,, it can apply for exclusion from the panel by giving three months notice and by depositing an exit fee equivalent to the average monthly bill submitted by it to the CGHS in the preceding one year.

## **6. Review of the proposals to replace the schemes with health insurance**

Before concluding this paper, let us also review some of the recent policy proposals to replace these contributory schemes with health insurance. The mid-term appraisal of the Tenth Plan by the Planning Commission (mid-term appraisal document, 2008) has proposed that “existing subscribers to the CGHS could exercise the option of continuing with the current arrangement or, alternately, subscribing to a new system

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<sup>2</sup> “ In case of any violation of the provisions of the Agreement by the Hospital / Centre such as (but not limited to), refusal of service, refusal of credit facilities to eligible beneficiaries and direct charging from the CGHS beneficiaries, undertaking unnecessary procedures, prescribing unnecessary drugs/tests, deficient or defective service, over billing and negligence in treatment, the CGHS/Ministry of Health and Family Welfare shall have the right to de-recognise the hospital/centre as the case may be” (CGHS technical document 2008).



developed within the CGHS. Another option is to convert CGHS into a public sector provider of clinical healthcare for the general public, on payment for services, in competition with other providers, public and private, at secondary levels of healthcare. Central government employees may be gradually shifted to a system of health insurance, through which they may access the CGHS or any other clinical healthcare provider of their choice and direct budgetary support to the CGHS could be phased out to the health insurance system. The remaining two years of the Tenth Plan may be used to develop these options further, confer greater operational autonomy to the CGHS in preparation for its new role, and convert it into an appropriate organisational form, like a registered society.”

Similarly, the Sixth Pay Commission (2008) observed that there is increasing pressure on CGHS, which sometimes results in less than satisfactory services being provided to its beneficiaries. Further, the commission also observes that the CGHS is appreciated by a number of employees and most of the pensioners’ associations and, in their submissions to the commission, they have requested the continuation of CGHS facilities. The commission has stressed that “the need of the hour may, therefore, be to retain CGHS in its existing form while simultaneously providing optional in-patient department (IPD) facilities through health insurance. This will provide an alternative to those employees/pensioners who are not satisfied or are not living in the areas covered by CGHS”.

The commission further recommended the introduction of and outlined a health insurance scheme for central government employees/pensioners with the following features:

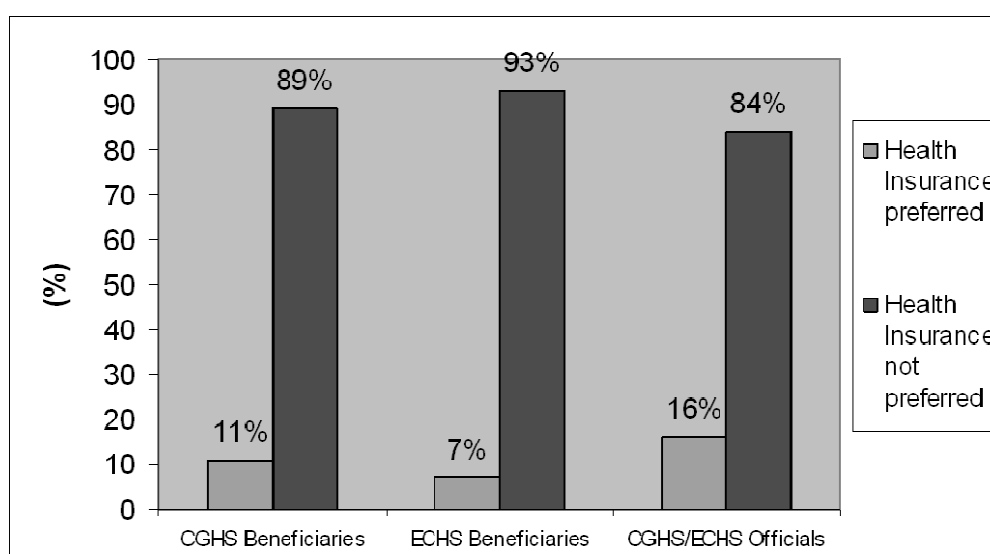
- i) For existing employees and pensioners, the insurance scheme would be available on a voluntary basis, subject to their paying the prescribed contribution. Contributions should be based on the actual premium paid. Group A, B and C employees should contribute 30 per cent, 25 per cent and 20 per cent of the annual premium, respectively, with the government paying the remaining. This arrangement should be reviewed periodically.
- ii) The health insurance scheme would be compulsory for new government employees who join the service after the introduction of the scheme. Similarly, new retirees after the introduction of the scheme would be covered

under it. New recruits and the new retirees may be paid an appropriate amount for meeting their OPD expenses until an insurance scheme to provide OPD facilities is devised.

- iii) Serving employees and existing pensioners shall have the option to opt out of CGHS and subscribe only to the insurance scheme, thus making their own arrangements for OPD needs. In such cases, they will not make contributions to CGHS. On par with new recruits, they will need to contribute only the amounts prescribed for similarly placed class of employees/pensioners under CGHS. They may also be paid an appropriate amount for their OPD expenses until an insurance scheme for providing OPD facilities is devised. Serving employees in non-CGHS areas may also opt for the health insurance scheme.
- iv) All personnel of the central government, including All India Services officers, serving and retired and others who are covered under the existing CGHS and under CS (MA) rules may be offered the health insurance scheme on a voluntary basis.

In accordance with the recommendations of the Sixth Pay Commission, the CGHS has already announced the gradual replacement of the CGHS with health insurance. However, there is much anxiety on the part of beneficiaries as well as CGHS/ECHS officials about the proposed health insurance (Figure 10).

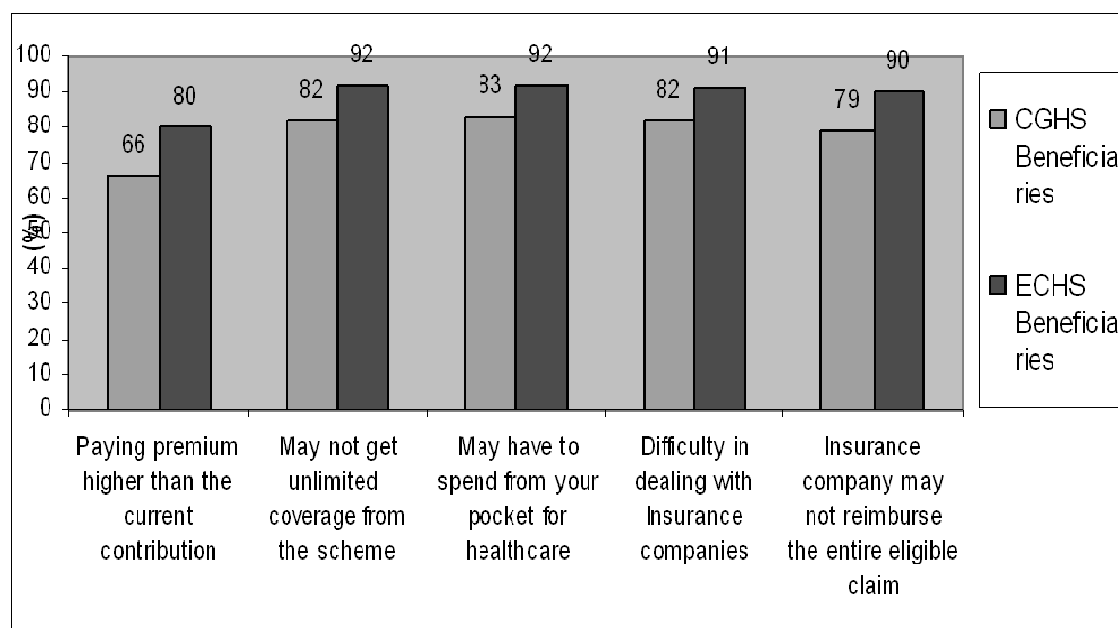
**Figure 10: Responses of beneficiaries and officials to the proposal to replace the schemes with health insurance**



*Source: Calculated by the authors from primary data*

Our survey among beneficiaries and CGHS/ECHS officials reveals that the majority do not want health insurance to replace the schemes. The underlying reasons for such a response are shown in Figure 11.

**Figure 11: Beneficiary responses on reasons for not preferring health insurance to replace CGHS/ECHS**



*Source: Calculated by the authors from primary data*

The main reason beneficiaries do not prefer health insurance is the lack of awareness about the proposed health insurance schemes. As health insurance is almost non-existent in India (at present, less than three per cent of the people are enrolled with health insurance schemes), the majority of Indians do not have any significant experience with health insurance. So far, beneficiaries have enjoyed uncapped healthcare benefits under CGHS/ECHS and there is anxiety that health insurance will not provide such uncapped services. Such anxiety may arise because existing health insurance schemes in India do not cover OPD services and related expenses; besides there is a limit on utilisation under the prevailing schemes. The majority of beneficiaries have the perception that it will be very difficult to deal with insurance companies to get reimbursements and that there is no guarantee that insurance companies will reimburse even eligible claims. Therefore, it is important to clarify issues and concerns about the structure, modalities and benefit packages of the proposed health insurance scheme to beneficiaries before launching it. Interestingly,

the CGHS is in the process of conducting an online survey among beneficiaries to understand their concerns with the health insurance proposal.

The replacement of CGHS with health insurance is expected to provide beneficiaries with wider facilities and quality healthcare. It is also expected that the step would not only make the scheme financially self-sustainable in the long run but also will reduce the administrative burden of verifying bills and/or expanding public sector medical infrastructure that now falls on the government. Since the ECHS has been following the CGHS as its role model, it can be expected that ECHS also will be gradually replaced by health insurance.

## **7. Summary and Policy Implications**

This study, based on the results of a primary survey across 12 select Indian cities among CGHS and ECHS beneficiaries, private healthcare providers and officials of CGHS and ECHS, evaluated both the CGHS and ECHS schemes with special reference to service delivery as well as with issues pertaining to contracts with private healthcare providers. Furthermore, the study examined the recent proposals to replace these contributory schemes with health insurance. We have constructed various satisfaction indices in terms of accessibility, environment, behaviour of doctors and behaviour of staff for measuring the level of satisfaction of patients with healthcare services in CGHS dispensaries-ECHS polyclinics as well as with the services in empanelled private healthcare facilities. We have found that patients are relatively more satisfied with private healthcare services than with dispensaries-polyclinics. Moreover, we have found that CGHS beneficiaries are less satisfied than ECHS beneficiaries across the polyclinics-dispensaries services. One reason for such an outcome could be that ECHS was established more recently in 2003 while the CGHS was established in 1954 and, hence, has new infrastructure. The renovation of the infrastructure at CGHS dispensaries is necessary to ensure better healthcare delivery under the scheme. There is no difference regarding satisfaction in the case of services by private healthcare providers. Further, we also found that though both schemes are said to offer uncapped and comprehensive healthcare services, beneficiaries have been incurring out-of-pocket health expenditure.

Appropriate policy measures have to be introduced to enhance the quality of healthcare service provision in the dispensaries-polyclinics of the CGHS and ECHS as well as to minimise the out-of-pocket healthcare expenditure of beneficiaries. In this regard, both the schemes need to introduce more ‘patient-centred’ treatment practices at CGHS dispensaries and ECHS polyclinics. Moreover, the introduction of proper incentives for doctors and supporting staff at polyclinics and dispensaries might yield better healthcare delivery. The ‘pay for performance’ incentive that has been introduced in several developed and developing countries can be adopted. Apart from these measures, the availability of necessary drugs and medicines also needs to be increased at the dispensaries and polyclinics.

Further, we have found that the beneficiaries are willing to pay for better service quality and a larger proportion of CGHS beneficiaries are willing to pay more as compared to ECHS beneficiaries. Since the beneficiaries are willing to contribute more for better quality of care, the ‘financial contribution’ from the beneficiaries towards the schemes should be increased substantially so that the long-term, financial sustainability of the schemes can be ensured. The beneficiaries’ willingness to pay also implies that they will be willing to pay a regular premium, should the schemes be replaced with health insurance. In the context of the recent implementation of the Sixth Pay Commission’s pay scales, an increase in beneficiary contributions will not adversely affect the well being of beneficiaries.

Although beneficiaries are relatively more satisfied with the services of private healthcare providers than of CGHS dispensaries and ECHS polyclinics, private healthcare providers themselves are not satisfied with the terms and conditions of empanelment under the CGHS and ECHS. Their main concern is centred on the low prices for their services as well as delays in reimbursement. Apart from these issues, we have found that empanelled private healthcare providers are also dissatisfied with the exit fee and bank guarantee clauses. To ensure better healthcare services to beneficiaries, both schemes should address the issues raised by private healthcare providers. The increase in the cost of healthcare inputs should be taken into account while revising the price of services of the empanelled healthcare providers. Besides, separate biddings of tariffs for different levels of healthcare providers (such as secondary, tertiary, and super specialties) should be implemented instead of the

current practice of common bidding without any classification. This will ensure that the cost of service provision as well as quality of services will be reflected in the tariffs for their services. It will not only ensure greater satisfaction among private healthcare providers and better healthcare service delivery to beneficiaries, it will also reduce their out-of-pocket health expenditure. Moreover, the schemes should hire the services of third party administrators (TPAs) for faster and smoother claim settlement and reimbursement.

Given the fact that private healthcare providers are unsatisfied with the exit fee and bank guarantee clauses, the CGHS and ECHS should review whether these measures would add value in terms of better management of the schemes and improve the quality of partnership with private healthcare providers; if they do not, it is better to abandon these clauses. Overall, to ensure a long-term, healthy and sustainable partnership, a collaborative and transparent approach with private healthcare providers should be followed.

Further, we have examined recent proposal to replace gradually the CGHS scheme with health insurance in terms of the response of beneficiaries towards such a proposal. We found that a majority of the beneficiaries reject the proposal. The major reason for the response could be the lack of awareness of the various terms and conditions of health insurance. Therefore, it is important to clarify issues and concerns about the structure, modalities and benefit packages of the proposed health insurance to beneficiaries before launching it.

From a government perspective, replacing the schemes with a health insurance scheme could reduce the fiscal deficit by reducing their growing budgetary burden and make the schemes more self-sustainable in the long run, since the financial contribution by beneficiaries amounts to less than 10 per cent of the total outlay on the schemes. Moreover, it would reduce the administrative burden of the government by handing over tasks such as the empanelment of private healthcare providers, fixing tariffs for their services and claim settlement and reimbursement to insurance companies. The government may also consider making enrolment in the proposed new health insurance scheme compulsory not only for new recruits and pensioners but for all existing beneficiaries as well. Since the proposed health insurance scheme is a

comprehensive one, it can be expected to ensure better access to high quality healthcare without any financial burden on beneficiaries other than the premium payment.

For better management of the scheme and to ensure rational utilisation of resources under the schemes, it is necessary to develop a proper information management system under the schemes. For example, there is no database on the details of reimbursement given to serving employees by various ministries. Besides, these expenditures are reported under different headings by respective ministries (the medical expenses to those beneficiaries who are serving employees are being reimbursed directly to them by their respective ministries but in the case of pensioners, the expenses are directly reimbursed to empanelled private healthcare providers from CGHS and ECHS). Consequently, we do not have a single estimate on the total outlay under the two schemes.

Apart from these, it is also necessary to develop proper measures to control both supplier- induced and demand-induced moral hazards. This would help control unnecessary healthcare provision and utilisation under the schemes. It is particularly important to rationalise spending on these schemes and divert some funding to provide basic healthcare to the common man since a large number of people in the informal sector do not have access to basic healthcare facilities,.

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