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Government-Sponsored Health Insurance in India

Are You Covered?

Gerard La Forgia and Somil Nagpal

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Foreword

Ever since assuming the position of Additional Secretary and Director General, Central Government Health Scheme, in the Ministry of Health and Family Welfare in September 2010, I have observed firsthand the opportunities and challenges facing health financing in India. Despite recent gains, the country still struggles with low levels of population coverage and financial protection, poor outcomes, but rapidly rising costs. Since Independence, the health financing scenario in the public sphere has not changed much. It consists of mostly central government public health programs, state-financed service delivery systems, and insurance schemes for formal sector workers and civil servants. Reflecting low levels of public spending, out-of-pocket spending at the point of service surpasses all other sources of financing, suggesting that much more needs to be done to ensure more equal access to health care and suitable financial protection.

This book fills a critical knowledge gap by providing an in-depth analysis of a relatively new, but promising health financing modality: government health insurance schemes. La Forgia and Nagpal dissect the nine largest schemes with considerable detail and accuracy, focusing on a new crop of schemes that emerged in the last few years and are directed toward protecting the poorest segments of Indian society. The authors

finely probe these schemes, uncovering their progress, potential, and shortcomings. Arguably, these recent arrivals represent a pioneering—at least in the Indian context—but still emerging platform that can be one of the key tools for achieving India's stated goal of universal health coverage. However, finishing the job started will be more difficult. In this respect, the authors make a significant contribution by specifying the operational changes that will be required to transform them into more robust platforms for contributing to universal coverage. Policy makers and planners should pay close attention to these recommendations.

The road ahead will not be easy. In preparation for the 12th Five Year Plan (2012–17), the central government is planning to significantly increase public spending on health to spearhead the march toward universal coverage. This is certainly a welcome initiative, considering the historically low levels of government financing for health. But it is not only a question of giving the health system more money. How best to spend these new resources to secure more effective services is also an issue that needs to be addressed. These health insurance schemes can spearhead changes in the broader system of finance and delivery at the tertiary and secondary levels in the march toward universal coverage. How to direct the new funding is already the subject of intense debate. For example, some call for expanding public delivery systems operated by the states while others call for extending coverage through government-sponsored health insurance. This may be a false dichotomy, and the authors intelligently avoid this trap. What is clear is that the country can ill afford to move ahead on parallel tracks—expanding financing of both the demand and supply sides without a clear notion of coordination and future convergence. To their credit, La Forgia and Nagpal recommend a blended approach, one that strengthens the links of government health insurance to public delivery but ties funding to performance. Yet the authors maintain the essential and innovative features pioneered by this new generation of health insurance schemes in terms of patient choice of provider, private participation, defined (and delivered) benefits, and the separation of purchasing from provision. This approach is well grounded in current Indian reality but also draws on international experience. Clearly, there is a huge role for the public delivery system in India, but it needs a shot in the arm, in terms of both financing and incentives for improved performance. This book provides the analytic basis and policy recommendations for reorienting how India pays for and delivers health care, connecting the dots between the supply- and demand-side

approaches. By doing so, this book strengthens the hand of those seeking to reform the health system.

I have enjoyed reading this publication, and stand amply informed about the intricacies of the current crops of schemes, the context in which they operate, and the opportunities and challenges they face. I am sure that other readers of this book will also echo my thoughts. I do look forward to continued efforts from all stakeholders on the recommendations made in this book, and also to reading more such analytical pieces that create and share new knowledge on the Indian health insurance schemes.

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Preface

In response to a formal request from India's Ministry of Health and Family Welfare (MOHFW), the World Bank undertook research on the country's major central and state government-sponsored health insurance schemes (GSHISs). Their organizational design features, spending, impacts, challenges, and potential for contributing to the achievement of universal coverage were assessed. This book presents the first comprehensive and systematic review of all major GSHISs operating in India. The analytical focus, however, is on the GSHISs launched since 2007. These schemes targeted poor populations.

This book reports the findings from three central-level schemes and six state schemes. The central schemes include the Employees' State Insurance Scheme (ESIS), Rashtriya Swasthya Bima Yojana (RSBY) scheme, and Central Government Health Scheme (CGHS). At the state level, the schemes include the Rajiv Aarogyasri (Andhra Pradesh, AP), Yeshasvini (Karnataka, KA), Vajpayee Arogyashri (Karnataka, KA), Kalaignar¹ (Tamil Nadu, TN), RSBY Plus (Himachal Pradesh, HP), and the proposed Apka Swasthya Bima Yojana (Delhi).

¹ In 2011–12, the scheme was modified to include additional procedures and relaunched as the Chief Minister's Comprehensive Health Insurance Scheme, and the executing agency serving the scheme also changed.

In the Indian context, this veritable wave of new GSHISs represents an alternative form of mobilizing and allocating government resources for health care. Prior to the appearance of these schemes, nearly all public financing was directed to the government-owned and -operated service delivery system to support an implicit (and often undelivered) benefits package. The poor were often faced with steep out-of-pocket spending to resolve their health needs in both public and private facilities.

In an environment challenged by low public financing for health, entrenched accountability issues in the public delivery system, and the persistent predominance of out-of-pocket spending, particularly by the poor, GSHISs have introduced a new set of arrangements to govern, allocate, and manage the use of public resources for health, including an explicit (and delivered) package of services, greater accountability for results, and a “built-in” bottom-up design to reach universal coverage by first covering the poor. These arrangements are promising foundations for reaching a positive consensus on reforming India’s health finance and delivery system.

The remainder of the preface summarizes the main findings reported in this book in the form of responses to frequently asked questions on GSHISs.

Design and Organizational Features of GSHISs

How many families or individuals are covered under the GSHISs? Which key population groups are covered and how does that vary from scheme to scheme? In 2010, about 240 million Indians were covered by GSHISs, about 19 percent of the population, including smaller schemes not reviewed in this report. Accounting for private insurance and other schemes, more than 300 million people, more than 25 percent of the population, have access to some form of health insurance. The newer schemes target populations living below the poverty line (BPL)² and the informal sector, but the way BPL lists are defined varies across schemes. RSBY, as well as state schemes in HP and Delhi, uses the BPL lists based on central government Planning Commission criteria; the states of AP and

²The poverty line was established by the GOI and has been defined on the basis of the money required to buy food worth 2,100 calories in urban areas and 2,400 calories in rural areas. However, states use a variety of parameters to determine their own poverty lines, including land holding, type of house, clothing, food security, sanitation, consumer durables, literacy status, labor force, means of livelihood, status of children, type of indebtedness, reasons for migrations, and so forth.

TN use the more extensive state BPL lists for their respective schemes. In effect, these latter states have extended coverage to the “vulnerable” poor, covering (in theory) nearly 80 percent and 50 percent of their respective populations. ESIS covers formal private sector employees earning up to Rs. 15,000³ per month and their dependents; CGHS covers central-level civil servants residing in 25 notified⁴ cities.

What is the depth of benefit coverage under the publicly funded GSHISs for the poor, and how does that compare with costs per beneficiary per year under these schemes? The new generation of GSHISs aims to provide financial protection to the poor against catastrophic health shocks. For these schemes, “catastrophic” is invariably defined in terms of inpatient care. RSBY focuses mostly on secondary care; most state schemes emphasize tertiary care. Most of the newer schemes demonstrate a strong emphasis on surgical procedures. Ambulatory care is largely uncovered except for limited coverage as part of an inpatient episode. Nevertheless, significant variations in the depth of benefit coverage exist as evidenced by the wide range of “inpatient treatment packages” covered by the schemes. Most schemes limit their exposure through annual family caps, ranging from Rs. 30,000 for RSBY to Rs. 150,000 for the AP scheme. The older programs, ESIS and CGHS, are the only ones to provide coverage for a comprehensive benefits package that includes preventive and primary care services, and also do not have annual caps.

The depth of coverage is reflected in per beneficiary costs, ranging from Rs. 5,333 in CGHS to Rs. 180 for RSBY. CGHS offers open-ended, comprehensive coverage with no overall cap and relatively few restrictions on services. RSBY’s low costs also reflect its secondary inpatient focus, a low annual spending cap, and conservatively priced packaged rates. The beneficiary costs of the state schemes that emphasize tertiary care (TN, KA, and AP) have roughly similar per beneficiary costs, varying between Rs. 148 and Rs. 183, reflecting a combination of low utilization frequency and the higher package rates common to these state schemes.

How much is being spent on publicly funded health insurance schemes and how does it fit within India’s existing health financing system? How does it relate to the expenditure for public delivery? For NRHM? In 2009–10, these nine GSHISs spent an estimated 5,800 crores,⁵ about 8 percent of total

³ For all Rupee data presented in this book, US\$1 = Rs. 45.

⁴ Notified areas are geographical areas where ESIS has sufficient capacity to provide the services contained in the benefits package. Nearly all cities with a population of 1 million or more are notified areas.

⁵ One crore is equivalent to Rs. 10,000,000, roughly US\$204,000 in October 2011.

government health expenditure. Including private, community, and other insurance spending that same year, total spending on health insurance accounted for Rs. 160 billion (Rs. 16,000 crores), 6.4 percent of the estimated total health expenditure of Rs. 2.5 trillion in 2009–10. To illustrate, GSHISs accounted, respectively, for 24 and 5.6 percent of GOI and KA own health expenditure in 2008–09.

These contributions represent additional spending to supply-side subsidies. The government direct delivery system, including GOI's flagship program, NRHM, and state health directorates, continues to account for about nine-tenths of the public health spending in the country. Nevertheless, GSHISs have an increasing share of the incremental public spending on health, reflecting strong political support for these schemes and a corresponding budgetary commitment.

What do the utilization data of these schemes show with respect to the frequency of claims, disease patterns, and trends over time? Utilization rates vary significantly with the depth of benefit coverage, scheme maturity, and other factors such as the provider payment mechanism used (discussed below). Schemes in AP, TN, and KA (Vajpayee Arogyashri) provide coverage for low-frequency, high-cost tertiary care only, and their hospitalization frequency is thus the lowest among the schemes under study. They are not comparable with community averages, which are based on all types of inpatient stays. Consequently, their utilization rates are significantly lower (about 5 hospitalizations for 1,000 beneficiaries per year) than the inpatient utilization rates generated for these states from the National Sample Survey (NSS) data (between 22 and 37 hospitalizations per 1,000 inhabitants per year). However, Yeshasvini (in KA) covers mostly secondary care but also some tertiary care. RSBY covers mostly high-frequency secondary hospital care. Frequency of hospitalization for these two schemes is significantly higher, 22 and 25 admissions, respectively, per 1,000 beneficiaries per year and is more or less comparable to national community averages.

Responding to likely adverse selection (which is expected in a voluntary context) and possible moral hazard, as well as the lack of adequate cost-containment mechanisms, utilization rates for private voluntary insurance dwarf those of GSHISs. Similar to RSBY and Yeshasvini, private insurers generally cover both secondary and tertiary inpatient care, but their members display a much higher frequency of hospitalization at about 64 admissions per 1,000 per year.

How do the GSHISs pay the health care providers and how is it different from past practices? All schemes studied here use a system of “package rates”

for paying their networked providers for inpatient services. ESIS and CGHS also use line-item budgets and salaries for their own facilities and staff, respectively. A package rate is a simplified case rate consisting of a single fee or close-ended payment for a set of inputs and services for a specific and predefined treatment or procedure. Package rates offer several advantages. They are easy to administer, are less complicated or subjective than an open-ended fee-for-service arrangement, and, in principle, can contain costs if the rates are set at or near costs. They can limit the liability of the schemes (as payers) and may motivate efficiency improvements among providers—if priced correctly. Importantly, providers do not receive a payment unless they provide the treatment, which has an advantage over budgetary-based payment systems in which payments are not linked to outputs. But package rates also represent a huge advantage over itemized fee-for-service payment mechanisms applied by most private insurers. The latter method of payment is a known driver of cost escalation.

What is the role of health insurance companies in these schemes? Inasmuch as most GSHISs are in their early years, nearly all have yet to develop the institutional architecture to ensure robust governance and management. All the newer schemes use intermediary agencies, such as commercial insurers and third-party administrators (TPAs), to perform most managerial functions on their behalf. To be sure, the rapid strides in the commercial health insurance industry in recent years have made insurers' capacity (e.g., technological acumen, management experience, professional manpower) available to GSHISs for performing functions such as provider network management, administration of preauthorization processes, claim processing, information management, and so forth. These managerial contributions would have been inconceivable a decade earlier. Government systems still lack both the incentives and capacities to perform these functions. Of the two shortcomings, lack of incentives may be more difficult to surmount. The new generation of GSHISs has been able to effectively leverage available private capacity, creating a model of engaging with private insurers and private providers that is unique to India. A case can be made that the use of insurers as intermediaries may be useful in the short to medium term because they have incentives to check provider and beneficiary behaviors that negatively impact their bottom line.

What design and control features for reducing fraud and moral hazard have been built into these schemes? Not surprisingly, evidence is emerging of cases of induced demand, illegitimate charges, and fraud (e.g., false claims, ghost patients, claim bundling). To detect and contain

these abuses, schemes require control systems in three domains: constant vigilance over claims data, reviews of preauthorization requests, and physical verification of beneficiaries undergoing treatment. They also need grievance and feedback systems for patients and providers. Some schemes have implemented sound vigilance measures along these lines with varying degrees of sophistication. Others appear to be in reaction mode, responding to press reports or random beneficiary complaints. Few schemes systematically or proactively implement fraud-detection measures. Nevertheless, when detected, there is a noticeable tendency to deal with unethical practices or unwarranted treatment. Many schemes have disempowered hospitals as a disciplinary action after investigation confirmed such complaints. For example, as of September 2010, RSBY, AP, and Yeshasvini had disempowered 54, 67, and 58 hospitals, respectively. Whether these actions have decreased the incidence of such practices is unknown, but enforcement of rules and policies is a good sign.

What are the GSHIS linkages to the public delivery system? Most GSHISs are marginally linked to the public delivery system, and most networked hospitals are private. Particularly for the tertiary-focused state GSHISs, one of the main reasons to initiate these schemes was the limited capacity in the public sector to provide tertiary care. The actual share of private hospitals in service utilization may be larger than implied by the quantum of networked hospitals since most beneficiaries choose private facilities when seeking care. For example, in the AP, TN, and KA schemes, most network facilities are private hospitals, which, ranked by number of admissions, are also predominant among the top 20 facilities. However, a few public medical colleges and public autonomous hospitals were also included among the top 20 hospitals for Vajpayee Arogyashri, Yeshasvini, and Rajiv Aarogyasri. Nevertheless, barring these few large, tertiary public institutions, many other public hospitals empaneled by the schemes, especially district and subdistrict hospitals, saw little or none of the insurance traffic. This is particularly the case for the tertiary-focused schemes. The exceptions to this observation include public hospital utilization in Kerala (under RSBY) and the linkages for referral from public facilities in AP. Under current governance and institutional arrangements, most public hospitals are in no position to compete with private facilities. Few have the autonomy or flexibility to manage their own affairs. They are entirely dependent on the hierarchical control of state health authorities for nearly all budgetary and input decisions.

Opportunities

What are the major strengths of the schemes? GSHISs are well-positioned to become key stakeholders in policy decisions regarding health financing and delivery arrangements. GSHISs hold the potential to spearhead reforms in the public delivery system through strengthening accountability for results by linking financing to outputs. In addition to the gains in coverage and financing, taken together, the schemes introduced a demand-side purchasing approach to public financing while embracing several innovative features—at least for the Indian context. These include:

- Defined (and delivered) entitlements
- Separation of purchasing from financing
- Targeting of low-income groups
- Impressive use of information and communication technology, including electronic beneficiary registration and utilization tracking
- Patient choice of providers
- Package rates for provider payment
- Extensive engagement with the private sector in the areas of insurance, administration, and delivery.

Strong political interest in health insurance is evident, especially at the state level, and is a driver of expansion of population coverage, extension of benefits, and increased public expenditures for health. This is clearly observed in KA, TN, and AP where political leaders have extended coverage to non-BPL populations and have managed to reach 50 to 80 percent of the population in the latter two states. Other states such as HP and Kerala are seeking to deepen the benefits package for the BPL population already enrolled in RSBY beyond the standard RSBY offering. Kerala has also extended RSBY coverage to the non-BPL population at the state's cost. Political ownership at the state level has been an important lever for sustainability, and to date, there is no evidence of this support ebbing. Political support from the central government as well as from participating states for RSBY coverage and its expansion is also strong. This is evidenced by the inclusion of new groups of beneficiaries (such as NREGA beneficiaries, construction workers, railway baggage handlers, and vendors working in railway stations). Significantly, GSHISs have been a driver for increasing public financing for health from state governments. For example, some state governments appear more likely to increase health financing if funds are directed through insurance schemes.

Future Directions and Potential Impacts of GSHISs

How will India's health insurance sector change over the next few years and how might it look in 2015 in terms of its size, composition, and spending? In light of current trends, and assuming continued political and financial support from government, insurance coverage can be expected (perhaps conservatively) to exceed 630 million persons (50 percent of the population) by 2015. Most of the growth is likely to occur along three lines: RSBY, commercial insurance, and state-sponsored schemes. GSHIS coverage will likely more than double, from 243 million in 2009–10 to nearly 530 million in 2015. By then, RSBY aims to reach 60 million families (roughly 300 million members) and will account for most of the growth in GSHISs. State schemes such as Vajpayee Arogyashri (KA) will continue to expand, while population growth will also add new members to other GSHISs.

Turning to expenditures, spending through health insurance mechanisms will continue to increase at an estimated overall compounded annual growth rate of 19 percent per annum, reaching Rs. 38,000 crores (Rs. 380 billion) by 2015. GSHISs will account for about 40 percent of the total; commercial insurers will represent most of the remainder (excluding their GSHIS business). In 2015, spending through health insurance will reach 8.4 percent of total health spending, up from 6.4 percent in 2009–10.

Several states are expected to introduce schemes over the next five years that will further add to coverage and spending. Other factors will also drive coverage expansion and expenditure growth. For example, there will be pressure to expand coverage to non-BPL but vulnerable poor and to deepen the benefit coverage, as already observed in several state schemes. RSBY is piloting a program for ambulatory care coverage, and continued experimentation with extending benefit coverage to a subset of ambulatory services is expected.

What is the impact of these insurance schemes on budgetary support for public health facilities and primary care? Is the money being spent on GSHISs duplicating what is being spent on the public health system? State health department officials openly worry that their budgets may be negatively affected by the expansion of government-sponsored insurance. However, there is no evidence that public subsidies are being “converted” from the supply to the demand side. Government contributions to GSHISs appear to represent additional funds for health. Without the presence of these schemes, it is difficult to say whether these additional funds would have

been directed to public delivery or would have stayed outside the health sector itself. Also, most state schemes were created to address public supply constraints at the secondary and tertiary levels. Nevertheless, some schemes have shown an intent to improve the capacity of public provision beyond what was available in the public health system. For example, schemes in Kerala and AP have provided the public hospitals with an additional source of financing that has been used to upgrade infrastructure and introduce new services.

Is there any information on the impact of the GSHISs on access to and utilization of health services? What about issues of moral hazard? Available utilization data suggest that insurance coverage has resulted in higher utilization of covered services among beneficiaries. However, impact on utilization is best measured through beneficiary and household surveys applying rigorous methodologies.

Recent evaluation data from the Yeshasvini scheme show that affiliation (and the resulting financial access) resulted in increased utilization—a utilization rate of between 6 percent and 7 percent higher among insured members than among their uninsured peers. Since both groups were matched for health status, it was unlikely that adverse selection had caused this higher utilization. Lower-income members increased utilization by a still significant 2 percent.

Research using administrative data identified some factors that affect utilization. In an analysis of 16,000 claims in 2007 and 2008 from R. Aarogyasri (AP), distance from cities where most empaneled facilities demanded by the beneficiaries were located was found to be negatively associated with utilization. Similarly, in an analysis of RSBY claims data from 75 districts, the authors reported that utilization was related to the distance between blocks and the towns where empaneled hospitals are located. Nevertheless, other factors that increased the probability of utilization were detected through regression analysis of the claims data from 18 districts (3,600 villages): being elderly, being literate, residing in a district with a large number of empaneled hospitals, having access to transportation, and living in a village where other insured villagers have already been treated through the scheme.

Is there any evidence of impact on reducing financial burden or reducing out-of-pocket payments? A major objective common to all schemes is to reduce the financial burden of health spending on the poor. From the fact that all schemes are cashless (or nearly so) and provide coverage for hospitalization, a case can be made that they have reduced the financial burden on the poor, at least for the covered inpatient services. However,

as in the case of access and utilization, impacts on financial burden are best measured through rigorous evaluations.

Analyses of household data from two schemes provide insights into their effects on household spending. The authors of an impact evaluation of the Yeshasvini scheme in Karnataka involving a large survey of members matched beneficiaries and nonbeneficiaries to compare their borrowing behavior to pay for inpatient surgical care. They reported a 30 percent reduction in such borrowing among low-income beneficiaries compared with nonenrollees and a 36 percent drop for higher-income members. Payments that drew from sources other than borrowings (e.g., income, savings) increased by 74 percent for all sampled beneficiaries. The authors concluded that the scheme had a significant price reduction effect, but only for surgical care. An evaluation of the impact of Aarogyasri on out-of-pocket health spending during a 12-month period subsequent to the rollout of Phase 1 of the program found that households significantly reduced inpatient spending (in absolute terms and as a share of household consumption and catastrophic spending). Households participating in Phase 1 also significantly reduced the probability of having any out-of-pocket health spending. The results demonstrate that Aarogyasri provided financial protection for inpatient care, which is the main focus of the scheme. Whether these financial benefits are evident in other schemes remains an open question and requires further rigorous evaluation.

Operational Challenges

What are the GSHISs doing to address issues related to the quality of health care delivered by their providers? The schemes are not yet using their financial leverage to improve the quality of their network providers. Hospital empanelment, the main form of quality control of providers, normally focuses on assessing the structural aspects of quality. It is not a rigorous process. Also, there is little evidence of follow-up inspections or recertification. Empanelment information is usually stored in manual form and is neither analyzed nor reevaluated. Some schemes (e.g., AP Aarogyasri) have created special posts to oversee empanelment and monitor quality, but the functions are concentrated on collecting information and reacting to complaints and grievances about hospitals and beneficiaries. Quality and patient safety information is not demanded or collected from providers. Providers have few incentives to improve standards of care or institute quality-improvement measures.

What are the GSHISs doing in terms of data collection, monitoring, and analysis and what information is provided to beneficiaries? A few schemes have recently made strides in strengthening monitoring systems, but the general weakness of these systems and dearth of data and analysis underlie all issues. Most schemes have yet to develop robust systems to monitor insurer, TPA, and provider performance regularly. This situation impedes their effectiveness in buying services, selectively contracting providers, supervising and assessing performance (e.g., insurers, TPAs, and providers), gauging beneficiary trust and satisfaction, and systematically correcting emerging problems. Two schemes have only recently planned for impact evaluations.

Beneficiaries appear to have insufficient information on enrolment, benefits, and providers. Inadequate information on covered and uncovered procedures can result in denials of preauthorization as well as out-of-pocket expenses for beneficiaries. Most consumers lack the information on provider performance (e.g., quality, patient satisfaction, volume) that would allow them to make well-informed choices.

To what extent do GSHISs implement sound purchasing and contracting practices? At their current state of development, schemes tend to focus on ascertaining admissibility of a claim under coverage rules and the preagreed package rates, and on simple reimbursement of validated claims to the treating hospitals. Scant attention has been given to purchasing and contracting functions to maximize insurers' and network providers' performance. Invariably a scheme contracts a single insurer for a demarcated geographical area (state or district), and in the absence of performance-based contracting instruments, insurers are driven by their own incentives, which may not dovetail with scheme objectives. Similarly, schemes have yet to take advantage of their financial leverage to motivate providers to improve their quality, efficiency, patient safety, and satisfaction.

Are GSHISs doing enough to control costs? Insurers under contract with the schemes have incentives to check provider and beneficiary behaviors that negatively impact their bottom line. However, they face weak incentives to control costs over the long term. Because schemes' contracts with insurers are short term, insurers can reprice the premium or exit the market when costs rise rather than invest in long-term cost containment. Similarly, although package rates are a significant advancement over itemized fee-for-service payments in their ability to contain costs, package rates have not been systematically based on underlying costs or market prices and need improvement. Significant strengthening is needed in such

managerial cost-containment measures as claims analysis, preauthorization, provider profiling, utilization review, use of generic drugs, and channeling a high patient volume to low-cost, high-volume providers.

What are the schemes doing to control provider behaviors? How are GSHISs affecting the provider market? Package rates and preauthorization processes have helped rein in the delivery of unnecessary care, but providers still have incentives to induce demand for unneeded care and substitute inpatient for outpatient treatment. Although scheme managers and policy makers are cognizant of these problems, efforts to detect, control, and penalize such behaviors need to be intensified.

Further, a case can be made that current schemes stimulate a hospital-centric delivery system—already obsolete in most industrialized countries and, in the long term, unaffordable, ineffective, and unsustainable in dealing with a large burden of chronic disease that is emerging in India. In addition, to enable greater access, the schemes have prescribed a low minimum number of beds required for empanelment. This may be promoting the expansion of small hospitals that barely meet the empanelment criteria, and where clinical management may be too meager and volume too small to offer high-quality care.

How sound are governance arrangements and managerial systems? Because most GSHISs are in their early years, few have yet developed the institutional architecture to ensure robust governance and management. Although nearly all the GSHISs studied here have established governing agencies that are legally autonomous from the government department that creates and oversees this agency, formal arrangements for periodic consultations with key stakeholders are generally absent. Schemes rely heavily on insurers and TPAs for most managerial functions, but insufficiently monitor fulfillment of these tasks. Most GSHISs lack the staff and management tools to act as effective agents for their beneficiaries.

What is the interface between the GOI and state schemes? Even though health is constitutionally a state subject, how this mandate should be applied to health insurance is unclear. Although the GOI flagship RSBY scheme has successfully rolled out in a large number of states, it has not progressed on the issue of integration with state government-sponsored schemes. In at least one state, RSBY is implemented in one set of districts while a state-sponsored scheme is implemented in another set. The schemes are already beginning to overlap in some districts. In other states, RSBY has not begun its operations because central and state authorities have not agreed on common ground for integration with state-sponsored health insurance schemes. Differences related to the definition of BPL

status, benefits packages, price structures, coverage caps, empanelment criteria, and lack of portability of state schemes have hampered scheme mergers into an integrated state-based insurance system. Nevertheless, some states (HP, Kerala, and Delhi) have elected to try a “top-off” model that uses RSBY as the base coverage while the state finances a deeper tertiary coverage exceeding RSBY-covered services.

Policy Recommendations

What are the major short- and medium-term policy recommendations emerging from the study, who will need to address them, and when? GSHISs can serve as change agents for overcoming financing and delivery obstacles to achieving universal coverage. By pioneering new ways of doing business in terms of financing, payment, and managing and delivering care, the current crop of GSHISs can also facilitate reform of the dominant fee-for-service system used by private providers, as well as the budget-based, public direct delivery system. However, GSHISs will first need to address the above-mentioned operational challenges and design constraints.

GSHISs, in close coordination with the related government agencies, should implement the following series of measures over a two-year period.

- Promote governance and coordination.
- Strengthen purchasing and contracting practices.
- Reinforce cost containment by consolidating the GSHISs’ purchasing power, reforming provider payment mechanisms, and strengthening utilization management and control systems.
- Establish robust monitoring and data use.
- Fix targeting mechanisms.
- Introduce quality-based purchasing.
- Expand public hospital autonomy.
- Strengthen the collection and dissemination of consumer information.

A number of recommendations to be implemented over the medium term are also proposed to improve current financing and delivery arrangements and make them work together to contribute to universal coverage. Overall, a reorientation is sought in the current configuration of health financing and service delivery, using the building blocks laid by the new generation of GSHISs as well as the NRHM. The recommendations

outline pragmatic and affordable pathways to achieving universal coverage based on realistic assumptions of fiscal capacity, the current configuration of health financing and delivery arrangements, lessons and innovations from GSHISs, and international experience. Most can be implemented over a five-year period and could be included in India's forthcoming 12th Five Year Plan for economic development.

The proposal consists of developing and implementing:

- (1) *The GOI-financed standard benefits package of secondary and maternity care for the BPL population.* The proposal builds upon RSBY design and implementation experience. The package would contain services currently covered under RSBY—mostly secondary and maternity care. It would therefore provide coverage against many (but not all) frequent and financially catastrophic hospitalization events. Similar to RSBY, the benefits would be fully subsidized, portable across India, and directed to the BPL population.
- (2) *The GOI-financed standard ambulatory package for the BPL population, delivered through the existing primary care system.* This would also strengthen ties between the GSHISs and the public delivery system for referral for inpatient services and follow-up care after discharge. Three approaches are outlined: (a) package payments for defined periods of postdischarge, follow-up care (e.g., consultation, diagnostics, and drugs) for insured patients, which can be provided in government primary health centers (PHCs), community health centers (CHCs), and other contracted primary care providers; (b) capitation and package payments for defined bundles of primary care services that are tied to performance in government PHCs/CHCs (such as antenatal care package, infant care package, diabetes management package); nongovernmental organizations can also be contracted under this arrangement to deliver primary services in localities with no, or inadequate, governmental services; and (c) standard outpatient insurance “product” bought from insurers for care provided by public and private outpatient clinics and hospitals.
- (3) *State-financed “top-off” benefits for the BPL population.* States can be incentivized to offer an expanded set of tertiary care benefits beyond the coverage under the GOI-financed common package, aimed at the BPL group but drawing on states' own resources according to their fiscal capacity. Similar to the GOI-financed common package, the benefits would be fully subsidized (e.g., cashless) for BPL populations without any premium contributions or cost sharing when using services. The GOI and states may draw on the utilization experience of

the existing state-sponsored top-off and tertiary-care schemes to guide the design of the benefits package.

- (4) *State-financed “contributory” point of service package for the vulnerable non-BPL population.* This recommendation involves offering a “contributory” point of service scheme for the vulnerable non-BPL group. This group may not be the poorest in the population, but it is financially vulnerable to health shocks and generally seeks care from private providers, paying out-of-pocket for nearly all services. Several states already classify this “vulnerable” population as poor, but poverty data suggest that they do have some capacity to pay for care. Ideally, this scheme’s benefits can consist of an integrated offering of the aforementioned standard (secondary and maternity), ambulatory care, and “top-off” (tertiary care) packages.

The administrative costs of collecting from the informal sector are expected to be high, and the collection procedure, complex. The collection procedure is also likely to result in incomplete uptake and adverse selection. Therefore, no upfront collection of contributions from this group is recommended. Potential beneficiaries would be enrolled free of cost (or automatically) as in the case of the BPL population. They would “contribute” only when seeking care, by making copayments for the claim costs at the point of service, namely, the hospital. Depending on their fiscal capacity, states could consider a 30 to 70 percent subsidy of the package costs for this vulnerable group. Because this state subsidy is applied to the already negotiated (and discounted) package rates, it would effectively lower out-of-pocket spending to a small fraction of the fee-for-service market prices which the intended beneficiaries would incur without it. This would be a strong incentive to enroll. The feasibility of this scheme, however, will depend on improvements in targeting and separation of BPL from the vulnerable non-BPL group.

What would be the institutional arrangements for the proposed schemes? GOI would establish a governance agency to support all GSHISs. This autonomous national umbrella agency would coordinate, monitor, evaluate, and provide technical support to all government-sponsored schemes, including the preparation of guidelines, policies, statutes, information technology systems, and operating instructions and manuals. Each state would administer the multiple components of the proposed coverage as part of an integrated, state-executed insurance system, including the pooling of risks, purchasing of services, and direct monitoring of providers and beneficiaries. Thus, services for all schemes would be bought from a

common, state-based platform through this independent state agency wherein the states make all “operational” rules and set requirements. Having a single, integrated purchasing platform would build purchasing power and enforcement power for common pricing and quality criteria.

How much would the implementation of the proposed measures cost?

Assuming all of the recommended packages, including the optional point-of-service scheme, are introduced in all states by 2015, and the primary care incentive is kept at Rs. 500 per family per year, the total incremental cost is estimated to reach Rs. 38,400 crores, accounting for an additional 22 percent of projected total government health expenditure in that same year. This amount would represent a little less than 0.4 percent of the country’s projected GDP in 2015. It is not unduly large relative to the recent growth trends in public health expenditure, and it is well within the stated commitment of the GOI to raise the share of public health spending to between 2 percent and 3 percent of GDP. The share of the additional cost for the GOI is about Rs. 9,000 crores, while the state portion is Rs. 29,400 crores, which would represent, respectively, increases of 10 percent and 33 percent above the base GOI and state health spending projected for 2015. Given that nominal GOI spending increased by 23 percent annually between 2005–06 and 2008–09, a high elasticity of central health spending relative to GDP, and credible commitments to public outlays for health during the 12th Plan, the government of India should be able to afford these schemes. However, they might not be affordable for some states. Although state health expenditure grew by 17 percent between 2005–06 and 2008–09, this rate of increase might not cover all the optional components for some states.

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Abbreviations

AP	Andhra Pradesh
APL	above poverty line
ASBY	Apka Swasthya Bima Yojana
BPL	below poverty line
CAG	comptroller and auditor general of India
CEO	chief executive officer
CGHS	Central Government Health Scheme
CHC	community health center
CS-MA	Civil Service (Medical Attendance) Rules
DEA	Data Envelope Analysis
DOHFW	Department of Health and Family Welfare
DPT3	diphtheria, pertussis, and tetanus
DRG	diagnosis related group
ECG	electrocardiogram
EDC	Empanelment and Disciplinary Committee
ENT	ear, nose, and throat
ESI	Employees' State Insurance
ESIC	Employees' State Insurance Corporation
ESIS	Employees' State Insurance Scheme
GOI	Government of India

GSHISs	Government-Sponsored Health Insurance Schemes
HAI	hospital-acquired infection
HP	Himachal Pradesh
ICCU	intensive cardiac care unit
ICD-10	International Classification of Disease, version 10
ICU	intensive care unit
IEC	Information, Education, and Communication
IFC	International Finance Corporation
IGMC	Indira Gandhi Medical College
IIB	Insurance Information Bureau
ILO	International Labour Organization
IMP	insurance medical practitioner
IRDA	Insurance Regulatory and Development Authority, India
ISM	Indian Systems of Medicine
IT	information technology
JSY	Janani Suraksha Yojana
KA	Karnataka
KHSDRP	Karnataka Health Systems Development and Reforms Project
MIS	management information system
MOHFW	Ministry of Health and Family Welfare
MOLE	Ministry of Labour and Employment
MOU	memorandum of understanding
n.a.	not applicable
NABH	National Board of Accreditation for Hospitals and Healthcare Providers
NCEUS	National Commission for Enterprises in the Unorganized Sector
NCMH	National Commission on Macroeconomics and Health
NCT	National Capital Territory
NFHS	National Family Health Survey
NGO	nongovernmental organization
NHA	National Health Accounts
NHSRC	National Health Systems Resource Center
NIC	National Informatics Center
NIMHANS	National Institute of Mental Health and Neurosciences (Bangalore)

NREGA	National Rural Employment Guarantee Act
NRHM	National Rural Health Mission
NSS	National Sample Survey
NSSO	National Sample Survey Organization
OECD	Organization for Economic Co-Operation and Development
ONA	National Accreditation Organization (Organização Nacional de Acreditação)
OOP	out of pocket
PGIMER	Post Graduate Institute of Medical Education and Research (Chandigarh)
PHC	primary health center
PVHI	private voluntary health insurance
PPMs	provider payment mechanisms
PPP	public private partnerships
RFP	Request for Proposal
RKS	Rogi Kalyan Samiti
RP	RSBY Plus
Rs.	Rupees (Indian Rupees); for all Rupee data presented in this book, US\$1 = Rs. 45
RSBY	Rashtriya Swasthya Bima Yojana
SAS	Suvarna Arogya Suraksha
SHI	social health insurance
SMC	state medical commissioners
TAC	tariff advisory committee
TEC	technical executive committee
TN	Tamil Nadu
TNHSS	Tamil Nadu Health Systems Society
TNMSC	Tamil Nadu Medical Supplies Corporation
TPA	third-party administrator
UHS	Universal Health Insurance Scheme
US\$	U.S. dollar; for all Rupee data presented in this book, US\$1 = Rs. 45
VA	Vajpayee Arogyashri
WHO	World Health Organization

Note: All dollars in this book are U.S. dollars unless otherwise described.

CHAPTER 1

Introduction

Since Independence, India has struggled to provide its people with universal health coverage. Whether defined in terms of financial protection or access to and effective use of health care, the majority of Indians remain irregularly and incompletely covered. Addressing the coverage gap is a huge challenge in light of the traditionally low public spending on health (currently about 1 percent of GDP), the high levels of informal or unorganized labor (93 percent of the labor force) (NCEUS 2007), a large but dispersed rural population (72 percent rural) (MOHA 2001), high levels of poverty (27.5 percent) (Planning Commission 2007),¹ unregulated service delivery, and low quality of service providers serving the poor (Das et al. 2011; Shiva Kumar et al. 2011; Reddy 2011; Berman et al. 2010; Human Rights Watch 2009; Rani, Bonu, and Harvey 2007; Planning Commission 2005; MOHFW 2005; Das and Hammer 2004, 2006).

Despite this ominous picture, opportunities to reverse the trend have recently come to the fore. As specified in the National Health Policy (MOHFW 2002) and the current coalition government's framework for governance ("common minimum program") (Government of India 2004), the government is committed to raising public health spending to between 2 and 3 percent of GDP. Increasing public spending on

health has been confirmed in recent government pronouncements related to the preparation of the 12th five-year development plan (2012–17) (Planning Commission 2011). In addition to improving the reach and supply of public provision in rural areas, since its launch in 2005 the central government's flagship National Rural Health Mission (NRHM) has strengthened demand-side funding programs such as Janani Suraksha Yojana (JSY), which provide conditional cash transfers to pregnant poor mothers for institutional births and transportation assistance. Vigorous economic growth and a reformed regulatory environment have propelled the voluntary private health insurance industry into a period of accelerated expansion, with annual growth rates of more than 30 percent since 2001–02. At the same time, the insurance industry has crafted innovative products to improve the breadth of benefit coverage and is increasingly contributing to the expansion of the private supply of health services. Finally, and most recently, a new generation of government-sponsored health insurance schemes (GSHISs) has emerged to provide the poor with financial coverage. These schemes, their design and coverage features, their potential to contribute to universal coverage, and their role within India's health finance and delivery system are the subjects of this book.

Briefly, the main objective of these new GSHISs was to offer financial protection against catastrophic health shocks, defined in terms of an inpatient stay. Between 2007 and 2010, six major schemes have emerged, including one sponsored by the government of India (GOI) and five state-sponsored schemes. In 2011, several others are understood to be on the planning table at the state level. The designs and rate structures of these new schemes were drawn from the experience of existing social insurance schemes and private insurance products in India. This new wave of schemes provides fully subsidized coverage for a limited package of secondary or tertiary inpatient care, targeting below poverty populations. Similar to the private voluntary insurance products in the country, ambulatory services including drugs are not covered except as part of an episode of illness requiring an inpatient stay. The schemes have organized hospital networks consisting of public and private facilities, and most care funded by these schemes is provided in private hospitals.

The recently launched GSHISs are a new form of mobilizing government resources in an underfinanced system while pioneering a new set of design features and institutional arrangements to govern, allocate, and manage the use of these resources. Though still small in terms of the quantum of public financing, these GSHISs introduced a number of

significant changes in traditional government health financing and delivery arrangements in India. They have established a demand-side mechanism that mobilizes and channels additional public financing to health, introduced an explicit benefits package, pioneered cashless care (e.g., there are no point of service payments or other forms of cost sharing required from beneficiaries and the hospital charges are directly settled by the schemes with their network hospitals), fostered public private partnerships (with insurers and providers), and in principle stimulated competition among insurers (for government contracts) and providers (for beneficiaries, when ill). Prior to the appearance of these schemes, nearly all public financing was directed to government-owned and -operated service providers to support an implicit but irregularly (at best) delivered benefits package. Although services are nominally free in most cases, users faced significant costs for unavailable drugs and consumables, transportation, diagnostics, and other services as well as informal payments. Moreover, the GOI has yet to deliver on pledges for significant increases in public financing for health, at least through the public delivery system. However, recent pronouncements suggest that government may double public spending on health in the 12th Five Year Plan, 2012–17 (Planning Commission 2011).

Based on a systematic review of nine GSHISs, including older social health insurance schemes (SHIs), the objective of this book is to assess their practices and performance to enable policy makers to gain insight into emerging issues requiring their attention if India is to achieve universal health coverage. The focus is on two lines of inquiry.

The first involves institutional and “operational” opportunities and challenges regarding their design features, governance arrangements, financial flows, cost-containment mechanisms, underlying stakeholder incentives, information asymmetries, and potential for impact on financial protection and on access to care and use by targeted beneficiaries. The second entails “big picture” questions on the future configuration of India’s health financing and delivery systems that have surfaced, due in part to the appearance of a new wave of GSHISs after 2007. How these schemes will interact with and affect the wider health financing and delivery system is a major underlying issue facing Indian policy makers. Will they contribute to integration or will they lead to greater fragmentation? Will they contribute to improving health sector efficiency and quality or will they lead to a steep escalation in the cost of health care? Will explicit entitlements be expanded, and if so, does government have the capacity to enforce the provision of the benefits

package as well as ensure efficient delivery within quality standards? Specific objectives follow:

- Document key design features of the prominent government-sponsored health insurance schemes in India including their institutional structure, beneficiaries and membership, benefits package and exclusions, provider payment mechanisms, intermediaries, and health providers used.
- Identify emerging issues, opportunities, and challenges facing the schemes, including the financial sustainability thereof, in light of global experiences and within the Indian context.
- Estimate current and future coverage and spending, based on available data and allowing for certain assumptions on utilization, claims, costs, and inflation.
- Recommend policy measures for expanding coverage and improving the efficiency and effectiveness of health insurance schemes within the context of health financing in India.
- Develop hypotheses and questions for subsequent research.

Ostensibly, the objective of any health insurance scheme is to increase access, utilization, and financial protection, and ultimately improve health status. Due to lack of evaluations and analyses of household data, the authors of this book do not examine the impact of health insurance in terms of these objectives.² A recent review of the evidence of the effects of health insurance in low- and middle-income countries shows that insurance can positively influence access and utilization of health services, provide financial protection against catastrophic health shocks while reducing out-of-pocket spending, and, if designed in a pro-poor manner, offer greater benefits to the poor than the well-off (Escobar, Griffin, and Shaw 2010; Giedion and Yadira Diaz 2010). However, evidence on the impact on health status is inconclusive.

This book is not meant to highlight problems of the GSHISs, but rather to raise potential challenges and emerging issues that should be addressed to ensure the long-term viability of these schemes and secure their place within the health finance and delivery system. A number of the schemes have been under implementation for only a few years and have yet to stabilize in terms of core processes and procedures. Many of the schemes have made great strides in recent years, and in most cases through “learning by doing.” They have gained popularity among major

stakeholders. In short, similar to health insurance everywhere, all schemes examined here are works-in-progress.

GSHISs are not a panacea for all the problems facing the Indian health sector. However, they are a new component in health financing that has the potential to contribute to more efficient, affordable, and better quality care and, ultimately, to spearhead reform. How well these schemes become integrated into and supportive of other components of the finance and delivery system will determine their long-term sustainability. Further, international experience has shown that no matter how successful these fledgling GSHISs are during their initial years, early success is no guarantee of future success.

This book is the first comprehensive review of all the major publicly funded health insurance schemes in India. It responds to a request from the Ministry of Health and Family Welfare (MOHFW) received by the World Bank in June 2010 to assess GSHISs in terms of their organizational design features, spending, impacts, challenges, and potential to contribute to the achievement of universal coverage. The collaborating partners for the field research, the Public Health Foundation of India and Access Health International, also received similar requests from the Planning Commission, the government of India, and the state government of Andhra Pradesh (AP), respectively.

The rest of this chapter outlines the analytical framework and methods used to assess the schemes and construct the case studies. It also contains a summary matrix depicting the salient features of each scheme. Chapter 2 briefly outlines the current configuration of health finance and delivery in India and examines the context in which the schemes developed. It distills the design linkages among the schemes and the ways certain trends and innovations have disseminated among the schemes over time. Chapter 3 synthesizes organizational, operational, and design issues emerging from the case studies. Chapter 4 presents recommendations for strengthening the design and operational features of the schemes that can be implemented in the short term. Chapter 5 proposes options for the medium-term expansion of health insurance and linking demand- and supply-side financing and delivery arrangements. This chapter also includes an agenda for future research. Appendixes A through I contain detailed case studies of nine GSHISs. For these schemes, sufficient information was collected to produce case studies.³ Appendix J includes the instruments applied to collect information and data for the cases. Appendix K contains a glossary of terms used in this book.

Analytical Framework and Methods

Based on an instrument developed by the authors (appendix J), the key features of and challenges faced by health insurance schemes were assessed through site visits to scheme administrative offices, enrolment stations, and network hospitals, interviews with managerial staff, review of published and unpublished documents, and analysis of available secondary data, including enrolment, claims, and spending. For three schemes, Rashtriya Swasthya Bima Yojana, RSBY (GOI), Rajiv Aarogyasri (AP), and Yeshasvini (KA), reports based on assessments, evaluations, and small sample surveys were made available to the team. The findings are incorporated in the case material reported here. In some cases, the team visited enrolment camps and empaneled hospitals to get a sense of how the schemes worked in practice. No primary data through household, beneficiary, or provider surveys were collected for this research.

Depending on the availability of information, each case study follows a similar framework, addressing a series of features and questions related to each of the schemes under study. Table 1.1 outlines the main areas of inquiry. However, for lack of information, not all case studies follow the format or contain information on each area of inquiry.

Within the framework, an attempt was made to assess other aspects of the insurance as both a financing and risk-reduction instrument. For example, the authors looked for possible information asymmetries associated with health insurance: moral hazard (overutilization), adverse selection (overrepresentation of high-risk individuals), cream skimming (insurers' selection of low-risk individuals), and provider induced demand. However, for lack of household and provider data, in most cases such problems were hypothesized from theory and experience. The authors also attempted to examine incentives faced by the four key stakeholders for the schemes that influence their decisions: government (to set and enforce beneficiary-eligibility criteria, set package rates to pay providers, and define benefits packages), insurers (to contain costs, expand coverage, and improve equity of coverage), providers (to provide only necessary care, improve quality, and to contain costs), and beneficiaries (to get care soon enough to avoid more serious illness). The lack of household and provider data did not permit definitive statements on incentives and information asymmetries or impact. However, in most cases sufficient information was available to propose hypotheses on these themes.

Table 1.1 Analytical Framework Applied to Case Studies

<i>Area of inquiry</i>	<i>Specific topics covered</i>
Institutional features	Objectives, mission, legal and regulatory framework, contextual enablers (that led to creation of scheme), ownership, organizational structure, interinstitutional linkages, governance arrangements including stakeholder participation, supervisory oversight and decision-making authorities, management capacity, use of intermediaries (insurers and TPAs)
Beneficiaries	Target population, eligibility criteria, enrolment processes, characteristics of enrollees, equity of coverage
Benefits package	Services and/or conditions covered, preexisting conditions, exclusions, pre- and postcare coverage
Provider network	Number, location, ownership, and characteristics of empaneled facilities, empanelment criteria, competition among providers, linkages to public delivery system, provider education
Financing and financial status	Sources of income, registration and user fees, premium setting
Information environment	Reporting requirements
Utilization and claims	Number and amount of claims received, paid, and repudiated, including details on geographical distribution, disease distribution (including analysis of top 10 diseases/procedures paid under the scheme and their costs), utilization by different income quintiles as available, concentration of utilization, provider induced demand, timeliness of claims and payments, administrative costs
Provider payment mechanisms	Types and effectiveness of measures, variation in rates across schemes, rate-setting methods, payment procedures
Cost containment	Demand- and supply-side measures: copayments, deductibles, use of gatekeepers, second opinion, utilization review and control, prior authorizations, screening, concurrent review, discharge planning, in-depth analysis of claims experience, use of underwriting and actuarial analysis
Quality orientation	Quality assurance activities, guidelines, or standards; use of quality measures for empanelment, inspections
Consumer information and protection	Provision of information to beneficiaries on benefits and responsibilities; complaint and redress systems including statistics of grievances received and settled, comparative information on provider infrastructure, statistics or quality (given to consumers) if any
Other	Evidence of moral hazard (overutilization), adverse selection (provider and beneficiary), provider penalty mechanisms
Overall performance	Patient satisfaction, political viability, equity of access and utilization, expansion challenges, fraud and corruption

Source: Authors.

Case Study Selection and Summaries

The nine schemes included in this study are considered “health insurance” schemes in the Indian context, but not necessarily under Indian insurance law (box 1.1). They involve pooling risk and purchasing services from public and private providers and, in most new generation GSHISs, there is also a formal contract between a government agency and an insurance company.⁴ Most schemes do not collect contributions from the beneficiaries; they are entirely funded from general tax revenues. Thus, risk pooling occurs at the societal level.

For this study, all major central and state-level schemes receiving a government subsidy were selected, including the traditional social health insurance (SHI) schemes, the Employees’ State Insurance Scheme (ESIS), and the Central Government Health Scheme (CGHS).⁵ Other health insurance schemes were not included⁶—those for specific employee groups or those still in an initial planning stage such as the case of Maharashtra state. However, the Apka Swasthya Bima Yojana (ASBY) scheme in Delhi, which was scheduled for rollout in 2011, was taken up for the study.⁷ The following schemes were assessed:⁸

Box 1.1

Indian Law and Health Insurance

In terms of Indian insurance defining an “insurance contract” and specifying the entities eligible to offer insurance, a scheme should either have a contract with a licensed commercial insurer (as in RSBY; AP; Tamil Nadu, TN; and Himachal Pradesh, HP), or should be offered by an exempted public insurer created under an act of law (e.g., ESIS). Therefore, according to Indian insurance laws, a scheme such as Yeshasvini is not “insurance” even though it involves the collection and pooling of contributions (and a formal risk transfer to the government agency executing the scheme), and purchasing of health services from a defined network of providers. Under insurance laws, Yeshasvini can best be described as a self-managed contributory health scheme (sometimes also called “self-insurance”). The other scheme in Karnataka, Vajpayee Arogyashri (VA), is similarly not an “insurance” scheme since it too does not contract with a licensed insurer. However, within the broad context of how “health insurance” is understood internationally and in India (and with the above disclaimer), the authors consider these nine schemes “health insurance” schemes.

- *Central level.* ESIS, Rashtriya Swasthya Bima Yojana (RSBY) scheme, and CGHS.
- *State level.* Rajiv Aarogyasri (AP), Yeshasvini (KA), Vajpayee Arogyashri (KA), Kalaingar (TN), RSBY Plus (HP), and ASBY (Delhi).

Table 1.2 presents and compares summary features of the nine schemes. All new generation schemes launched after 2007 receive a full subsidy from government. The three schemes are sponsored by the central government. ESIS and CGHS offer comprehensive coverage (ambulatory, secondary, and tertiary) to formal sector employees and civil servants, respectively. Beneficiaries contribute through payroll deductions. Both are directly administered by government, although CGHS also makes limited use of private TPAs. RSBY, a national scheme, covers secondary care for the population living below the poverty line (BPL). Contributions by beneficiaries are nominal and are only for enrolment. Financing is shared between the central government (75 percent) and the states (25 percent). RSBY contracts private and public insurers on a competitive basis to take on insurance and administrative functions. The remaining schemes are state sponsored. Three schemes, Rajiv Aarogyasri (AP), Vajpayee Arogyashri (KA), and Kalaingar (TN), provide cashless, inpatient, tertiary care coverage to BPL populations as well as to the lower-middle class.

All of the newer schemes have another common feature: the use of commercial insurers or TPAs for underwriting and administrative functions such as beneficiary enrolment, hospital empanelment and claims processing and payment. Yeshasvini covers members of rural cooperatives in Karnataka and offers primarily surgical inpatient care, including secondary and some tertiary care procedures. It is the only state-subsidized scheme in which beneficiaries make mandatory contributions, which represented about 58 percent of the scheme's revenues in 2009–10. The final two state schemes, RSBY Plus (HP) and ASBY (Delhi), can best be described as RSBY “top-up” schemes. They cover higher-end tertiary care for the BPL population already enrolled in RSBY on a cashless basis. The in-depth case studies are provided in appendixes A through I. They are summarized in table 1.2.

The next chapter reviews the health finance and delivery context in India and the conditions that gave rise to a new generation of GSHISs. Thereafter, we delve into a detailed analysis of the schemes (based on the aforementioned framework) in the succeeding chapter.

Table 1.2 Summary of Salient Characteristics of the Government-Sponsored Health Insurance Schemes, 2010

<i>Scheme name</i>	<i>Employees' State Insurance Scheme (ESIS)</i>	<i>Central Government Health Scheme (CGHS)</i>	<i>Yeshasvini Co-operative Farmers Health-care Scheme (Karnataka)</i>	<i>Rajiv Aarogyasri Health Insurance Scheme (AP)</i>	<i>Rashtriya Swasthya Bima Yojana, RSBY (GOI/MOLE)</i>	<i>Chief Minister Kalaingar's Insurance Scheme^a (TN)</i>	<i>Vajpayee Arogyashri Scheme (Karnataka)</i>	<i>RSBY Plus (HP)</i>	<i>Apka Swasthya Bima Yojana^b (Delhi)</i>
Launch year	1952	1954	2003	2007	2008	2009	2009	2010	2011–12 ^a
Geographical area	Pan India in notified areas	Pan India, 25 cities	Entire state of Karnataka	Entire state of Andhra Pradesh	Pan India: Currently implemented in 25 states	Entire state of Tamil Nadu	Gulbarga Division of Karnataka	Entire state of Himachal Pradesh	Entire territory of Delhi
Target/eligible population	Private formal sector	Employees and pensioners of central government and certain other groups	Members of the rural cooperative societies (both above and below the poverty line)	BPL or annual family income below Rs. 75,000	BPL families and other targeted groups	BPL; annual family income below Rs. 72,000; members of 26 welfare boards	BPL residing in covered areas	Enrollees in HP under RSBY	Enrollees in Delhi under RSBY
Number of beneficiaries	55.4 million	3 million	3 million	20.4 million families, 70 million beneficiaries	23.4 million families, 70 million beneficiaries	13.4 million families, 36 million beneficiaries	1.5 million families, 7.5 million beneficiaries	0.24 million families, 0.8 million beneficiaries	0.65 million families (proposed)
Unit of enrolment	Family	Family	Individual	Family	Family	Family	Family	Family	Family
Benefits package	Comprehensive	Comprehensive	Inpatient, surgical secondary focus; covers more than 1,200 notified surgeries	Inpatient, tertiary focus; 938 identified procedures and follow-up packages covered	Inpatient lower-cost, secondary care focus; maternity also covered.	Inpatient tertiary focus; more than 400 identified hospitalization procedures covered	Inpatient tertiary focus; 402 packages and 50 follow-up packages covered	Inpatient tertiary focus; 326 defined procedures above RSBY covered	Inpatient tertiary focus; defined procedures over and above RSBY covered

Maximum insurance coverage	No limit	No limit	Rs. 200,000 per person per year	Rs. 150,000 per family per year plus buffer of Rs. 50,000 per year	Rs. 30,000 per family per year	Rs. 100,000 over four years, per family	Rs. 150,000 per family per year plus Rs. 50,000 per year buffer	Rs. 175,000 beyond the Rs. 30,000 covered by RSBY	Rs. 150,000 per family per year
Hospital empanelment, minimum beds	As per CGHS criteria (see next column)	100 beds in metropolitan cities; 50 beds in others	50 inpatient beds and 3 intensive care unit (ICU) beds	50 beds	10 beds	30 beds	50 beds	50 beds	50 inpatient beds
Number of empaneled hospitals (government and private)	148 own plus about 400 private hospitals	562 private hospitals (and can use any public hospital)	543 hospitals (including 30 public hospitals)	241 private and 97 government hospitals	8,111 hospitals (5,604 private and 2,507 public)	692 hospitals (including 56 public hospitals)	94 hospitals (86 private and 8 public)	16 hospitals	—
Sources of funds	Contribution, percent of wages (employees 1.75 percent, employers 4.75 percent)	Central government budget, employee contribution based on salary	Contributions (beneficiaries 58 percent), (state government 42 percent)	State government (100 percent, through the health budget and through a levy on alcohol sales in the state)	Central government 75 percent, state government 25 percent, but in some states, it is 90 percent from center plus Rs. 30 from beneficiary	State government (100 percent)	State government (100 percent)	State government (100 percent)	State government (100 percent)

(continued next page)

Table 1.2 (continued)

<i>Scheme name</i>	<i>Employees' State Insurance Scheme (ESIS)</i>	<i>Central Government Health Scheme (CGHS)</i>	<i>Yeshasvini Co-operative Farmers Health-care Scheme (Karnataka)</i>	<i>Rajiv Aarogyasri Community Health Insurance Scheme (AP)</i>	<i>Rashtriya Swasthya Bima Yojana, RSBY (GOI/MOLE)</i>	<i>Chief Minister Kalaingar's Insurance Scheme^a (TN)</i>	<i>Vajpayee Arogyashri Scheme (Karnataka)</i>	<i>RSBY Plus (HP)</i>	<i>Apka Swasthya Bima Yojana^b (Delhi)</i>
Total expenditure, 2009–10 (millions of Rs.)	Rs. 19,900	Rs. 16,000	Rs. 550	Rs. 12,000	Rs. 3,500	Rs. 5,170	None. Claim expenditure commenced in 2010–11.	None. March 1, 2010 to February 15, 2011, Rs 85.6	Estimated budget for first year: Rs. 400 to 600
Premium price, 2009–10	Contribution, percent of wages (employees 1.75 percent, employers 4.75 percent)	Contribution varies between Rs. 50 and Rs. 500 per employee per month. Balance paid by government.	Rs. 120 per person per year; increased to Rs. 150 per person per year in 2010–11	Rs. 439 per family (varies between phases and districts)	Average: Rs. 540 per family per year including service tax	Rs. 469 per family per year plus service tax	—	Rs. 364 per family per year including service tax	—
Number of hospitalizations per year	417,498, 2009–10	—	66,749, 2009–10	319,446, 2009–10	400,000, 2009–10	184,044, first year	3,738, until November 15, 2010	241 (March 2010 to February 2011)	—
Hospitalization frequency	0.75 percent per member per year	—	2.23 percent per beneficiary	0.6 percent per beneficiary	2.5 percent per beneficiary	0.5 percent (annualized)	—	0.10 percent (in 11.5 months) per family	—

Governing agency/legal status	ESIC / autonomous corporation	MOHFW / GOI	Yeshasvini Co-operative Farmers Health Care Trust/ autonomous trust	Aarogyasri Healthcare Trust/trust	State nodal agency/ insurance company	TN Health Systems Society/ autonomous society	Suvarna Arogya Suraksha Trust/ autonomous trust	HP Swasthya Bima Yojana Society/ autonomous society	Apka Swasthya Bima Yojana trust/ autonomous trust
Executing agency	ESIC and state ESIS departments	Same as governing agency	TPA	Trust and insurance company	State nodal agency and insurance company	insurance company	Licensed TPA	State health department and contractual staff	Insurance companies and TPAs
Number of staff in governing agency	13,585 (includes hospital and dispensary staff)	—	2	117	~10 at center and ~100 at state nodal agencies	<10	<10	5	—

Note: — = not available.

a. In 2011–12, the scheme was modified to include additional procedures and relaunched as the Chief Minister's Comprehensive Health Insurance Scheme, and the executing agency serving the scheme also changed. The maximum coverage was also changed from Rs. 100,000 floating over four years to Rs. 100,000 per year. Hereafter, this write-up reflects the scheme details that existed when this study was undertaken, in 2010–11.

b. ASBY was on the drawing board when this study began. The expected launch in 2011–12 had not yet happened when this book went to press.

Notes

1. However, a recent study submitted to the Planning Commission measures poverty at 37.2 percent. Official estimates using the new methodology are expected in late 2011 (GOI 2009).
2. Yeshasvini (Karnataka, KA) is the only scheme under study to have been the subject of an impact evaluation. The results are cited in this book. This study also makes use of small household surveys of beneficiaries in two schemes, RSBY (GOI) and R. Aarogyasri (AP), which provide limited information on potential impact.
3. The authors attempted to assess all government-sponsored schemes that were under implementation or in the final planning stages. However, the team had difficulty securing sufficient information from a few schemes. For example, CGHS and ESIS possess manual reporting systems while some other schemes were too new to have data for an appreciable length of time. A tenth scheme in Rajasthan, though not a health insurance scheme per se and therefore not documented here as a case study, provided valuable insights into building the recommendations on linkages with the public health system, discussed in chapter 5, this volume.
4. The two schemes in Karnataka do not have contracts with insurers.
5. These schemes receive a subsidy beyond any government contribution as an employer. Also, any health financing and delivery reform would have to account for these relatively large SHI schemes.
6. Other schemes include those operated by the department of textiles and the employee health services of the Defence and Railways Departments. The latter provide medical coverage through a network of facilities departmentally owned and operated for their employees and dependents. No contributions are collected and, for the most part, no outside services are purchased except for some tertiary care procedures.
7. At the time of going to print, Maharashtra had already launched phase 1 of its health insurance scheme (christened as Rajiv Gandhi Jeevandayee Arogya Yojana) in 8 districts of the state; the ASBY scheme in Delhi had been deferred; while the Kalaighar scheme in TN has been expanded to include more procedures and will be relaunched as the Chief Minister's Comprehensive Health Insurance Scheme. However, these evolutionary changes do not materially alter the analysis or recommendations contained in this book.
8. References to the "new wave" or "new generation" of GSHI schemes include the following, all launched after 2007: Rashtriya Swasthya Bima Yojana (RSBY), Rajiv Aarogyasri (AP), Vajpayee Arogyashri (KA), Kalaighar (TN), RSBY Plus (HP), and ASBY (Delhi).

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CHAPTER 2

Understanding the Context: The Development of Health Insurance in India

The extent and efficiency of health financing arrangements, the reach and performance of service delivery, and the evolution of risk-protection mechanisms in India have profoundly shaped the development of government-sponsored health insurance schemes (GSHISs). This is especially true of the recent crop of schemes, which as a group, were launched as a response to challenges and opportunities evident in the health system. This chapter attends to the contextual dimensions underlying the emergence of GSHISs. First the configuration of health financing in the country is reviewed and the salient problems and limitations of traditional, and heretofore dominant, health financing and delivery arrangements are examined. The discussion then turns to an examination of the historical development of health insurance in India. No scheme was woven from whole cloth. The spillover effects across schemes were extensive. The discussion focuses on the advent of a more or less common set of design elements that together fashioned the structural and organizational features of the new wave of GSHISs.

A Brief Review of Health Finance and Delivery in India

India has traditionally been a low spender on health care, allocating approximately 4.1 percent of gross domestic product (GDP), US\$40 per capita in 2008–09.¹ In terms of India's share in global health expenditure,

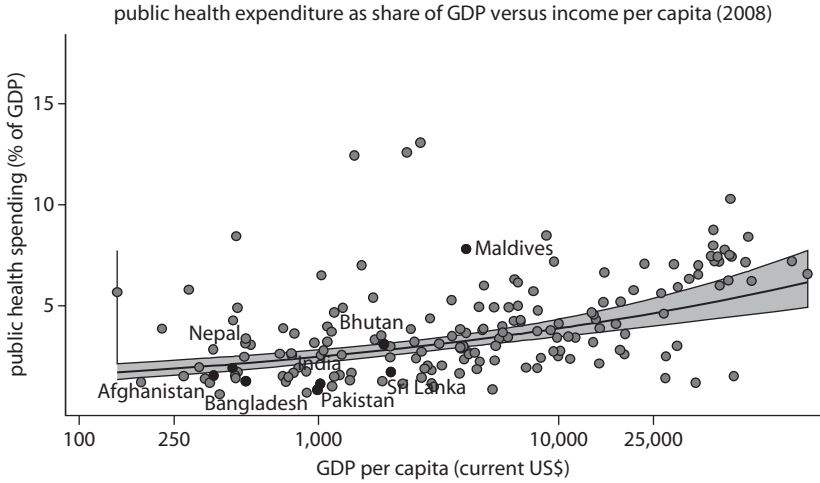
this country, where more than 16 percent of the world's population resides, scrapes by with less than 1 percent of the world's total health expenditure. The share of health spending has also not kept pace with the country's dynamic economic growth (in 2001–02, health spending accounted for 4.8 percent of GDP). Public spending on health has hovered at about 1 percent of GDP for the last decade. Government (central, state, and local) is the source of about one-fifth of spending; out-of-pocket payments represent about 70 percent—one of the highest percentages in the world.² External sources constitute a small share (2.3 percent) of health financing. Within the public health spending envelope, however, central government spending on health has increased as a percentage of total central government expenditure from 1.5 percent in FY2003–04 to 1.9 percent in FY2008–09 (Duggal 2007). Nominal central government spending increased by about 23 percent annually between 2005–06 and 2008–09, largely due to investments by the government of India (GOI) in its flagship National Rural Health Mission (NRHM) (MOHFW 2009a: 35).

India is significantly below its global comparators in terms of public expenditure on health as a share of GDP among countries with similar levels of income (GDP per capita in current U.S. dollars). At India's current income level, most countries exhibit higher public spending on health as a share of their GDP (World Bank 2010a). Figure 2.1 illustrates this situation on a log scale in which each circle represents a country. The countries in South Asia have been labeled for ease of comparison.

India also falls short in terms of health impact. Although it has achieved laudable annual percent reductions in infant mortality over the last decade, some of its neighbors, such as Bangladesh and Nepal, have achieved steeper declines (Deolalikar et al. 2008). India has gained less ground in reducing malnutrition, maternal mortality, adult mortality, and prevalence of communicable diseases than its neighbors. In relation to its income level and total health spending per capita, India has not performed as well as its comparators on lowering maternal mortality, and its performance is just about average for infant mortality (World Bank 2010a). Huge disparities in health outcomes are still evident across states and social groups (e.g., scheduled castes and scheduled tribes), and improvements have not been shared equally.

Table 2.1 provides an overview of health financing in India by major sources for 2004–05 and 2008–09.³ Over this period, total health spending increased by 64 percent while government spending more than doubled. GOI spending on NRHM accounts for a large share of the increase in public spending over this period. In part due to the NRHM,

Figure 2.1 India and Comparators: Public Expenditures on Health as a Share of GDP and in Relation to Income per Capita, 2008



Sources: World Bank 2010b; WHO 2010.
 Note: x-axis log scale.

the GOI is taking on an increasingly larger financial role in health financing vis-à-vis the states. Government spending on health insurance also increased significantly in the period but still represented a small share of total government spending (about 5 percent in 2008–09).⁴

Figure 2.2 depicts financial flows among major actors in India’s health system according to the national health accounts classification: categorized by sources, agents, and providers. The bolded arrows show the main financial flows. Box 2.1 describes health financing arrangements in terms of organizational forms for risk pooling observed in India.

Health finance and delivery in India have developed along four main and mostly parallel lines.⁵ The first and by far the largest is out-of-pocket spending by households (69 percent of spending). Nearly all this spending is directed to fee-for-service private providers, but some are for user fees collected at public facilities. This method of finance places considerable financial burden on poor households and is seen as one of the important reasons for impoverishment in India (discussed below). Approximately 80 percent of outpatient and 60 percent of inpatient care is provided by private practitioners (MSPI 2004). This translates into a flow of 77 percent of total health spending directed toward private providers (including charitable and other nonprofit facilities).

Table 2.1 India: Estimated Distribution of Health Expenditure, by Source (Rs. million)

<i>Item</i>	<i>2004–05</i>	<i>Percent</i>	<i>2008–09</i>	<i>Percent</i>
<i>GOI health expenditure</i>	90,667	7	223,857	10
Central expenditures, including NRHM (excluding insurance)	44,997		90,137 ^a	
Transfers to states (e.g., NRHM, HIV/AIDS)	37,670		113,720 ^a	
Insurance ^b	8,000 ^c		20,000 ^d	
<i>State and local government health expenditure, own resources</i>	172,465	13	362,957 ^e	17
Non-insurance	171,465		352,957	
Insurance ^b	1,000 ^f		10,000 ^g	
<i>Total public health expenditure</i>	283,085		586,814	
<i>External assistance</i>	30,495	2	37,016	2
<i>Private health expenditure</i>	1,044,135	78	1,573,935	72
Out-of-pocket	928,388		—	
Insurance	21,717		68,740	
Other	94,030		—	
<i>Total health expenditure (THE)</i>	1,337,763	100	2,197,765	100
THE as share of GDP (percent)	4.25	—	4.13	—

Sources: Authors' estimates based on data from National Health Accounts 2004–05 (MOHFW 2009b) and expenditure data from health insurance schemes.

Note — = not available.

a. Includes estimated spending for NRHM.

b. All estimates of insurance spending are approximate.

c. Includes estimated expenses on Central Government Health Scheme (CGHS) and Universal Health Insurance Scheme (UHS) subsidy.

d. Includes estimated expenditure on CGHS, RSBY, Handicraft/Handloom schemes, and UHS subsidy.

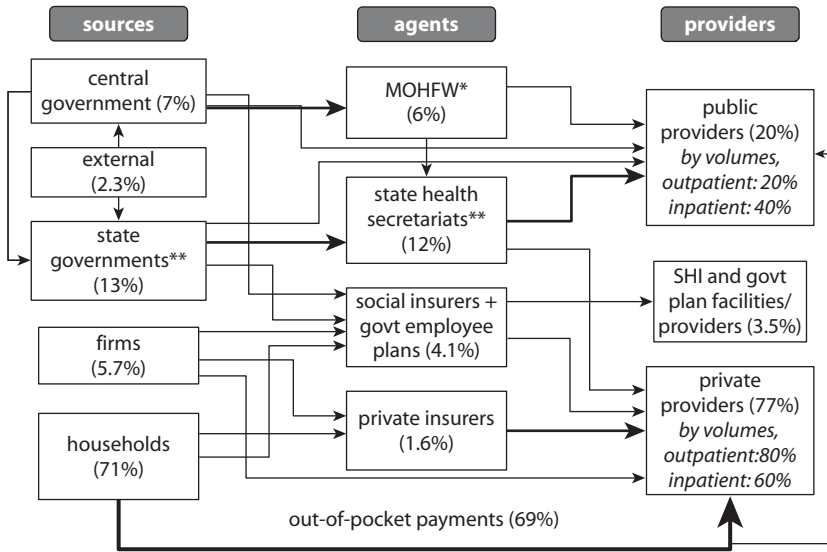
e. Includes provision for estimated expenditure of Rs. 20,000 million at local government level

f. Includes estimated expenditure on Yeshasvini and state subsidies to Employees' State Insurance Scheme (ESIS).

g. Includes estimated expenditure on Aarogyasri (AP), Yeshasvini, state share of RSBY, state ESIS subsidy, and other state schemes.

The second is tax-financed, direct public delivery (20 percent of total health spending) available, in principle, for India's entire population. Most funds are channeled through the MOHFW and state health secretariats, but central and state governments directly fund a number of public medical colleges and affiliated hospitals. A limited number of autonomous public institutions and nonprofit hospitals also receive direct financing from central and state governments. Operated mainly by the states, the public delivery system includes facilities at primary, secondary, as well as tertiary levels, and accounts for about 20 percent and

Figure 2.2 India: Main Actors and Fund Flows in Health System, ca. 2005



Source: National Health Accounts for 2004–05 (MOHFW 2009b) and authors’ estimates.
Note: The published NHA data contain certain inaccuracies which have resulted in both over- and underestimates of spending. For example, social insurance was placed as a source rather than firms and households. Also, some smaller sources of funds have not been depicted in this figure, and therefore the totals for sources do not add to 100 percent.
 *Includes spending by other central ministries.
 **Includes spending by local governments (about 1 percent of total spending).

40 percent, respectively, of outpatient and inpatient utilization. Considerable interstate variation exists especially in inpatient utilization (Mahal et al. 2002).

General tax revenues are the major source of financing for the central and state governments’ contributions to health spending, most of it for free or highly subsidized services delivered through public providers. Constitutionally, health is a state subject in India. Most of the central government’s budget for health is allocated to the states through grant transfers (from the MOHFW) to support various national health programs, known as Centrally Sponsored Schemes (CSSs).⁶ Although the central health budget has grown considerably, transfers to states as a proportion of the total budget of the MOHFW declined sharply since the 1990s. The share of the Central Government expenditure on health, including grants to states, constituted about one-third of the combined

Box 2.1**India: Organizational Arrangements for Risk Pooling**

The health financing system can also be categorized by the way financial risks are pooled. The largest is the national health service system operated by the states and is cofinanced by the GOI and states mainly through general tax revenues. This is a societal pooling arrangement in which the entire population in theory has access to publicly delivered care for free or at highly subsidized prices. The second is social health insurance (SHI) which is mandatory for formal sector workers, civil servants, military, and railway employees. Separate schemes operate for each of these groups. Risk pooling is performed through employee and employer contributions (via a payroll tax) and government subsidies. Voluntary private health insurance is the third and is financed through premium payments by individuals and employers. The fourth, and most recent, are fully-subsidized, mass schemes for the poor operated by central and state governments. In this book, we refer to both social insurance and subsidized mass schemes as government-sponsored health insurance schemes (GSHISs).

expenditure by the states and central government in 2001–02 (NCMH 2005). However, this percentage has increased since 2005 when the NRHM, the GOI flagship program to improve the public delivery system, was launched. In 2008–09, for example, GOI funding represented two-fifths of the country's total public financing (table 2.1).

State governments draw funds from several sources including general tax revenues, general central government transfers, and MOHFW transfers for centrally sponsored health schemes.⁷ Since the launch of NRHM, the funding mechanism for central assistance from the MOHFW has migrated from the treasury to the state health societies.⁸ These societies now receive most central transfers for health schemes. State health spending from own resources as a percent of state GDP varies considerably. In 2008–09, most states spent between 0.6 percent and 1.5 percent of their state GDP on health (Reserve Bank of India 2010). While state financing accounts for 58 percent of public spending on health, it varies greatly across states. Most states have traditionally placed low priority on health spending (Shiva Kumar et al. 2011).⁹

Although central government transfers through NRHM have increased state spending, ranging from 13 percent to 36 percent across the states, additional GOI funding has not bridged this spending gap. States are

mandated to contribute 15 percent of total NRHM spending (GOI contributes 85 percent), but many states have not fulfilled this mandate. For example, in 2007–08 only four states complied with the 15 percent contribution (MOHFW 2009a). Nevertheless, nominal state government spending increased by an annual 17 percent between 2005–06 and 2008–09, 10 percent per annum in real terms.¹⁰

The third segment consists of social insurance schemes for formal private sector workers, civil servants, and military and railway employees (4.1 percent of spending). These schemes are mandatory, and most are financed through employee and employer contributions via a payroll tax, but also receive partial government subsidies. Others are fully subsidized by the government (e.g., military, railways) or public corporations (e.g., coal and petroleum parastatals). Beneficiaries seek care in facilities owned and operated by the schemes or contracted out to the private sector.

The fourth segment is private voluntary health insurance (PVHI), which emerged in the late 1980s but has grown rapidly in the 2000s. In 2004–05, PVHI accounted for 1.6 percent of total health expenditure but, by 2008–09, reached an estimated 3 percent.¹¹ Private insurance companies' health products emphasize inpatient coverage provided in networked private hospitals. The market consists of two, roughly equal size components: a group market (catering to employers) and a retail market comprising individual and family plans. In 2010, PVHI covered about 60 million people or 5 percent of the population.

A large number of community-based microinsurance schemes also exist, but their coverage is small and was estimated at about 5–6 million persons in the early years of this decade (Devadasan et al. 2004).¹² However, a small portion of this coverage may overlap with the PVHI market: some CBHI schemes buy group insurance from private insurance companies.

A fifth segment, not depicted in figure 2.2 and the subject of this book, appeared in the second half of the 2000s. Unlike their social insurance counterparts described above, these new government-sponsored schemes are fully subsidized, mass-coverage programs that target the poor.

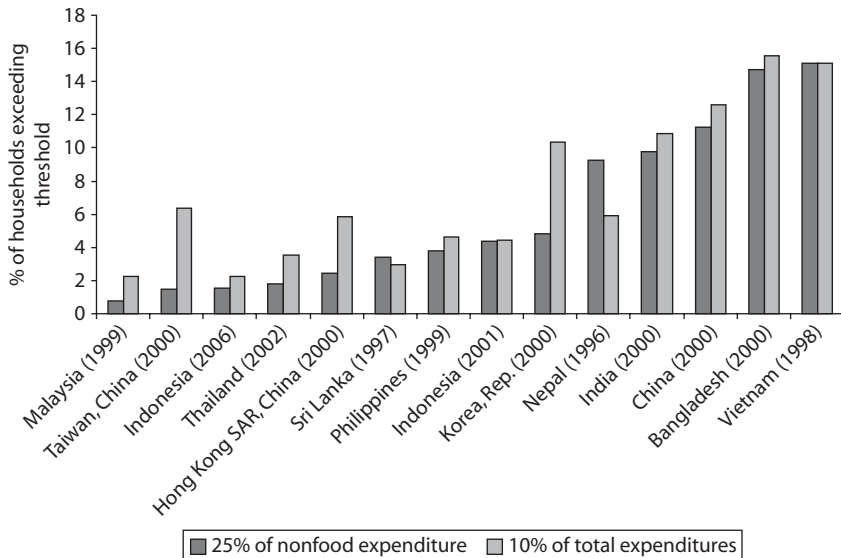
Private firms, external agencies, and others make up the remaining share of India's health expenditure. Although firms represent a fairly significant source of financing, in India, unlike in other countries, these funds are not always directed to health insurance (PVHI and SHI). Rather, they are often used to fund on-site health facilities or to reimburse employees' medical care expenses.¹³

Financial Burden

Deepening health insecurity has been a main driver of calls for government funding of health insurance for the poor. Selvaraj and Karan (2009), based on National Sample Survey Organization (NSSO) data (MSPI 2004), estimate that nearly 39 million persons were pushed into poverty by out-of-pocket payments for health care during 2004, compared with 26 million during 1993–94. Applying a different methodology to the NSSO data, Berman, Ahuja, and Bhandari (2010) estimate that 63 million individuals (11.9 million households) were pushed below the poverty line by health care expenditure in 2004. These figures represented 6.2 percent of all households (6.6 percent in rural areas and 5 percent in urban areas).

Households, on average, devote about 5.8 percent of all their expenditure to health care. Health accounts for about 10.5 percent of nonfood expenditure (World Bank 2010a). Approximately 14 percent of households in rural areas and 12 percent in urban areas spend more than 10 percent of their total annual consumption expenditure on health care (MSPI 2004). Countries such as Sri Lanka do much better, while China, Bangladesh, and Vietnam do worse than India on this count. A comparison of household spending on health for selected countries in Asia is shown in figure 2.3.

Figure 2.3 India and Comparators: Household Spending on Health Exceeding Thresholds (25% of nonfood expenditure and 10% of total expenditures)



Source: Van Doorslaer 2005.

Table 2.2 India: Average Out-of-Pocket Expenditure for an Inpatient Stay, 1996 and 2004 (nominal Rs.)

<i>Location/provider</i>	<i>1995–96</i>	<i>2004</i>
<i>Rural</i>		
Government	2,080	3,238
Private	4,300	7,408
All	3,202	5,695
<i>Urban</i>		
Government	2,195	3,877
Private	5,344	11,533
All	3,921	8,851

Sources: MSPI 1996, 2004.

Table 2.2 shows the average amounts paid by rural and urban households for a hospital stay based on NSSO data from 1995–96 and 2004 rounds (MSPI 1996, 2004). In 2004, unit level NSSO records show that drug purchases represented between 45 percent and 55 percent of all inpatient expenses and between 70 percent and 80 percent of outpatient expenses incurred by households (MSPI 2004). Although private hospitals cost significantly more than government facilities, the latter are far from “free.” Patients in government hospitals have to pay out-of-pocket costs of user fees, medicines, and other supplies. There is also evidence of informal payments (TII-CMS 2008).

Public subsidies for health disproportionately favor the richer segments of society. Peters et al. (2002) estimated that, in the late 1990s, for every Rs. 1 spent on the poorest income quintile, the government spent an estimated Rs. 3 on the richest quintile. As in other developing countries, the relatively well-off capture subsidies directed to hospitals. Mahal et al. (2002) reported that, while 46.5 percent of public spending is on hospitals, 36 percent is directed to the top quintile, and only 8.1 percent benefits the bottom quintile. Health financing reforms to improve equity in public health spending remain an imperative for India.

Service Delivery Issues

Service delivery is far from optimal in India. Public services are plagued by a number of shortcomings that contribute to lack of trust on the part

of the population. These deficiencies were cogently summarized by the Planning Commission in an appraisal of the 10th Five Year Plan:

[T]he quality of [health] care across the rural public health infrastructure is abysmal and marked by high levels of absenteeism, poor availability of skilled medical and para-medical professionals, callous attitudes [among health workers], unavailable medicines and inadequate supervision and monitoring . . . The poor continue to avail of the costlier services provided by the private practitioner, even when they have access to subsidised or free public health care, due to reasons of distance (for significant segments of the population), but more importantly, on account of the unpredictable availability and very low quality of health care services provided by the rural public primary health sector. (Planning Commission of India 2005: 102)

Since 2005, a number of studies at state, district, and village levels have confirmed the Planning Commission's portrayal of the public delivery system. These studies highlighted the underlying lack of accountability to patients, communities, and public objectives as a main driver of poor quality, irregular supply, callous behaviors, and corrupt practices observed among public providers (Das et al. 2011; Reddy 2011; Bajpai, Sacs, and Dhalakia 2009; Ali et al. 2009; Hammer, Alyar, and Samji 2006; TII-CMS 2008; Das and Hammer 2006, 2007; Banerjee et al. 2008; CUTS-CART 2010; Gill 2009; Chaudhury et al. 2010).¹⁴ Although increased financing under NRHM has improved infrastructure and resulted in hiring a large number of health workers, the underlying accountability issues remain unaddressed.

Whether the private sector can contribute to affordable and better quality care for the poor remains to be seen. Private practitioners are omnipresent throughout India, but the range and quality of their services varies significantly. As suggested above, private providers emphasize curative care and provide a smaller share of immunizations and prenatal care than the public sector. Unqualified allopathic practitioners have a significant presence in rural areas and charge about a third less for a consultation than qualified allopathic providers (Peters et al. 2002). However, qualified allopathic providers congregate in urban settings (Costa and Diwan 2007). Recently, corporate hospital chains have been extending their reach into smaller cities (IFC forthcoming). Because private medical practitioners are unregulated, almost anybody can open a practice. In a further complication, nearly all public sector physicians also practice privately in solo clinics or as consultants to hospitals.¹⁵

Finally, acknowledging the limitations of the health financing and delivery system outlined above, the central government established the

National Commission on Macroeconomics and Health (NCMH). The commission's recommendations created an enabling policy environment for a new wave of government-sponsored health insurance schemes. The NCMH critically appraised the health system and suggested ways of strengthening it with the specific objective of improving access for all to a minimum set of essential health interventions. NCMH advocated: (1) moving toward universal health insurance for secondary and tertiary care, (2) significantly increasing public outlays for health, and (3) stimulating a competitive provider environment. Health insurance schemes have been one vehicle applied by central and state governments to achieve these objectives (MOHFW 2005).

Health Insurance in India: Context and Historical Development

The GSHISs date to the late 1940s when the central government introduced the Employees' State Insurance Scheme (ESIS) for blue-collar workers employed in the private sector. This was followed in the mid-1950s by the Central Government Health Scheme (CGHS) for central government employees and for their families. Both schemes provided comprehensive medical coverage and followed a traditional social insurance risk-pooling model in which funds are pooled through employer and employee payroll contributions, supplemented, in these schemes, by government subsidies. Other government schemes for employees in railways and defense, and other civil servants, also emerged shortly after Independence.¹⁶

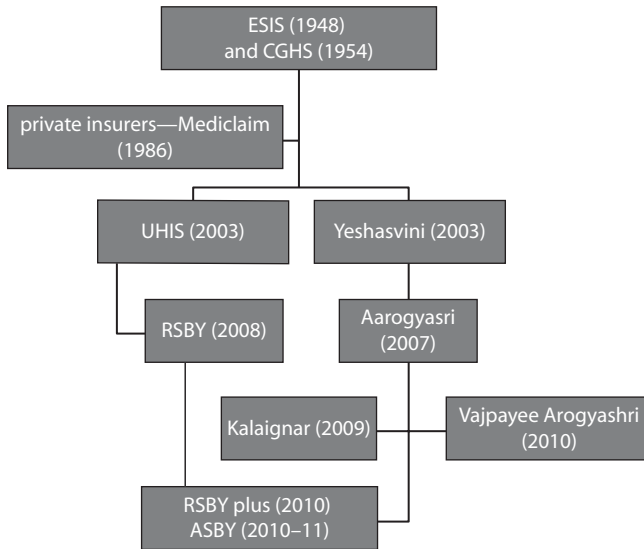
Perhaps due to the supply-side focus described in the previous section, demand-side financing approaches involving government-subsidized health insurance for the poor were slow to emerge. Since the launching of ESIS and CGHS, nearly five decades passed before a new wave of GSHISs emerged.

Not Cut from Whole Cloth

Context and capacities have played an important role in the development of the wave of GSHISs launched since 2007. Each of these schemes benefited from the earlier development of the health insurance industry over a 20-year period. Figure 2.4 traces the genealogy of GSHISs and the linkages among them.

Among the early attempts by the central government to introduce health insurance for the informal sector was the UHIS. Introduced in 2003, UHIS was a hospitalization indemnity product that could be

Figure 2.4 India: A Genealogy of Government-Sponsored Health Insurance Schemes



Source: Authors.

voluntarily purchased from any state-owned insurer at a heavily subsidized price (e.g., Rs. 165, less than US\$4 a year). Despite its name, the scheme remained far from “universal” and covered only 3.7 million lives by 2008–09. Another scheme launched in the same year was Yeshasvini, a contributory scheme introduced by the Department of Cooperation in Karnataka for the members of rural cooperative societies in that state.

Both schemes provided valuable lessons and possessed a number of common structural features that were adopted by the new generation of GSHISs. Features introduced by at least one of these schemes include: premium partially or largely subsidized by government on the demand side; cashless inpatient coverage; service provision by “networked” public and private hospitals; provider payment through prospective, case-based “package” rates; a bottom-up coverage design consisting of targeting the informal and BPL populations; and use of health insurance companies or third-party administrators as intermediaries for risk underwriting or administrative functions or both.¹⁷

Benefits design of UHS and Yeshasvini was also modeled on standardized insurance products sold in the private market since the mid-1980s.

The first, known as Medclaim, and launched by four public non-life insurance companies,¹⁸ covered inpatient care up to a defined annual cap. This feature was also adopted by most GSHISs.¹⁹ Although subsequent versions of this Medclaim product continue to dominate the PVHI market, more than 30 insurers (mostly non-life and some life insurers) now offer more than 300 mostly indemnity products.²⁰ Another variant of the Medclaim-type coverage, which was introduced by private insurers, is known as the “family floater.” It covers the entire family and was an additional design feature incorporated by a number of GSHISs analyzed in this book.

During its early years of development, the private insurance industry’s influence on hospitals was minimal. At the turn of the century, the private health insurance system was small and insignificant relative to total hospital revenues (about 2 percent of India’s total spending on hospitalization). Like uninsured patients, the insured paid their bills in cash but subsequently sought reimbursement from their insurers. This meant that patients not only had to arrange substantial funds upfront, but also suffer losses due to deductions and delays during claim processing by the insurer.

By 2008–09, however, health insurance companies were paying claims amounting to about 10 percent of all hospitalization expenditure in the country.²¹ This proportion was much higher for hospitals located in larger cities where insurers and third-party administrators (TPAs) were contributing 30 percent or more to total hospital revenues. In the 2000s, the number of “networked hospitals” rapidly expanded, and is currently estimated at about 10,000 hospitals across the country. By the late 2000s GSHISs were able to tap into this large hospital network for access to treatment for their beneficiaries (and indeed augmented it further), which facilitated GSHIS expansion.

With the rapid growth of private insurance and the introduction of TPAs in the 2000s, the concept of “cashless” hospitalization emerged, and was subsequently adapted by all GSHISs. TPAs (and insurers) entered into agreements with networked hospitals to treat the beneficiaries. Claims were settled between the TPA or insurer and the hospital, and patients were charged only for copayments or services not covered by insurance. This is a far cry from the early days of the system, when hospitals were wary of joining the cashless networks—a new, untested concept for most hospitals before the mid-2000s. Based on discussions with TPAs and insurers, the share of cashless hospitalization is currently estimated at more than 60 percent of the PVHI market. The remainder of the market still relies on paper-based reimbursement.

The operational capacities of the PVHI industry to process prior authorizations for cashless claims and the claim payment processes also grew, accounting for several million transactions annually. The information technology capabilities of insurers, TPAs, and hospitals—an essential prerequisite to the success of most new GSHISs—also witnessed consistent development across the industry.

The commercial health insurance market itself has become fiercely competitive, which has also benefited the emerging GSHISs. Insurers have demonstrated their willingness to quote lower and lower prices in a bid to acquire larger volumes of business. This was reflected in the low premium bids offered by insurers for the GSHIS business (chapter 3, this volume). The low premiums facilitated the affordability of GSHISs for government, at least in the short term. However, in the long run much greater resources may be needed to sustain the schemes.

Returning to the public sector, the system known as “Chief Minister’s Relief Fund” was also a precursor in the genealogy of the newer GSHISs, especially for the state government schemes. Several states in the country had been operating relief funds, often housed in the chief minister’s office, which made discretionary grants for high-cost illnesses, based on the patient’s financial status. Anecdotal evidence suggests that grant allocations were often inequitable and patronage driven, and resulted in out-of-pocket spending. With its initial list of covered illnesses stemming from applications for such grants, Andhra Pradesh institutionalized this discretionary grants program into a health insurance scheme. Subsequently, other states such as Himachal Pradesh also chose to convert a discretionary grants system into insurance-based entitlements for the state’s poorest citizens. Several other states are contemplating this option.

Notes

1. MOHFW 2009a (provisional estimations from 2005–06 to 2008–09).
2. Exceeded in Asia only by Pakistan, Cambodia, Myanmar, and Afghanistan in 2008 (WHO 2010).
3. In this chapter different sources of data on health spending are cited for different years. Not all data are consistent. Some data are available for certain years only, such as data based on national surveys (NSSO) and national health accounts (NHA).
4. These themes are discussed in greater detail in the paragraphs that follow.

5. This segmentation of finance and delivery has been observed in other low- and middle-income countries (Londoño and Frank 1997; La Forgia 2000; Baeza and Packard 2006).
6. These include: HIV/AIDS, disease surveillance, malaria, blindness control, tuberculosis, leprosy, reproductive and child health, and so forth, and are implemented by state health authorities.
7. The source of state budgetary expenditures is general state taxes. Information on the exact tax source is unavailable.
8. Registered as independent societies with state officials managing their affairs *ex officio*, the state health societies allow faster decision making, quicker cash transfers, and easier accounting requirements than the conventional treasury route.
9. An exception to this statement is the recent wave of state-sponsored GSHIS
10. Absorptive capacity of states to spend GOI transfers has been a major issue, particularly since the onset of NRHM (Duggal 2007). For example, a GOI audit found nearly 40 percent of transfers being unspent balances among the various programs under the NRHM in 2007–08 (MOHFW 2009a). However, some of the unspent funds were due to late-in-the-year releases by the MOHFW. This is a consequence of the budgetary cycle in which MOHFW funds lapse on March 31 each year, and mounting pressure to push funds to states as this date approaches, leaving little time for spending. States' absorptive capacity, nevertheless, has improved in recent years (MOHFW 2011).
11. Authors' estimates. Health insurance spending is taken up in chapter 3.
12. Kuruvilla and Liu (2007) outline the constraints to microinsurance schemes: (1) population coverage is usually limited to small geographical areas; (2) breadth of coverage is restricted, usually limited to primary care; (3) weak managerial capacity leads to low quality, cost escalation, and inefficiencies; and (4) without a significant government subsidy, coverage cannot be expanded to larger groups.
13. One reason for the limited group insurance market could be the additional service tax liability on insurance premiums which employers do not incur if they provide in-house services or reimburse employees' medical expenses (IRDA 2009).
14. Based on 36 focus group discussions conducted in 25 villages and wards in the impoverished Prakasam Region, AP, Reddy (2011: 41) provides the following depiction of community sentiments toward public hospitals: "They [villagers] opined that they cannot rely on the hospital in cases of emergencies as they never know if it functions properly with all the doctors and support staff. The same doctors working in the hospital have their private clinics and nursing homes. People prefer to attend their clinics as all the necessary equipment and staff to provide timely treatment is present there."

15. The low quality of diagnostic skills and advice provided by both qualified and unqualified private practitioners (and public practitioners) has been documented by Das et al. (2011) and Das and Hammer (2006, 2007). In a review of microstudies on private provision, Baru and Nundy (2008) found a number of shortcomings in private facilities in terms of infrastructure, equipment, sanitary conditions, and staffing, particularly among smaller hospitals known as nursing homes. The authors also cited studies outlining inappropriate and harmful practices in terms of treatment of tuberculosis, malaria, and other diseases, as well as irrational use of drugs. Concessional pricing for the poor is a widespread practice of qualified private inpatient and outpatient providers, but private allopathic providers usually cater to a wealthier segment of the population than public providers, at least in rural areas (Peters et al. 2002).
16. The schemes in railways, defense, and civil service for civil employees in non-CGHS areas (CS-MA) are all noncontributory and entirely funded by the GOI as an employment benefit. For railway and defense employees, services are delivered largely through a captive network of health facilities owned and operated by these departments. CS-MA reimburses government hospitals and authorized private medical practitioners. Because these schemes do not have the features of the “insurance” schemes examined here, they have been excluded from discussion.
17. These structural features are a departure from more traditional contributory “social insurance” models such as ESIS and CGHS. These latter schemes are financed mainly through payroll taxes and, unlike the recently established GSHISs, provide coverage for a comprehensive benefits package including inpatient and outpatient care. ESIS beneficiaries receive most care through scheme-owned and -operated facilities. Specialty inpatient care, however, is contracted out to private hospitals. CGHS outsources inpatient care to both public and private facilities, but mainly the latter.
18. These state-owned non-life insurance companies are entirely owned by the Indian government, but are registered as for-profit companies and operate as commercial insurers. Public and private insurers offer the same range of products. The term “private health insurance” used in this study refers to government-owned and privately held insurance companies. Nevertheless, the bottom line is probably far more closely monitored in private commercial insurers than in their publicly owned counterparts. Consequently, there could be differences in the expected incentive structure of private vis-à-vis public insurers.
19. However, some features of Mediclaim such as exclusions for preexisting conditions (which is primarily a deterrent against adverse selection used by private voluntary plans) were not adopted by the GSHISs due to their much wider member base and highly subsidized premium, which potentially address adverse selection.

20. Population coverage under voluntary PVHI schemes is estimated at about 5 percent of the population. In FY2009–10 PVHI was a Rs. 75 billion industry, excluding revenues from services provided under contract with GSHISs.
21. The rapid growth in the health insurance industry after 2001 can be attributed to the introduction of a new regulatory structure for the insurance industry in the late 1990s. Privately owned insurance companies were once again permitted to operate, which led to more efforts to increase public awareness of health insurance products. The other regulatory change was the introduction of third-party administrator (TPA) regulations in 2001, which provided a quick market entry for newer health insurers that could use already organized hospital networks and established claim processing capacities created by TPAs.

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CHAPTER 3

Results and Cross-Cutting Issues

The results drawn from the nine case studies, presented in appendix A, are synthesized in this chapter. Twelve cross-cutting themes are discussed. For each theme, general and innovative scheme features are described, strengths and shortcomings are identified, and emerging issues are raised. Focus is put on both big picture and operational issues. In cases where there is insufficient data to make sound interpretations, potential issues are hypothesized. For the most part, the themes follow the areas of inquiry specified in table 1.1. They are: (1) population coverage; (2) enrolment and beneficiaries; (3) benefits; (4) utilization; (5) expenditures and costs; (6) rate setting and provider payment; (7) provider networks, quality, and patient satisfaction; (8) the role of public hospitals; (9) financial benefits and burdens on patients; (10) cost containment; (11) institutional arrangements and managerial capacity; and (12) political economy issues. The chapter concludes with a summary of successes and challenges emerging from scheme design features and implementation experience.

Population Coverage

Extending population coverage has been the major focus of the new wave of government-sponsored health insurance schemes (GSHISs),

particularly during the continuing roll-out phase, which commenced in the late 2000s. In this section, past trends in population coverage and future projections are examined.

Table 3.1 tracks the significant growth in population coverage by GSHIS and commercial insurers over three time periods.¹ Between 2003–04 and 2009–10, population coverage through GSHISs increased by well over fivefold.

Rashtriya Swasthya Bima Yojana (RSBY) and two state schemes (Rajiv Aarogyasri and Kalaingar²) account for nearly all the growth achieved by GSHISs. Consequent to the focus of these schemes on the poor and economically vulnerable populations, lower-income groups predominate in this growth. Most of the expansion has been recent, after 2007. In the case of Rajiv Aarogyasri and Kalaingar, state governments have in theory extended coverage to more than 80 percent and 50 percent of their respective populations, which they deemed low-income and vulnerable to health shocks. Thus, these states are approaching universal coverage, at

Table 3.1 India: Population Coverage and Projected Growth, 2003–04, 2009–10, and 2015 (million people)

<i>Scheme</i>	<i>2003–04</i>	<i>2009–10</i>	<i>2015^a</i>
<i>Central government</i>			
Employees' State Insurance Scheme (ESIS)	31	56	72
Central Government Health Scheme (CGHS)	4.3	3	3
RSBY	n.a	70	300
<i>State government</i>			
Andhra Pradesh, AP (Aarogyasri)	n.a	70	75
Tamil Nadu, TN (Kalaingar)	n.a	40	42
Karnataka, KA (Arogyashri)	n.a	1.4	33
KA (Yeshasvini)	1.6	3	3.4
Total government-sponsored	37.2	243	528.4
Commercial insurers	15 ^b	55 ^b	90
Grand total (includes others not listed above) ^c	55	300	630

Sources: Authors' elaboration based on scheme data.

Note: n.a = not applicable, scheme not yet in existence.

a. See annex 3B for estimation methods.

b. Estimated based on average premium from Insurance Regulatory and Development Authority (IRDA) sample database Traffic Advisory Committee/Insurance Information Bureau (TAC/IIB) applied to published revenue data of the industry.

c. Includes other health protection and health insurance schemes, including community health insurance schemes, publicly subsidized schemes for handloom workers and artisans, noncontributory coverage by employers of government (defense, railways, state government staff) and nongovernment employees (where employers run their own facilities or provide reimbursements without using insurance mechanisms) as an employment benefit.

least for the defined benefits packages. Over this same period, commercial insurers also made impressive strides in coverage expansion, registering an estimated four-fold increase in coverage.

With 243 million persons estimated to be covered in the major government-sponsored health insurance schemes (table 3.1), the authors estimate that more than 300 million persons, about 25 percent of India's population, now have access to some form of health insurance.³ This estimate includes coverage by schemes not reviewed in this book, including those for government employees and pensioners managed by the Railways and Defense departments, targeted government schemes such as those sponsored by the Department of Handlooms and Handicrafts, and the community-based self-managed schemes.⁴

In light of current trends, and assuming continued political and financial support from government, insurance coverage is expected (perhaps conservatively) to reach more than 630 million persons, 50 percent of the population by 2015. Most of the growth is likely to occur along three lines: RSBY, commercial insurance, and state-sponsored schemes. RSBY aims to reach 60 million families by 2015 (roughly 300 million members), and will account for most of the growth in GSHISs. State schemes such as Vajpayee Arogyashri (VA) in Karnataka will continue to expand.⁵

Other potential drivers of growth are commercial insurance as well as new state schemes in the planning stage. As mentioned above, other states will be introducing new schemes. Any additional states that launch schemes will further expand coverage, increasing membership well above the projected 630 million.⁶

India's rapid economic growth is creating a large middle- and upper-middle class that can afford to buy mostly individual and family plans from commercial insurers. According to the National Commission for Enterprises in the Unorganized Sector (NCEUS 2009), about 23 percent of the population (270 million people in 2010) can be categorized as middle class and higher and the remaining 77 percent as poor or vulnerable. Therefore, 23 percent may represent an upper limit on potential coverage through private voluntary health insurance (PVHI).⁷

Because of its linkage to the formal economy, ESIS will probably experience slow growth. NCEUS (2009) estimates that between 1992–93 and 2005–06 national income grew by 125 percent. However, economic growth has had no impact on formal employment growth as a percent of total work force. Informal workers remained at about 92 percent of the workforce over this period. Most of the growth in ESIS

population coverage over the last decade was due to increases in the wage ceiling, thereby bringing previously uncovered groups of the formal sector under the ESIS umbrella. The impact of a recent 50 percent hike in the wage ceiling will similarly contribute to ESIS membership expansion in the near future.⁸

CGHS is limited to civil servants, a group that has experienced a decline in numbers in recent years. According to the Census of Central Government Employees (2009), the total number of regular central government employees (including railways but not including defense) in 2006 was 3.1 million compared with 3.2 million in 2004, a drop of about 1.5 percent. However, as CGHS also covers retirees and is an attractive proposition for retiring civil employees,⁹ it is assumed that the number of employees retiring (and thus exiting CGHS at the end of their service career) will be offset by new pensioners joining the scheme. Also, new recruitments (capped at an annual 2 percent of the existing base) are also likely to be offset by members exiting the scheme due to death, keeping the member base for CGHS more or less constant in the foreseeable future.

To summarize, if current trends of coverage expansion continue, at least one half of the Indian population will be enrolled in a health insurance scheme by 2015. GSHISs (as well as private insurers) are currently focusing on expanding the breadth of coverage. As will be seen below, the depth of benefit cover will vary considerably, with a large majority receiving very limited coverage and a small minority enjoying comprehensive benefits. Coverage will continue to expand in a segmented manner with different risk pools according to labor status, socioeconomic status, and enrolment in central- or state-sponsored schemes. Segmentation has important implications in terms of equity (of financial protection) and efficiency (of service purchasing and delivery).

Enrolment and Beneficiaries

Successful coverage extension requires robust enrolment processes and targeting mechanisms. These measures contribute to equity while avoiding issues of adverse selection (by both insurers and beneficiaries). Simple eligibility requirements, innovative outreach mechanisms, and use of smart technologies have facilitated enrolment, allowing schemes to reach targeted beneficiaries. To identify the poor, most schemes use the BPL list, a proxy means test applied nationally by the central government (and implemented by states). It is used primarily for targeting food and other

subsidies. Although the BPL targeting system is not without controversy (discussed below), by declaring all such BPL beneficiaries automatically eligible, the complexity of identification and enrolment is mitigated, and administrative costs are kept minimal. Some of the new schemes have established enrolment camps or stations that are organized by insurers in coordination with state government officials (e.g., RSBY).¹⁰

In state schemes, state officials are closely involved in distribution of identity cards (e.g. TN). Yeshasvini uses a novel enrolment mechanism linking the payment of insurance contributions to financial transactions with the cooperative society (such as loan repayment or payment collection for milk supplies). It also uses an online identity card retrieval system to lower administrative costs. Further, the enrolment period spans five months during the harvest season, which facilitates farmers' payment of the premium contribution.

This section first details enrolment processes and technological innovations applied by specific schemes to facilitate enrolment. The second part reviews several impediments to enrolment that have emerged during implementation. The final part focuses on issues related to BPL targeting.

Enrolment Processes and Innovations

The RSBY enrolment stations are a combination of enrolment, correction of personal information in the BPL lists where necessary, photographing family members, registration of biometric information, and on-the-spot issuance of corresponding smartcards. The insurance companies have an incentive to enroll as many eligible families as possible because their premium-based income is derived from the quantum of cards issued. To be sure, the pace of RSBY enrolment has been impressive. Approximately, 4.5 million households were enrolled in the first 16 months of the program. In 2010 the scheme added about 7 million families in a period of 8 months. In other schemes such as those in AP, TN, and KA (Vajpayee Arogyashri), where no specific enrolment process was implemented, the state essentially enrolled everyone on the BPL list (which they could prove through BPL identity cards). In effect, millions of families were registered almost instantaneously, though not all “enrollees” would come to know of their newly acquired insurance status right away.

RSBY has also been a leader in the use of smart card technology, which is increasingly adopted by other schemes.¹¹ Typically, 15 to 20 enrolment teams are dispatched to each district, depending on population size.

Hardware and software are made available to enter (or validate) member information such as name, age, photo, fingerprint, residence, and other identifiers. This information is uploaded to a server, printed in a smart card, and issued on the spot to beneficiaries during registration. Importantly, BPL status is validated against the BPL list, which is already uploaded on the server. Households (up to five beneficiaries) pay a nominal registration fee of Rs. 30 per family per year which flows to the state nodal agency to cover administrative costs. Insurers generally complete the registration process for a district in four months.

Even CGHS and ESIS are moving away from their paper identification (ID) cards. For example, CGHS has already issued plastic ID cards to its members with a permanent beneficiary ID, while ESIS has also embarked on issuing magnetic stripe cards to all its insured persons and their dependents. Both these cards will enable online identification of members at all health facilities operated by the respective schemes, making the benefits portable across the country. In the case of ESIS, the biometric information of family members is also being captured and made available at the server end, though not on the card itself (as the ESIS card does not contain a memory chip, unlike the RSBY or TN cards).

Enrolment Issues

Available research brought to light several obstacles to coverage expansion. Lack of awareness and information about the schemes remains a major impediment to enrolment in GSHISs despite a number of outreach measures. Aggarwal (2010) reported that lack of information contributed to lower enrolment in distant areas for the Yeshasvini scheme. In a subsequent analysis (Aggarwal, forthcoming), health status was found to be a significant determinant of enrolment (and renewal), suggesting adverse selection. The study also found that the scheme had low penetration in distant villages and tended to favor villages with a high density of eligible populations (e.g., milk cooperative members).

The RSBY team conducted a series of analyses on enrolment to understand problems and identify the determinants of enrolment performance. Together, these studies provide insight into demand- and supply-side constraints to enrolment.

Based on a small sample of 248 BPL households¹² (1,478 individuals) in Delhi, Grover and Palacios (2011) reported that a significant proportion were not clear about RSBY eligibility criteria, covered benefits, or cost of the smart card. However, once aware of the scheme, more than

70 percent applied for enrolment. Regression analyses found that the following factors contributed to the probability of enrolment: (i) head of household is between 30 and 45 years of age; (ii) household has links to politicians and local authorities; and (iii) head of household completed primary education. There was no evidence of gender bias. Interestingly, health status was not a determinant of enrolment, suggesting that adverse selection may not be a factor affecting enrolment.¹³ Site visits and interviews by the authors suggest supply-side constraints to enrolment such as cost of transportation (to access enrolment site) and lost wages, incorrect information on identification documentation, and absence of head of household.

Sun (2011) examined RSBY administrative enrolment data from 24 districts (17,000 villages) in seven states. He observed large variations in enrolment ratios in districts and villages, with an average take up rate of 45 percent. However, in-depth village-level analysis displayed even greater variation. For example, in 10 percent of villages there was no enrolment while in 2.5 percent full enrolment of BPL families was observed. The author suggests several reasons for these disparities, but the main problem may rest with the quality of BPL listings (see below). In some villages, no BPL families were listed. In other cases, the name of the village was incorrectly listed, such that individuals did not match up with villages.

Distance and BPL village density may also affect enrolment. Enrolment agencies contracted by insurers are paid a flat fee per family enrolled, and therefore have little incentive to incur the extra cost of enrolling potential beneficiaries in remote villages or in villages with few BPL families.¹⁴ Insurers may also try to avoid villages where the probability of higher utilization is greater, such as villages with a high population of elderly and without access to basic primary care.¹⁵ In a subsequent analysis, Sun found some evidence that enrolment agencies focus on nearby and high BPL density villages but reported no evidence of cream skimming in terms of avoiding villages with higher ratios of elderly.¹⁶

To further examine the determinants of take-up ratios Sun combined RSBY administrative data with available household and village data from the Census. Of the potential eligible population of 11 million people, only 3 million were enrolled. He found the major determinant of take up was village BPL density. As suggested above, this makes sense in terms of the incentives that the enrolment agencies face. They are usually paid on a per family basis and therefore would incur lower enrolment costs in villages with high BPL density. Other determinants were [villager] access

to commercial facilities such as a bank, immunization rates for diphtheria, pertussis, and tetanus (DPT3) as a proxy for primary care, and enrolment by a private insurance company.

The latter result is puzzling and could reflect the different incentive environment for government-owned vis-à-vis privately owned commercial insurers. Even though both types of commercial insurers (government-owned or privately owned) are for-profit firms and in principle face the same incentives, does the former's proximity to government and possible lack of incentives to maximize enrolment result in public insurers' making less of an effort to enroll beneficiaries? Or is it that the bottom-line impact of earning higher premiums (which are based on enrolment) and ensuring a larger risk pool is more important to privately owned insurers than to their public counterparts? Do internal incentives for field enrolment agents differ among these types of firms? If so, how is this manifested? Further research is needed to understand the incentive environment of public and private insurers.

Interestingly, Sun found that about a quarter of the difference between eligible and enrolled populations was related to the reduced number of enrolled family members. More than one third of families with five or more members enrolled fewer than five, which is the RSBY family limit. Enrolment decreased as family size increased. One would expect that large families would enroll the maximum number of five members. Why is this not the case? Three explanations come to mind. First, during the day of enrolment, not all members were present. The second relates to the outdated BPL lists, which may not account for family members no longer living in the household (due to marriage, death and change of residence). Another explanation may involve incentives facing enrolment agencies. Since a flat fee is paid per family irrespective of the number of members enrolled, agencies have little incentive to incur the extra time and cost to enroll the maximum number of family members.

Targeting and Equity Considerations

The effectiveness of targeting in the enrolment process depends on the quality of BPL listings. Unfortunately, the BPL scoring and classification system in India is notorious for false positives (leakage) and for false negatives (undercoverage). Jalan and Murgai (2007) compared BPL classification with consumption patterns drawn from the household Consumer Expenditure Schedule of the NSS. They found that BPL scores misclassified 49 percent of the non-poor as poor. The misclassification of non-poor

as poor is more prevalent in the richer states. Dreze and Khera (2010) performed a similar analysis based on the NSS 61st round (2004–05) and the third National Family Health Survey (DLHS-3: 2005–06). The results are reported in table 3.2. The second column contains the proportion of BPL cardholding households by quintiles based on the monthly per capita expenditures drawn from the NSS. In the third column the proportions are based on the “Wealth Index” generated by the authors from the DLHS-3. While only 53 percent and 39 percent of the poorest quintile had BPL cards according to the NSS and DLHS-3 data respectively, so did nearly 18 percent of the richest.

State-level analyses of non-poor BPL card holders yield significant variation. Ram, Mohanty, and Ram (2009) estimated the percentage of non-poor (e.g., 3rd, 4th, and 5th wealth quintiles) possessing BPL cards for selected states. Turning to the states operating GSHISs, Andhra Pradesh and Karnataka displayed high levels of leakage (59 percent and 37 percent, respectively) to the non-poor. Contrarily, only 5 percent of the BPL card holders in Tamil Nadu were non-poor. Himachal Pradesh (HP) performed at a middle range with 13 percent of non-poor BPL card holders.

Data on characteristics of beneficiaries are scarce across the schemes, but what data exist appear to reflect the aforementioned distortions of the BPL lists. In a small survey of 210 beneficiaries in six districts covered under AP’s Aarogyasri scheme in 2007–08, Rao and Kadam (2009) found that the scheme does an adequate job of targeting the poor. Rao reported that 49 percent of beneficiaries were illiterate, 51 percent were classified as of low socioeconomic status, and 66 percent were unemployed, unskilled manual workers, and domestics. Also, 87 percent resided in rural areas (compared with 73 percent rural population for the state as a whole).

Table 3.2 India: BPL Card Distribution and Economic Status, by Income Quintile, 2005 (percent of rural households with cards)

<i>Income quintile</i>	<i>Monthly per capita expenditure^a</i>	<i>Wealth index^b</i>
Poorest	53.1	39.2
Second	41.0	38.9
Third	34.6	36.9
Fourth	25.6	31.9
Richest	17.8	17.6
All households	34.2	32.9

Source: Dreze and Khera 2010.

a. National Sample Survey (NSS Data), 2004–05.

b. National Family Health Survey (NFHS Data), 2005–06.

However, undercoverage was found for hard-to-reach groups such as Scheduled Castes (12 percent of beneficiaries compared with 16 percent of the population) and Scheduled Tribes (3 percent of beneficiaries compared with 6 percent of the population). Also, 7 percent and 42 percent of beneficiaries were classified as of high and middle socioeconomic status, respectively, and 17 percent reported 10 or more years of schooling. These data appear to reflect the apparent targeting errors in state BPL lists.

In the case of AP, other factors may come into play. The state has expanded its BPL lists to include non-poor but vulnerable populations.¹⁷ For example, AP uses a different poverty line (from the one used for the GOI Planning Commission estimates of BPL in AP) in which more than 70 percent of the state's population is deemed BPL. This broader definition has resulted in eligibility for more than 80 percent of the population. However, a relatively well-off, non-BPL family can easily seek a waiver to secure the same benefits in times of need for tertiary care through an alternative mechanism (such as petitioning the chief minister's office), which practically results in universal access to Rajiv Aarogyasri benefits.

Yeshasvini in Karnataka is aimed at rural farmers, both below and above the poverty line.¹⁸ An evaluation conducted by the scheme found that some ineligible members had also joined the scheme (Nabard Consultancy Services 2007). The study also found that the members did not understand the scheme fully, especially exclusions and recent revisions.

Aggarwal (forthcoming) analyzed the equity effects of enrolment in Yeshasvini. In general, the scheme tends to favor the well off members of cooperative societies. Higher levels of income and education, membership in self-help groups, and access to information¹⁹ were found to increase the probability of enrolment. Scheduled tribes were also underrepresented after controlling for household and location effects. The probability of enrolment (and renewal) was negatively correlated with distance from health facilities. Gender, however, was not found to be a determinant of enrolment. The flat premium rate, truncated benefits,²⁰ and no coverage of transportation costs to access empaneled facilities probably contribute to curtail demand for enrolment from lower-income cooperative members.

In sum, the recent wave of GSHISs has targeted BPL populations across the country. Many have introduced innovative technologies to facilitate and lower the cost of enrolment. Insurers under contract with the schemes have an incentive to enroll as many families as possible

since their revenues, premium payments, are tied to membership. However, they also have a disincentive to enroll distant, hard-to-reach populations as well as BPL families residing in villages with low BPL density. Lower levels of coverage of hard-to-reach but eligible populations is worrisome. The targeting errors of the BPL lists, particularly in terms of leakage, combined with expansion of state-generated BPL lists to include the non-poor raise important equity questions about the allocation of scarce government resources. However, NCEUS (2009) estimates that 77 percent of the country's population is poor or vulnerable. This may justify extension of health protection mechanisms to a wider group beyond the BPL population, but probably not for the well-off who can afford private insurance.

Benefits

The new generation of GSHISs aims to provide financial protection to the poor against catastrophic health shocks. For these schemes, "catastrophic" is invariably defined in terms of inpatient care. Ambulatory care is largely uncovered. Further, even among these schemes, wide variations in benefits coverage exist. The older social health insurance (SHI) programs, ESIS and CGHS, are the only ones to provide coverage for a comprehensive benefits package that includes preventive and primary care services. This section describes the nature and depth of benefits covered by the schemes and discusses the coverage gaps.

Benefit Definition—Use of Inpatient Treatment "Packages"

In general, and with the exception of RSBY, the newer schemes demonstrate a strong emphasis on surgical procedures. All the state schemes focus on higher-end tertiary care, but often with a similar surgical focus. The evolution of this prominence of inpatient care and other characteristics of this benefits package responds to several factors. First, the sector, particularly insurers and large private hospitals in the insurer's networks, have considerable experience in catering to insured patients for inpatient care. Second, both were familiar with the "package" rate provider payment mechanism currently used by all GSHISs.²¹ Third, preauthorization and other control systems for inpatient claims had already been developed by the private insurers, and the third-party administrators (TPAs) employed by them, mainly because private health insurance (PHI) products were (and continue to be) focused predominantly on inpatient services. Fourth, inpatient care was seen as a major cause of

financial burden for the poor even when provided by public hospitals. Fifth, state policymakers who played an important role in the design of these schemes considered purchasing surgical and tertiary care services from the private sector a priority due to limitations of public supply, particularly public hospital infrastructure and specialized human resources.²² Sixth, some states (AP, HP, and other states currently in planning stages) designed their tertiary-focused health insurance (HI) schemes in part to address equity and access shortcomings of the system of discretionary sickness grants provided by chief ministers of the states for high-cost health care.²³ Finally, the potential moral hazard issues related to ambulatory care (which the country's PHI sector is still struggling to cover) and the relative inexperience of both government and insurers in purchasing ambulatory care services have contributed to widespread reluctance to offer wider insurance coverage. Notably, the only two comprehensive insurance schemes in this study, ESIS and CGHS, deliver ambulatory care mainly through their captive facilities, partly to control utilization and also to serve as a gatekeeper for hospitalization.

In most new GSHISs, benefits are defined in terms of treatment packages covered by the scheme.²⁴ Most schemes limit their exposure through annual per family spending caps, except CGHS and ESIS, which do not prescribe any annual (or even lifetime) caps. As observed in table 3.3, considerable variation exists among schemes regarding the number of eligible treatment packages and amount of annual spending caps. ESIS, CGHS, and Yeshasvini cover secondary and tertiary care and therefore have defined a larger number of packages than the other schemes. RSBY covers mostly secondary care including maternity. In theory, it covers all forms of hospital treatment but the depth of coverage is limited by the annual cap of Rs. 30,000 per family. Charges for most tertiary care would far exceed this amount. As a result, RSBY packages cater primarily to secondary care. The remaining schemes stress tertiary care, including cardiovascular, renal, neurological, and cancer care, and only for the defined conditions or procedures that have been priced on a "package" basis. The higher annual caps for these schemes are related to the higher pricing of package rates for covered services, due to the tertiary nature of the services covered. All package rates fall within the cap.

Table 3.4 displays the number of packages by specialty classified by type of treatment (surgical or medical). Cardiology, neurosurgery, nephrology, orthopedics, oncology, and general surgery account for 60 percent of packages. Interestingly, the areas of pediatrics and obstetrics and

Table 3.3 India: Number of Covered Treatment “Packages” and Maximum Benefit Coverage, 2009–10

<i>Scheme</i>	<i>Benefit type</i>	<i>No. of inpatient packages</i>	<i>Coverage extends beyond specified packages</i>	<i>Maximum annual coverage (Rs.)</i>
<i>Central government sponsored</i>				
ESIS	Comprehensive	1,900 ^a	Yes	No annual limits (or lifetime limits)
CGHS	Comprehensive	1,900	Yes	No annual limits (or lifetime limits)
RSBY	Inpatient Secondary	727	Yes	30,000/Family
<i>State government sponsored</i>				
Rajiv Aarogyasri (AP)	Inpatient Tertiary	938 ^b	No	150,000/Family+ 50,000 buffer
Vajpayee Arogyashri (KA)	Inpatient Tertiary	402 ^{b,c}	No	150,000/Family+ 50,000 buffer
Kalaignar (TN)	Inpatient Tertiary	412 ^b	No	100,000/Family (floating over 4 yrs)
Yeshasvini (KA)	Inpatient Secondary, limited Tertiary	1,229 ^b	No	200,000/Person
RSBY Plus (HP)	Inpatient Tertiary	326	No	175,000 over the RSBY cover of 30,000
ASBY (Delhi)	Inpatient Tertiary	n.a.	No	150,000 over the RSBY cover of 30,000 (proposed)

Source: Authors' elaboration from schemes' documentation and data.

Note: n.a. = not applicable.

a. As defined by CGHS. This number includes diagnostic and outpatient department procedures.

b. Mostly surgical.

c. Does not include 50 follow-up packages.

gynecology (OBGYN) possess relatively few treatments and procedures, together accounting for only about 9 percent of the total. The number of defined inpatient packages for the disease groups range from 326 (RSBY Plus, HP) to 1,229 (Yeshasvini, KA).

Surgical procedures dominate all categories, representing 96 percent of all inpatient packages. However, RSBY, CGHS, and ESIS also cover residual forms of inpatient treatment beyond the common, packaged conditions. Treatment for nonpackaged conditions is paid for on a fee-for-service basis, using rules and payment structures prescribed by the schemes. For example, unlike the tertiary-focused state schemes, RSBY

Table 3.4 India: Packages Classified by Major Disease Group and by Surgical and Medical Treatment, 2010

<i>Disease group classified by surgical (S) and medical (M)^a</i>		<i>RSBY^b</i>	<i>Kalaighar's (TN)</i>	<i>Yeshasvini (KA)</i>	<i>Vajpayee Arogyashri (KA)</i>	<i>CGHS^b and ESIS^b</i>	<i>Rajiv Arogyashri (AP)</i>	<i>RSBY Plus (HP)</i>
Cardiology	S	n.a.	24	135	134	85	109	109
	M		1				11	
Nephrology	S	109	9	212	21	129	54	54
	M						5	
Neurology	S	50	70	67	55	38	67	67
	M						12	
Orthopedics	S	131	29	295	8	109	68	20
	M						0	
Gastroenterology	S	73	37	167	n.a.	123	55	55
	M						19	
Oncology	S	23	121	n.a.	106	11	132	
	M		57		60	3	62	12
Ophthalmology	S	41	14	152		36	26	
	M				n.a.			n.a.
Ear, nose, and throat (ENT)	S	71	3	124		50	23	
	M				n.a.			n.a.
Obstetrics and gynecology (OBGYN)	S	46	5	60		75	17	
	M				n.a.			n.a.

General surgery	S	148	10	117	11	26	79	0
	M							
Pediatrics	S	31	56	10	7	22	57	n.a.
	M						67	
Others	S	4	n.a.	18	n.a.		29	n.a.
	M			7		24	46	
TOTAL		727	412	1,229	402	731	938	326
Percent	% S	100	86	100	86	96	77	96
	% M	0	14	<1	14	4	23	4

Source: Authors' elaboration based on scheme data.

Note: n.a. = not applicable, service not offered.

a. There are some overlaps between categories (such as oncology) where we have based our classification on the categorization adopted by the schemes.

b. These schemes offer coverage for conditions beyond those specified in packages.

covers all types of inpatient care (though within its limited annual cap) and not all of the covered care has been carved into “packages.” Inpatient care that does not belong to a defined package is handled through a longer process of prior authorization allowing fee-for-service payment of charges. These fees are based on specified daily room rent caps and other criteria.

Gaps in Benefit Coverage

Do the schemes cover high frequency conditions that lead to inpatient stays? According to data from NSS (60th round) five of the top 10 disease groups leading to hospitalization for rural residents are mostly covered in the state schemes:²⁵ heart disease (including hypertension), diseases of the kidney and urinary systems, gynecological disorders, and accidents and injuries. These conditions account for 25 percent of admissions. Since they are generally higher-cost conditions, they actually account for a still greater proportion in terms of inpatient costs. However, high-frequency but less-complex conditions such as diarrhea, dysentery, gastritis, respiratory infections (including asthma), and malaria remain uncovered in all the state-level schemes. They are covered, however, in CGHS, ESIS, and RSBY. Together these conditions account for 23 percent of admissions, according to the NSS data. Although these conditions should ideally be treated at the primary level, an inpatient stay would represent a catastrophic expenditure for the poor.

With the exception of CGHS and ESIS, no scheme covers ambulatory care except for some initial screening of patients (e.g., at camps) to determine if their ailments merit coverage for an inpatient admission. Some schemes also have limited coverage for posthospitalization care.²⁶ In terms of the latter, RSBY and AP cover medications for the number of days specified, which are provided by the hospital upon a patient’s discharge. Rajiv Aarogyasri (AP) and Vajpayee Arogyashri (KA) also cover “follow up packages” for 125 and 50 conditions respectively. For example, in case of conditions such as renal failure and malignancies, posthospitalization coverage includes a year’s supply of any required follow-up medicines, consultations, and defined diagnostics. These follow-up packages are, however, poorly understood and utilized.

As discussed below, although these schemes reduce the financial burden for hospitalizations, whether they address the overall financial burden of the poor is an open question. Clearly, an inpatient stay would be a catastrophic event for most poor people. However, what would qualify as “catastrophic” for the poor household requires more precise definition

of the term. For example, ambulatory care constitutes a much higher share of overall health expenditure than inpatient care, and much of this continues to be out of pocket. A chronic ailment requiring regular treatment as an outpatient can involve higher expenditures than an inpatient procedure.

As schemes evolve, they will face pressure to deepen the benefits package. This is already the case for some. In Rajiv Aarogyasri (AP), for example, the scheme started in a small geographical area, with coverage for expensive, tertiary conditions that were among the most common causes for which patients approached the chief minister's discretionary "relief" fund for a grant to cover the cost of care. As the scheme expanded geographically, it also deepened the benefits package, adding several hundred new procedures, including some secondary procedures. Similarly, after a year of implementation experience, RSBY added maternity coverage and removed the exclusion for HIV/AIDS. Based on analyses of claims data, RSBY is also expanding its list of packages to standardize costs for an additional set of conditions. Also with the aim of deepening the coverage, other schemes are considering follow-up care packages. Evolution of benefits packages is an ongoing process in response to sociopolitical demands, claim experience, and availability of financial resources.

Utilization

Insurance coverage contributes to increased utilization by removing or lowering financial barriers. This can help improve welfare. However, controls need to be introduced to reduce unnecessary utilization and overutilization (moral hazard). This section reviews findings on utilization patterns and their determinants for a subset of schemes as well as emerging issues related to induced and unnecessary utilization.

Hospital Utilization Patterns

Table 3.5 compares the frequency of hospitalization from selected schemes with the community average, based on NSS/60th (2004–05) round survey data for rural and urban areas. One needs to be cautious about comparing scheme-specific hospitalization frequency with community-level data for any form of hospitalization for two reasons. First, the benefits package of the scheme may not be sufficiently comprehensive and may cover only a subset of community needs for inpatient treatment. Second, insurance may induce changes in health-seeking behaviors.

Table 3.5 India: Hospital Utilization Rates Nationally and for Selected Schemes (admissions per 1,000 beneficiaries per year)

Scheme	2009–10	NSS 2004–05	
		Rural	Urban
Rajiv Aarogyasri (AP)	5	22	28
Kalaighnar (TN) ^a	5	37	37
Vajpayee Arogyashri (KA) ^b	4	23	26
ESIS	7.5	23	31
Yeshasvini (KA)	22	23	26
RSBY	25	23	31
Private insurance	64	23	31

Source: Authors' calculations based on NSS 2004–05 and IIB (IRDA) 2010.

a. Annualized based on data from August 2009

b. Annualized based on data of April–August 2010 (FY2010–11).

In addition, if the scheme member base is only a small proportion of the community (as in the case of Yeshasvini), it may not be representative of the community due to possible adverse selection.²⁷

Schemes in AP, TN, and KA (Vajpayee. Arogyashri) provide coverage for low-frequency tertiary care only, and their hospitalization rates are not comparable with community averages which include all inpatient stays. Consequently, their utilization rates are significantly lower than the utilization rates generated from the NSS data. Yeshasvini covers mostly secondary care but some tertiary care. RSBY covers mostly secondary care. As observed in table 3.5, hospitalization rates for these two schemes are comparable to national rates.²⁸

However, this does not appear to be the case for private voluntary health insurance. Private insurers generally cover both secondary and tertiary inpatient care, but their members are hospitalized much more frequently. Hospitalization rates in private voluntary health insurance are two to three times the national average, and are suggestive of moral hazard or adverse selection.

The high claim frequency in PHI schemes does not bode well for GSHISs, which as a group are highly dependent on insurers to conduct insurance and administrative functions.²⁹ The data suggest that private insurers cannot completely address adverse selection (especially in voluntary products) or prevent moral hazard or overutilization. In addition, the fact that insurers under contract with GSHISs can reprice their portfolio on subsequent renewals and pass on the higher claim costs to the schemes may reduce their long-term incentives to control costs.³⁰

Despite offering a comprehensive benefits package, the low frequency of hospitalization in ESIS suggests that this scheme is an outlier. ESIS covers workers who generally belong to a younger and healthier age group and therefore less utilization would be expected. But the scheme also covers all dependents, which may include higher age and less healthy groups. Thus the composition of the beneficiary pool may not contribute to lower the utilization to the level observed in table 3.5. Historic trends in the scheme indicate that the absolute number of hospitalizations in ESIS has declined despite an increase in the number of beneficiaries (see appendix A for details). This decrease in utilization of ESIS has also taken place for ambulatory care. Further research is needed to ascertain the reasons for lower utilization. Two possibilities come to mind. First, it may represent a shift in utilization by long-established, and mostly blue collar ESIS beneficiaries to out-of-pocket spending (or, though less likely, to duplicate coverage by private insurance). The second reason may relate to new beneficiaries who were inscribed because of recent increases in the wage ceiling for mandatory coverage under ESIS. These beneficiaries are higher-paid, and increasingly, white collar, formal sector employees, but may not utilize ESIS facilities due to their perceived low quality. These beneficiaries may opt for coverage through duplicate private insurance or pay out of pocket. A study on the ESIS scheme undertaken in the southern district of Sivakasi in the state of Tamil Nadu suggests that opting-out could be a reason for the low utilization of ESIS facilities (Dash and Muraleedharan 2011).

Determinants of Hospitalization

Available evaluation data from one scheme show that affiliation (and the resulting financial access) resulted in increased utilization. Aggarwal (2010) reported that insured cooperative members demonstrated between 6 and 7 percent higher utilization than their uninsured peers. Since both groups were matched for health status, it was unlikely that adverse selection was causing this higher utilization. Lower-income cooperative members increased utilization by 2 percent, which was still significant. Gaining insurance coverage resulted in a 19 percent reduction in the use of free public facilities, and this reduction cut across all income groups.

Research using administrative data identified some factors that affect utilization. In an analysis of 16,000 claims in 2007 and 2008 from Aarogyasri (AP), Rao and Kadam (2009) found that distance from cities where most empaneled facilities demanded by the beneficiaries were

located was negatively associated with utilization. Similarly, in an analysis of RSBY claims data from 75 districts, Hou and Palacios (2011) reported that utilization was related to the distance between blocks and the towns where empaneled hospitals are located. Nevertheless, regression analysis of the claims data from 18 districts (3,600 villages) detected other factors that increased the probability of utilization: being elderly, literate, residing in a district with a larger number of empaneled hospitals, having access to transportation, and living in a village where other insured villagers have already been treated through the scheme. The authors highlighted the large variation in utilization across villages that may relate to awareness factors which in turn may respond to the recent origin of the scheme. Although none of the findings are surprising, these types of analyses provide insightful information to implementers regarding adjustments to improve utilization.

Similarly as enrolment, incorrect understanding of the scheme or lack of information may impede utilization. Based on analysis of administrative data, current preauthorization denial rates were about 15 and 20 percent for the Rajiv Aarogyasri (AP) and Vajpayee Arogyashri (KA) schemes, respectively. Denials also vary by conditions or procedures; higher rejections are evident for cardiovascular conditions, neoplasm, and nervous disorders. The relatively high rates of preauthorization denials in the tertiary-focused state schemes suggest confusion among beneficiaries and providers regarding the contents of the benefits package (and perhaps also on the corresponding admissible claim amount). For example, it is unlikely that providers would make the administrative effort to lodge incorrect or inadmissible preauthorization requests if they had understood the insurance coverage better. If beneficiaries and providers do not fully understand the covered benefits, this could lead to dissatisfaction with the scheme and also to out-of-pocket expenditure by the beneficiaries who arrive at a hospital only to find that their ailments are not covered.³¹ As many of the newer GSHISs cover a limited set of procedures, effective communication by these schemes takes on added importance and should result in higher utilization and lower preauthorization denials.

Cognizant of the fact that insurers have few incentives to inform enrollees of the scheme and therefore raise usage, schemes such as AP and RSBY have made an effort to increase awareness and utilization through health camps. Running these camps is usually entrusted to insurers. RSBY has instructed insurers to organize health camps throughout the country. Camps are generally held at the local level and

managed by empaneled public and private hospitals and nongovernmental organizations (NGOs). They deploy mobile medical units where doctors or nurses hold consultations and paramedical staff members perform diagnostics. All villagers in a defined catchment area are invited to attend the one-day camps. Similar to health camps organized by other GSHISs, all services including consultation, basic investigations (when available), and medicines are free to the extent these are available in the camp. If well advertised, camps are attended by large numbers of villagers.³² Any RSBY enrollees diagnosed with covered illness were directed to seek treatment at the empaneled hospital. However, the impact has been hard to gauge. Johnson and Kumar (2011) investigated 65 health camps in Jharkhand and Uttar Pradesh and found that the camps did not result in higher utilization as measured by claims. The authors suggest that camps attract such large numbers of people—usually in search of free consultations and medicines—that medical personnel do not have sufficient time to dedicate specifically for RSBY enrollees. In contrast, schemes such as AP and Vajpayee Arogyashri (KA) use their outreach workers (known as arogyamithras) for precamp screening to improve yields from the camps. These schemes report that a large part of the covered hospitalizations originate from this route.

Emerging Evidence of Unnecessary Care

The newer GSHISs have few incentives for facilities (or for beneficiaries) to restrict utilization to only the necessary services. Despite some efforts by these GSHISs to align incentives with scheme objectives, hospitals still have incentives to induce demand for covered services even when such services may not be necessary, provide inpatient care for what could be treated more effectively (and cheaply) in an ambulatory setting, maximize the utilization of the annual family cap under the insurance schemes, overtreat, and even provide unnecessary care. Since outpatient care is not covered by most schemes, patients also have an incentive to substitute inpatient for outpatient care. Further research is needed to determine the extent of any of these practices, which can result in inefficiencies and raise long-term costs.

Nevertheless, from schemes' monitoring systems, evidence of unnecessary care is emerging. For example, RSBY found that certain hospitals perform many more hysterectomies than would be expected, or combine hysterectomies with simultaneous salpingo-oophorectomies (which entitles the facility to claim additional charges for one more

treatment package). There were similar claims for hernia combined with appendectomy to maximize revenues from the scheme. Monitoring data from Aarogyasri (AP) also suggests that certain procedures (e.g., appendectomy, hysterectomy, laminectomy/discectomy, and renal stone lithotripsy) were experiencing provider induced demand. The scheme introduced additional checks and guidelines to address this situation (such as the requirement to upload the video of a counseling session for every hysterectomy recommended for a patient). Officials from one GSHIS pointed to evidence of hospitals' converting outpatient care to inpatient care to seek reimbursement. This substitution was also reported in hospitalization products covered by PHI which led private health insurers to incorporate exclusions such as "unwarranted hospitalization" or "hospitalization only for observation with no active treatment" which exist in PHI products.

Finally, anecdotal evidence suggests that some schemes may also induce overinvestment in tertiary care and expensive technologies (e.g., CT scanners and cardiac catheterization units) at the expense of investments in ambulatory care, prevention, and coordinated networks. Health care in India is inexpensive when compared with costs in countries in the Organization for Economic Co-operation and Development (OECD). Nevertheless, care is probably not inexpensive in relation to the income of the vast majority of its citizenry, but if insurance drives a hospital-based system, costs will escalate beyond what the country can afford.

To summarize, insurance coverage is resulting in higher utilization among beneficiaries. Adverse selection does not appear to be a major problem for the new wave of GSHISs because most are free (or at a negligible cost) and often automatically cover all eligible beneficiaries. However, moral hazard and early signs of unnecessary care and substitution of inpatient for outpatient services are worrisome, and will require tough control measures. Of equal concern is the emerging data of unequal utilization patterns that suggest that more effort should be devoted to facilitating access for beneficiaries residing in remote localities or far from empaneled facilities.

Expenditures and Costs

Health insurance is assuming an increasingly important role in India's health financing system. Some observers promote GSHISs as a future conduit for additional government spending³³ while others question the

affordability of their further extension and whether they will check spending on direct public delivery.³⁴

This section first presents estimates of trends in GSHIS spending, including projections of expenditure growth. Government spending on GSHISs is then compared with expenditures on public delivery. The section concludes with a review of spending across the schemes per beneficiary and per hospitalization.

Total and Projected Expenditures

Table 3.6 presents expenditure data by scheme for 2003/04 and 2009/10 as well as projections for 2015. It also includes estimated spending by commercial insurers. This is pictorially depicted in annex figure 3A.2.

Based on updated health insurance data drawn from the respective scheme documents and from IRDA annual reports and journals reporting private health insurance data for the respective years, our combined estimate for health expenditure incurred through the various health insurance

Table 3.6 India: Estimated Expenditures on Health Insurance and Projected Growth, 2003–04, 2009–10, 2015 (Rs. crores: Rs. 10 million)

<i>Scheme</i>	<i>2003–04</i>	<i>2009–10</i>	<i>2015^a</i>
<i>Central government</i>			
ESIS	767	1,990	4,500
CGHS ^b	700	1,600	3,500
RSBY	n.a	480 ^{ce}	4,000
<i>State government</i>			
AP (Aarogyasri)	n.a	1,200	1,500
TN (Kalaingar)	n.a	517 ^b	720
KA (Arogyashri)	n.a	n.a	660
KA (Yeshasvini)	11	55	80
<i>Total government-sponsored</i>	1,478	5,842	14,960
Commercial insurers ^c	1,200	7,000	17,500
Other schemes ^d	1,800	3,200	5,500
Grand total^e	4,500	16,000	38,000

Source: Authors' calculations based on scheme data, IRDA reports, and Jaswal, 2011.

Note: n.a = not applicable; scheme did not exist.

a. See annex 3C for estimation methods.

b. Cost for full year. Includes estimated expenditure on salaried employees recorded in the respective departments.

c. Rounded.

d. Non-life and excludes GSHIS business.

e. Spending estimates for other schemes, not listed above (see table 3.1, n. 3).

schemes in 2009–10 is Rs. 160 billion (Rs. 16,000 crores), 6.4 percent of the estimated total health expenditure of Rs. 2.5 trillion in 2009–10.³⁵ Though still relatively small, this amount represents a significantly higher participation of insurance in the health financing system than previous estimates.³⁶

In 2003–04, ESIS and CGHS were essentially the predominant government-sponsored schemes, while the first of the new generation of GSHISs, Yeshasvini, was making a modest beginning. During that same period, total spending by these schemes was slightly greater than spending by commercial insurers. However, by 2009–10 this situation had changed radically. With the launch of state-sponsored schemes in AP and TN as well as RSBY, by 2009–10 spending by GSHISs grew to nearly four times the 2003–04 levels. Meanwhile, spending on PHI accelerated even faster, registering an almost six-fold nominal increase over the same period.

Spending through health insurance mechanisms will continue to increase at an estimated overall compounded annual growth rate of 19 percent per annum, reaching Rs. 38,000 crores (Rs. 380 billion) by 2015. The seven GSHISs in table 3.6 will account for about 40 percent of the total; commercial insurers will represent about 45 percent (excluding their GSHIS business). Other government, employer, and community schemes will constitute the remainder. In 2015, spending through health insurance will reach 8.4 percent of the total health spending in India, up from 6.4 percent in 2009–10.³⁷

Turning to public expenditures, government spending on GSHISs will increase to about 8.6 percent of total public spending on health by 2015, up from about 8 percent in 2009–10³⁸ if political commitment to the National Rural Health mission (NRHM), to demand-side schemes, and to growth in government health spending remains at current levels. However, this estimate does not include new state schemes that may be introduced between 2011 and 2015.³⁹ In short, these estimates should be considered conservative projections of government spending on health insurance. If more states launch new GSHISs, or if expenditure on public delivery does not continue to expand at the same pace of growth observed in recent years, total government spending on health insurance could easily surpass 10 percent of total public expenditures in health by 2015.

Government Spending on GSHISs and Public Delivery

What are the trends of government contributions to GSHISs vis-à-vis their supply-side subsidies? The expansion of RSBY as well as state

schemes suggests fiscal commitment of additional resources for health, or some conversion of supply- to demand-side subsidies.⁴⁰

Table 3.7 compares government spending on GSHISs with expenditures on the public delivery system for government of India (GOI), AP and KA in 2008–09.⁴¹ Due to the maturity of the scheme and political commitment, AP contributed significantly more to health insurance than other states and the GOI in that year. However, the state expenditures shown in column (6) of table 3.7 for AP and KA are only for states' own resources and do not include GOI transfers. GOI transfers account for a major share of primary care spending in the states. Therefore, the insurance spending as a percent of total government spending is overestimated to the extent that the central share of health spending in the state is not accounted for in the denominator.

GSHISs account for 24, 41, and 6 percent of government spending by the GOI, AP, and KA, respectively in 2008–09. The level of spending in KA is for ESIS and Yeshasvini only, and does not account for Vajpayee Arogyashri which had yet to appear on the scene in 2008–09. These contributions represent additional spending to supply-side subsidies and account for an increasing share of total state spending on health. This is evidence of the political support and corresponding budgetary commitment these schemes enjoy. To date, there is no evidence that spending on GSHISs is substituting for public spending on public delivery. However, as discussed in a later section, some state authorities complain that their budgets would have grown more in the absence of GSHISs in their states.

The extent to which these state schemes are approaching a fiscal limit is difficult to ascertain from available data. Anecdotal evidence suggests that AP probably cannot afford to significantly increase outlays for Aarogyasri to expand population coverage or deepen the benefits package. However, only in-depth revenue and expenditure analysis can confirm these claims. Converting supply-side to demand-side is an option under consideration, but its feasibility needs to be weighed in an environment in which any reduction in supply-side expenditures may not be easy. In the current Indian context, conversion itself would be the subject of a polarized and probably bitter debate with considerable political and bureaucratic positioning.

Spending on Medical Services

Table 3.8 displays spending per beneficiary and per hospitalization derived from claims data. Noteworthy is the high per beneficiary spending by

Table 3.7 India: Government Contributions to GSHIs and Public Delivery, 2008–09 (Rs. crores)

<i>Government entity (financing source)</i>	<i>ESIS / CGHS (1)</i>	<i>RSBY (2)</i>	<i>State schemes (3)</i>	<i>Other health protection schemes^a (4)</i>	<i>Total health insurance (1)+(2)+(3)+(4) (5)</i>	<i>Total government health spending (6)</i>	<i>Adjusted government health spending^b (7)</i>	<i>(5) as a % of (7) (8)</i>
GOI	1,600	100	—	2,000 ^c	3,700	13,370 ^d	15,470	24
AP ^e	100	0	925 ^f	300 ^g	1,325	2,899 ^h	3,199	41
KA ^e	76	n.a.	55 ⁱ	n.a.	131	2,358 ^j	2,358	6

Sources: Authors' elaboration based on state health spending information and schemes' data.

Note: — = not available; n.a. = not applicable.

a. Estimates.

b. Includes (6) + health insurance expenditure from sources other than MOHFW.

c. Includes estimated expenses on central employee schemes (railways, defense), schemes in dept of textiles etc.

d. Union Government Finance Accounts for 2008–09.

e. Excludes GOI transfers under NRHM to State Health Society.

f. Includes voted expenditure from demand for grants (Rs. 925 crore), but not the estimated expenditure from CM relief fund (public account).

g. Includes estimated expenses on CM's Relief Fund account and for state employee schemes.

h. State Government Finance Accounts for 2008–09.

i. Yeshasvini only.

j. State demand for grants 2010–11 showing actual expenditure for 2008–09.

Table 3.8 India: Average Central and State Government Spending per Beneficiary per Admission, 2009–10 (Rs.)

<i>Scheme</i>	<i>Per beneficiary</i>	<i>Per hospitalization^a</i>
<i>Central government</i>		
ESIS	359	28,599 ^b
CGHS ^c	5,333	25,000
RSBY ^d	180	4,100
<i>State government</i>		
Rajiv Aarogyasri (AP)	171	28,000
Yeshasvini (KA)	183	8,240
Vajpayee. Arogyashri (KA)	200 ^e	60,000 ^e
Kalaigmar (TN)	148	33,720
Private insurance ^f	1,250	19,637

Source: Authors' estimates based on claims data from the respective schemes.

a. This is not adjusted for case-mix and is a blind average.

b. Based on an estimated 60 percent of total medical expenditure being for inpatient treatment.

c. Sample data, 2009.

d. Estimate based on Rs. 540 average premium per family and three covered members per card. Cost per hospitalization does not include enrolment or administration costs.

e. Estimates are based on performance of the scheme in the first half of 2010–11. The VA scheme did not have any expenditure in 2009–10.

f. IRDA sample data.

CGHS which significantly exceeds all other schemes including private insurers. A number of factors contribute to the high costs of this scheme. CGHS is a comprehensive, rich cover with no overall cap and with no cost-sharing provisions. Almost one-third of its members belongs to a retired age group and probably has higher health needs than younger groups. The scheme also experiences high expenditure on its outpatient infrastructure and consumables, including branded drugs. Finally, it caters to a population segment, central government civil servants, which is very influential in India's socio-political context.⁴²

In contrast, PHI per beneficiary costs less than a fourth as much as CGHS. This is understandable because private insurance policies cover inpatient treatment only, underwrite proposals at entry, and can reject the same. Private insurance has defined annual caps and contains a number of exclusions and cost-sharing provisions. These provisions help contain costs in a scenario otherwise affected by adverse selection, moral hazard, and an open-ended fee-for-service provider payment system.

Per beneficiary spending of the three state schemes that focus on tertiary coverage—Rajiv Aarogyasri (AP), Kalaighar (TN), and Vajpayee Arogyashri (KA)—are roughly similar and respond to similar utilization rates. However, the high per admission spending for Vajpayee Arogyashri is probably due to a predominance of cardiac cases in the present case mix, which are the proverbial low-hanging fruit for providers in the early days of the scheme.⁴³ Given the state-wide rollout of the scheme, scheme maturity, and the relatively wider distribution of the case mix, the average hospitalization costs in Rajiv Aarogyasri (AP) and Kalaighar (TN) are significantly lower than those observed for Vajpayee Arogyashri.

Given RSBY's secondary focus and conservatively priced package rates, its average claim (per admission) and per beneficiary costs are significantly lower than all other schemes.⁴⁴ This has also translated into overall low costs per beneficiary. Yeshasvini is a similar case but with one important difference: while the predominance of secondary cases is a key factor for the low average claim costs, the scheme also requires cost-sharing by its members to pay for the consumables and implants not covered by the scheme. This shifts part of the costs of treatment to the members, resulting in lower average claim costs for the scheme itself, and in theory, may also lower utilization levels, further contributing to low costs per beneficiary.

Despite its comprehensive coverage and relatively high hospitalization costs, ESIS continues to manage with a modest overall cost per covered beneficiary for a benefits package similar to CGHS's. One reason for the modest cost is the lower-than-expected utilization of both inpatient and outpatient scheme services. However, another reason is the capping of overall medical expenses by ESIS at the state level (currently Rs. 1,200 annually per insured person including his/her dependents). In effect, in any state in which the average cost per insured family exceeds this annual cap, the excess is borne entirely by the state. This cost shifting effectively transfers the risk of higher utilization and higher costs from ESIS to the state government.⁴⁵ This can be seen as a kind of state reinsurance. ESIS overall medical costs are thereby controlled, and some state governments therefore contribute additional subsidies beyond the 12.5 percent share they are normally required to contribute. In 2009–10, AP and West Bengal (WB) were among such states with high subsidies (with actual costs of Rs. 1,931 and 1,430 per family during the year). Three other states in which costs per capita exceeded the Rs. 1,200 benchmark by a small amount were Assam (Rs. 1,284), Kerala (Rs. 1,257), and Orissa (Rs. 1,263). In all other states, the average costs were well within the cap and required no additional state subsidies.

In sum, the 15-fold variation across these schemes in average cost per hospitalization may be explained on grounds of the case mix (which in turn depends on the scheme focus, maturity, and benefits package) and cost-sharing provisions. The 30-fold variation in costs per beneficiary may result from an array of factors including the benefits package, adverse selection (in PHI and other voluntary schemes), beneficiary awareness, cost-containment mechanisms or lack thereof), moral hazard, provider management, and incentive structures for intermediaries such as insurers and TPAs. Some of these factors are discussed in the remaining sections of this chapter.

Rate Setting and Provider Payment

Provider payment mechanisms (PPMs) are powerful levers used by health care purchasers such as GSHISs that can shape provider behaviors and ultimately their performance. Incentives embedded in PPMs can induce providers to control costs, raise efficiency, and even improve quality. Contrarily, a PPM with a different set of incentives can lead to distortions such as cost shifting, care denial, and delivering unnecessary care. Rate setting—the pricing of a service or package of services—is an essential element of PPMs. How rates are determined and the process by which rates are bundled and allocated to the providers are key to understanding the incentives embedded in any PPM.

Package-Based Rate: Advantages and Disadvantages

All schemes studied here use a system of “package rates” to a greater or lesser extent for paying their providers for inpatient services.⁴⁶ A package rate is a simplified case rate consisting of a single fee or close-ended payment for a set of inputs and services for a specific and pre-defined treatment or procedure. They generally include room charges (including intensive care unit (ICU) or operating room charges where applicable), professional fees for medical personnel (for consultation, surgery, anesthesia, and so on), diagnostics, drugs, and consumables. In some cases, such as in RSBY and AP, the package rates also include public transport costs for the patient, ambulatory screening before admission, and medicines for a specified number of days after discharge.

Package rates offer several advantages. They are easy to administer, are less complicated or subjective than a fee-for-service arrangement, and in principle, can contain costs if the rates are set at or near costs. The early

experience suggests that in exchange for the potential volume that the GSHISs offer, many providers have committed to package rates that are significantly lower than the usual fee-for-service charges for the uninsured, and therefore bear some risk of incurring higher costs.⁴⁷ They also limit the liability of the schemes (as payers) and in principle may stimulate greater efficiency among providers, if priced correctly.

In practice, the package rates also display some shortcomings. First, with the exception of Kalaingar (TN), all schemes apply a one-size-fits-all rate structure for “packages” across all territories in which beneficiaries reside. In other words, rates are not adjusted for different input prices by region or by facility location (such as in Tier 1, 2, or 3 cities⁴⁸) where labor and other input prices vary considerably.⁴⁹ Therefore, schemes maybe be overpaying in some and underpaying in other markets. As shown in table 3.9, the usual fee-for-service charges for many services in Tiers 2 and 3 cities are notably less than Tier 1 cities. This reflects lower input prices.

For example, the price of a normal delivery in a Tier 2 city can be less than one fifth of the price in a Tier 1 city while an appendectomy in a Tier 3 city is less than one half of the Tier 1 price. As an extreme example, shared or general ward charges can be 15 to 20 times higher in a Tier 1 city than in smaller cities. Thus, unless the single rate indicates a conscious

Table 3.9 India: Average Hospital Charges by City Size, 2009 (Rs.)

<i>Service</i>	<i>Tier 1 city</i>	<i>Tier 2 city</i>	<i>Tier 3 city^a</i>
Room charges (general)	1,000	45	70
Room charges (shared rooms with two patients)	1,500	630	410
Room charges (ICU)	5,000	1,675	1,500
X-ray	300	145	135
Ultrasound (abdomen)	1,200	480	415
CT (brain, no contrast)	3,000	1,800	1,725
Complete blood count	250	155	140
Biopsy (small)	900	465	385
ECG	150	135	120
Echocardiography	1,500	945	900
Normal delivery	25,000	5,700	3,600
Angiography	12,000	9,500	8,800
Angioplasty	120,000	68,000	73,000
Cataract surgery	15,000	9,500	10,000
Appendectomy	20,000	13,500	8,800

Source: IFC, forthcoming (based on survey of 500 providers).

a. These figures reflect tariffs of a typical corporate hospital in Delhi.

policy choice to attract greater hospital investment in the underserved Tier 2 and Tier 3 markets, it will provide much higher margins to facilities located in Tier 2 and Tier 3 cities. These providers may be willing to deliver the same services for a far lower price.

Second, flat rate-based payment mechanisms can lead to distortions if rates are unaligned with costs. Hospitals may focus on only “profitable” procedures associated with high rates. In the absence of sufficient controls, packages can still be subject to fraud through “upcoding” and “ghost patients.”

Third, any variations in severity, unexpected complications, or complexity of a treatment have to be managed by the hospital within the established rates. Since the rates are not adjusted for case complexity, a longer stay resulting from comorbidity will not lead to an additional payment. The current rate structure provides a disincentive to hospitals for treating severe patients and may incentivize providers to select lower-risk cases. Conversely, providing a higher package rate based on severity or complications may also subject the schemes to a “creep” wherein providers will try to charge the higher rates even when cases do not warrant the same. Under the current system, the price setting principle is a balanced mix of high- and low-severity, but providers would have an incentive to screen and treat low complexity cases for any given procedure. In short, patients with complications or more severe illness may be turned away from hospitals. Such behaviors are neither expressly prohibited nor monitored.

Fourth, with the possible exception of AP, none of the schemes possess standardized or well-defined descriptions of the packages. The “title” is often the only clue to what comprises a package. For example, a package for cataract surgery or for enlarged prostate may not specify the method of surgery, the consumables to be used, the likely duration of stay, or the diagnostics and drugs to be provided by the hospital. This lack of definition allows considerable wiggle room for providers. Providers may use cheaper, short-lived (or even inferior and unknown quality) implants and medicines or discharge patients prematurely to minimize hospital costs and maximize the bottom line, with consequent adverse effects on patient safety and health outcomes. This is yet another provider behavior that schemes do not adequately monitor.

Package Rates and Market Prices

Table 3.10 shows the large variation in rates paid for similar packages among a subset of schemes for which data are available. RSBY generally

Table 3.10 India: Variation in Package Rates for Similar Procedures, 2009–10, Selected Schemes (Rs.)

Procedure	CGHS	Rajiv		Yeshasvini (KA) ^a	Vajpayee	
	ESIS	Aarogyasri (AP)	Kalaigmar (TN)		Arogyashri (KA)	RSBY
Coronary bypass surgery	130,000	95,000	90,000	60,000	95,000	Up to 30,000
Coronary angioplasty	85,000	60,000	60,000	25,000	60,000	
Transurethral resection of prostate	16,200	30,000	25,000	12,000	20,000	14,250
Nephrolithotomy	14,100	10,000	25,000	14,000	10,000	10,000
Nephrectomy	n.a.	40,000	40,000	14,000	10,000	10,000
Appendectomy ^b	12,000	18,000	n.a.	9,000	n.a.	6,000
Cholecystectomy ^b	10,200	20,000	25,000	9,000	n.a.	10,000
Hysterectomy ^b	13,000	20,000	25,000	6,000	n.a.	10,000
Tympanoplasty	7,050	15,000	n.a.	3,500	n.a.	7,000
Normal delivery	6,500	n.a.	n.a.	n.a.	n.a.	2,500

Source: Authors' elaboration based on scheme websites and other scheme documentation. For Kalaigmar, rates shown are for the highest category of hospitals. For CGHS, the rates pertain to Delhi.

Note: n.a = not applicable, service not covered.

a. Package rates in Yeshasvini do not include surgical implants or consumables, unlike the other schemes.

b. This is not an equal comparison as the tertiary schemes like AP pay only for laparoscopic appendectomy/cholecystectomy/hysterectomy (which is generally priced higher than conventional methods). CGHS, Yeshasvini, and RSBY do not distinguish the payout for different surgical procedures used.

pays the lowest rates. The AP and TN schemes pay more but only for the specified modality of treatment (i.e., only endoscopic surgery). For coronary bypass surgery and angioplasty, CGHS and ESIS⁵⁰ pay the highest rates. Even the rates for government-sponsored schemes in the same state, such as Karnataka (Yeshasvini and Vajpayee Arogyashri), display considerable disparity.⁵¹ However, variations in package rates can lead to distortions. A hospital that is networked with two or more schemes (three of the new generation GSHISs exist in Karnataka) and also with private insurers may face multiple and significantly different rates for the same procedure. This situation of conflicting incentives may lead hospital managers to favor admitting beneficiaries of one scheme over another or create an inequitable situation within a hospital in which more responsive care would be provided to beneficiaries from schemes with higher rate structures.

Comparing the market prices in table 3.9 with the rates listed in table 3.10 provides insight into the disjointed relationship between market prices and specified rates for three procedures, angioplasty, appendectomy,

and normal delivery. For the former, CGHS and ESIS pay significantly above market rates for all cities while the other schemes pay above market rates for Tier 2 and Tier 3 cities, but below rates for Tier 1 cities.⁵² A different pattern emerges for appendectomy; Rajiv Aarogyasri (AP) is the only scheme that approaches market rates for Tier 1 cities but is significantly above market prices for Tier 2 and 3 cities (perhaps because it covers only the laparoscopic modality of appendectomy which is often priced higher than the conventional open surgery).⁵³ RSBY pays well below market rates for all types of cities. CGHS and ESIS are below market rates for Tier 2 cities but above for Tier 3 cities. In case of normal delivery, RSBY continues to pay below the level for Tier 3 cities, but the CGHS and ESIS rate is pitched between Tier 1 and Tier 2 prices. The other schemes do not cover maternity.

Some providers, especially large hospitals in metro cities, already refuse to accept certain groups of GSHIS beneficiaries because of allegedly “below cost” rates. Interviews with managers of hospitals empaneled under RSBY complained of the low package rates (Grover and Palacios 2011). Although RSBY rates may be lower than the facilities’ usual charges as well as rates offered by other schemes, there is no way to determine with available data whether RSBY rates are below facility costs, as claimed by hospital managers.⁵⁴ If rates are indeed below provider costs, providers will have an incentive to balance bill (by charging the patients in an unauthorized manner), or to make up their margins by inducing additional uncovered services and charging fees.

To summarize, there is a lack of clarity on how the rates were formulated. Most seem to be borrowed from earlier schemes with few questions asked about their robustness and relation to market prices or costs. Based on a comparison of rates and market prices for three procedures, the one-size-fits-all approach to rates may result in schemes’ overpaying in some locations while underpaying in others. In general, if most care is provided in facilities located in Tier 1 cities, the package rates probably exert downward pressure on market prices. But the opposite may be the case for Tier 2 and 3 cities where most schemes (except RSBY) pay significantly above market prices. Given the nature of the rates, providers have incentives to oversupply, provide additional and unnecessary care, and use treatments that maximize the coverage cap as a means to garner additional revenues from GSHISs. There is clearly a need to review rates and cost the packages in different markets, applying standardized protocols.

Provider Networks, Quality, and Patient Satisfaction

To be effective, health insurance should make available to beneficiaries the providers who possess the knowledge, processes, and capacity to provide quality care efficiently. Insurance presents an opportunity to raise service standards because, as direct purchasers of health care, insurers can use their financial leverage to improve quality. This can be done through enforcing licensing regulation, incentivizing accreditation, requiring the reporting of data on outcomes and quality processes, requiring medical audits and, where feasible, introducing pay-for-quality initiatives.

This section centers on quality-of-care challenges facing GSHISs. Clearly, these challenges need to be understood within the Indian context in which quality is still a nascent issue. It reviews how networked hospitals are empaneled or certified. Available data on patient satisfaction are also presented. Finally, some evidence on the impact of GSHISs on provider markets is presented.

Addressing Quality of Care in India

Similar to the case of broader public and private delivery systems in India, quality is a forgotten or underemphasized component in all schemes. Available evidence from micro studies in India suggests serious quality shortcomings in three main areas: structure, process, and outcomes. Many facilities lack basic infrastructure and essential equipment (NHSRC 2009), and adequately trained staff (MOHFW 2009). Turning to processes, studies have highlighted the absence of clinical protocols or guidelines, and noncompliance with diagnostic and therapeutic requirements for common diseases (Parulekar et al. 2009). Poor medical record documentation impedes the kind of detailed review required to assess protocol compliance (Deodhar and Kakkar 2004). Lapses by staff were observed in measures to prevent hospital-acquired infections (HAI) (Chandra and Milind 2001). One study revealed that the HAI-bacteraemia led to additional spending of \$980,000 in the cardiothoracic unit of a hospital (Kothari et al. 2009). India also suffers significant problems with medication use because of the lack of pharmacy practice programs. A study revealed that adverse drug reactions are one of the important causes of emergency admissions in a public hospital in north India (Pattanaik et al. 2009). Inappropriate drug prescribing has been found to be common among hospitalized elderly patients.

For most schemes, little data are available beyond the limited information collected at the empanelment stage on facility infrastructure

and staffing.⁵⁵ Quality and patient safety information is not demanded or collected from providers. Even empanelment information is usually stored manually and is not analyzed or reevaluated. While some schemes (e.g., Rajiv Aarogyasri) have created special posts to oversee empanelment and monitor quality, the functions are focused on collecting initial information to assess eligibility for empanelment and thereafter only reacting to complaints and grievances received about hospitals. Little proactive analysis of empanelment or quality information is conducted.

Importantly, there is a noticeable tendency to deal with unethical practices or unwarranted treatment. Many schemes have disempaneled hospitals as a disciplinary action after such complaints were examined and confirmed. For example, as of September 2010, RSBY, AP and Yeshasvini had disempaneled 54, 67, and 58 hospitals respectively. Whether these actions have decreased the incidence of such practices is unknown, but enforcement of rules and policies is a good sign.

Hospital Empanelment and Quality Certification: Is There a Relation?

Table 3.11 lists the number of empaneled hospitals by scheme. Most networked hospitals are private facilities. Particularly for the tertiary-focused, state GSHISs, one of the main reasons to initiate these schemes was the limited capacity in the public sector to provide tertiary care. In

Table 3.11 India: Number of Scheme-Networked Public and Private Hospitals, 2010

<i>Scheme name</i>	<i>Public hospitals</i>	<i>Private hospitals</i>	<i>Total</i>	<i>Private (percent)</i>
<i>Central government</i>				
ESIS	148 ^a	400	548	73
CGHS	All public hospitals ^b	401	n.a.	n.a.
RSBY	2,267	4,923	7,190	68
<i>State government</i>				
Rajiv Aarogyasri (AP)	97	241	338	71
Vajpayee. Arogyashri (KA)	5	89	94	95
Kalaignar (TN)	56	636	692	92
Yeshasvini (KA)	29	421	450	94
Commercial insurers	nil	10,000 ^c	10,000 ^c	100

Source: Authors' elaboration based on scheme websites and documents.

Note: n.a = not applicable.

a. All ESIS owned and operated.

b. Eligible for reimbursement, though not networked for cashless service.

c. Estimates.

addition, the administrative difficulties in establishing formal cashless arrangements⁵⁶ with public hospitals seem to be an important reason for the limited “networking” of public hospitals in several schemes.

Since it is a national scheme operating in 25 states, RSBY has the largest network of hospitals (more than 7,000 as of December 2010). Though national in scope, CGHS and ESIS have relatively few networked hospitals since they operate in a limited number of cities where there are high concentrations of civil servants and formal sector employees. In the case of ESIS, the number of hospitals in the table includes 148 hospitals that the scheme owns and operates. Twenty-two of these are ‘model’ hospitals directly managed by the central ESIS Corporation while others are managed by the respective state governments’ ESIS departments.

The actual share of private hospitals in service utilization may be larger than implied by the quantum of networked hospitals listed in table 3.11. In the AP, TN, and KA schemes, private hospitals predominate in the top 20 facilities ranked by number of admissions. However, a few public medical colleges and public autonomous hospitals were also among the top 20 hospitals for Vajpayee Arogyashri, Yeshasvini, and Rajiv Aarogyasri.⁵⁷ Nevertheless, barring these few large, tertiary public institutions, most other public hospitals listed saw little or no volume of the insurance traffic.

Hospital empanelment normally focuses on assessing the structural aspects of quality and is not a rigorous process. There is no review of processes and results, and there is little evidence of follow-up inspections or recertification. Empanelment criteria for most GSHISs have evolved from the criteria followed by TPAs in the PHI industry, and the empanelment application forms and assessment processes are also quite similar. Most schemes set criteria based on minimum number of beds, availability of qualified medical professionals, criteria for adequate ICU beds, certain minimum equipment, diagnostic facilities, tie-up with blood banks to source blood in the event of an emergency, and compliance with legal requirements such as registration or licensing as applicable.⁵⁸

Table 3.12 displays the minimum bed requirement for different schemes. Most of the tertiary care schemes set a 50-bed minimum. With the aim of securing a more geographically accessible network, RSBY empanels “hospitals” with 10 beds. However, although most small facilities may be undertaking only the more common secondary care procedures, the volume for the less common procedures in these facilities is probably too low to maintain minimal quality standards. Studies elsewhere have shown that performing sophisticated procedures at

Table 3.12 India: Minimum Number of Hospital Beds Required for Empanelment, by Scheme, 2010

<i>Scheme</i>	<i>Minimum number of beds</i>
ESIS	100 ^a
CGHS	100 ^a
RSBY	10
Rajiv Aarogyasri (AP)	50
Vajpayee Arogyashri (KA)	50
Kalaighar (TN)	30
Yeshasvini (KA)	25 ^b

Source: Authors' elaboration based on schemes' empanelment documents.

a. In smaller cities, a 50-bed minimum.

b. Relaxed to 15 beds for subdistrict level.

low-volume and low-capacity facilities may lead to poor health outcomes (Noronha et al. 2003; Birkmeyer et al. 2003). The quality standards of these small facilities are likely to be highly variable and even questionable. Strengthening empanelment criteria or raising quality standards in small facilities will be a major future challenge for GSHISs.

Nevertheless, even larger hospitals may not have sufficient capacity to provide quality services. Based on a small survey of 26 hospitals empaneled by RSBY in Kerala state, one study found that only 38, 31, and 19 percent reported the availability of surgeons, gynecologists, and pediatricians, respectively. Radiologists and anesthesiologists were present in 46 and 62 percent, respectively (Research Institute 2009). Only about half reported the availability of nurses exclusively for the operating theater and delivery room. The dearth of medical and nursing staff is surprising, considering that most of the hospitals (55 percent) were relatively large (by Indian standards), possessing over 60 beds. Only about a third had registered blood banks, a fifth had a protocol for identifying and reporting HAIs, and none reported the maintenance of medical records for the last five years. As suggested above, these deficiencies are typical of hospitals in India, not just RSBY-empaneled hospitals.

On a more positive note, a survey of private facilities empaneled by the Aarogyasri scheme in a single district in AP found that all had sufficient medical staff and operational equipment (Reddy 2011). Of particular interest, the researchers reported that for two hospitals, wards for Aarogyasri beneficiaries were notably cleaner than non-Aarogyasri wards.

In Rajiv Aarogyasri (AP), 77 network hospitals (out of 338) have more than 200 beds; 40 of these are private hospitals. Another 66 have between 100 and 200 beds, while 195 hospitals have 50 to 100 beds. Tertiary

focused schemes seem to be more selective and insist on larger hospitals, but even a 50-bed facility may not conform to quality standards if appropriate empanelment standards and quality monitoring are not an integral part of the system.

Once empaneled, it is unlikely that a facility will be inspected again except in response to a grievance. Through their financial leverage, GSHISs hold great potential to drive quality improvements in public and private hospitals. Nevertheless, as a consequence of a weak empanelment process and lack of quality monitoring, schemes may be paying additional charges for the consequences of the uncertain service quality such as adverse events, infections, and medication errors resulting in readmissions, extra inputs, and longer stays. Most schemes do not assess postcare recovery to determine final outcomes.⁵⁹ There is little interest in using evidence-based care as manifested in clinical protocols.

Patient Satisfaction

Though based on small samples, available data from three schemes indicate that patient satisfaction is high. RSBY is one of the few schemes assessing patient satisfaction regularly. For example, a survey of 390 RSBY beneficiaries in Delhi who had been hospitalized found that 18 percent were highly satisfied, 67 percent were satisfied with the scheme, and only 3 percent were dissatisfied (Grover and Palacios 2011). Importantly, satisfaction appears to be increasing since earlier ratings. In terms of treatments, about 75 percent classified the treatments as good or adequate. Not unexpectedly, a regression study found that patient satisfaction was highly correlated with patients' reporting of partial and full recovery. Surgical patients as well as those who were treated in an ICU reported high levels of satisfaction. In a survey of 108 RSBY beneficiaries in Kerala, more than 90 percent state that they would recommend the scheme to others (Research Institute 2009). An assessment of 102 beneficiaries conducted by Yeshasvini found that 60 percent were fully satisfied, 30 percent expressed partial satisfaction, and 10 percent were not satisfied with the scheme (Nabard Consultancy Services 2007). All households that used Aarogyasri in AP's Prakasam District expressed satisfaction with the scheme (Reddy 2011).

Help desks in RSBY empaneled hospitals and prompt attention may contribute to high levels of satisfaction. In the aforementioned survey in Kerala, 90 percent mentioned the availability of easy-to-locate help desks in the hospitals where treatment was provided (Research Institute 2009).

Nearly two thirds reported waiting less than five minutes before being attended by hospital administrative staff to arrange admission and verification of beneficiary status. Once admitted, all were attended by medical staff within one hour.

GSHIS Impact on Provider Markets

GSHISs have contributed to providers' markets by reducing underutilized bed capacity and stimulating hospital expansion. Initially, most schemes were able to develop a provider network because of underutilized bed capacity, especially in the private sector. For example, in their review of Yeshasvini, Kuruvilla, and Liu (2007) reported a 35 percent bed occupancy rate among hospitals in Karnataka during the early years of the scheme, and the rate of utilization of operating theaters was even lower. Given the lack of statistical data on hospitals in India, whether a similar situation is evident in other states is unknown.

The wave of new GSHISs seems to have contributed to expansion of private sector provision and, in some states, infrastructure upgrading of public facilities. Patient choice of care providers may give both public and private providers incentives to expand and possibly improve quality. Initial reports from the GSHISs suggest that the schemes are stimulating new investments in private hospital infrastructure, especially in smaller cities and towns, and even in semi-urban areas. This is understandable. Patients with difficult geographical access to large cities would prefer to seek care at networked nursing homes and public facilities in their vicinity. The field teams observed facility construction or expansion in several cities, and interviews with owners suggest that GSHISs are a driver of new investments.

Although in some parts of India there is a dearth of hospital beds, the expansion of hospital capacity begs two related questions about the type of the health delivery system appropriate for India and its future affordability. The first concern is the rapid promotion of a traditional and probably outdated hospital-centric delivery system. There have been calls from both public and private sectors to significantly increase the number of beds. Private leaders are calling for between 300,000 and 500,000 new beds (CII 2009; IFC forthcoming) based on comparative bed-density ratios in other countries. However, little is known about utilization of the existing hospital infrastructure. As suggested above, GSHISs may contribute to filling existing underutilized bed capacity. However, as mentioned, they may also be incentivizing the substitution

of inpatient care for cost-effective care in an ambulatory setting. This could drive up costs. Ambulatory-sensitive conditions account for 18 percent of admissions in Spain, 13 percent in the U.S. state of New Jersey, and 30 percent in Brazil. In Brazil, spending on these conditions was estimated at \$1.6 billion in 2002, 21 percent of total spending on inpatient care (Caminal, Starfield, and Sanchez 2004 and 2002; Vali 2001; La Forgia and Couttolenc 2008).

Examination of recent trends in delivery models in OECD countries would be worthwhile for India (OECD 2010 a, b, c). Given the emerging burden of chronic diseases, changing demographic profiles, the introduction of new medical technologies and pharmaceuticals (particularly outpatient therapies and procedures) and increasingly mobile workforces—changes that have already commenced in India—nearly all OECD countries are reducing the number of acute hospital beds. They are shifting care to alternative, but mostly ambulatory, settings while incentivizing coordination or integration among a range of providers. In OECD countries, health planners increasingly accept that the traditional emphasis on acute care hospitals reflects treatment practices and epidemiological profiles of bygone days (McKee and Healy 2002). Moreover, given the time it takes to design and build hospitals, many may become outdated soon after their inauguration (Guenther and Vittori 2008).

A second concern relates to the possible expansion of small hospitals. The schemes may stimulate the proliferation of small, low-volume, and probably low-quality hospitals. Most hospitals in India are already small, most of them with fewer than 30 beds.⁶⁰ A considerable body of literature exists on the poor outcomes of low-volume hospitals, particularly in performance of sophisticated procedures such as those covered in most of the schemes under study here (Birkmeyer et al. 2003 and 2002; Ho 2000; Halm, Lee, and Chassin 2002). This is compounded by the lack of quality monitoring by the schemes (and the broader health delivery system).

International experience also suggests that smaller hospitals tend to be bypassed and increasingly underutilized as road networks improve, primary care is extended, and specialty care becomes concentrated in larger hospitals. For example, this has been the case in Brazil, where small hospitals (e.g., fewer than 50 beds) represent 61 percent of all hospitals (24 percent of total beds), but report occupancy rates of only 22 percent on average (La Forgia and Couttolenc 2008). Although small hospitals may address access issues in rural India, demand for their services may decline as geographical access to higher-quality (and higher-volume) facilities increases.⁶¹

To summarize, quality has yet to become a major area of focus for the schemes. Large purchasers of health care in India—including GSHISs, government, and private insurers—have yet to use their financial leverage to improve the quality of care provided at their networked facilities. Data are not demanded on quality of care. Though not atypical of many countries, this failure to focus on quality has multiple causes: ambiguity about the role of a purchaser in influencing clinical decisions, assumptions that such decisions are best left to medical professionals who would also be appropriate managers for quality issues, lack of information about the nature and magnitude of quality problems (and their effects on payers' costs), and lack of clarity about specific measures that purchasers and providers can take to improve quality. Under their current design, GSHISs may be incentivizing the expansion of small, low-quality hospitals as well as an outdated and potentially unaffordable hospital-centric delivery model.

The Role of Public Hospitals

An important policy issue relates to how GSHISs can improve the performance of public hospitals and foster their utilization by beneficiaries. In theory, the new generation of GSHISs is designed to foment competition for beneficiaries among all empaneled public and private hospitals. This competition is based on hospitals' prestige or perceived quality, since most schemes are cashless for the beneficiary and information on quality of care is generally lacking.⁶² In most cases, private hospitals, and to a lesser extent public medical colleges, that continue to receive the lion's share of beneficiaries, are prestigious or higher-end hospitals that cater to the middle class. These facilities are generally located in Tier 1 cities. Outside Tier 1 cities geographical access may play an important role in facility selection: the real choice is among hospitals that are accessible to the patient.

There could be a greater role for public hospitals in this system, especially in areas where private supply is nonexistent, inadequate, or of poor quality. This section focuses on public hospitals' governance and accountability arrangements that may be an obstacle to increasing their participation in GSHIS provider networks. It also reviews potential opportunities based on the Indian experience in promoting more independent public hospitals. However, understanding the challenges and opportunities of public hospitals is constrained by the lack of data in India on the supply of hospital services and beneficiaries'

hospital-seeking behaviors, hampering analyses of the potential for public hospitals to reap revenues from GSHISs.

Public Hospital Governance and Accountabilities in India

Under current governance and institutional arrangements, most public hospitals are in no position to compete with private facilities. Few have the autonomy or flexibility to manage their own affairs (box 3.1). They can neither perceive the incentive signals inherent in a payment mechanism, nor are they able to respond to them effectively. They are entirely dependent on the hierarchical control of state health authorities for nearly all budgetary and input decisions.

Budgets bear little or no relation to volume, quality, or efficiency of care. Unless part of a GSHIS network, these hospitals do not face market pressures. Staffing and budget norms—often related to civil service, budgetary legislation, or public health codes—restrict managers' freedom to marshal resources to improve quality or achieve efficiency. In

Box 3.1

India: Alternative Organizational Arrangements of Public Hospitals

Two categories of alternative organizational arrangements have emerged in India. The first involves a subset of public hospitals that have been granted autonomy through special legislation. These are often tertiary hospitals affiliated with medical colleges. The second is an emerging arrangement in which committees consisting of local politicians, community members, and medical staff are granted decision rights over the spending of a limited amount of revenues.

Autonomous hospitals. A small number of public hospitals have been established as “autonomous institutions” under special central or state legislation. Examples of such autonomous hospitals include the Post- Graduate Institute of Medical Education and Research (PGIMER), Chandigarh; Sri Venkatesvara Institute of Medical Sciences, Tirupati, AP; Nizam’s Institute of Medical Sciences, Hyderabad, AP; the All India Institute of Medical Sciences, New Delhi; and the National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore. These hospitals have broad decision-making authority to manage their inputs and receive grant-based financing. However, the internal rules created by these institutions often

(continued next page)

Box 3.1 (continued)

mirror the public service rules. A key difference is that many employees of these hospitals are not civil servants (except some officials on deputation). Rather, they are hired by the facilities. In this respect, often the medical college hospitals under municipal corporations, though not created as autonomous institutions, also mimic some of the attributes of the autonomous institutions as they are self-managed and not subject to a statewide transfer policy administered by a state directorate. In general, the autonomous institutions, by virtue of their distinct legal status, have a high degree of decision-making authority on the management of inputs, including human resources, use of resources, financial management, procurement of goods and services, and service mix.

Rogi Kalyan Samiti (RKS). The National Rural Health Mission (NRHM), the federal government's flagship health program, has taken up the mantle of creating and supporting governance bodies for public health facilities called Rogi Kalyan Samiti's (RKS, patient welfare committees), a nomenclature and concept that was initiated in the state of Madhya Pradesh in the 1990s. The RKSs are registered societies constituted within each public health facility (district hospital, community health center, and primary health center) and receive "untied funds" (grants from the central government without any earmarking of how funds should be spent). In addition, they are empowered to raise their own resources at the facility level. The aim of these committees is to increase participation from people's representatives and improve the health facility, using its own resources raised from user charges, grants, and other sources. MOHFW sees RKSs as the foundation for broadening decision-making autonomy and fostering management improvements in public hospitals. A recent assessment of 12 RKSs in Madhya Pradesh found that they augmented their revenues from local sources. Though limited in terms of the total budget, these funds were used to address pressing needs (Sadanandan and Shiv Kumar 2006). However, the researchers found no impact of RKSs on management practices, monitoring, or facility utilization.

effect, hospital managers have little decision-making authority over inputs, including hiring, firing, rewarding, or disciplining of staff, while accountabilities for performance are diffuse at best. This model of public hospital service delivery, often referred to as direct management, is known for low efficiency and quality (Preker and Harding 2003; La Forgia and Couttolenc 2008).

There is some evidence, however, that states are seeking alternative approaches to hospital governance. In Kerala and AP, the availability of demand-side financing for public hospitals has opened an additional stream of funds to upgrade these facilities and incentivize staff. In Kerala, for example, public hospitals represent 60 percent of the RSBY case load and 53 percent of revenues. Public hospitals are receiving additional state financing to upgrade public facilities (Arora and Nanada 2011). According to state authorities, this additional financing places public hospitals on par with private facilities. However, there are two problems with this experience. First, since public hospitals receive a supply-side subsidy, the demand-side financing from RSBY represents an *additional* source of public revenue while the private providers receive only the demand-side package rates. As a result, a situation of dual subsidy is emerging, which could lead to accusations of unfair competition from the private providers. Second, as mentioned, a major problem facing public facilities in India is accountability. Upgrading alone will not solve problems related to absenteeism, inhumane treatment, poor skills, and insufficient effort, which have been documented in public facilities (NCMH 2005; Human Rights Watch 2009; Benerjee, Glennerster, and Duflo 2008; Planning Commission 2005; Gill 2009; MOHFW 2009; Das et al. 2011; Das and Hammer 2007; Chaudury et al. 2006). To its credit, Kerala is exploring arrangements to grant greater autonomy to public hospitals. Recently, public hospitals have been given greater decision-making authority over financing to hire additional staff.

Drawing solely on revenues from Rajiv Aarogyasri, a government medical college in AP strengthened its cardiothoracic surgery infrastructure, shored up its supplies of medicines and consumables, and also witnessed a steep rise in surgeries performed at the center. The same hospital, and several others across the state, introduced a dialysis center through a public private partnership (PPP) arrangement. Nearly all the patients are members of the state's health insurance scheme. The hospital is able to use some of the "extra" revenues from the same health insurance scheme to improve services elsewhere in the facility.⁶³

Despite these innovations, much more will need to be done in terms of creating an incentive environment in which public hospitals are accountable for results, and compete for GSHIS beneficiaries. Also, if states want to move toward a situation of competition for demand-side revenues, all facilities, public and private, should eventually operate under the same rate structure after phasing out dual subsidies.

Financial Benefits and Burdens on Patients

A major objective common to all schemes is to reduce the financial burden of health spending on the poor. The fact that all schemes are cashless (or nearly so) and provide coverage for hospitalization, a case can be made that they have reduced financial burden on the poor at least for the covered inpatient services. It can also be hypothesized that the schemes have diminished the probability of falling into poverty (or deeper into poverty) due to hospitalization for the covered populations. Targeted demand-side subsidies combined with an explicit entitlement (e.g., a defined benefits package) may have improved the targeting of scarce public resources on the poor. However, any statements on impact on household spending are tempered by the lack of impact evaluations for nearly all schemes. This section reviews evidence of financial benefits as well as the persistence of financial burdens. The latter are related to provider charges, transportation costs, and the absence of ambulatory coverage.

Impacts on Household Spending

Analyses of household data from two schemes provide insights into their effects on household spending. In an impact evaluation of the Yeshasvini scheme in Karnataka involving a large survey of cooperative members and comparing matched beneficiaries and nonbeneficiaries, Aggarwal (2010) found that borrowing to pay for inpatient surgical care was reduced by 30 percent for low-income beneficiaries compared with non-enrollees (36 percent less for higher-income members). Payments that drew from sources other than borrowings (e.g., income, savings) increased by 74 percent for all sampled beneficiaries. The author concluded that the scheme had a significant price-reduction effect, but only for surgical care. However, the study also found that inpatient treatment for care other than surgical⁶⁴ resulted in increased borrowings, but only for the higher-income beneficiaries. For the combined sample of lower- and higher-income beneficiaries, health expenditures increased by 20 percent compared with the uninsured control group. However, this effect was not significant for lower-income groups.⁶⁵

These latter results are not surprising. The Yeshasvini benefits package covers only surgical procedures. Significantly, the study did not report whether additional spending was due to spending on covered procedures or uncovered care. Other factors probably contribute to the increase in out-of-pocket spending. For example, procedure packages

exclude diagnostics and surgical consumables. Follow-up, postsurgical care, including medicines, is also not covered. Finally, package rates have not been revised since the founding of the scheme in 2003 and are currently reported to be between 40 percent and 50 percent of market prices, particularly in Tier 1 cities. It can be hypothesized that hospitals are probably increasing their revenues by charging for tests and consumables. They have an incentive to oversupply these uncovered services, which can result in higher profits. The fact that additional spending by lower-income households is not significant suggests that this group may not access uncovered services, may seek only surgical procedures that do not require significant copayments, or not demand postsurgical care.

Fan, Karan, and Mahal (2011) examined the impact of Rajiv Aarogyasri on out-of-pocket health spending during a 12-month period subsequent to the rollout of Phase 1 of the program, launched in April 2007.⁶⁶ The authors found that Phase 1 households significantly reduced inpatient spending (in absolute terms and as a share of household consumption and catastrophic spending).⁶⁷ Households participating in Phase 1 also significantly reduced the probability of having *any* out-of-pocket health spending. The results demonstrate that Aarogyasri provided financial protection for inpatient care, which is the main focus of the scheme. The reduction in total spending suggests that beneficiaries, who previously may have substituted outpatient care for inpatient care, were probably not accessing the latter (at that time) due to its high cost. Alternatively, beneficiaries (in collaboration with providers) may be substituting inpatient care, which is covered, for outpatient care, which is not.

Fan, Karan, and Mahal also reported that the above-described effects of Aarogyasri on inpatient expenditure were not as robust for households from scheduled castes and scheduled tribes (SC/ST). In contrast, the effects for non-SC/ST households were significant. This suggests that the scheme may not be as effective in reaching SC/STs, one of the more impoverished and marginalized segments of Indian society. This finding is consistent with the results reported by Rao and Kadam (2009) on [lower] levels of coverage of SC/STs.

Except for the SHI (CGHS and ESIS) schemes, limitations remain for most GSHISs in terms of geographical access, coverage gaps, after-care spending, and charges resulting from balance billing by providers that can lead to significant, and sometimes, unexpected out-of-pocket (OOP) spending. Costs for room and board of an accompanying family member and any transportation costs beyond those covered under the scheme are

examples of “legitimate” OOP costs which continue to be incurred by beneficiaries. Nevertheless, the limited scope of insurance coverage may contribute to significant, and higher, OOP spending as a result of uncovered charges for postsurgical treatment. In some cases, the low annual family insurance ceiling may be insufficient to provide adequate coverage for an inpatient event resulting in OOP charges. In others, low package rates and lack of consumer information provide hospitals with an incentive to exercise balance billing practices.

Beneficiaries may have limited information about what is and is not covered. If, for example, a potential beneficiary is contacted in a health camp, an *uncovered* disease or condition may be detected. If the provider convinces the potential patient about the importance or urgency of treatment, the uncovered patient will have to bear all treatment costs out of pocket. Also, in some cases, patients may not be fully aware (or informed) prior to admission of the need for legitimate out-of-pocket payments even when the procedure is otherwise covered (e.g., additional transportation costs, ambulatory drugs, and follow-up tests, post hospitalization costs). Schemes such as Yeshasvini require patients to bear the costs of surgical implants, and such details may not be fully clear to patients until they reach the hospital.

Evidence of Illegitimate (and Legitimate) Charges by Providers

There is some evidence that network hospitals under RSBY are charging patients for medicines and other items that are covered in the package rates. A small-scale survey of RSBY beneficiaries in three states reported that between a fourth and a third of beneficiaries made a payment for medicines, and to a lesser extent, for services that were fully covered under the scheme (Palacios 2011; Grover and Palacios 2011). In a survey of 108 RSBY beneficiaries in Kerala, the majority reported out-of-pocket expenses ranging between Rs. 700 and Rs. 2,000 (Research Institute 2009). Charges were for physician fees, medicines, diagnostic tests, food, and other items that, according to RSBY guidelines, should be provided free of charge.⁶⁸ In about one fourth of cases, patients were asked to purchase outside of the hospital drugs, diagnostic services, and meals unavailable in-house. Of the patients who were prescribed medicines upon discharge, about 70 percent did not receive them from the hospital, per RSBY rules.

These practices are not particular to RSBY. The incidence of these charges may be significant across all schemes, but not all GSHIS (or the insurers and TPAs servicing them) have sufficiently sound

information systems and grievance procedures to track these abuses.⁶⁹ Interviews with providers suggest that they consider the package rates too low to cover costs, and therefore have an incentive to continue this practice.⁷⁰

A small survey of 127 beneficiaries of AP's Aarogyasri scheme found that 58, 52, and 32 percent reported incurring expenses for medicines, transportation, and tests, respectively (Rao and Kadam 2009). The median expenditure was Rs. 3,600. This figure is significantly lower than the OOP expenditures for inpatient stays in private hospitals reported in the 2004 NSSO survey (even adjusted for inflation), but similar to OOP spending for inpatient stays in public hospitals reported in the same survey (table 2.2). According to Rao, the tests were covered by the scheme and therefore should have been free of charge. Also, field workers reported that private hospitals tend to admit patients only after a confirmed diagnosis but charge for preadmission diagnostic tests. Although the schemes do not reimburse hospitals for such tests, hospitals are expected (through the empanelment agreement) to provide such ambulatory services for free. Rao did not report on whether this expenditure on medicines was for covered services as an inpatient or for uncovered prehospitalization or posttreatment care.⁷¹

Transportation Spending and Geographical Access

Geographical access is another challenge facing most schemes. Several schemes now provide for transportation reimbursement as part of the total package cost agreed by the hospital. This payment is intended to meet the costs of public transport (generally at the base-level fare of an ordinary public transport bus). However, the reimbursement is capped at about Rs. 100 per hospitalization, which probably does not fully cover patients' traveling costs from distant areas, and certainly not the travel costs of accompanying family members. These uncovered costs may represent a deterrent to access. In AP, Rao and Kadam (2009) found that the average travel distance to the closest cities servicing Rajiv Aarogyasri beneficiaries ranged from 34 km to 259 km. Nearly a third of Rajiv Aarogyasri beneficiaries had to pay out of pocket on transportation. Whether this spending was to cover patient travel costs (which are covered) or those of accompanying family members (which are uncovered) is unknown. Palacios (2011) reported that small-scale surveys in a few states found that hospitals often do not pay the RSBY transportation allowance to beneficiaries.

The Burden of Ambulatory Care

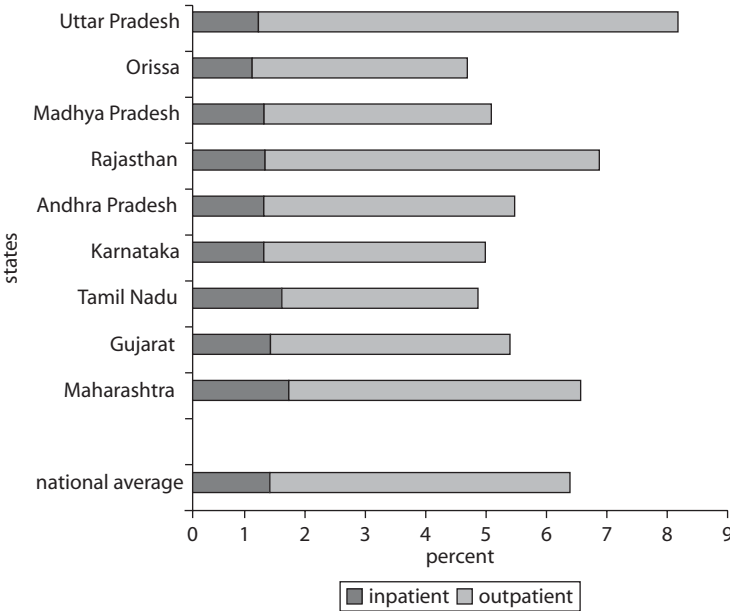
Finally, except for CGHS and ESIS, none of the schemes cover ambulatory care. Yet the demand for outpatient care is very price-sensitive for the poor and can result in catastrophic expenses. A recent analysis of the NSSO/60th round survey of health utilization and expenditure (MSPI 2004) patterns defined catastrophic as being pushed below the poverty line due to health payments (Berman, Ahuja, and Bhandari 2010). In 2004, over 63 million individuals (12 million households) fell into the BPL category, resulting from out-of-pocket health expenditure. Nearly 79 percent of these individuals became impoverished due to outpatient care in part due to its high frequency and repetitious contacts with the health delivery system, resulting in numerous small payments for an illness episode. Since 80 percent of the outpatient spending is reported by households on drugs (usually dispensed by the attending private practitioner or purchased from private pharmacies), expenditure on drugs is probably the main driver of impoverishment (Berman, Ahuja, and Bhandari 2010). Only 21 percent of impoverishment was due to inpatient care, partly because it is a low-frequency event but also partly because this figure does not take into account people who may not have sought inpatient care at all because of its high costs.

Figure 3.1 displays the proportion of people falling into poverty for inpatient and outpatient health care costs in selected states, based on NSSO 60th round data (MSPI 2004). Three states with GSHISs providing tertiary cover are included in the chart: Karnataka, Tamil Nadu, and Andhra Pradesh. Except for Rajasthan, AP, and MP, all other states in the figure are already implementing RSBY.⁷² For all the states, the burden of outpatient expenditures dwarfs that of inpatient spending.

Using the same NSSO/60th data set, Shahrawat and Rao (2011) estimated the effects of three benefit design strategies on impoverishment as measured by reduction in the poverty head count. The first involves eliminating OOP payments on outpatient drugs, which would significantly lower poverty headcounts. A similar reduction was found for the second strategy—abolishing OOP payments for outpatient care. The final strategy, eliminating OOP payments for inpatient care, had negligible effects on impoverishment. In other words, OOP payment for inpatient care is not a significant source of impoverishment compared to outpatient care and drugs.

To summarize, from both a financial protection and health standpoint, a case can be made for covering basic outpatient care. By focusing on

Figure 3.1 India: Households Falling below Poverty Line due to Inpatient and Outpatient Health Care Costs, Selected States, 2004 (percent)



Source: Berman, Ahuja, and Bhandari 2010.

inpatient care, in theory beneficiaries have an incentive to delay treatment until an illness becomes serious enough to warrant inpatient care, although supporting evidence for this hypothesis is uncertain. Questioned about extending coverage to basic outpatient services, some scheme officials said that in theory the poor are covered for these services through the public delivery system. However, as mentioned in chapter 2, 69 percent of all health expenses in the country are paid out-of-pocket; mostly to private providers paid on a fee-for-service basis. Although insurers could craft provider payment systems and other mechanisms to better control moral hazard related to demand for outpatient care, most officials and insurers claim that managerial capacities, spending controls, and the information environment are not conducive to introducing outpatient coverage at this juncture. As described in box 3.2, they may have a case in point.

Together, the schemes have probably helped improve financial access to inpatient care for low-income populations for conditions that would

Box 3.2**India: Constraints to Introducing Ambulatory Care Benefits in Health Insurance**

Including comprehensive ambulatory coverage would be a daunting task under current provider payment systems, oversight arrangements, and managerial and information capacities. Schemes are still ill-equipped to handle demand-side ambulatory care coverage from a control and managerial standpoint. Potentially overwhelming moral hazard and fraud issues would require a rethinking of the insurance and delivery models. In general, group practices (which in principle can be capitated to provide a package of ambulatory services) have yet to take hold in India. Under these constraints, GSHISs and nearly all private insurers have yet to develop viable products extending coverage for primary care. As described in chapter 5, RSBY is piloting an ambulatory benefit in Orissa. More such pilots (with proper impact evaluations) are needed before the schemes can consider rolling out ambulatory coverage to their beneficiaries.

probably have gone untreated, resulting in lower health status, loss of productivity, school absence, and so forth. However, only longitudinal household data can support such a hypothesis. While geographic access may seem to be a constraint in exercising this choice, particularly for beneficiaries residing in distant areas at least some beneficiaries seem to be accessing care from providers of their choice, even after traveling substantial distances.

Cost Containment

Since beneficiaries do not pay the full cost of care, insurance provides an incentive to consume more services and use more expensive providers (demand-side moral hazard). Depending on pricing and provider payment mechanisms, providers may have an incentive to deliver more services than an informed (or price conscious) patient would demand (supply-side moral hazard). This is particularly true of fee-based payment systems. Typically, health insurance schemes contain design elements that may escalate costs though possessing others that can contain them. Schemes can also use direct managerial methods (such as copayments,

preauthorizations) to control utilization. In this section, cost drivers, cost-containment measures, and incentives facing insurers, providers, and beneficiaries are reviewed. The focus is on the new GSIHSs.

Cost Drivers

As explained early in this chapter, one cost driver relates to difficulties in targeting the beneficiaries. Although expanding coverage to nonpoor but still vulnerable groups is laudable, apparently higher-income groups (who, in theory, are excluded from membership) appear to have access to benefits under these schemes. Such leakage (false positives) is related to the defects of the BPL listing and targeting system⁷³ but increases costs and undermines scheme sustainability and possibly capacity to deepen the benefits package.

Beneficiaries have no incentive to secure medical care in a timely manner to avoid more serious illness. For example, if a condition that can be treated on an outpatient basis is detected, treatment will have to be out of pocket because newer schemes do not cover ambulatory care. People may delay care until conditions become serious enough to warrant hospitalization, which is covered. This situation could lead to cost escalation.

Since beneficiaries face near zero costs for covered treatment in any of the hospitals, they have an incentive to seek care at “prestigious” hospitals, invariably the more expensive tertiary care facilities with their higher cost structures. Given their popularity among beneficiaries and the fact that they are generally also politically well connected, these facilities may exert influence to raise package rates in the future. In light of the absence of quality and outcome information on empaneled facilities, patients will continue to choose facilities by their reputation rather than their clinical effectiveness. There is no attempt to steer patients to lower-cost but good-quality providers, due partly to lack of information on the quality of care, however defined. Also, schemes were founded on the principle of “free choice” of provider, and any preference given to a specific facility (or facilities) may be viewed negatively.

Cost-Containment Measures and the Role of Insurance Intermediaries

In theory, five features common to most of the studied schemes can contribute to cost containment: insurer competition, limited scope of the benefits package, annual family spending caps coupled with procedure-specific package rates, and provider competition. Although these

features may initially contribute to cost containment, they are unlikely to continue to exert downward pressure on costs indefinitely.

Package rates are the main form of paying the hospital providers among the schemes analyzed. Although this payment mechanism may be a substantial improvement over the open-ended, fee-for-service regime,⁷⁴ it is still far from an effective cost-containment system for the long run. Officials from some schemes claim that package rates exert downward pressure on costs and have helped lower market rates for similar services. As discussed earlier in this chapter, the impact of package rates on controlling cost escalation remains to be seen.

In principle, competition among providers for beneficiaries may exert pressure on providers to lower costs (or expand volume). However, in rural and semi-urban areas, there may be too few providers to form a competitive market. Further, evidence is emerging that beneficiaries in rural areas are traveling longer distances to access empaneled and more “prestigious” facilities in large cities. This appears to be the case for Bangalore based cardiac hospitals for beneficiaries living in the distant divisions of Karnataka (covered under Vajpayee Arogyashri), and for RSBY beneficiaries in Kerala. Even in larger cities with multiple providers, provider competition may not be contributing to cost containment as evidenced by the high concentration of care provided in a relatively limited number of empaneled facilities. For example, table 3.13 shows high concentration of care provided in the top 20 facilities according to claims data.

The use of managerial cost-containment mechanisms is in its infancy in GSHISs as well as in the broader health insurance industry in India. Preauthorization is the main form of utilization control but, with the

Table 3.13 India: Share of Top 20 Network Hospitals in Preauthorized Claims, Selected Schemes

<i>Scheme</i>	<i>Percent of all claims serviced by top 20 hospitals</i>
Kalaignar' (TN) ^a	26
Yeshasvini (KA) ^b	58
Vajpayee Arogyashri (KA) ^c	60
Rajiv Aarogyasri (AP) ^d	34

Source: Authors' elaboration based on scheme documentation.

a. July 2009–Aug 2010 data.

b. 2009–10 data.

c. Apr–July 2010 data.

d. 2007–2010 data.

possible exception of AP, this mechanism appears to focus on detecting uncovered services and fraud, with only limited success in filtering unnecessary care and overprovisioning of service. Other managerial practices such as utilization review, analysis of practice patterns, use of gatekeepers, and claims analysis are rarely applied. Considering hospitals' incentive to induce demand, these methods need to be introduced or strengthened. Finally, cost-containment measures such as case-based provider payment mechanisms, use of generic drugs, and controlled introduction of expensive technologies are yet to enter into the cost-containment discourse.

Controlling costs will be a future challenge facing all schemes. Premiums are currently low because of the recency of many of the schemes, the limited depth of coverage, beneficiaries' general lack of awareness of benefits and processes, and insurers' tendency to take a "top-line" approach to the GSHIS market. As the schemes mature and expand, this situation will change, and cost escalation will become a major concern. Evidence shows that claim frequency increases rapidly in the second and third year after schemes' rollout, leading to higher aggregate costs.⁷⁵

The Challenges and Potential of Insurance Intermediaries in Controlling Costs

Before continuing the discussion of cost containment, it is important to understand the nature of insurer competition in the GSHISs markets as well as insurers' underlying incentives to compete. Insurers vie for government contracts to cover large groups of beneficiaries residing in defined territories such as states or districts.⁷⁶ The basis of competition is their quoted premium prices. Unlike the private voluntary insurance market, insurers do not compete for beneficiaries.⁷⁷ Since they are paid according to the number of enrolled families, insurers have an incentive to maximize enrolment and minimize costs.

The use of insurance companies as intermediaries has probably contributed to the highly competitive pricing of premiums, at least in the early years of implementation. The health insurance industry is very competitive, and many companies seek to expand revenues and market share⁷⁸ to complement their private insurance products by offering lower premiums to GSHISs.⁷⁹ In addition to the long-term potential of monetary gains from the GSHIS market itself, which is a big driver of insurers' participation, insurers have a number of reasons to continue in this market despite some short-term losses on this business (if any at all). Given the competitive nature of the insurance market, participation in GSHISs establishes brand recognition as well as their credentials as a large insurer.

They also gain from a larger geographical presence, an expanded hospital network, and greater knowledge of the provider market. Insurers can then leverage their increased size to exact better discounts from hospitals for their GSHISs as well as voluntary commercial business. Insurers also make investment gains on the funds received in advance, which offset some of the claim losses (or lower returns). Finally, servicing social policies probably places the insurers in a favorable light among politicians and policy makers.

However, it is safe to say that the currently observed low levels of pricing will be difficult to sustain. Premiums will eventually increase to more realistic levels after a couple of years of operation as awareness levels become more widespread among the targeted population, more facilities become empaneled particularly in smaller cities and towns, and companies become more skillful in predicting utilization and costs.

Already there are signs of upward pressure on premiums as insurers incur losses in some territories. For example, under RSBY in Kerala, a state that had a claim ratio higher than 100 percent,⁸⁰ new premium bids submitted by prospective insurers for 2011 were markedly higher than the previous year's. As GSHISs expand, it may be tougher for insurers to justify losses resulting from unrealistic pricing in terms of short-term policies to grow their business volume.⁸¹

Whether the incentives for insurers are sufficiently robust to control costs and protect margins is unclear. The large variation in utilization rates across insurers suggests that not all insurers are interested in minimizing costs or able to do so. Given this scenario, limits on family benefit coverage alone are unlikely to contribute to cost containment as the schemes mature.

Three factors contribute to insurers' weak cost-containment incentives. First, while low package rates and limited benefit coverage may exert downward pressure on total cost for newer GSHISs, schemes will continue to face political demands to raise annual family caps and to increase the depth of benefits (e.g., to cover more and more expensive procedures).⁸² This is already happening in HP and Kerala with schemes in these states designing top-up coverage for RSBY. In AP, the expansion to newer geographic areas in July 2008 was accompanied by the incorporation of several hundred new procedures to the scheme. Yeshasvini and Kalaingar have recently added a number of commonly performed procedures to their benefits package. In short, the trend of expanding the scope of coverage is a question of "when" and "how much," rather than "whether" this will happen.

Second, with the exception of TN, most schemes do not have long-term pricing contracts with insurers. Most contracts are annual. As suggested above, insurance companies will anticipate their rising costs and, in due course, quote progressively higher premiums for successive annual policy cycles, which the public budget will have to cover. Even in the case of multi-year contracts for state-managed RSBY policies, contractual terms stipulate that government and insurer have to mutually agree to renew the insurance annually.⁸³ In effect, insurers can “re-price” their services for the next policy period whenever costs rise, which mitigates their incentive to make long-term investments in cost containment at the provider end. If they fail to break even at the quoted or prevalent premium, they may exit the contract and bid again at a higher price level for subsequent periods. Alternatively, they may decide to exit the GSHIS market altogether.⁸⁴ Given the limited number of insurers in the market,⁸⁵ the continued willingness of insurers to prefer growth in revenues at the cost of bearing some losses is uncertain in the long run.

Finally, most schemes are cashless to the beneficiary and thus do not use other direct forms of cost sharing such as copayments, deductibles, and coinsurance. Although such mechanisms can pose barriers to care, especially for the poor, not using them does eliminate an important form of utilization control.⁸⁶

To summarize, GSHISs face a number of challenges to control cost escalation. Insurers have weak incentives to control costs, in part because they can “reprice” or rebid a higher premium for each annual policy cycle and therefore shift the medium-term (and long-term) financial risk back to the public budget. Provider competition is constrained by the high concentration of utilization in a relatively limited number of providers. Other measures such as package rates, preauthorization processes, provider competition, and use of gatekeepers can contribute to cost containment but will have to be significantly strengthened or introduced as a design feature.

Institutional Arrangements and Managerial Capacity

Health insurance requires sound and reliable systems of governance and management to ensure the execution of key risk-management and administrative functions expected of the implementing agency. These include the enrolment of beneficiaries, collection of funds (where applicable), engaging intermediaries such as TPAs and service providers, rate setting, claims administration and analysis, selection and payment of

providers, utilization and cost control, quality monitoring, enforcement of rules and terms related to the delivery of the benefits package, and overall monitoring and analysis.

GSHIS governance and management arrangements are assessed in this section. It examines staffing issues and ways insurance and TPA intermediaries contribute (or not) to overall capacity. Purchasing of medical services, a key GSHIS function, is also reviewed. The remainder of the section deals with three emerging institutional issues: use of information technology (IT), control of fraud and corruption, and innovation, research, and learning. All three are key institutional responsibilities and are pertinent to scheme sustainability.

GSHIS Governance and Institutional Arrangements

Governance arrangements concern accountabilities and relationships (Savedoff 2008). Such arrangements establish the institutional architecture to enable coordinated relations between key actors (government, insurers, providers, regulators, and beneficiaries) while ensuring that the main agents, insurers, and providers are held accountable to the main stakeholders: government, beneficiaries, and regulators. An important aspect of management involves developing a purchasing capacity to buy health services for beneficiaries efficiently and effectively (Baeza and Packard 2006; Preker and Langenbrunner 2005). Sound purchasing involves selective identification of providers, specification of service and quality standards, linking of payments to performance, and robust contract monitoring and enforcement by the purchaser. Insurers' contracts with providers usually involve risk sharing: providers assuming some of the risk for variations in treatment costs. Insurers need to become active rather than passive purchasers of health care to ensure that the schemes achieve objectives related to access and financial protection.

Given that most of the GSHISs are in their early years, nearly all have yet to develop the institutional architecture to ensure robust governance and management. However, as will be shown below, exceptions to this statement are emerging. Nevertheless, mechanisms for representing stakeholders, government, beneficiaries, and providers in decision-making processes have yet to be developed. All the newer schemes use intermediary agents, such as commercial insurers and TPAs, to conduct many managerial functions on their behalf. With the exception of Rajiv Aarogyasri, no scheme has yet deployed technology solutions that enable informed decision making or developed reliable systems to facilitate the effective and efficient purchasing of services (which, for

the newer schemes, is a function of their recent origin). Without adequate institutional capacities to perform these functions, the performance and survival of any scheme is at risk.

With the exception of CGHS, all the studied GSHISs have established governing agencies that are legally autonomous from the government department that created the agency and oversees it (table 3.14). However, most agencies are not functionally autonomous and generally follow government rules and approval channels governing the use of public funds. Also, most senior positions in these agencies are occupied by government officials serving ex-officio. Some positions are filled by retired government officials, hired under contract. This group continues to act in the “mold” of the public servant and are as sensitive to bureaucratic and political pressures as their civil servant counterparts.

Managerial Arrangements, Staffing, and Managerial Capacity of Intermediaries

The next layer of institutional structures in the GSHIS system is that of the executing agencies, which consist mainly of commercial insurers and TPAs. The rapid strides in the commercial health insurance industry in recent years have made insurers' capacity (e.g., technological acumen, management experience, professional manpower) available to GSHISs for performing such functions as provider network management, administration of preauthorization processes, claim processing, and information management. These managerial contributions would not have been conceivable a decade earlier. The new generation of GSHISs has been able to leverage this capacity effectively over the last decade. Five schemes, Rajiv Aarogyasri, RSBY, Kalaingar, RSBY Plus, and the proposed ASBY use health insurance companies (and these insurers may also use TPA services to raise implementation performance). Two schemes, Yeshasvini and Vajpayee Arogyashri, directly contract TPAs to manage the schemes.⁸⁷ CGHS makes limited use of TPAs to augment its own claim-processing capabilities. ESIS is the only scheme that does not use commercial insurers or TPAs.

Most GSHISs work with severe human resource constraints (table 3.14).⁸⁸ They lack the institutional architecture to conduct major governance and managerial functions involved in oversight and administration of health insurance. Officials usually have many other responsibilities within the government system and cannot dedicate full time to scheme oversight and management. Nor do they have adequate staff in terms of volume or skill set. In fact, most schemes have fewer than five

Table 3.14 India: Features of GSHIS Governing and Executing Agencies, 2010

<i>Scheme</i>	<i>Governing agency and legal status</i>	<i>Parent department</i>	<i>External executing agency (if any)</i>	<i>Number of full-time staff in governing agency</i>
Rashtriya Swasthya Bima Yojna (RSBY)	Ministry of Labour and Employment (MOLE) + state nodal agency (autonomous society or trust)	State departments of labor, health, or rural development	Insurance companies	<10 at center + ~100 located in 25 state nodal agencies
Kalaigarnar's (TN)	TN Health Systems Society (autonomous society)	Department of Health, TN	Insurance companies	<10
Employees' State Insurance Scheme (ESIS)	ESIC (Employees' State Insurance Corporation)—(autonomous body under a Parliamentary Act)	Ministry of Labour, GOI	n.a.	13,585 (includes hospital and dispensary staff)
Yeshasvini (KA)	Yeshasvini Co-operative Farmers Trust (autonomous trust)	Department of Co-operatives, KA	TPA	<10
Vajpayee Arogyashri Scheme (KA)	Suvarna Arogya Suraksha Trust (autonomous trust)	Department of Health, KA	TPA	<10
Central Government Health Scheme (CGHS)	Department of Health and Family Welfare, GOI	MOHFW, GOI	TPAs (to some extent)	n.a.
Rajiv Aarogyasri (AP)	Aarogyasri Healthcare Trust (autonomous trust)	Department of Health and chief minister's office, Government of AP	Insurance company	117
RSBY Plus (HP)	State nodal agency (autonomous society)	Department of Health, HP	Insurance company	<10
Apka Swasthya Bima Yojna (Delhi) (Proposed)	Apka Swasthya Bima Trust (autonomous trust)	Department of Health, Delhi	Insurance company	n.a.

Source: Authors' elaboration based on site visits and schemes documents.

Note: n.a. = not applicable; scheme does not use an external agency.

full-time staff. Few GSHIS staff have the experience or training in the complex functions of overseeing or managing health insurance (including reviewing and understanding data generated by their information systems), scrutinizing insurers and TPAs, or supervising field staff.

Insurance intermediaries serving the GSHISs have picked up some of the slack, contributing to the government's ability to recruit, contract, and purchase services from private hospitals on a historically unprecedented scale. Yet, poor monitoring of insurers and TPAs by the schemes could reduce or nullify these advantages and introduce systemic distortions (such as leakages). Public objectives may not be congruent with those of the insurers intermediating in the transactions. Thus, sound internal control systems and effective supervision of the insurers by the governing agencies are required.

Most schemes are highly dependent on intermediaries to collect and analyze data, manage and control providers, ensure quality, and control costs. Experience elsewhere, however, suggests that insurance companies have done a poor job with some of these tasks unless forced to by payers (e.g., government and employers) (Davidson 2010). The same holds for India. Most of the private insurers currently contracted by GSHISs perform mainly administrative functions typical of a TPA, and the risk-management role expected of them is emerging only slowly. Monitoring of providers is sporadic and usually responds to a grievance or a claim-related issue, or is intensified only when the insurance company experiences a loss. This is an opportunity lost to drive improvements in service delivery—the function that has the most direct impact on beneficiaries. If beneficiaries receive poor quality care or inhumane treatment (or are illegitimately made to pay), the benefits of the proposed system will be compromised, and with it, sustainability.

One scheme, Rajiv Aarogyasri, has developed a sound institutional framework, and may represent a model for others. In the early years, only a handful of officials oversaw the scheme. Over time, the trust expanded in size and complexity to nearly 120 employees in 2010. The insurer employs about 4,000 functionaries exclusively for serving the scheme. Most of them are the field workers, known as aarogyamithras. The remainder man call center and claim adjudication teams and other administrative units. Specialized roles for staff and an elaborate IT system are critical characteristics of the scheme's monitoring system.

Weakness of Purchasing Functions

Although schemes have separated financing from provision, and money already follows patients, providers are not held responsible for productivity, efficiency, quality of care, or patient satisfaction. In effect, as practiced by nearly all schemes, purchasing is a passive, poorly managed activity. The commonly used Memorandum of Understanding (MOU)⁸⁹ is a loosely crafted instrument in which provider responsibilities and performance are ill-specified, if at all. In their current form the MOUs are not tools for modifying or even influencing provider behaviors, in part due to their poor enforcement and monitoring by GSHISs.

In GSHISs, insurers and TPAs do not appear to have taken up the slack at least in terms of service purchasing. They may have few incentives to do so. As mentioned, insurers may be oriented toward securing “top line” (revenues) or “bottom line” (profitability) rather than making major investments in controlling costs. This is especially true if they can easily pass on the increase in costs as higher premiums in the next policy cycle.

Similar to social insurance schemes in Latin America, ESIS and CGHS have built their institutional structure as providers of integrated care services to their beneficiaries. While they have large numbers of full-time staff, a good proportion of them are directly involved in service delivery at the schemes’ health facilities.⁹⁰ In general, both schemes appear under-resourced for effective purchasing⁹¹ and other important governance functions such as monitoring and information management for better decision making. The absence of robust management information systems (MISs) further compromises the ability of these schemes to purchase effectively, control costs, and measure performance.

In sum, GSHISs require stronger purchasing capacity to improve the drafting and enforcement of contractual terms with insurers, TPAs, and providers; pay providers on time; represent the interests of the insured population and government; and collect, analyze, and take action based on operational data. A shift from passive purchasing to active purchasing is warranted to ensure that the health services financed through the schemes are efficient and of high quality.

Use of “Right-Level” Information Technology

Increasing use of information and communication technology (ICT) tools is another encouraging trend across all schemes. Even the traditional schemes, ESIS and CGHS, have embarked on widespread automation of their processes and to develop MISs commensurate with the needs of the

schemes. The application of biometric smart cards for enrolment and identification in RSBY and Kalaingar, an integrated web-enabled platform for a paperless work environment in Rajiv Aarogyasri, and electronic pre-authorization and claim submission platforms in Kalaingar and Yeshaswini schemes are successful examples of the central role played by ICT in these schemes. ICT has the potential to play an increasingly important role in reducing fraud, containing administrative costs, and generating data for monitoring and analysis.

Most schemes already deploy, or are planning, IT applications extensively. A common theme across all of them is the desire to apply IT solutions at the “right” or appropriate level. Some schemes have invested considerable sums and effort in developing customized and very detailed IT systems. However, such systems may demand a level of effort that may not be practical to ensure full compliance from the provider network, or similarly, achieve only the mandatory level of compliance required for payment. For example, Rajiv Aarogyasri has a relatively advanced IT system for admission, preauthorization, and discharge modules. All are well populated with the required information. However, the opposite is the case for the module on inpatient notes.⁹² Schemes have not yet mandated hospitals to provide information such as international classification of disease (ICD-10) codes for diagnosis, which would require significantly less effort but would be highly valuable for data analysis.

Some schemes rely entirely on the IT systems and proprietary applications deployed by the insurer or the TPA (e.g., Yeshaswini and TN). These may be good quality systems or applications, but they were created with different objectives in mind and may not be appropriate for the scheme’s requirements. Other schemes such as CGHS and ESIS have operated with manual systems for decades and are only now gearing up to deploy IT systems. It is vital that all schemes introduce IT tools. Manual systems will not be able to handle the volume and data requirements of mass health insurance schemes. However, they also have to be pitched at a level appropriate to the user environment and should not impose an impractical submission requirement for which the provider has no incentive for compliance or which raises administrative costs in the system without a corresponding gain in terms of generating useful information.

Preventing Fraud and Misutilization

Institutional strengthening to prevent fraud and misutilization in the scheme is an important focus area for GSHISs. At the claims stage,

misutilization or fraud can take multiple forms, including misrepresentation (ineligible members and/or dependents), claims submitted by non-existent hospitals or for services not rendered, providing (or billing) higher-level services than required, or balance billing of patients. Insurers report other types of fraud such as outpatient to inpatient conversion and the inclusion of false names in smart cards (ICICI Lombard 2010). In some cases, however, hospitals may select the incorrect package due to lack of familiarity with or capacity to navigate the claims process.

In general, schemes require control systems along three domains: constant vigil on claims data, reviews of preauthorization requests, and physical verification of beneficiaries undergoing treatment. They also need to make use of grievance and feedback systems for patients and providers. Some schemes have implemented sound vigilance measures along these lines with varying degrees of sophistication. Others appear to be in reaction mode, responding to press reports or random beneficiary complaints. Few schemes systematically or proactively implement fraud-detection measures.

A somewhat extreme example of fraudulent practices was detected by RSBY in Dangs (Gujarat) where hospitals logged fraudulent claims for several months before being detected and disempowered by the contracted insurers (Palacios 2011). This is not a recent phenomenon and has happened in other schemes without an insurer as an intermediary. For example, in 2003, CGHS found irregularities in the bills submitted by hospitals and chemists in a few cities. In both cases, disciplinary action was taken against these providers including recovery and suspension. This experience demonstrates the importance of good oversight by the governing agency, which can be supported through systems developed by intermediaries such as insurers. Nevertheless, the governing agency is ultimately accountable for detecting fraud as well as taking prompt disciplinary action against fraudulent practices. Prompt disciplinary action is important as a deterrent to future fraudulent behaviors.

Some public authorities and academics have called for replacing insurers with government agencies to handle enrolment, claims settlement, and underwriting functions. Such calls raise questions about government agencies' and insurers' incentives to control fraud. In theory, insurers have a strong incentive to minimize fraud because such measures, if successful, would reduce the quantum of claim payments. However, as mentioned earlier, the short-term nature of their contract may reduce their incentive to invest in fraud control. Nevertheless, it is uncertain

whether a government agency that directly pays providers would be able to make objective decisions to contain costs and eliminate fraud or possess the technical and administrative efficiency and wherewithal to ensure effective empanelment of hospitals, eliminate leakages, and ensure timely claim payments.⁹³ Recent experience with CGHS and state employee schemes that purchase services directly from private hospitals suggests that, despite several efforts and ongoing reforms, much remains to be done to improve purchasing effectiveness and efficiency. A case can be made that using insurers as intermediaries may be useful in the short to medium term because they have the incentives to check provider and beneficiary behaviors that negatively impact their bottom line.

Under RSBY, at least one insurer is implementing an audit system to improve fraud detection. This system involves two features. The first consists of culling claims data to uncover potential cases known as “triggers.” These can include a sudden increase in the volume of claims or high-value claims, multiple admissions for the same patient or procedure, high repetition of certain diagnostic tests, unreasonable lengths of stay, and lopsided gender-based treatment (e.g., large number of hysterectomies). Once a trigger is detected, the second feature entails follow-up hospital visits conducted by surveillance teams staffed by medical personnel to verify records and claims. In some cases, the audit may require home visits to authenticate patient residence and ascertain the services used. RSBY reported that doing audits in 219 hospitals in 2009 resulted in disempanelment of 68 of these facilities (ICICI Lombard 2010). It is unknown to what extent audits have been incorporated by other insurers under contract with RSBY (or other GSHISs) or rolled out to the majority of RSBY empaneled hospitals.

Innovation, Research, and Learning

With the possible exception of AP and RSBY, there appears to be a lack of innovation in the schemes examined for this study. Some of the original schemes, such as ESIS and Yeshasvini, have reached a low level of equilibrium and appear to have little interest in or capacity to systematically address faults in the design or implementation or innovate in terms of managerial processes. Some recent state schemes are close carbon copies of early innovators such as Aarogyasri in AP. Scheme planners have rarely examined the contextual conditions in which the earlier schemes were planned and launched, or their potential weaknesses that could be improved with home-grown innovation. Most managers are too involved in day-to-day operations of rollout and their myriad additional assignments. They also do not have adequate technical support. Consequently,

senior officials are rarely able to revisit the big picture design issues raised in the previous sections, including provider market, access, rate setting, financial burden, fiscal space, and relation to primary care.

Part of the problem lies in the limited orientation toward research and analysis. Together, the nine schemes studied spent more than Rs. 5,600 crores (\$1.25 billion) in 2009–10. Despite this large sum of money, only very limited systematic research is being done (except by RSBY) to measure financial performance or impact on financial burden, quality, provider market, outcomes, and so forth. A donor-driven impact evaluation with rigorous methods is planned for three schemes (RSBY, AP, and Yeshasvini, KA). Most schemes appear to be in reactive mode, addressing problems only as they appear. They seem fairly certain that government will continue to fund them. Most lack the information or analytical base to make evidence-based decisions. Such information provides important inputs into inevitable in-flight structural and process corrections, which are necessary for all insurance schemes to thrive (or survive).

The Political Economy of Demand- and Supply-Side Financing

This final section focuses on issues of political economy facing the GSHISs as well as the broader system of health financing in India. The extent of political support for the schemes is appraised as well as the challenges of uneasy relations between GSHISs and the public delivery system and the tenuous linkages between federal- and state-sponsored schemes.

Political Support

Political interest in health insurance is strong, especially at the state level, and is a driver of expansion of population coverage, deepening of benefits, and increasing public expenditures for health. This is evident in KA, TN, and AP where political leaders have extended coverage to non-BPL populations, reaching more than 80 percent of the population in the latter two states. Other states such as HP, Kerala, and Delhi are seeking to top-up the RSBY benefits package for the already enrolled BPL population. This dual trend of extension to new states and population and benefits expansion in ongoing schemes will likely continue at least over the medium-term. Political ownership at the state level is an important lever for sustainability, and to date there is no evidence of this support ebbing. Although political leadership may change, these schemes have substantial popular support and eliminating or reducing benefits and population coverage of ongoing schemes appears unlikely.

Political support from GOI as well as from participating states for RSBY coverage and its expansion is also strong. This is evidenced by the inclusion of new groups of beneficiaries at the central level (such as beneficiaries under the National Rural Employment Guarantee Act, construction workers, railway baggage handlers, and vendors working in railway stations), and the non-BPL population at the state level (such as in Kerala), and sustained commitment to financing the scheme.

Significantly, GSHISs have been a driver for increasing public financing for health from state governments. For example, some state governments appear more likely to increase health financing if funds are directed to the demand side. Given the low level of total government funding for health (about 1 percent of GDP) and within that, the state-level contribution (about 0.7 percent of GDP), additional resources for health from state coffers will help address the overall public financing gap.⁹⁴ This is particularly relevant inasmuch as states are constitutionally responsible for implementing health services and programs in India.

GSHISs have the potential to help raise public spending on health, given the high political commitment. In the past, this has been difficult to achieve in practice due to supply-side constraints (NCMH 2005). Interviews with political leaders suggest frustration in improving the performance of the public delivery system in their own states. Whether demand-side financing can be a catalyst for significant and sustained increases in public spending remains to be seen, but the experience so far with state-sponsored GSHISs suggests it has strong potential.

GSHIS Relations with the Public Delivery System

Related to the debate over demand and supply financing, an emerging issue involves linkages between these schemes and the public delivery system. The expansion of GSHISs has resulted in some friction within state governments regarding the expansion of the schemes vis-à-vis investing in the public delivery system. Most GSHISs are only marginally linked to the public delivery system, which accentuates the dichotomy. Empaneled private facilities outnumber public facilities in nearly all scheme networks, and most beneficiaries choose private facilities when seeking care. In short, public hospitals are competing with private hospitals for clients but are losing due to real or perceived differences in service quality.⁹⁵

Health department officials openly worry that their budgets may be negatively affected by the expansion of government-sponsored insurance. The argument was voiced by a public hospital representative in one state:

“There is no need for cashless GSHISs because care is already free in public facilities, and funds would be better spent upgrading public delivery rather than making private hospitals richer.” Conversely, scheme officials often question the benefits of public delivery, particularly at the hospital level, pointing to the problems of availability of specialized human resources, maintenance of medical equipment, perceived issues with quality of care, low patient satisfaction, and need for out-of-pocket spending to cover irregularly supplied consumables and medicines. Some scheme officials also believe that the future expansion of GSHISs rests in converting supply-side subsidies to demand-side subsidies, while the mere idea of conversion is anathema to state health departments. The political economy of supply- and demand-side financing is thus not an easy path to tread. However, as discussed in chapter 5, perhaps the solution lies in a pragmatic and balanced approach, building on the strengths of the current health system.

Interface between Federal and State Schemes

How the federally sponsored schemes will interact with state-sponsored schemes is another key policy issue. Although health is constitutionally a state subject, how this mandate should be applied to health insurance is unclear. Should GSHISs be the responsibility of states? If not, what is the role of the central government and how can it support funding and operations of these schemes? Although the GOI flagship RSBY scheme has successfully rolled out in a large number of states, it has not been able to progress on the issue of integration with state government-sponsored schemes except, to some extent, in Kerala and HP, leading to fragmentation and possible distortions. In at least one state, RSBY is implemented in one set of districts while a state-sponsored scheme is implemented in another set. The schemes are already beginning to overlap in some districts. In other states, RSBY has yet to commence operations due to the inability of central and state authorities to arrive at a common ground for integration with state-sponsored health insurance schemes. Different criteria for ascertaining BPL status, benefits packages, price structures, coverage caps, empanelment criteria, and lack of portability across states (state schemes) have hampered merging schemes into an integrated state-based insurance system. Nevertheless, some states (such as HP and Kerala) have elected to try a “top-off” model that uses RSBY as the base coverage while the state finances a deeper tertiary coverage beyond RSBY-covered services. These schemes are still evolving and lack of information prevents

making any definitive statement on the top-off model and overcoming the aforementioned constraints.

In the context of multiple federal schemes (e.g., ESIS, CGHS, RSBY, and other smaller federal schemes), the system is already fragmented. This can lead to inefficiencies and inequities such as overlapping administrative arrangements and provider empanelment/certification. Varying package rates (or provider payment mechanisms) would send mixed signals to providers, leading them to gravitate toward higher-paying schemes and resulting in insufficient leverage to control costs. Lack of portability is another issue (Baeza and Packard 2006). Although CGHS and ESIS are mandated for specific groups, they have several common features. However, these functions are performed in parallel and with separate management structures, resulting in duplication of effort and costs. The federal government is losing an opportunity to aggregate purchasing systems for achieving economies of scale. Similarly, the GOI Ministry of Labor runs two separate schemes for formal and informal sector workers, ESIS and RSBY, with few lines of communication between the schemes. At the very least, shared use of the ESIS facilities by RSBY could be a way of improving utilization of several underutilized ESIS facilities, and ESIS facilities could be a mechanism for RSBY to foray into ambulatory care, where they exist.

Conclusion: Successes and Challenges

The major operational and design features of the GSHISs and their implications for future and sustained performance were analyzed in this chapter. The focus was on the new wave of schemes launched in the late 2000s. These schemes introduced a demand-side purchasing approach to public financing while embracing several innovative features—in the Indian context. GSHISs are well-positioned to become key stakeholders in policy decisions regarding health financing and delivery arrangements. This final section summarizes major operational successes and challenges emerging from GSHIS implementation.

Successes

Building upon the lessons learned from earlier rounds of SHI and government-subsidized health insurance as well as managerial know-how of private insurers, a new genre of schemes emerged after 2007 with a “bottom-up” focus on covering the poor. Together, these schemes represented a new way of doing business for government in terms of

financing and delivery of health services in which money follows the patient. The following are major achievements of these schemes.

Coverage extension and focus on the poor. As newcomers to India's health insurance landscape, these schemes have placed significant emphasis on achieving stated population-coverage goals. For the most part, GSHISs have rapidly achieved these coverage targets and have multiplied membership manifold, while providing financial protection for covered conditions.⁹⁶ The distribution of population coverage has also shifted, suggesting important equity enhancements. In contrast to PHI, ESIS, and CGHS, which constituted almost the entire member base in 2003–04, most of the beneficiaries of the newer government (central and state) schemes are BPL populations or lower-income groups. This trend of covering lower socioeconomic groups will continue in the future.

Political and financial support. Another important measure of success is the willingness of GOI and state political leaders to increase outlays to GSHISs. Spending on the recently launched GSHISs will increase by nearly threefold in nominal terms between 2009–10 and 2015 (table 3.6 and annex figure 3A.2).⁹⁷ It is unlikely that government, particularly state governments, can continue to significantly expand health financing on both the demand-side (through GSHISs) and supply-side (through NRHM) for the indefinite future. In short, the schemes have helped raise the political profile of health, which has led to additional financing for insurance coverage for the poor.

Access and financial protection. The absence of point-of-service charges and other forms of copayments has increased access to care for the poor for the covered benefits. The consequences of a poor person's not having insurance through a GSHIS will leave him or her facing the grim prospect of foregoing treatment, treating himself (usually self-medication), or incurring catastrophic expenses for an inpatient stay. There is some evidence that borrowings to pay for hospitalizations have been reduced for beneficiaries.

An emerging social compact. In principle, a comprehensive package is available to the entire population through the public delivery system, but in reality the government is far from delivering on this promise, especially for the poor. The explicit entitlement evident in insurance schemes has established a new and more binding compact between

government and citizens. Though limited in scope, benefits and the service delivery system to which they have access are clearly defined. In addition, the purchaser-provider split shifts provider payments from inputs to outputs and creates an enabling environment for increased accountability for results. Providers are held accountable for service provision (or they do not get paid). In theory, patient choice of providers further contributes to accountability.

Managerial innovations. GSHISs have become industry pioneers on a least three fronts. The first is the use of package rates to contain costs. In contrast, private health insurers continue to apply itemized fee-for-service payments, which tend to induce cost escalation. Second, GSHISs have introduced a number of IT solutions on a mass scale including the biometric enrolment, electronic preauthorization, on-line claims and payment processes, and monitoring field functionaries through video surveillance. Finally, the standard packages combined with IT innovations have resulted in timelier provider payment than their private insurance counterparts.

Engagement with the private sector. The insurance intermediaries used by the newer GSHISs have provided an effective and transparent mechanism for these publicly funded schemes to buy services for their low-income beneficiaries from private providers. In the absence of this arrangement, purchasing of services could have been fraught with numerous hurdles, including the leakages, delayed payments, and misaligned incentives. The GSHISs are also deeply engaged with private providers, allowing beneficiaries a broader choice of hospitals. Prior to the emergence of GSHISs, public financing was directed almost exclusively to public providers.

Challenges

Despite these advances, all schemes are at the beginning of a long and steep learning curve. International experience suggests that reaching effective and efficient implementation of government-sponsored health insurance requires many years and involves overcoming many technical and political obstacles while experiencing numerous in-flight adjustments (Hsiao et al. 2007). As the recent generation of GSHISs enters a new phase that aims to consolidate gains and build upon lessons learned, they will need to tackle a number of design and operational challenges that have emerged during implementation, and highlighted in this chapter. If not addressed, the following shortcomings could compromise the long term sustainability of the schemes.

Institutional arrangements and managerial systems. Governance and managerial capacity are two glaring gaps in the institutional architecture for most schemes. Arrangements to consult and coordinate with key stakeholders are generally absent. There is a heavy reliance on insurers and TPAs for most managerial functions, but with insufficient monitoring of the same by the schemes themselves. Most GSHISs do not have sufficient staff and management tools to act as effective agents for their beneficiaries.

Purchasing and contracting. At their current state of development, schemes tend to focus on simple reimbursement of claims. Scant attention has been given to purchasing and contracting functions to maximize the performance of insurers and network providers. Invariably a single insurer is contracted for a demarcated geographical area (state or district), and, in the absence of performance-based contracting instruments, insurers face few incentives for improving performance. Similarly, schemes have yet to take advantage of their financial leverage to affect provider behaviors in terms of driving improvements in patient safety, satisfaction, quality, and efficiency.

Monitoring and evaluation. The general weakness of monitoring systems and dearth of data and analysis underlie all issues. Most schemes have yet to develop robust systems to monitor insurer, TPA, and provider performance regularly. This situation impedes schemes' capacity to purchase services, contract providers selectively, supervise and assess performance (e.g., insurers, TPAs, and providers), gauge beneficiary trust and satisfaction, and systematically make corrections as problems emerge. Impact evaluations have only recently come under consideration of a couple of schemes.

Cost containment. Insurers and TPAs under contract with the schemes face weak incentives to reduce costs. Although an advance over itemized fee-for-service payments, package rates are set by the schemes and are generally applied to all providers with little relation to underlying costs or market prices. Scheme contracts with insurers are short term which allows insurers to re-price the premium or exit the market when costs rise rather than invest in long-term cost-containment measures. There are also no incentives to identify, empanel, or direct beneficiaries to lower-cost providers. Managerial measures to contain costs such as preauthorization, provider profiling, utilization review, promotion of generic drugs, and claims analysis require implementation or significant strengthening.

Targeting. Though not under the purview of the GSHISs, the BPL lists are fraught with problems. These lists are notorious for an unacceptably high incidence of false positives and negatives. This situation severely undermines the pro-poor orientation of the schemes and may lead to diversion of resources to the non-poor combined with undercoverage of the deserving poor. This situation could result in political challenges to the schemes' legitimacy.

Provider behaviors and markets. Providers have an incentive to induce demand, provide unnecessary care, and substitute inpatient for outpatient care. Much more needs to be done to detect, control, and penalize such behaviors. Further, a case can be made that the schemes are stimulating a hospital-centric delivery system—already obsolete in most OECD countries. In the long term, such a system would become unaffordable as well as ineffective in dealing with the emerging large burden of chronic diseases in India. Given the low minimum number of beds required for empanelment, schemes may be promoting the expansion of small hospitals where clinical management may be too meager and volume too small to meet minimal quality standards.

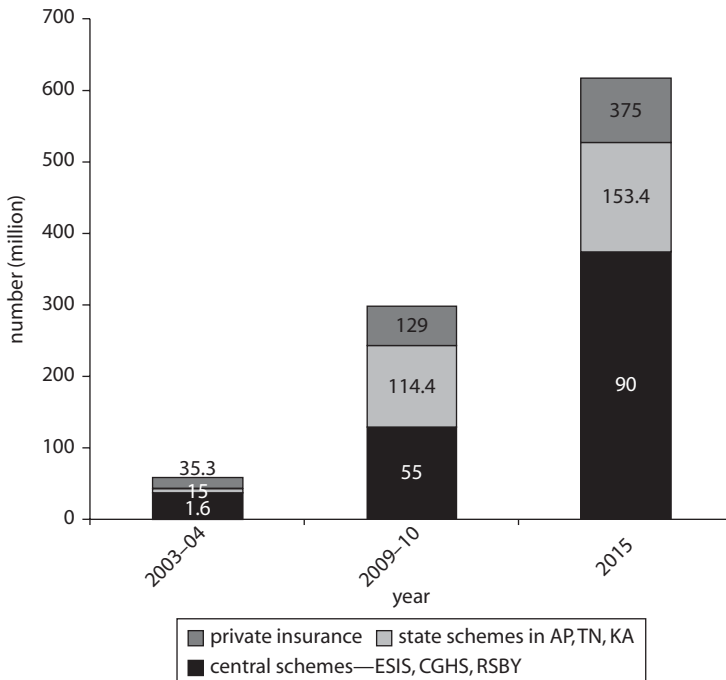
Provider competition. In theory, providers compete for beneficiaries. However, evidence is sketchy that this happens in practice. Utilization is concentrated in a limited number of “prestigious” facilities in nearly all schemes. Beneficiaries residing in distant areas may be unable to access providers located in urban areas. The schemes limit the ability of insurers to selectively contract higher quality or more efficient providers due to lax empanelment criteria and one-size-fits all package rates. As discussed above, schemes also don't have sufficient information (e.g. on costs and quality) to selectively contract providers and foster competition. Finally, under current organizational arrangements, few public facilities can compete with their private peers.

Quality of care. The schemes are not using their financial leverage to improve the quality of network providers. The schemes do not demand or collect quality information from providers. Postempanelment inspections to verify compliance with minimal empanelment criteria are rare. Providers have no incentives to improve standards of care or put in place quality-improvement measures.

Consumer information. Beneficiaries appear to have insufficient information on enrolment, benefits, and providers. When automatically enrolled under the schemes, awareness of beneficiaries takes time to build up. Insurers have an incentive to avoid enrolment in distant and low-BPL density areas as well as to select lower-risk individuals (as in RSBY). They also have an incentive to not enroll all family members. Beneficiaries are not sufficiently informed of covered vs. uncovered procedures, which can result in preauthorization denials and potentially unscrupulous behaviors by providers. In general, consumers also do not have sufficient information on provider performance (e.g., quality, patient satisfaction, volume, and so on) to make well-informed choices of providers.

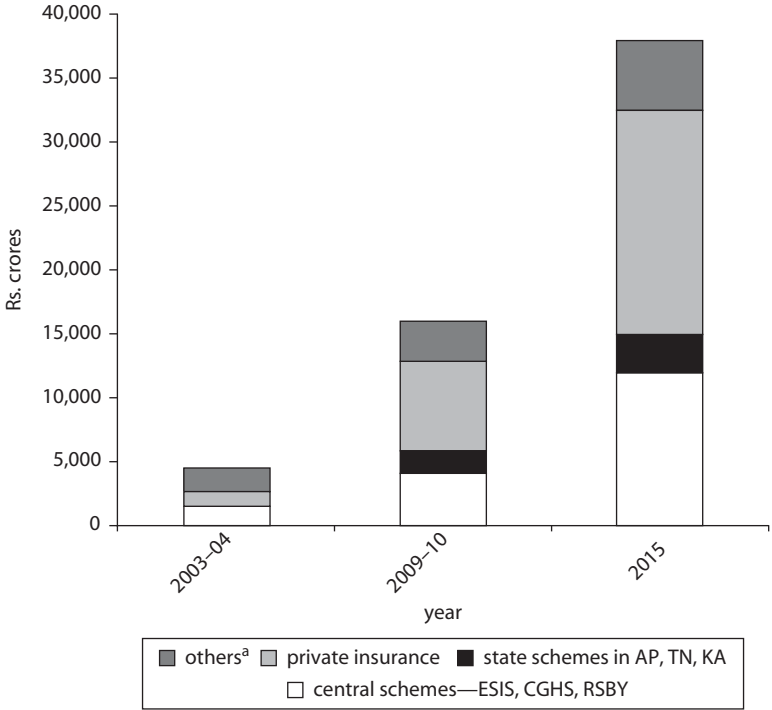
Annex 3A Statistical Annex

Figure 3A.1 India: Estimated Health Insurance Coverage, 2003–04, 2009–10, and 2015 (million people)



Sources: Table 3.1.

Figure 3A.2 India: Estimated Health Insurance Expenditures



Source: Authors’ calculations based on scheme data, IRDA reports, and Jaswal, 2011.
 a. Includes other health protection and health insurance schemes, including community health insurance schemes, publicly subsidized schemes for handloom workers and artisans, noncontributory coverage by employers of government (defense, railways, state government staff) and nongovernment employees (where employers run their own facilities or provide reimbursements without using insurance mechanisms) as an employment benefit.

Annex 3B Methods Used for Population-Coverage Projections

The member base for 2015 was compiled with professional actuarial support. Assumptions include: (1) for schemes in which the member base has stabilized, for example, Andhra Pradesh, Tamil Nadu (TN), Yeshasvini, and the Employees’ State Insurance Scheme, the growth rate is based on projected population growth; (2) for rapidly growing schemes such as Rashtriya Swasthya Bima Yojana (RSBY), the scheme’s stated 2015 target was taken as the expected member base. Inclusion of new population groups, changes in benefits package, and other characteristics may alter these numbers significantly; (3) for the Central Government Health Scheme, the number of retiring employees was assumed to be the same

as the number of new pensioners joining the scheme. New recruitments are about 2 percent of the existing base. The number of new recruits is exactly offset by the number of members exiting the scheme due to death; (4) for Vajpayee Arogyashri, it is assumed that the entire state will be covered in 2015.

A 10 percent annual accretion of new members is assumed for private health insurance (PHI) companies. There may be some overlap in these numbers since some beneficiaries of government-sponsored health insurance schemes may also hold PHI policies. Also, RSBY beneficiaries may be beneficiaries of state schemes (such as in a few districts in Karnataka and TN).

Annex 3C Methods Used for Expenditure Projections

Expenditure projections for government-sponsored health insurance schemes for 2015 were compiled with the help of professional actuarial support. Key assumptions are that the schemes will continue to use package rates and that the package rates will be revised upward by 20 percent in 2012–13. In the case of the Central Government Health Scheme, the number of retiring employees is the same as the number of new pensioners joining the scheme. These new recruitments will be approximately 2 percent of the existing base and will be offset by members exiting the scheme due to death. This will keep the member base more or less constant. For Vajpayee Arogyashri (Karnataka), the assumption is that the entire state will be covered by 2015. Finally, a 20 percent annual growth rate is predicted for private health insurance: 10 percent annual increase in enrolment and a 10 percent annual increase in average premium.

Notes

1. For a graphic depiction of the data, see annex figure 3A.1.
2. In 2011–12, the scheme was modified to include additional procedures and relaunched as the Chief Minister's Comprehensive Health Insurance Scheme, and the executing agency serving the scheme also changed. The maximum coverage was also changed from Rs 100,000 floating over four years to Rs 100,000 per year. Hereafter, this write-up reflects the scheme details that existed when this study was undertaken, in 2010–11.
3. As of November 2010.
4. While references have been drawn to the private voluntary health insurance schemes (PVHI) and the community-based self-managed schemes

throughout this book, a systematic examination of these schemes was beyond the scope of this work.

5. As discussed in the next section, precisely estimating coverage for these state schemes is difficult because all holders of state below-poverty-line (BPL) cards were automatically enrolled. Initially, many were unaware of their newly-acquired enrolment status.
6. Since at least two states are already planning their own schemes, the estimates presented in table 3.1 should be considered conservative.
7. The employer-based group insurance market remains static, and much of the recent growth in private health insurance originates from the retail clientele of individuals and families.
8. Employees earning up to Rs 15,000 per month are now included under the ambit of ESIS. Previous to the May 2010 revision, the ceiling was Rs 10,000 per month.
9. Retiring civil employees can opt for life-time coverage under CGHS by making a one-time contribution equal to 10 years (120 months) of the applicable monthly contribution. This one-time amount can range from Rs. 1,800 (roughly equivalent to US\$40) to Rs. 60,000 (US\$1,300) at current rates, but requires no future contributions. The contribution is inflation-proof, and provides unlimited coverage for life to the retiring employees and their dependents.
10. For most schemes, insurers usually outsource enrolment to third-party administrators (TPAs) and other agencies.
11. For distributing ID cards, TN used the BPL biometric data that the state had already collected and compiled for the BPL cards. Thus, while TN also issued smart (storage-enabled) ID cards, they did not specifically enroll beneficiaries in the field as in the case of RSBY. Instead, TN undertook an effort to distribute the cards to beneficiaries through state officials and local political leaders.
12. Of these households, 100 were enrolled.
13. This is understandable given that the scheme is heavily subsidized and provides beneficiaries cashless access to private providers for which there is considerable demand.
14. Sun reports that although the average village in his sample had 145 BPL families, the range spanned from 1 to over 10,000.
15. Contrarily, insurers have an incentive to enroll villagers in remote areas because experience shows that they tend to have lower levels of utilization (due to distance to empaneled hospitals), which could justify higher enrolment costs. However, it is unlikely that the enrolment agencies face this incentive in a flat-fee environment.
16. Since insurers are paid a flat-rate premium per card—irrespective of the number of family members enrolled—they have no incentive to ensure that the

entire family (up to the maximum of five members) is enrolled. Similarly, they have perverse incentive to minimize their risk by enrolling a lesser number of family members as the card issuance requirements are met. As insurers usually outsource the enrolment function for RSBY—and that, too, at a fixed cost per family—incentives to reduce enrolment costs emerge strongly. In contrast, villages with a higher likelihood of claim costs are not a disincentive for the enrolment agencies, and so “cream skimming” in those terms was not observed.

17. This is also the case for TN.
18. BPL status is not an eligibility criterion for this scheme.
19. Measured as regularity of reading newspapers.
20. Not covered are nonsurgical treatment, diagnostics, follow-up care, and surgical consumables (e.g., valves, mesh grafts, stents, nails, and screws) which can result in significant out-of-pocket costs even for covered treatment.
21. As discussed in chapter 2, early GSHISs such as Yeshasvini and CGHS pioneered package rates that were fixed, single-fee schedules for defined procedures, for several years. Adopting or modifying the packages could be done with relative ease. Package rates have become increasingly acceptable among providers due to the volumes these large payers bring them. Package rates are discussed in detail in a later section.
22. Sufficient primary care was considered available from the public sector, but that is not necessarily so. Supply varies widely among and within states.
23. The system of discretionary grants involves partial cash subsidies for patients approaching the chief minister’s office and suffering from illnesses requiring expensive treatment that they cannot afford. The system suffers from concerns on equity, transparency, and access, as the poorest groups in the population are less likely to know or make use of these channels nor can they raise the remaining cost for the treatment themselves. The origin of the focus of the state HI schemes on expensive, tertiary care can be at least partly attributed to this system, which drew the attention of political leadership to this need.
24. As will be discussed later in this chapter, package rates are relatively easy to specify, verify, and to achieve agreement on price, especially for surgery.
25. State schemes are selective even within these disease groups. In other words, they don’t cover all conditions under any disease group.
26. As of this writing, August 2011, RSBY is piloting an outpatient benefit in one district (Puri district in the state of Orissa). The pilot pays for up to 10 outpatient visits per family per year in empaneled clinics and hospitals, and covers the cost of consultation and essential drugs on the World Health Organization (WHO) list. The clinic is reimbursed Rs. 50 (about \$1.10) per visit.

27. The utilization rates for the two lowest quintiles—the target group for some of the schemes—are in fact significantly lower than depicted in table 3.5.
28. This suggests that moral hazard may not be an issue, at least for these two schemes. However, the reasons for apparently low moral hazard are different. Yeshasvini beneficiaries face hefty copayments while RSBY is still a young scheme in an early phase of implementation. Moral hazard may still exist, but the apparent conformity with national rates occurs due to lower than expected initial utilization rates.
29. Institutional arrangements are discussed later in this chapter.
30. As explained in greater detail in a subsequent section, although contracted insurers cannot change their premium price mid-way through a contract, they can do so at renewal. Given that the typical group health insurance policy is for one year, rising claim costs pose only a short-term risk to insurers until policy renewal.
31. Radermacher et al. (2005) reported that in the early days of Yeshasvini (KA) many beneficiaries were unfamiliar with benefits, exclusions, and their responsibility for paying for uncovered services.
32. Doug Johnson and Sushil Kumar (2011) estimate that average patient attendance in the states of Jharkhand and Uttar Pradesh ranged from 1,884 to 2,760 villagers per camp. The average number of RSBY enrollees therein ranged from 126 to 313 per camp.
33. Interviews with chief executive officers (CEOs) of GSHISs.
34. Notes from meeting of High Level Expert Group on Universal Coverage, Public Health Foundation of India, New Delhi, January 19, 2011.
35. Estimated from National Health Accounts (2004–05), 2009, which contain projections for total health expenditure to 2008–09, assuming a continuation of the same rate of expenditure growth in 2009–10 as in the previous two years.
36. Previous extrapolations involving older data as published in 2009 in the National Health Accounts have estimated insurance mechanisms contributing about 4.6 percent (MOHFW 2009).
37. Using the trends from National Health Accounts (NHA) 2009 which reported that total health expenditure grew at a nominal rate of about 13 percent annually between 2005–06 and 2008–09, total health spending in 2014–15 is estimated to reach Rs. 450,000 crores at current prices.
38. Public spending on health is estimated to be Rs. 175,000 crores in 2015. Public spending on health has grown at about 20 percent annually in nominal terms over the last five years (MOHFW 2009; WHO 2010). Continued growth is estimated at this rate.

39. Several states are exploring the launching of GSHISs.
40. To date there is no evidence of such conversion.
41. The latest year for which final state expenditure numbers were available.
42. The creation of special and usually wide-ranging schemes for influential groups of the labor force is typical of early social insurance schemes in Latin America (Mesa-Lago 1978).
43. Many cardiac procedures have low incremental costs and relatively higher package rates. However, there is probably latent demand in the community. For this reason, during the early period of the GSHISs, providers appear to focus on cardiac procedures, which have accounted for about 70 percent of the claim costs in early months of the VA scheme.
44. Data are based on available claim data from about 150 districts that have experienced at least one year of implementation as of December 2010.
45. Since state contributions above the cap are not registered in ESIS ledgers, total scheme spending is underestimated to that extent. As mentioned, significant additional spending occurs in only two states, AP and WB.
46. As mentioned in chapter 2, package rates were pioneered by CGHS in 2001 and later adopted by Yeshasvini in 2003. This experience was subsequently embraced and customized by RSBY, Rajiv Aarogyasri, Kalaigarnar, and other schemes. Private insurers have not adopted package rate-based payment methods and predominantly reimburse itemized hospital bills on a fee-for-service basis.
47. Research comparing package rates with costs is required to determine if the rates serve as cost-containment mechanism.
48. Categorization of cities is based on population and infrastructure. Tier 1 cities are metropolitan cities with more than 5 million people. Generally, Tier 2 cities have populations between 1 million and 5 million while Tier 3 cities have fewer than 1 million residents.
49. Currently, the GSHISs set package rates based on previously established rates (e.g., CGHS and Yeshasvini), rapid (and often incomplete) market assessments, and informal panels with private and/or public providers. There has been no systematic attempt to secure information on market prices or to cost out packages based on standardized protocols. This may, in part, also be due to the limited technical expertise that is available to the GSHISs. Rates are rarely adjusted systematically or even periodically to account for inflation.
50. ESIS uses the CGHS rates.
51. For Yeshasvini, the difference can be explained in part because its package rates do not include surgical implants or posthospitalization drugs.

52. RSBY does not include a package rate for this procedure due to the annual family cap of Rs. 30,000. RSBY covers treatment until the cap is reached.
53. Aarogyasri covers only laparoscopic appendectomy. Table 3.9, however, refers to any form of appendectomy.
54. Few hospitals in India measure their costs or possess cost-accounting systems.
55. One possible exception is CGHS in which National Board of Accreditation for Hospitals and Healthcare Providers (NABH/NABL) accreditation has been made a criterion for empanelment. NABH-accredited hospitals already receive higher payouts for the same procedures.
56. The cashless arrangement means that the hospital has agreed to extend credit to the insurance scheme so that the patient can be discharged without paying (or after paying only his share of non-admissible expenses) and that the hospital will subsequently seek reimbursement directly from the insurance scheme. It also implies mutually agreeing to the scheme's tariff structure, preauthorization requirements, claim submission requirements and so on.
57. See box 3.1 for a description of autonomous public hospitals in India.
58. A handful of states have facility-licensing requirements, but enforcement is irregular.
59. Rajiv Aarogyasri was the first scheme to incorporate after-care packages, and the model has been replicated by Vajpayee Arogyashri (KA). In Rajiv Aarogyasri, follow-up treatment is periodically monitored by field staff. Some schemes also demand and review mortality data from providers.
60. In 2008 and according to available information, India possessed more than 52,000 hospitals (see Indiastats.com) containing approximately 1.4 million beds, with a bed-to-population ratio of 0.7/1,000 (WHO 2010). Approximately 41 percent of hospitals and 61 percent of beds are private (MSPI 2004).
61. Evidence from a small sample of private facilities in Tier 2 and 3 cities in India suggests higher occupancy rates (68 percent for hospitals with fewer than 50 beds). However, high average lengths of stay (approximately 6 days) for this same category of facilities may be a determining factor of the relatively high occupancy rates (IFC forthcoming).
62. In a small survey of patients seeking care in private hospitals in Tier 2 and 3 cities, 46 percent and 30 percent choose the hospital based, respectively, on the reputation of the facility and physician (IFC forthcoming).
63. The Aarogyasri scheme in AP has also introduced field staff in primary care centers (PHCs) in part to inform patients of a covered condition of their insurance benefits and direct them to empaneled hospitals for treatment. However, most beneficiaries continue to choose private hospitals.
64. Nonsurgical care is outside the scope of the scheme and is paid out of pocket.

65. The study found that for the higher-income groups, savings from inpatient coverage had a spillover effect of increasing expenditure on ambulatory care. Borrowing and asset sales on ambulatory care by the poorest beneficiaries was reduced by 61 percent ($p < .05$), but this effect was not significant for higher-income beneficiaries.
66. The study was based on an analysis of cross-sectional data from NSSO consumer expenditure surveys over three time periods: 1999–2000 (55th round), 2004–05 (61st round) and 2007–08 (64th round). It compared BPL household spending patterns before and after scheme implementation in samples of villages participating in Phase I districts (initiated in April 2007) -and matched control villages. Placement in the treatment groups was determined by both location (residence in Phase districts) and time of program implementation. The researchers applied a difference-in-differences estimator to measure variation in program effects over time across treatment and control groups. The study also examined the impact on households residing in “Phase 2” districts, which was implemented in December, 2007. However, no clear effects were found for Phase II in part because of the short implementation period (six months) prior to treatment measurement.
67. This was measured in terms of the probability of experiencing inpatient expenditures of 50 percent or more of total health expenditures and having total health spending exceed 15 percent of total household spending.
68. Over three fourths were unaware that they would incur any charges while two thirds did not know the balance remaining on their smart cards.
69. With the exception of RSBY and to some extent Yeshasvini, no scheme has made a systematic attempt to detect these distortions through household surveys and other means.
70. As discussed in the previous section on Package Rates and Market Prices, due to the lack of data on costs, neither providers nor GSHISs know much about the relation between costs and prices.
71. While all Rajiv Aarogyasri packages include medicines for a period of 10 days after discharge, follow up packages (with duration of one year) for 125 select procedures have also been included in the list of covered procedures. These include consultation, medication and diagnostics for follow up.
72. Rajasthan is piloting its own health protection fund for BPL patients who use public facilities. It covers any medicine, consumable, or diagnostic not available in the public system.
73. These shortcomings are beyond the control of the health insurance scheme.
74. Open-ended fee-for-service is still the dominant form of provider payment in the private voluntary health insurance system.
75. In case of Rajiv Aarogyasri (AP), the claim frequency per beneficiary rose from about 0.1 percent in 2007–08 to 0.34 percent in 2008–09 and then to

0.49 percent in 2009–10. Part of this was also due to a deepening of the benefits package by adding 600 new procedures in July 2008. However, between 2008–09 and 2009–10, there was no change in beneficiaries or in the benefits package. Similarly, for Yeshasvini the claim frequency per enrollee was 0.57 percent in 2003–04, 1.3 percent in 2006–07 and 2.59 percent in 2007–08, but has remained between 2.2 and 2.4 percent thereafter.

76. The contracts may pay for the area's entire BPL population without a specific enrolment process, as in AP, or only for those specifically enrolled by the insurer, as in RSBY. However, only the eligible population, as defined in the contract, is paid for by the scheme. Insurers do not enroll ineligible groups since they are paid only for eligible beneficiaries
77. Therefore, insurer-induced adverse selection or cream skimming are not major concerns, when compared to PHI.
78. In the industry, this is known as a "topline" focus.
79. In an effort to increase market share, these products may also suffer losses due to low pricing. Losses are covered through revenues from nonhealth insurance products.
80. Claims exceeded the premiums collected.
81. However, public and private insurers may differ in terms of their response to losses. The incentives faced by publicly owned insurers and privately owned insurers may vary.
82. They will also face provider demands to raise package rates.
83. If an insurer experiences losses during any year of a multi-year contract, it may choose to not renew the policy at the existing prices (and lose the potential business for the next year) rather than continue incurring losses. The insurer may still be eligible to participate in a new round of tendering, submitting a bid with a higher but more realistic price.
84. In the early years of government-sponsored health insurance schemes in India, a few states had schemes that only lasted one year because the insurer suffered losses and was unwilling to continue at the negotiated but original price levels (e.g., Punjab, Mizoram).
85. Currently only non-life insurers bid for the GSHIS business. About 20 non-life insurers (including 3 standalone health insurers) offer health insurance products in the Indian market and a majority of them are active in the GSHIS market also.
86. Assuming that the insurers have strong incentives to maximize profits, they would take measures to limit utilization. As is apparent from the U.S. experience with commercial health insurers, cost containment by insurers may take the following path: introduction of copayments, deductibles, coinsurance; reduction in benefits; the introduction of contributions; or any combination thereof.

- These measures may only shift costs from insurers and may lead to overall spending increases and not result in cost containment in the broader health system as patients increase out-of-pocket spending to compensate for reduced coverage and higher copayments (as in the case of China and the United States). These measures undermine the objectives of the GSHISs, and none are politically viable in India's current environment.
87. TPAs have been an integral part of the private health insurance industry in India for the last 10 years. About 30 TPAs are licensed in India, and most of the active TPAs also serve GSHISs.
 88. Rajiv Aarogyasri in AP, and possibly ESIS, are the exceptions.
 89. Providers sign MOUs with insurance companies or TPAs at the time of their empanelment. The MOU forms the basis of the relationship and specifies the terms and applicable conditions of both parties. In practice, other than some oversight on the monitoring by the insurance company or TPA, MOU implementation is poorly monitored by the GSHISs.
 90. The number of full time staff in these schemes cannot be compared with the other GSHISs which do not own and operate medical facilities.
 91. Purchasing is a recent function for both ESIS and CGHS. Until about a decade ago, all care was provided in-house.
 92. In most hospitals, the detailed day-to-day notes on health status and medications while the patient is hospitalized are recorded manually in case sheets by the nursing staff and attending physicians. The current operating environment in most hospitals does not require this detail to be captured in the hospital information system (even though there are modules to do so). Entering these data electronically would require considerable effort, and, since it is not mandatory for claim processing, there is no incentive for the provider to do so.
 93. On the incidence of fraud and corruption in India's public health delivery system, see Center for Media Studies 2008; Reddy et al. 2011, Chatterjee 2010: 1679, and Solberg 2008: 464.
 94. See chapter 2 for a discussion on health financing in India.
 95. NRHM financing is mostly directed to the primary care level including small rural hospitals known as Community Health Centers. District level hospitals are mainly dependent on state financing which has not been adequate in most cases.
 96. Given current trends, we estimate insurance population coverage will increase significantly over the next five years if recent experience is a predictor of future trends (see annex figure 3A.1 and table 3.1).
 97. Considering the large, across-the-board increases in central and state government health spending in recent years (chapter 2), it is difficult to gauge whether the schemes will contribute to fiscal stress.

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CHAPTER 4

Addressing GSHIS Operational Challenges

Government-sponsored health insurance schemes (GSHISs) can serve as change agents for achieving universal coverage. Through pioneering new ways of doing business in terms of financing, managing, providing, and paying for care, the current crop of GSHISs can facilitate reform of the dominant fee-for-service private system as well as the budget-based, public direct delivery system. However, before spearheading any reforms in the broader health finance and delivery systems, GSHISs first need to address operational constraints emerging from both design and implementation. The future success and sustainability of GSHISs hinge on the development of strong governance arrangements, management systems, monitoring and purchasing mechanisms, cost-containment tools, and quality-improvement instruments.

In this chapter, the first of a two-phased approach to universal coverage is presented. This first, short-term phase addresses the operational or “mechanical” challenges of the current crop of GSHISs that were outlined in the previous chapter. A series of corrective measures are proposed—often based on international best practice—to strengthen GSHISs’ institutional architecture and managerial practices. These operational improvements will encourage a more accountable institutional environment to utilize GSHIS funds effectively to improve access, utilization, and financial protection while containing costs.

Most measures can be implemented over an estimated two-year period. The enabling institutional and accountability environment would also facilitate the design of a reconfigured set of schemes proposed to be implemented in a subsequent phase, which is the subject of chapter 5.

Promoting Governance and Coordination

In his study of institutional governance arrangements in social insurance schemes, Savedoff (2008) defined governance as a combination of factors that influence the behaviors of an organization, particularly in terms of accountability relations (e.g., to government, members, and providers), incentives alignment, and information availability and transparency.¹ Governance arrangements continue to be generally inadequate or absent in GSHISs, particularly in terms of accountabilities, incentives, and information availability. Although the same can be said of the public delivery system, the complexity of demand-side financing approaches with explicit entitlements necessitates greater attention to establishing sound institutional and governance arrangements to make schemes viable, sustainable, and high performing. The key to any good governance arrangement is to protect the schemes from political interference while making them accountable to major stakeholders such as government and beneficiaries.

Leveraging the fact that the government of India (GOI) already finances the major and fastest-growing scheme, Rashtriya Swasthya Bima Yojana (RSBY), and is a major contributor to others (Central Government Health Scheme [CGHS], and to a lesser extent, Employees' State Insurance Scheme [ESIS]), and will continue to play a major financial role in the roll out of GSHISs and any future reconfiguration thereof (chapter 5), it should establish a legally autonomous umbrella health insurance coordination agency.² This entity would support, coordinate, monitor, and evaluate all GSHISs, including the social insurance schemes (e.g. ESIS, CGHS). This agency should also work closely with the private insurance regulatory authority, Insurance Regulatory and Development Authority (IRDA) to ensure synergistic and holistic regulation of the entire health insurance sector.

The overall mission of the proposed agency would be to promote the timely access and provision of services to beneficiaries of central and state GSHISs. It would also ensure that beneficiaries receive care of acceptable quality and that schemes are operated in a transparent and

efficient manner. The agency should also promote coordination among schemes to ensure portability, foster standardization, and stimulate cross-learning. The umbrella body would facilitate establishing monitoring and evaluation mechanisms and standards for information reporting. It would also promote information disclosure³ and sharing across schemes.

The governance arrangement should contain sufficient government oversight and include participation from all stakeholders—central government, including the Ministry of Health and Family Welfare (MOHFW) and Ministry of Labour and Employment (MOLE) (and other stakeholders such as the Ministry of Finance and the Planning Commission), state governments, and IRDA. The arrangement should also put in place a mechanism or structure to facilitate regular consultations with providers, insurers, beneficiaries, and other stakeholders. Ideally, this agency should not be dependent on or linked to any single ministry or government department, partly to guarantee its independence and neutrality to guide and coordinate the schemes effectively.⁴ For the same reason, this body will necessarily be structurally and functionally separate from the schemes it oversees.

Among this agency's responsibilities would be setting objectives and principles, preparing and monitoring policies and statutes, and providing guidelines for such operational areas as data and communication standards, management information system (MIS) and data-sharing requirements, cost-containment mechanisms, provider audits, quality and patient safety standards, fraud and corruption control measures, patient rights, and confidentiality. It could also play a crucial role in setting uniform, national standards on provider empanelment, provider contracts, billing and claim systems, quality measurement and reporting, customer service parameters, and information systems for each scheme to implement. An added function could also be the provision of technical assistance to schemes through its own technical resources, through facilitating cross-learning between schemes and by tapping national, international, and donor professional support.

To facilitate cross-learning, the agency could catalyze the creation of a learning forum with members drawn from all the schemes to encourage collaboration and knowledge exchange. Regularly tabulating, analyzing, and sharing monitoring data (e.g., empanelment, claims, payments) would contribute to continual assessment of overall schemes' performance as well as the details of the schemes' financing, managerial, and delivery systems. A final function would be the promotion and cofinancing of monitoring and evaluation.

All the aforementioned activities will evolve, undergoing numerous changes over time. Robust data—regularly collected (and analyzed)—based on household, provider, and market surveys, combined with the operational data from the schemes themselves underlies all functions.⁵ Such data will provide valuable inputs into the invariable in-flight adjustments for the schemes as well as for the agency itself.

Strengthening Purchasing and Contracting Practices

All schemes would benefit from establishing and strengthening the purchasing of care, or similarly, the allocation of pooled funds to providers. Sound purchasing can contribute to restructuring of health financing and service delivery by providing incentives to shift financing to more efficient and higher-quality providers as well as more cost-effective services (Fuenzalida-Puelma et al. 2010).

Provider contracting is one of the most important functions of scheme management and is a major determinant of network development. GSHISs need to be much more proactive in contracting providers and monitoring the delivery of services (even if they use an insurance company or third-party administrator [TPA] as an intermediary) to take advantage of their financial leverage, fostering greater value for money and improved service performance. The contribution of insurance intermediaries in augmenting the capacity of GSHISs in recruiting, contracting, and purchasing services from hospitals is in itself substantial and suggests a possible route for continued and increasing government engagement with the private health sector in purchasing health services for the poor.⁶

An important step toward improving incentives and accountabilities is to strengthen contracting of both public and private providers. This can be done by significantly expanding the functions of the agencies responsible for scheme execution. The trust that implements the AP scheme is an example of a sturdy platform to build upon for strengthening purchasing functions.⁷

International experience shows that explicit contracts that link payment to performance or use provider payment mechanisms⁸ that stimulate efficiency can significantly improve provider performance in terms of quality, patient satisfaction, and efficiency (Preker and Langenbrunner 2005; Langenbrunner, Cashin, and O'Dougherty 2009; Loevinsohn 2008). It is best to start by developing a purchasing and negotiating strategy that accounts for scheme goals, available resources, degree of market

or regional penetration, geographical accessibility (for targeted beneficiaries), and minimum quality and patient-safety criteria (for provider selection). This strategy would serve as the basis for selecting, negotiating with, and contracting providers. As data systems improve, more sophisticated purchasing strategies can include estimates of utilization (type and volume of procedures, number of bed days, and the like) and corresponding expenditures for each provider. This information can be used as benchmarks to compare with actual experience.

Contracts should, at the very least, define the type and range of services as well as the expected quality standards or processes. For example, to complement the empanelment process, contracts can also improve upon the existing (empanelment) requirements for hospitals in terms of infrastructure, staff qualifications, and patient-safety requirements. Contracts can eventually stipulate cost-control measures such as use of generic drugs and application of standardized clinical protocols (to reduce cost variations). Other possible areas include compliance with data reporting requirements, including the use of standard codes for diagnosis and procedures. For example, in the Brazilian state of São Paulo, the state government has issued contracts with public and private hospitals that mandate the establishment and functioning of medical record systems and facility-based commissions for reviewing mortality data, ethics issues, and infection control. Contracts also specify monthly and annual reporting requirements for activities, costs, and patient satisfaction surveys (La Forgia and Couttolenc 2008).

A final important area of focus is contract management and monitoring. By definition, contracting allows payers to focus on outputs and outcomes. Contract management and monitoring has generally been the weakest component of purchasing in developing countries (Loevinsohn 2008; La Forgia, Mintz, and Cerezo 2005). Reporting and review systems need to be established to monitor contract compliance on a regular basis. The review mechanism should be the basis for contract enforcement. Consistently poor performance should result in penalties or contract cancellation.

Reinforcing Cost Containment: (1) Provider Payment Systems

Given the third-party payment arrangement, health insurance may be more prone to cost escalation than other health financing systems. Controlling utilization and provider rate escalation are essential to the financial (and political) sustainability of any health insurance scheme.

International experience suggests that no single approach to cost containment can effectively slow the increase of costs over the long run. Three categorical methods, taken together, have strong potential to contribute to effective cost containment in the Indian context. The first, a direct measure, entails strengthening the current package rate-based provider payment system and is the subject of this section. The two other methods, strengthening the purchasing power of state purchasers and improving managerial interventions, are reviewed in the following section. Again, the effectiveness of any cost-containment measure depends on the robustness of the information system.

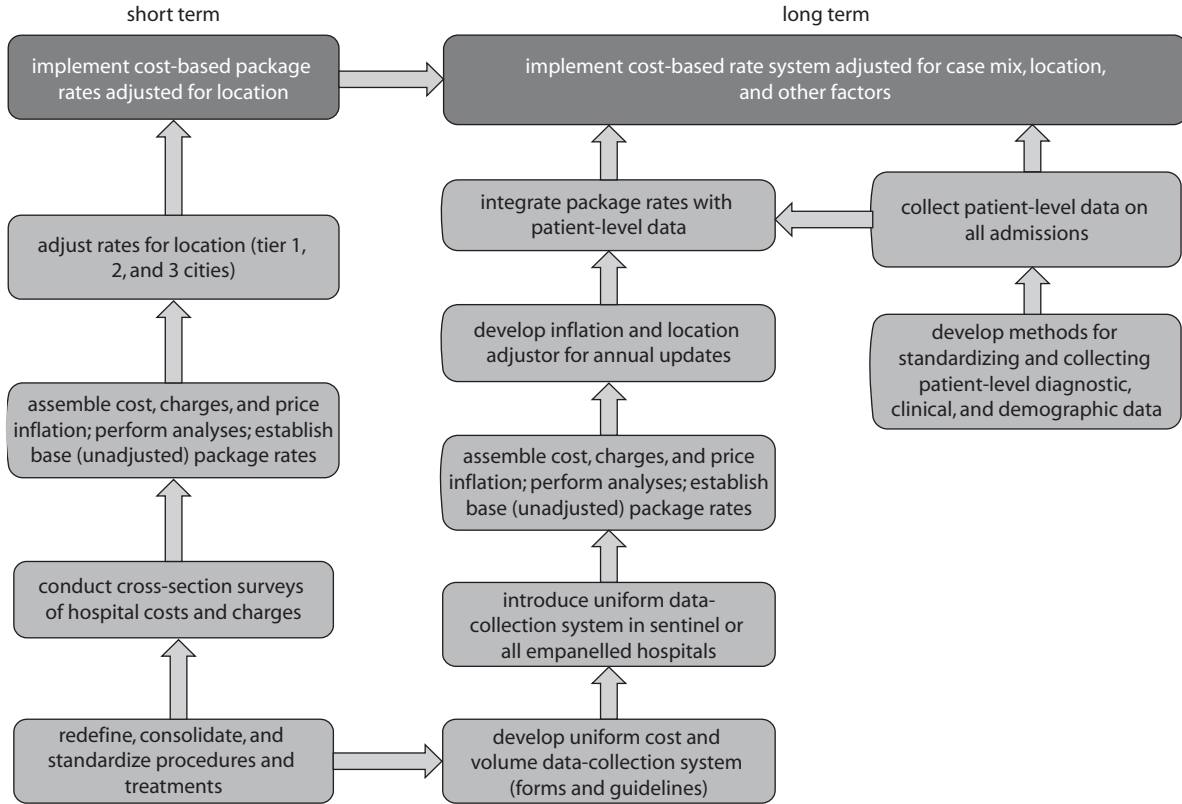
Promoting Provider Payment Reform: A Bottom-Up Approach

As part of the proposed explicit contracting approach, in addition to prospective agreement between purchaser and provider on the terms and conditions regarding types and range of services, there also needs to be agreement on the terms of payment. The payment mechanism shapes provider behaviors and therefore performance. But the type of mechanism used depends on policy objectives and availability of financial, cost, and patient-level data. In the case of health insurance, purchasers usually focus on some combination of increased access, cost containment, and administrative simplicity. Practical considerations are also important. Complex payment mechanisms may tax the administrative capacity of both provider and purchaser and result in high transaction costs.

All GSHISs currently use pre-defined procedure-based package rates to pay hospitals. These all-inclusive rates bundle into a fixed monetary sum different services, including drugs, consumables, professional fees, and institutional services related to a specific procedure. This payment mechanism, already an accepted arrangement for all GSHISs and their networked providers, is a big improvement over the open-ended fee-for-service payment system still used by private insurers. If properly administered, this payment system has the potential to create strong incentives for cost containment, efficiency, and equity.

This section outlines a series of bottom-up steps to address a number of shortcomings observed in the package rate payment mechanism.⁹ Figure 4.1 schematically displays short- and long-term approaches and corresponding processes required to introduce data collection and analysis capacities in order to strengthen the package rates. GSHISs can immediately adapt a short-term approach based on cost and market price surveys to strengthen the current system. However, a long-term strategy for crafting uniform data architecture is required for more robust rate

Figure 4.1 India: Data Infrastructure for Strengthening Package Rates, Bottom-Up Approaches for the Short and Long Term



Source: Adapted from Murray 2007.

setting.¹⁰ Core elements of such information architecture include detailed and standardized data on hospital costs, volume, charges, patient demographics and diagnoses as well as data on cost inflation. These can be complemented by data on quality and outcomes (discussed below). The structure and sophistication of data collection and analysis as well as rate setting will improve over time as capabilities develop.

The first order of business is to redefine, consolidate, and standardize procedures and treatments across the current array of schemes. There is no reason why all schemes cannot use the same nomenclature for procedures, and have a standard content of what constitutes a “package” in terms of procedures and protocols, including the specification of consumables.

The second order of business is to improve how procedure rates are calculated. This would require standardized and comparative information on unit costs, volume, and market prices for the procedures in different geographical settings. The rates should be aligned with unit costs to minimize incentives for under- and overprovision of different services, balance billing, or favoring one type of service over another. Different methods can be used to measure unit costs, including their direct and indirect components.¹¹ Given the absence of cost-tracking information systems, any costing exercise to set the rate schedule will initially have to rely on cross-sectional studies of samples of providers. Such studies will have to be performed biennially so that purchasers have the information base to negotiate rate adjustments with providers. Another—and perhaps more rigorous—approach, used in Germany and Thailand, is to establish a subset of sentinel hospitals where costing and other data are collected to adjust package rates regularly. Such a system can serve as the basis for developing a sound monitoring system, and ultimately, contribute to the development of more robust payment systems such as Diagnosis Related Groups (DRGs), as it has in Thailand (box 4.1). Over time, standardized cost accounting and reporting systems (which generate and analyze data related to costs, volume, and other areas) would need to be installed in all providers and shared with the purchasers (figure 4.1). Cost data derived from these systems can be built into provider contracts.

Rates can be based on average costs in a state, but generally the costs vary across districts therein. Unless there are policy priorities to act otherwise, rates should not be one-size-fits-all across an entire state but differentiated. Costs should be measured (and rates set) across different locations (e.g., Tier 1, 2, and 3 cities) as well as across different types or

Box 4.1**Thailand: Sentinel Hospitals Evidence for DRG Cost Weights**

To be a prudent purchaser, health insurance systems need to develop reliable information systems capable of generating two types of databases on a regular basis: (1) health services utilization coded by care level and (2) unit costs of services, including outpatient, inpatient, diagnostic, and support services. This information is critical for development of robust payment mechanisms no matter what the basis for reimbursement rates: procedure, diagnosis related groups (DRGs), capitation, or global budgets.

Thailand has sought to strengthen costing capacities since the mid-1980s and has adopted standardized cost-accounting methods based on international standards. Hospitals were expected to implement cost-accounting systems but application was diffuse. In the meantime, capitation—also based on cost and utilization data—has been used by the Social Health Insurance System since its inception in 1990. DRGs were piloted in the mid-1990s and gradually applied to various health-welfare schemes, until finally adopted by the Universal Coverage (UC) Scheme in 2002. The UC scheme, in addition to DRGs, includes a global budget cap to pay for inpatient services and uses capitation to pay for outpatient services.

However, due to cost data limitations, the development of DRGs was originally based on charges, which varied across facilities, and not on costs. Although the use of DRGs resulted in significant efficiency gains, the absence of cost data hampered the setting of cost weights for different types of facilities and probably led to some distortions in payments such as overpaying for some cases and procedures while underpaying for others.

To align the DRG cost weights with actual costs, the Thai government recently established 200 sentinel hospitals where utilization and cost data will be collected regularly through standardized accounting and coding methods. These hospitals vary by size, type, location, ownership (public and private), and teaching/non-teaching status and therefore represent the universe of hospitals. The data will provide valuable inputs into annual adjustments of DRGs cost weight, which will facilitate a transparent, undisputed payment system for inpatient services and accurate cost data for estimating capitation rates to pay for outpatient services. Sentinel hospitals also benefit from cost data for internal efficiency monitoring and cost controls.

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sizes of facilities. As highlighted in chapter 3, market prices for similar treatments and procedures vary significantly by location, and the proposed package rate structure should reflect such variations.¹²

Also, some facilities concentrate on providing only maternity and limited secondary care, while others emphasize a small set of mostly surgical procedures delivered in large volumes. These facilities may face lower costs than multispecialty facilities. From a policy perspective, GSHISs can decide to adjust (downward) the rates for these (high-volume) facilities while mandating that they are the main providers for a subset of treatments and procedures. In other words, they may be willing to exchange lower rates for higher volume. Alternatively, the lower costs of high-volume facilities can be built into rates applied to all facilities performing such procedures (within a given location), which could stimulate efficiency gains in multispecialty hospitals.

Once the unit cost structure is in place, adjustments may also be made over time in response to claims and utilization experience. For example, and as practiced in Japan, rates can be adjusted upward and downward in response to “inappropriate” spikes or drops in volumes for specific procedures or adjusted to incentivize or disincentivize certain types of care (Ikegami and Campbell 2004, 1999). For example, rates for high-tech tertiary care can be set below costs while the same for high-volume secondary care can be set above costs. Alternatively, and as part of a coverage extension policy, purchasers can initially provide above cost rates in Tier 2 and 3 cities to stimulate provider expansion in underserved areas. Yet another adjustment option, similar to that used in Thailand, would be to achieve further close-ending¹³ of the payment mechanism through the use of global budgets.

The third order of business is to eliminate rate disparities among government-sponsored schemes, at least within any state territory. Rate differences can lead to inequities and distorted incentives such as the creation of a multitier system even within the same facility. In other words, care that is more responsive (e.g., shorter queues) and probably of higher quality is provided to patients affiliated with high-rate purchasers while less responsive and probably lower-quality care is provided to patients affiliated with lower-rate purchasers. Even private voluntary insurers may be encouraged to follow the same provider rate structure. Together with information on costs, a single set of rates will strengthen the leverage of purchasers to negotiate fair and acceptable rates with providers as well as drive efficiency-inducing provider behaviors.¹⁴

However, caution will be needed to set rates that do not pay for inefficiencies of service provision. This will be a difficult task at first, given the lack of information on provider cost structures and performance. Nevertheless, the cost data from a cross-sectional provider survey can be used to analyze the relative efficiency of providers through methods such as Data Envelope Analysis (DEA) and benchmark analysis.¹⁵ Purchasers can decide to set rates that are increasingly aligned with the costs of the most efficient providers. But such an adjustment will have to be implemented gradually to reduce the possibility of massive market exit by the relatively inefficient producers. Working to introduce standardized care processes at least for high-volume procedures, including the use of lower-cost inputs such as generic drugs, can also go a long way toward improving the efficiency (and quality) of care. Such terms can be included in provider contracts but would require significant policy support and technical assistance from the proposed national coordination and governance agency.

Eventually, package rates will require adjustments for resource use and case severity, paving the way for the introduction of a case-based payment mechanism such as DRGs. Unadjusted package rates are independent of the length of stay and services rendered to treat a patient. If hospitals can freely choose patients, they would have an incentive to avoid sicker patients or skimp on care provided to the same since they consume more medical care, supplies, and pharmaceuticals without yielding any additional revenues, and therefore reducing hospitals' margins. By admitting less sick patients, hospitals can reduce their costs below the revenues received from the package rates. Also, to avoid higher costs hospitals have an incentive to reduce the number of tests, medications, and bed days for patients with complications (or transfer them to other facilities). To avoid these distortions, package rates would need to be adjusted for case severity. This means that payments are adjusted upward to cover the cost of extra resources needed to treat sicker individuals.

As a long-term policy objective and with the strong support of the GOI, the schemes can move toward a case-based payment system such as DRGs. DRG is a case-classification scheme that groups cases requiring similar resources and treatment processes. International experience demonstrates that when properly implemented, DRGs can contribute to cost control and efficiency (USAID 2005; O'Dougherty et al. 2009).¹⁶ Strengthening the current procedure-based package rate system along the

lines suggested above would build a solid platform for DRG migration. However, introducing DRGs would require significant capacity building and investments in complex information management and considerable upgrading of medical records systems. Under any case-based system such as DRGs, as well as the current package rate system, adjusting for case mix is constrained by the general absence of reliable patient information at the facility level. This is related to poor recording in medical case sheets and charts (and still poorer coding of the data) and the lack of standardized medical practices. Addressing both these constraints will be an important long-term endeavor.

Reinforcing Cost Containment: (2) Additional Measures

Two additional measures to contain costs are discussed in this section. The first is structural and involves the development of a state-level purchasing platform for all GSHISs. The second consists of managerial interventions to control utilization and provider behaviors.¹⁷

Increasing the Purchasing Power of GSHISs

One potentially effective cost-containment mechanism is the channeling of heretofore separate GSHI schemes into a single institutional purchasing platform (but not necessarily a single fund).¹⁸ Countries that have been able to direct substantial funding to a limited number of purchasers have had a better track record in containing the growth of health spending (Gottret, Schieber, and Waters 2008) than those with multiple payers. This makes sense: a purchasing unit acting on behalf of several schemes would be better able to negotiate with providers than any scheme acting alone.

Given India's size and federal structure, and the states' constitutional mandate regarding health service delivery, a common purchasing platform should be created in each state in which GSHISs are active.¹⁹ Taking advantage of the monopsony clout of a large purchaser, such an entity would impart greater purchasing power in the marketplace to negotiate favorable payment rates with hospitals and providers. It would also facilitate application of a single set of rates, thereby eliminating rate disparities (among GSHISs) and resulting distortions from multiple rates for similar procedures.²⁰ In principle, using a single purchasing platform would help improve productive efficiency (and quality) of the providers.

Strengthening Managerial Cost-Containment Measures

Considering the evidence of wide variation in medical practice, which suggests issues of overtreatment, undertreatment, wrong treatment, or unnecessary treatment, health insurers and other payers in many countries have instituted interventions to control or manage the utilization of medical care. Further, in most GSHISs in India, providers have an incentive to “burn the cap” or attempt to spend more and more from the total annual sum available for a family’s health benefits. This may involve providing unnecessary care (even for eligible conditions), modifying diagnoses to make a claim eligible, bundling two or more eligible procedures to augment the revenues, and substituting inpatient for outpatient care. Some of these practices have already been observed by GSHISs.

Considerable literature exists on utilization management and control measures. They aim to reduce utilization or the frequency of claims, lower spending for the services provided, and, in some cases, detect and control fraud. Measures typically used by health insurers involve:²¹ (1) inpatient management to reduce length of stay and avoid unnecessary admissions (e.g., preadmission review, concurrent review, second opinion before surgery, discharge planning); (2) programs and incentives to encourage the substitution of outpatient for higher-cost inpatient care (e.g., ambulatory surgery) and the identification of new and less costly treatments for high-cost conditions; (3) provider profiling (to enable the analysis and characterization of providers according to utilization, costs, quality, and other performance-related features that facilitate the identification of high-cost providers as well as providers with patterns of high utilization); (4) standard treatment guidelines and/or provider education programs (to encourage cost-effective practice patterns); (5) programs and incentives to promote the use of generic drugs and low-cost technologies; and (6) case- or disease-management programs (to manage costs of patients with high-cost, chronic conditions). Health insurers establish medical management departments that are staffed with physicians and nurses who conduct these practices, applying their clinical knowledge. Software has been developed to assist insurers and payers in adopting a number of these measures (Kongstvedt, Goldfield, and Plocher 2001).

Finally, although managerial cost-containment measures are widely used by health insurers globally, particularly by corporate insurers that contract out provision, some observers assert that they result in one-time savings and may not contribute to sustained cost-containment (Davis et al. 1990). Managerial interventions are considered less robust

than establishing a common purchasing platform or employing provider payment reform. These latter measures have a greater potential to improve the productive efficiency of providers.

Establishing Robust Monitoring and Data Use

The ability of schemes to collect and intelligently use data to assess financial status, provider performance, and beneficiary utilization and satisfaction may be the major determining factor of overall scheme performance. Effective contracting requires close management and monitoring of data on utilization, claims, payments, outcomes, quality, grievances, patient satisfaction, and outcomes. Cost containment requires timely information on utilization patterns and spending. Strengthening the precision of package rates is dependent on sound data on diagnoses and costs. Some of this information can be accessed through claims data, but other data would require provider and beneficiary surveys as well as establishing reliable and valid reporting systems on utilization, hospital-based statistics, grievances, and quality of care. The proposed GOI governance entity and state-based purchasing agencies will need to work together to develop and standardize monitoring and reporting systems that enable the assessment and comparison of performance parameters within and across schemes.

Schemes need to plan for and draw on multiple types of data to gain an accurate picture of overall performance. These can include: (1) hospital-based statistics on admissions, post-discharge follow-up, quality (such as infection rates); (2) claims-based data for monitoring procedure-based volume and outlays, authorization records, provider utilization patterns, diagnosis and procedure utilization patterns, geographic utilization patterns; (3) medical record-based data to detect deviations from protocols, assess resource use, or identify adverse events; (4) household or beneficiary survey-based data to assess enrolment and utilization patterns, beneficiaries' sociodemographic characteristics, treatment outcomes, and patient satisfaction with both scheme operations and health care received; and (5) data from grievance and complaint registration systems (letters, emails, and call centers).

Linking and validating diverse data elements present major challenges. For example, provider based data must mean the same to all providers, and any analysis must be based on a uniform clinical dataset. In other words, how hospitals code procedures, generate statistics, or calculate infection rates cannot vary. The rapid introduction of information technology can facilitate more accurate reporting, but care must be taken to avoid

the development of separate systems that impede the interface of databases that draw on different data sources. Software packages are available to facilitate the collection and analysis of data from most sources, including variables for measuring quality of care. Protecting the confidentiality of patient information is another emerging challenge confronting data-management efforts.

An essential element of medical data management is provider monitoring and profiling. This involves the collection, analysis, and classification of data on provider performance, particularly in terms of volume, spending, appropriateness of care, and quality. Provider profiling can help identify low-cost and high-volume providers, provide feedback to assist providers in altering their practice patterns, and improve the quality of care.²² None of the GSHISs have yet to develop data-management systems to enable the analysis of provider performance in part due to their overdependence on insurer and TPA data systems that may not collect or analyze such data.

Given the dearth of publicly available data on hospitals and quality, the poor quality of medical records, and the weakness and frequent absence of information management at hospitals (with few exceptions), GSHISs face a long, uphill struggle to improve data collection for monitoring and management purposes. A good place to start is to mandate data collection of a subset of relevant data elements as part of insurer and provider contractual terms. Data collection by providers can be further incentivized through a performance-based financing arrangement (“pay-for-data”). For example, to facilitate utilization management, GSHISs can mandate hospitals to maintain a daily log of general hospital statistics, admissions, discharges, and services rendered to beneficiaries, authorizations and denials, identification of high-cost cases, readmissions, infections, adverse events, and so on, which would be accessible to the GSHISs. Standardizing and expanding the claims information system to include additional data elements is another and relatively easy way to enhance the collection of performance data.

Finally, establishing a set of standards against which performance can be measured would also contribute to data collection and use. These can include, for example, hospital infection rates, readmission rates, and lengths of stay²³ but can also entail more operational standards such as “all claims submitted within 15 days of discharge” or “all patients receive transport allowance upon discharge.”²⁴ Finally, schemes should assess reputed vendors of software that can assist them in the development of information systems that can facilitate the collection and analysis of data from multiple sources.

Fixing Targeting Mechanisms

The current household-targeting mechanism used to generate BPL lists requires reform to address documented inclusion and exclusion errors. These faults, though usually outside the control of the entities implementing GSHI schemes, compromise the equity of GSHIS coverage. The targeting methodology (and the lists themselves) is determined nationally by the Planning Commission based on a national survey of consumer spending. The latest estimates are based on the National Sample Survey Organization 61st round (MSPI 2005). Recognizing the limitations of the BPL mechanism the central government appointed an Expert Group in 2008 to recommend corrective measures. The Expert Group released a draft report in 2009, known as the Saxena Committee Report (GOI 2009), specifying a methodological framework with the following components:

- (1) Automatic exclusion of the “visible” nonpoor (criteria can include households with at least one member working in the formal economy, possess two or more wheeled vehicles, own farm equipment, and other evidence of financial well-being). An estimated 25 percent of the population would be excluded.
- (2) Automatic inclusion of the poorest (e.g., schedule caste/schedule tribe groups, single women-headed households, in which at least one bonded laborer or main earner is disabled, households with at least one member with certain debilitating infectious diseases, homeless households, among other criteria). An estimated 5 to 7 percent of the population would be included.
- (3) For households not automatically excluded or included, a survey will be applied to separate the “deserving” from the “undeserving” poor. This will be achieved through a grading system consisting of a weighted point system. A deprivation score will be derived based on criteria such as “backward castes” status, landless agricultural workers, self-employed fishermen and artisans and households headed by seniors. It is expected that the deprivation score will be applied to determine the percent of deserving or vulnerable poor.

This proposed methodological approach is considered a major improvement over the current system and would contribute to reduction of inclusion and exclusion errors (World Bank 2011b). It would also increase the percent of the national population deemed poor from 27 percent to 42 percent.²⁵ Embracing the underlying methodological

framework of the Saxena Committee, World Bank (2011a) recommended additional measures to further strengthen household targeting. These include applying regression models to identify indicators with greater predictive power, state-based weighting of indicators, allowing the indicators to vary by state, and planning for regular updating of the BPL lists. It is anticipated that some version of these proposed modifications would be approved by the Planning Commission in the near future. Even though this is not under their direct purview, GSHISs are large users of these lists, and will have to work closely with government agencies to expedite updating of BPL lists.

Where specific enrolment is envisaged under the respective schemes (such as in RSBY), the GSHISs can also enact measures to counteract disincentives of enrolment agencies to reach remote villages (where the poorest of the poor tend to reside), villages with low BPL densities, or to enroll maximum allowable number of family members. One possible corrective measure would be to introduce a performance-based payment system in which additional remuneration is provided for enrolling these eligible but underrepresented groups (e.g., by reaching out to remote villages or enrolling the fourth and fifth members of a household).

Introducing Quality-Based Purchasing

In principle, most providers would be quite interested in building up their patient bases or at least holding on to current patient volumes that result from affiliation with insurance schemes. Depending on the degree of competition, the GSHISs can use their leverage to encourage improvements in quality of care and data reporting on quality and patient satisfaction through applying a performance-based purchasing approach.

Although evidence is uneven, international experience suggests that purchasers can do a lot to incentivize providers to measure and report quality-related data as well as improve quality processes and results through strategic purchasing and rewarding hospitals for excellence in quality and quality improvement (Doran et al. 2006; Velasco-Garrido et al. 2005; Borem and Valle 2010 and Lindenauer et al. 2007). The evidence does, however, suggest a business case for improving quality as a means to cost containment (i.e., reducing readmissions, long stays, repeat procedures) (Leatherman et al. 2010; Greene et al. 2008; Lawrence 2003; IOM 2000).²⁶ This section outlines how quality can be promoted by GSHISs through data reporting, quality-based purchasing, and pay-for-quality initiatives.

Collecting and Analyzing Data on Quality

Arguably, the first step in improving quality is to collect and analyze quality-related data. At the outset, usually in a contract, the quality data to be measured by hospitals and reported to the insurers are specified. Currently, no quality data are systematically collected by GSHISs or by the government. GSHISs can agree to establish a central repository of data on quality of care across schemes while incorporating data reporting requirements in hospital contracts. This approach generally consists of reporting “tracer” process and outcome indicators for specific high-volume procedures and treatments. For example, government contracts with hospitals in France include a requirement to report the percentage reductions in the rate of nosocomial infections. However, as suggested above, systems for defining the indicators and collecting and documenting such data have first to be developed. In 1997 the Council of Europe recommended that purchasers require providers to establish quality-improvement management systems in all purchasing contracts. Italy and Germany are two countries that require implementation of such systems. Other structural mandates used in European hospitals include establishment of adverse effects registers (France), specification of maximum waiting times (United Kingdom, Italy, and others), and use of standardized data-collection and reporting systems (Germany and Italy). Finally, several European countries specify process indicators in hospital contracts, including establishment of and adherence to clinical protocols.

Establishing Quality “Threshold” Requirements

Quality threshold requirements are established by selecting only providers that meet set structure and process standards through prior credentialing or certification by an external agency (“empanelment” in the Indian context). The standards would be gradually raised over several years according to a pre-defined roadmap, and eventually, a formal accreditation could become the threshold level for the GSHISs. In Europe, accreditation is increasingly used as an “extra licensing” system to determine the eligibility of hospitals to receive public or social insurance funding (Figueras, Robinson, and Jakubowski 2005: 226). In the United States, only accredited hospitals are eligible for Medicaid and Medicare funds. Many private insurers in the United States also require accreditation. In India, CGHS had mandated accreditation as a criterion for empanelment of hospitals. However, it has had to extend the timeline for compliance a few times.²⁷ Currently, already accredited facilities receive a higher payout from CGHS for the same services compared with their

unaccredited counterparts. Other GSHISs also have plans to follow the CGHS lead and increase their focus on quality standards.

Providing Financial Incentives to Improve Quality

Quality can be rewarded through payment mechanisms. One form of quality-based purchasing involves the use of incentives for hospitals to modify behaviors so as to improve quality. Rewarding performance requires robust information systems to ensure that the rewards are allocated to providers that really do achieve the desired improvements. In the decade following the publication of the Institute of Medicine's report on the state of quality of care in the United States (IOM 2000), numerous pay-for-quality programs have been piloted or implemented in the United States to address quality gaps. Indeed, provider incentive and reward strategies applied by purchasers have become widely accepted in Organisation for Economic Co-operation and Development (OECD) member countries as a means of improving performance, particularly in terms of quality. Nevertheless, implementation has been irregular, and evaluations are just getting under way. Recent analyses demonstrate that incentives work, but the research is inconclusive regarding the most effective quality-based purchasing strategies (Van Herck et al. 2010; Dudley 2005). Several types of initiatives, however, are worth examining.²⁸ These are summarized in box 4.2.

Box 4.2

International Experiences with Pay-for-Quality Incentives

These five types of quality incentives seem to work.

UNIMED, a private insurer in Belo Horizonte, Brazil, has linked reimbursement rates of networked hospitals to their achievement of accreditation levels of the National Accreditation Organization (Organização Nacional de Acreditação [ONA]). The insurer increases the reimbursement by defined percentages according to the accreditation levels attained (level 1 receives an additional 7 percent, level 2 gets 9 percent, and level 3 is paid an extra 15 percent) (USAID 2010). This example is particularly appropriate in India where the NABH Board has recently implemented a stage-based accreditation system, comprising "pre-assessment," "preaccreditation," and "accreditation" stages, which is similar to Brazil's staged system under ONA (Borem and Valle 2010).

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Box 4.2 (continued)

CCSS, the Costa Rican social insurance agency (CCSS) pioneered a pay-for-quality system with public hospitals. It rewarded hospitals for compliance with performance indicators related to adherence to protocols for prevention of nosocomial infections and delivery complications. Two percent of the annual budget was allocated to the program for bonus payments (McNamara 2005).

Blue Cross / Blue Shield of Michigan provided up to a 2 percent bonus to hospitals for participation in quality improvement programs related to care processes for patients with acute myocardial infarction and congestive heart failure. This "pay-for-participation" program compensates hospitals for staff participation in quality-improvement programs. The program incentivizes structural changes such as the formalization of quality management staff, creation of case-management teams, and increasing the engagement of hospital board members in quality improvement (Nahara et al. 2006; Birkmeyer and Birkmeyer 2006).

The *CMS-Premier Hospital Quality Incentive Demonstration* piloted a pay-for-quality reporting program in 2003 in hospitals treating Medicare patients. The program provided percent bonus over Medicare rates for hospitals that submitted data on 33 quality indicators for five clinical conditions: heart failure, acute myocardial infarction, community-acquired pneumonia, coronary-artery bypass grafting, and hip and knee replacement. For each condition, hospitals performing in the top decile on a composite score received a 2 percent bonus added to the regular reimbursement rate (Lindenauer et al. 2007).

Blue Cross / Blue Shield of Massachusetts Hospital Performance Improvement Program is a comprehensive pay-for-quality program designed to reward participating hospitals in four domains: pay for system improvement, pay for outcomes reporting, pay for patient satisfaction, and pay for improvements in governance. Bonus payments of between 3 and 6 percent are divided among the four domains such that a hospital may earn partial reward for achievements in some domains but not in others. Significantly, the system performance domain emphasizes safety-improvement measures drawing on the Institute for Health Improvement's Five Million Lives Campaign. This campaign essentially aims to reduce adverse events leading to needless death, disability, pain, and waste. This is achieved by implementing prevention processes (e.g., prevent pressure ulcers, adverse drug events, central line bloodstream infections, surgical site infections, surgical complications). Patient satisfaction measures were derived from the Hospital Consumer Assessment of Providers and Health Systems Survey. Governance improvement measures involved participation by hospitals' board of directors in a quality-improvement training program (Janet 2010; McCannon, Hackbarth, and Griffin 2007).

Expanding Public Hospital Autonomy

Public hospitals need to be organizationally equipped to respond to a new system of incentives and accountabilities inherent in demand-side financing if they and their patients are to benefit from the aforementioned reforms in purchasing systems, provider payment mechanisms, results-based financing arrangements and coverage extension through reengineering of GSHISs, discussed in the next chapter. As evidenced by the paltry utilization of public facilities by current GSHIS beneficiaries, public hospitals are poorly positioned to perceive and respond to such signals, whether in terms of adjusting bed capacity, range of services, inputs, staff mix, skill sets, and attitudinal responses. As GSHISs expand, public hospitals will come under increasing competitive pressure to perform or risk losing (or not gaining) clientele, and therefore, resources. How to position public hospitals to reap revenues from GSHISs is also an important political economy issue. Given the immense network of public hospitals throughout India, a case can be made that the potential success of GSHISs will depend on the affiliation of public hospitals in empaneled provider networks. Creating the enabling organizational environment for public hospitals to compete will probably take a number of years.

A good starting point is to analyze organizational arrangements and performance of autonomous public hospitals, particularly those already treating GSHIS-covered patients. Most of these autonomous facilities are medical college hospitals or nonteaching tertiary hospitals that were incorporated through special federal or state legislation in the two or three decades after Independence. Anecdotal evidence suggests that some of these facilities have witnessed strong demand from the GSHIS beneficiaries as part of the GSHIS provider networks, offering good quality services while retaining revenues earned. In many cases, personnel in these public facilities receive a share of the facility's earnings from the insurance schemes. In response to the extension of RSBY, Kerala is testing a "functional autonomy" model in which public hospitals fully manage all inputs and will be in a position to compete for beneficiaries (Arora and Nanada 2011). A recent State Government Order has granted hospitals more flexibility to hire staff under contract as well as directly manage revenues, and the state has allowed payment of staff incentives financed from the facilities' insurance revenues. The Cherthala Taluk hospital of Alappuzha district already recovers a significant proportion of costs by selling services to RSBY and has used these revenues to upgrade equipment and infrastructure.²⁹

Models from other countries are also worth studying. For example, Australia, Portugal, Spain, and the United Kingdom have gradually increased public hospitals' decision-making rights over the last two decades. Middle-income countries such as Singapore, Brazil, Colombia, Tunisia, and Estonia have also made important inroads in reforming public hospitals. In some countries such as Thailand, Malaysia, Panama, and China, reforms have been restricted to a limited number of facilities or cities. In general, reforms involve three core elements: retention of public ownership of the facility, conversion of the facility into a legally independent entity but free from "public law" constraints related to input management and civil service, and the use of contracts to foster facilities' accountability for results and compliance with public objectives. However, these reforms are usually undertaken as part of a broader package of reforms involving provider payment mechanisms, separating purchasing from provision, performance-based contracting, upgrading of plant and equipment, improving managerial capacity, and modifying human resource management practices. Approaches to the implementation of reforms involving these elements are reviewed in box 4.3.

As India moves forward with greater GSHIS coverage and more public hospitals affiliate with provider networks, it will face the difficult task of reducing hospitals' financial dependence on supply-side subsidies. This will be a gradual process but will require strong government commitment to create a level playing field in which all networked providers, public and private, compete on similar terms for patients and corresponding revenues from GSHISs. This may involve the gradual conversion of supply-side subsidies to the demand side.

Public hospital reform will require significant leadership and strong policy advocacy. Tinkering at the margins through, for example, providing partial autonomy, will probably not result in substantive improvements in organizational processes and performance. After systematically analyzing Indian and international experience in autonomous public hospitals, government will need to develop a strategy backed by a regulatory framework and an implementation plan to convert public hospitals to autonomous facilities with decision rights over all inputs, including human resources. As a first step, government can mandate that any new public hospitals should adopt an alternative arrangement that fosters full autonomy. However, current facilities will require a transitional arrangement, particularly for dealing with the complex issue of human resource conversion.

Box 4.3**International Experience in Public Hospital Reform**

How any hospital responds to the terms of contract or the incentives embedded in a payment mechanisms or pay-for-performance arrangement depends on how it is governed and managed. International experience suggests that five elements of the organizational environment are crucial to enable them to respond to such incentives (Figueras, Robinson, and Jakubowski 2005; Preker and Langenbrunner 2005; Preker and Harding 2003; La Forgia and Couttolenc 2008; McKee and Healey 2002). These elements are

- Decision-making authority, particularly regarding input management (autonomy)
- Exposure to market pressures in providing services to assorted purchasers (market exposure)
- Retention of unspent earnings and responsibility for losses (residual claimant status)
- Degree of directness of responsibility for performance (direct accountability)
- Specification of objectives and mission as well as of revenues to cover service costs (social functions).

Other factors include qualifications of managers and mechanisms to foster accountability for results. Patient choice and provider competition provide public hospitals with some market exposure and the defined entitlements and package rates provide some accountability for results. Arguably, the key element involves autonomy. Hospitals with the independence and flexibility to manage inputs, set case mix, adjust capacity, reallocate resources, and perform other managerial functions are better performers than their counterparts without such independence.

How public hospital reforms are implemented can vary significantly. The state of São Paulo, Brazil, achieved full autonomy in nearly 20 public hospitals by introducing public private partnerships (PPPs) in which charitable organizations were contracted to operate all clinical and nonclinical services (La Forgia and Harding 2009). Several countries (including Romania, Turkey, and Slovakia) have introduced private employment contracts for staff working in public hospitals to increase flexibility in human resource management and improve staff incentives. In Austria, public hospitals were transferred to nonprofit, public holding companies incorporated under corporate law, in each state. State governments retain

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Box 4.3 *(continued)*

ownership and maintain contractual arrangements with the holding companies. Autonomy was enhanced by replacing line-item budgets with global budgets (Fidler et al. 2007). A national law in Estonia converted public hospitals into private foundations or joint-stock companies. Hospitals were granted independent legal status and therefore managerial autonomy, but assets remained public. The heretofore public employment status of staff in most facilities was converted to a labor regime under private law (Fidler et al. 2007). In Spain, an array of autonomous arrangements has emerged in the last two decades in traditional public hospitals. Depending on the subnational government, several organizational types were legally created such as foundations, consortia, public firms, and autonomous organizations. Conversion has been gradual. In cases involving labor status changes, public employees are replaced by contracted staff through attrition (Martín 2003). The United Kingdom's experience of partial autonomy under the National Health Service Trusts of the 1990s and then greater autonomy under the Foundation Trusts (since 2003) has been well documented and provides some important lessons on the "how" of public hospital reform. Building the institutional, regulatory, and technical architecture to support, govern, and monitor autonomous hospitals has been a work in progress and subject to considerable changes and learning (World Bank 2010).

Reforms involving partial autonomy or autonomy without accountability have been less successful. In Colombia, facility managers were granted decision rights over all inputs except human resources. This severely restricted their ability to respond to incentives in the new insurance-based system (Toro et al. 2007). A study of five semiautonomous hospitals in Zambia found little impact on performance, in part because the facilities remained dependent on centralized historical budgets (Kamwanga et al. 2003). In their review of "autonomization" reforms in developing countries, Castaño, Bitran, and Giedrion (2004) warn that, without strong accountability mechanisms (such as enforced contracts), monitoring, regulation, and oversight, hospitals may display perverse behaviors such as raising user fees, reducing quality, inducing unnecessary demand, or making unnecessary and unaffordable investments in technology.

Strengthening the Collection and Dissemination of Consumer Information

An important institutional responsibility of GSHISs is to provide information to their beneficiaries to enable them to better manage their

interactions with the scheme, including insurers and providers, as well as take a more active role in their treatment and recovery. These interactions can include a number of areas, including enrolment, provider selection and access, treatment choices, access to follow-up care, dealing with illegitimate provider charges, and navigation of grievance and complaint processes.

Information disclosure is particularly relevant in the Indian context in which beneficiaries generally receive little information on providers, treatment options, and costs when involved in an illness episode or a care-seeking decision. This lack of information is compounded by socioeconomic, ethnic, and caste differences between beneficiaries and providers, leading to nearly absolute deference of patients to providers. The specialized cadre of GSHIS field workers, known as *arogyamithras* (in Andhra Pradesh, AP and Karnataka, KA-Arogyashri schemes), is one such effort to provide beneficiaries with information on their benefits and assist them in accessing providers in a timely matter. These initiatives should be reviewed by other GSHISs.³⁰

Research on insurance beneficiaries in the United States found that they are generally uninformed or confused about the basic features of private insurance schemes (Accenture 2008; Isaacs 1996) and seek much more information on how a scheme works, how much it will cost them out-of-pocket including any point-of-service charges, the particulars of the covered (and uncovered) services, the competence or quality of providers, and overall patient satisfaction with both the insurers and providers (Edgman-Levitan and Cleary 1996). They prefer an unbiased source for this information. They are also interested in how others “like them”—friends, family members, neighbors—judge the care experience. It is fair to say that Indians enrolled in GSHISs probably have similar questions and concerns.

GSHISs need to strengthen and, in most cases, formalize systems to help beneficiaries understand their rights and responsibilities within the schemes, access and navigate empaneled providers, track and monitor member contacts, deal with routine issues (e.g., change of address, lost cards, change of BPL or enrolment status, issuance or reissuance of identification cards due to new dependent or death), register complaints, and resolve problems and questions. Box 4.4 outlines questions for eight areas relevant to health insurance and health care information. The performance of a well-formulated consumer information system is based on how easily a beneficiary can find clear and timely answers to these questions.

Box 4.4**Areas of Consumer Information and Corresponding Questions**

Enrolment. Am I eligible? How many members of my family are eligible? How do I know I am eligible? How do I maintain eligibility?

Access. How do I get access to health care providers? Whom can I see? How do I find them? How long do I have to wait?

Benefit coverage. For what services am I eligible? What is not covered? What follow-up care is covered?

Costs. What costs do I have to pay? How much do I have pay? How and when do I pay it? What provider charges are considered legitimate?

Quality of care. How good are the different hospitals and physicians? How can I tell which will offer me the best care?

Patient satisfaction. What do others say about their experience with the different hospitals? In which hospitals do other beneficiaries tend to like the way they are treated?

Wellness. Where can I get information about my condition? What can I do to better manage my health (and condition)? How can I lead a healthier life?

Routine business. Whom do I contact to register a new dependent, a change of address, replace a lost card, renew eligibility?

Complaints and grievances. How do I file a complaint? Who will follow-up on my complaint? Is there a formal grievance or appeal process (for uncovered services, illegitimate charges, poor treatment)?

Source: Adapted from Accenture 2008.

Typically many information functions listed in box 4.4 are fulfilled through a member services department within a scheme's institutional structure.³¹ However, some functions can be delegated to independent public authorities or nongovernmental organizations. These latter institutional arrangements would provide for greater flexibility and independence, and in principle, may be more representative of consumer interests. International experience suggests that any of these institutional forms may work for providing certain aspects of consumer information

but their feasibility depends on national legal and regulatory regimes related to governance models.

The remainder of this chapter outlines best practices in a subset of operational features of a sound consumer information system for an insurance scheme.

- *Outreach and member education.* Schemes need to provide general information on how the scheme works, what the benefits are, how beneficiaries can best use the scheme, how to access information, and on other practical matters related to the insurance. Most schemes in India perform this function through camps. Other vehicles include village-based group information sessions, newsletters, websites, village theaters, and radio spots. Schemes can also launch a mobile phone-based outreach program, which has the advantage of allowing beneficiaries to ask questions. As mentioned, the AP scheme has hired field workers to staff primary care centers and hospitals to orient beneficiaries as they navigate the health delivery system. In the United States, a number of health insurers have developed “a member’s bill of rights” that details a member’s rights and an insurer’s responsibilities.³²
- *Routine access to and provision of information.* Beneficiaries need a “gateway” to the scheme to help them with any concerns or questions. In the Indian context, where mobile phone use is widespread, this is best achieved through a toll free hot line. The use of short messaging services (SMS) to provide short responses to specific questions is another possibility. GSHISs will have to consider the staff required for this task and their training needs.
- *Data collection and analysis.* The service department would be responsible for the collection, collation, and analysis of all beneficiary contacts with the scheme including levels of satisfaction/dissatisfaction, complaints/compliments, and any problem related to a claim, medical service, or administrative process. This would require securing tracking software that classifies and codes problems, which in turn will facilitate subsequent trend analysis. This information can be complemented by beneficiary surveys to gauge patient satisfaction and dissatisfaction.
- *Complaints and grievances.* Complaints are problems that beneficiaries would like to raise with the scheme. In most schemes, resolution of

complaints is often informal, but all should have a formal policy and process for registering, investigating, and resolving complaints. A grievance is a formal complaint and requires a clearly defined internal procedure to assess and resolve the same. This procedure should be made known to all beneficiaries. In some countries, such a procedure is mandated by law. Some countries also mandate an appeal process through independent ombudsman programs as in the case of the United States (Brunner et al. 2012). The Indian Insurance law has created an ombudsman mechanism to handle complaints on nonredressal of grievances emanating from private health insurance.

- *Quality-of-care measurement and dissemination.* Providing information on quality of care is arguably the most difficult task facing GSHIS due to the general lack of quality information in India and the absence of institutional arrangements to measure and compare quality across health care providers. Many OECD countries have created national institutions to develop and apply quality metrics that are used by public and private payers to provide information on the quality of care of networked providers to their beneficiaries. The quality reports on hospitals, for example, are often referred to as “report cards.” However, the breadth and depth of information varies significantly, and the extent to which consumers use available information to select providers is uncertain. Examples of quality ratings of hospitals are available in the United Kingdom, Germany, and in several U.S. states.³³ In the absence of these arrangements in India, as mentioned, the schemes themselves will have to initiate their own programs to measure and disseminate information on the quality of care in their hospital network. A good place to start is to adapt the indicators and instruments used to measure hospital quality in OECD countries.

Notes

1. The author identified five dimensions of good governance for social insurance schemes: coherent decision-making structures (to give decision makers the discretion, authority, and tools to comply with organizational objectives), stakeholder participation (to enable consensus in the decision-making process), transparency and information (to ensure that information is available to all stakeholders to fulfill their obligations and comply with rules and standards), supervision and regulation (to hold stakeholders accountable for behaviors and performance), and consistency and stability (to enable sustainability and continuity).

2. The GOI already has legitimate interests in this area under existing provisions for oversight and regulation of health insurance at the national level. For example, the IRDA Act (1999) and the Insurance Act (1938) provide for central-level regulation of the health insurance business. The GOI is also the major financier of GSHISs through its contribution to CGHS, ESIS, and RSBY and other health insurance schemes (such as the one for handloom workers).
3. Consumer information is taken up later in this chapter.
4. For example, it would be inappropriate to insert the proposed agency within the MOHFW, which cofinances a large provider network currently operated by state health secretariats, and this network would be increasingly contracted by the state schemes. This may create a situation of conflict of interest. Further, MOHFW has a number of stewardship responsibilities for the entire health system, including several regulatory aspects. It would be best to keep the functions of steward/regulator, insurer, and provider separate among different agencies or ministries.
5. Data monitoring and use is taken up below.
6. As discussed in chapter 3, all the new GSHISs depend on insurers, or to a lesser extent, TPAs, to perform a gamut of functions, including insurance functions such as underwriting, actuarial estimations, premium setting, and risk management as well as operational functions such as enrolling beneficiaries, provider networking, and claims administration.
7. See appendix D, Rajiv Aarogyasri case study.
8. See below for recommendations regarding strengthening provider payment systems.
9. As outlined in chapter 3, these include: variations in definition of what comprises a “package”—current packages are replete with duplications and inconsistencies. Some packages for similar procedures are not comparable across schemes. Package rates and the relative resource use are not aligned, which could make some procedures far more attractive for some providers, but not for others, and multiple rates are used across parallel schemes for similar packages.
10. A well-formulated payment mechanism can contribute to cost containment, promote efficiency and equity, and improve transparency and accountability.
11. Waters and Hussey (2004) review these methods. The activity-based costing (ABC) model appears most appropriate for costing package rates. Waters, Abdallah, and Santillán (2001) applied the ABC model in a developing-country setting and found the methodology robust for pricing without overly taxing administrative capacity.
12. For example, input prices, particularly for human resources and real estate, can vary considerably between, for example, facilities located in Tier 1 and Tier 3 cities.

13. In Thailand, the DRG provider payment mechanism is applied for inpatient services. However, the payout is calculated in terms of relative weights and not in absolute monetary terms. At the end of the year, a fixed global budget is distributed among providers in proportion to the weight earned. This limits the total payout for the government to the pre-declared fixed global budget and also reduces the incentive for providers to overserve.
14. Government may want to work with private insurers to have them adapt the same rate structure, thus resulting in a single-rate system (even with multiple payers and multiple pools). There is evidence from the U.S. state of Maryland that single-rate systems have been successful in containing costs (Murray 2009).
15. DEA is a method for estimating technical efficiency—the ratio of outputs to inputs used. It involves the use of linear programming to rank organizations producing goods or services according to their relative efficiency scores. See Bowlin et al. (1985) and Jacobs (2001) for a critical review of the DEA methodology. Benchmark analysis refers to a systematic process of evaluating and comparing organizations' processes and performance with those of organizations considered to represent best practice (Gohlke 1997; Hurst and Jee-Hughes 2001). Benchmarking has gained considerable acceptance in the health sector for comparing provider performance in terms of efficiency and quality.
16. However, case-based payment mechanisms are not without risks. Measuring case-mix change over time has been difficult. At the same time, hospitals are known to game the system through record-keeping practices in which they “up code” (also known as “DRG creep”) to higher-weight DRGs to increase revenues. To avoid hospitals' charging for higher severity than existed would require major improvements in coding and medical record documentation. The latter is particularly lacking in India and would take many years to implement.
17. On the demand side, cost sharing is another common cost-containment method, but this may be unacceptable in the Indian context because of the potential to impede utilization by the BPL population. However, cost sharing may be a viable cost-control mechanism for non-BPL populations if the cost to the household is significantly lower than the alternative—out-of-pocket payments to service providers.
18. As suggested above, this would require implementing sound purchasing practices.
19. Based on mutual agreement, smaller states could voluntarily choose to use the purchasing platform of an adjacent large state, which could potentially result in better bargaining power and a wider provider network.
20. See discussion on provider payment mechanisms in the previous subsection.

21. Although some schemes already employ a subset of these measures, in general they are weakly or irregularly applied by most GSHISs.
22. For a detailed account of profiling methods applied by insurers in the US, see Kongstvedt, Goldfield, and Plocher 2001; Goldfield 1999; Goldfield and Nash 1999.
23. Some measures may require adjustment for case severity.
24. The U.S. government and nonprofit institutions have developed standards for measuring the performance of insurers, health plans, and providers. See: <http://reportcard.ncqa.org/plan/external/plansearch.aspx>; <http://hospital-compare.hhs.gov/>; <http://www.qualitycheck.org/consumer/searchQCR.aspx>.
25. This would increase by 10 percent if the transient poor are included.
26. The impetus for quality-based purchasing schemes was reports that documented quality shortcomings. The Institute of Medicine (2000) in the United States estimated that between 44,000 and 98,000 Americans die annually as result of medical errors. An additional hundreds of thousands suffer or barely escape from nonfatal injuries that consume an estimated 20 to 40 percent of the country's health expenditures.
27. Although accreditation by international accreditation agencies of a handful of elite hospitals has existed for about a decade, India's home-grown accreditation agency was established only recently. The National Board of Accreditation for Hospitals and Healthcare Providers (NABH) under the Quality Council of India commenced hospital accreditation in 2005 and has had very modest uptake. Hospitals seeking to attract foreign clients were the first in line. In 2010, there were only 44 NABH accredited hospitals, but an additional 336 hospitals were at various stages in the accreditation process. Still, at this rate it will take several decades to accredit even the 10,000-odd hospitals currently used by the insurance system. Hospitals have few incentives to become accredited.

Experience from accreditation programs in developed and developing countries shows that well-designed accreditation systems contribute to improved quality of health services. Although few accreditation programs have been evaluated using rigorous methodologies, accredited facilities more often comply with standards than do unaccredited facilities (Shaw 2004a). Accreditation and the quality-enhancement programs employed to achieve it can lead to improved health care quality. Compliance with standards is related to improved care processes associated with outcomes such as reductions in hospital infection rates, medical errors, and adverse events (Heerey and Necochea 2005; Scrivens 2002; Shaw 2004a, 2004b). This is particularly true when the accreditation scheme is integrated into an overall quality measurement and improvement program (WHO 2003). In addition, the processes of training personnel, adapting systems, and developing indicators can in

- themselves improve hospital quality, irrespective of whether accreditation is sought or achieved.
28. An emerging literature exists on methods, plans, and guidelines to develop and implement pay-for-quality schemes as well as opportunities, pitfalls, and lessons learned for different types of schemes; a review of this literature is beyond the scope of this report. For reviews, see Van Herck et al. (2010); Damberg et al. (2009, 2007); Christianson, Leatherman, and Sutherland (2007).
 29. As highlighted in box 3.1, Rogi Kalyan Samiti (RKS) Committees or their equivalents have been established in all public hospitals. These societies are responsible mainly for managing flexi-funds granted by the National Rural Health Mission as well as their own earnings from user fees and any other sources. Revenues are used to make repairs, hire contractual personnel, and purchase supplies and minor equipment. In some facilities, the committees have contributed significantly to improving facility performance, at least in terms of patient satisfaction. The RKSs have potential to foster the decentralization of decision-making authorities to the facility, but deeper reform will be required to foster greater autonomy.
 30. See the AP and KA-Arogyashri case studies in appendixes D and G, respectively.
 31. Based on U.S. experience, Kongstvelt (2001b) estimates that staffing this department would require one staff person for every 7,500 members. However, any ratio depends on the incidence and nature of member contacts.
 32. See, for example, Aetna's "Members' Rights" : <http://www.aetna.com/faqs-health-insurance/member-rights-member-services-faqs.html>.
 33. For the United States, see: <http://hospitalcompare.hhs.gov/>; for the United Kingdom, see: <http://www.nhs.uk/ServiceDirectories/Pages/ServiceSearch.aspx?ServiceType=Hospital&InputError=Default>

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CHAPTER 5

Pragmatic Pathways to Universal Coverage

The ultimate objective of universal coverage is to ensure access to and use of quality health services for all people and to provide financial protection against poverty-inducing health shocks. India is far from achieving all three. Most Indians are overexposed to financially crippling health shocks. Typical of many developing countries in the pursuit of universal coverage, India is grappling with three major issues: extending coverage to its informal poor, expanding (and effectively delivering) a package of services that addresses their health needs—including those of the informal nonpoor—and doing this within a robust financial protection mechanism. Finding an affordable and politically viable combination of health financing mechanisms to achieve universal coverage underlies all issues.

Government faces difficult decisions on allocating new resources to personal health care, catastrophic care, and population-based public health interventions. Currently, all are inadequately financed. It also faces tough decisions on how to allocate these resources: through the demand-side purchasing approach pioneered by the new generation of government-sponsored health insurance schemes (GSHISs) or through the traditional supply-side public delivery system. To this can be added tough decisions about the recipients of government subsidies. Should government target the poorest in the below-poverty-line (BPL) population for a deeper benefits package? Or, as some states do, should it include the

vulnerable nonpoor but offer more limited coverage? Other confounding issues include the acceptable mix of public and private provision and the roles of central and state governments in financing coverage expansion.

As the government of India (GOI) prepares for the 12th Five Year Development Plan, calls are mounting for it to deliver on its promise to significantly raise public spending on health. A ‘Call for Action’ was recently prepared by a distinguished panel of academics, social advocates, and opinion leaders, and published by *The Lancet*. The panel, known as the India Lancet Group for Universal Health Care, recommended a “universal” and “integrated health plan” that would provide comprehensive coverage for all Indians. This benefit would be mostly government-financed through a single “national insurance fund” (Reddy et al. 2011; Shiva Kumar et al. 2011). To finance this program (as well as other recommended activities) the Group calls on government to increase public spending for health to 6 percent of GDP by 2020, including a 2 percent of GDP target by 2012. Although the details of how to reach coverage and spending goals and put in place the proposed health plan and insurance fund were not specified, the overall proposal has many praiseworthy strategic elements.¹ Nevertheless, given past growth trends in central government health spending, low tax-to-GDP ratio, fiscal limitations of state governments, and increasing demands on government coffers, it is unlikely that the proposed rate of growth in government financing will materialize, at least in the medium term. This in turn calls into question the affordability of achieving universal coverage through a comprehensive benefits package for all Indians.

In the spirit of the *Lancet* Group’s call for a national debate on its recommendations, this chapter details a path in incremental steps toward achieving universal coverage that takes as starting points the current configuration of health financing and delivery arrangements, recent trends in government health financing as well as innovations and lessons from the new wave of GSHISs analyzed in this report.² Building upon the experiences of the GSHISs, the following actions are recommended: a reconfiguration of insurance schemes, expansion of population coverage to both the BPL and the vulnerable nonpoor populations, and the deepening of benefit coverage. In light of stated government commitment to significantly augment public spending on health, the proposals are funded mostly—but not exclusively—by central and state government fiscal resources. Mechanisms to link the schemes to the public delivery system are also recommended. These arrangements can be implemented over the period spanned by the 12th Five Year Plan.

The first part of this chapter identifies the foundations already in place that serve as the basis for these recommendations. The second details the proposed reconfiguration of GSHISs, corresponding institutional arrangements, and links to the public service delivery system. Potential regulatory issues related to the private insurance industry are also discussed, and the costs of coverage expansion through the restructured system are estimated. The chapter concludes with a review of issues for further research.

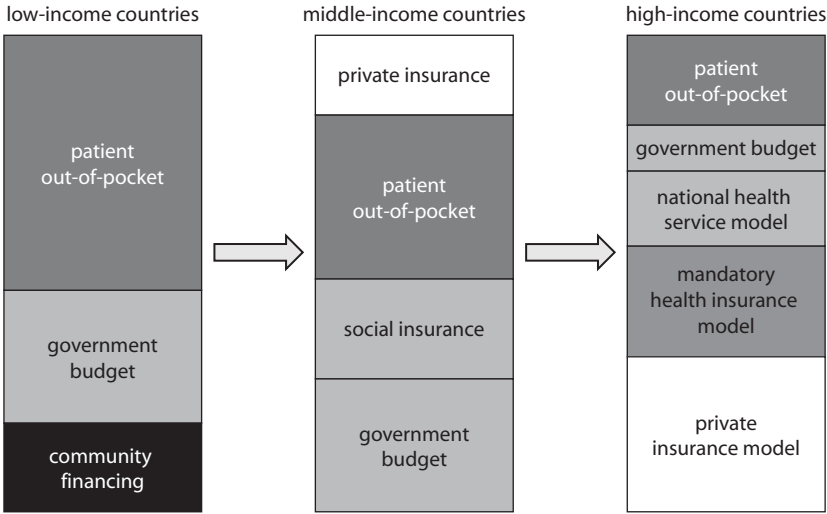
Building Blocks for Change

India's health sector is expanding in several directions at once, not all of which is planned or regulated. India needs to act soon to avoid the chaotic and inefficient development of its health system. On the supply side, central and state governments are increasing financial allocations to public delivery through the National Rural Health Mission (NRHM), and this has contributed to a major extension of public facilities.³ On the demand-side, and as documented in this report, the GOI has introduced a national insurance scheme for the poor, and more than a handful of states have already significantly increased allocations to health through recently launched GSHISs. Stimulated partly by the new wave of GSHISs, recent tax incentives, and an emerging middle class, that is able and willing to pay for medical care, growth of the private hospital industry has accelerated with an increasing presence in Tier 2 and 3 cities. Private insurance is expanding rapidly, particularly in the corporate sector and among the new Indian middle class, and will contribute to expansion of private delivery.

Figure 5.1 depicts the evolution of health financing systems for low-, middle-, and high-income countries. India has the classic features of a low-income country due to the predominance of out-of-pocket (OOP) spending as the main source of financing and the lack of other mechanisms of social financing. The idea is to move toward greater use of social or government-sponsored health insurance as a source of pooled financing. Given the high levels of informality and poverty in India, this will not be easy.

India needs a vision of a health financing system that delivers value for the money, provides financial protection, and allows real access to defined packages of health benefits. The country faces the difficult task of calibrating the best blend of financing and risk-pooling instruments linked to effective service delivery arrangements and cost-control mechanisms. Such instruments should offer access to an affordable combination

Figure 5.1 India: Evolution of Health Financing Systems, by Income Level



Source: Adapted from Gottret et al. 2008.

of primary, secondary, and tertiary care services that can affect both health and financial protection. It is best to start from wherever you are.

Strong foundations have been put in place to build a positive consensus. NRHM has contributed to making operational a large number of primary care centers through upgrading infrastructure and equipment and hiring of professional personnel. It also has resulted in improvements in public health programs. Several low-cost private delivery models have emerged that may represent an affordable and complementary delivery platform for public financing (IFC forthcoming). The new wave of GSHISs has introduced several innovations in the Indian health system from the standpoint of public financing. These potential “spillover” effects include: defined entitlements, patient choice (money follows patients), provider empanelment, provider competition (in principle), and separation of purchasing and provision functions. In addition, new GSHISs place strong emphasis on the inclusion of the lower segments of Indian society. This bottom-up approach to coverage expansion can be seen as possessing a “built-in” design to reach universal coverage by increasing the depth or scope of coverage for the poor while preparing the way for expanding the breadth of coverage to nonpoor but vulnerable groups.⁴ Finally, and as observed in the state-sponsored schemes, political leadership

appears to increasingly favor a highly visible, well-defined package of benefits that can be successfully delivered. Emerging evidence suggests widespread public support for specified but cashless benefits packages and choice of providers. In part because of their public support and political viability, these schemes are here to stay, and other states are likely to follow.

Pathways to Expanding Population Coverage and Benefit Coverage

In this section we outline a feasible and affordable path to strengthen progress toward universal coverage based on realistic assumptions of fiscal capacity, the current configuration of health financing and delivery arrangements, lessons and innovations from GSHISs, and international experience (box 5.1). It consists of three components and four benefits packages covering both BPL and vulnerable poor populations.⁵ (See annex table 5A.1 for specification of indicative service coverage for each of the four packages.)

- (1) GOI-financed benefits
 - standard benefits package for secondary and maternity care for BPL population;
 - ambulatory benefits package for the BPL population;
- (2) State-financed benefits
 - “top-off” tertiary benefits package for the BPL population;
 - “contributory” point of service package for the vulnerable non-BPL population;
- (3) Consolidation of Employees’ State Insurance Scheme (ESIS) and Central Government Health Scheme (CGHS).

The recommendations presented here address the following questions: How can current financing and delivery arrangements be improved and made to work together to contribute to universal coverage? What can India do to narrow the gap between current GSHISs while continuing to expand both the depth and breadth of coverage? What is the role of the central government vis-à-vis state governments in financing and operating GSHISs? How can the varying schemes be coordinated and duplications avoided? How can GSHISs be better linked to primary care and the public health systems? First, the recommended institutional architecture to support the proposed financing and delivery arrangements is examined.

Box 5.1**Extending Coverage to the Informal Sector: Lessons from Middle-Income Countries**

Analyses of experiences of Latin America, Eastern Europe, and Southeast Asia in extending universal coverage to informal sectors suggest several policy prescriptions that are relevant to the Indian context:

Financing

- Aggregate risks into large pools where possible.
- Align proposed expansion with potential for fiscal sustainability.
- Avoid contradictory policies that fail to coordinate supply- and demand-side financing schemes.
- Shift from payroll tax financing toward general revenues.
- Use general revenues to cover the poor.
- Promote actuarial analysis to establish the long-term solvency of the schemes.

Pooling

- Reduce risk-pooling fragmentation and population segmentation through virtual pools with uniform rules, benefits, and payment mechanisms.
- Avoid contributory schemes for the informal sector due to high costs and complexity of collecting contributions and the potential for adverse selection.

Benefits

- Move toward uniformity of benefits packages across schemes.
- Consider partial subsidies for the nonpoor but vulnerable informal sector.
- Benefits packages require costing as well as alignment with fiscal realities.

Purchasing

- Use leverage of large pools to enhance purchasing power vis-à-vis providers.
- Seek efficiency, provider responsiveness, and quality gains through developing purchasing functions and explicit contracting.
- Expand choice of service providers.
- Avoid fee-for-service payment systems.

Institutional

- Establish an insurance agency that is independent and insulated from political interference.
- Guard against the leakage of funds due to corruption.

Source: Tangcharoensathien et al. 2011; Kutzin et al. 2010; Wagstaff et al. 2009; Hsiao and Shaw 2007; Baeza and Packard 2006.

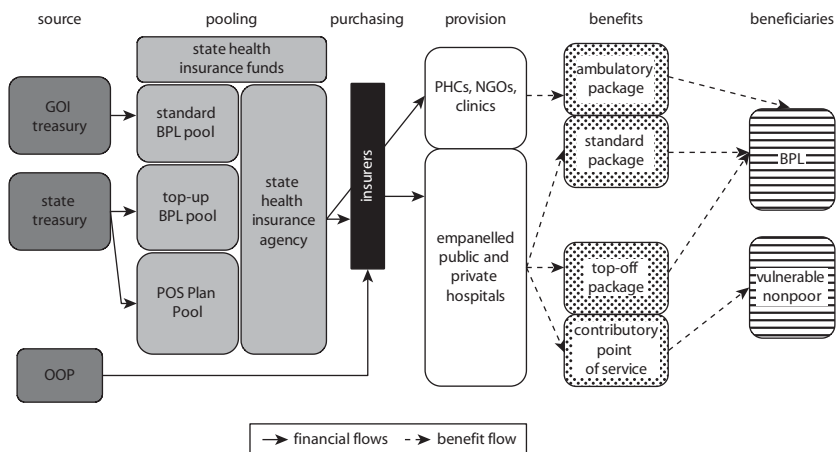
Institutional Arrangements

Before describing the proposed configuration and expansion of schemes, a few words on the proposed institutional arrangements are in order. Figure 5.2 illustrates the financial and benefit flows of the proposed schemes as well as state-based institutional arrangements. As discussed in chapter 4, the GOI would establish a governance agency to coordinate and support the functioning of all GSHISs. However, it will be the responsibility of the states to operate the schemes,⁶ including the pooling of risks, purchasing of services, and direct monitoring of providers and beneficiaries.

Pooling (e.g., the collection and accumulation of revenues on behalf of the beneficiary populations) would be decentralized at the state level managed under a single, autonomous state purchasing agency. For each scheme, virtual pools or accounts would be established within the state purchasing agency.

Pooling and purchasing will be performed by the same agency, but the latter function will be conducted through (or with the support of) private and public insurers and third-party administrators (TPAs). The use of intermediary agencies from the private health insurance sector has been an innovative feature of GSHISs, contributing to more or less successful beneficiary enrolment, claims management, provider empanelment and payment, preauthorization systems, and insurance underwriting. In the absence of such intermediation, it may have been difficult to create purchasing

Figure 5.2 Financial and Benefit Flows of Proposed Schemes



Source: Authors' elaboration.

systems to contract and oversee private providers to the extent that has heretofore been possible by the GSHISs.⁷

Allocation from the pooling accounts to purchasing functions will be internal to the agency. Unifying pooling and purchasing under a single “umbrella” organizational arrangement promotes equity and efficiency by reducing the probability of fragmentation and segmentation while increasing the schemes’ financial leverage with providers. Equity will also be enhanced by purchasing services (for all beneficiaries) from the same set of empaneled providers, thus avoiding the further development of parallel delivery systems. As suggested, the proposed consolidation of heretofore separate schemes under a single state agency creates opportunities to increase their collective purchasing power.

Fully Subsidized GOI-Financed Standard Package for the BPL: Secondary and Maternity Care

This package builds upon the Rashtriya Swasthya Bima Yojana (RSBY) design and implementation experience. It would contain services currently covered under RSBY—mostly secondary and maternity care. It would therefore provide coverage against many financially catastrophic health events.⁸ Similar to RSBY, the proposed common standard benefits will be fully subsidized, portable across India, and directed to the BPL population. The GOI would provide guidelines for each state to implement. These can include: benefit definition, eligibility criteria, reporting requirements, cost-containment mechanisms, provider audits, fraud and corruption control measures and standards, provider empanelment and disempanelment, quality measurement and reporting, information systems, and provider contracts. A subset of these measures has already been established under RSBY. Means testing to better target the BPL population will need significant strengthening.⁹

Because health is constitutionally a state subject in India, placing the states front and center in the implementation of any GSHIS is an important starting point. This scheme would be operated by the states and would be cashless to the beneficiaries. GOI can consider financing the entire cost of the package from general revenues through state per capita (or per family) transfers.¹⁰ As discussed below, GOI can incentivize additional state contributions to deliver a deeper “top-off” package through a matching grant arrangement. In other words, GOI would fully finance the standard package, but conditioned on state financing of additional ‘top-off’ benefits.

However, the implementation and institutional arrangements would entail a number of important enhancements to RSBY, some of which were described in previous sections:

- (1) States would administer the GOI-funded standard package as the basic component of a larger, integrated state-executed insurance system which can include “top-off” benefits as well as coverage of non-BPL population groups (see below). Essentially this means that each state would operate one health insurance system that can include several optional components in addition to the base, standard coverage.¹¹
- (2) The full cost of the standard package is assumed by the GOI; this would allow states to use their own resources for deepening the benefits package (e.g., top-off benefits) or to include wider population groups.¹² Nevertheless, full GOI financing can be conditional on state contributions to a top-off package (see next section).
- (3) All purchasing functions would be conducted under a common, state-based purchasing platform through an independent state agency in which all “operational” rules and requirements are set by the states. As described in chapter 4, the GOI establishes an autonomous national umbrella agency to oversee, coordinate, monitor, evaluate, and provide technical support to state-sponsored schemes including the preparation of guidelines, policies, statutes, information technology (IT) systems, operating instructions, and manuals.
- (4) States select payment mechanisms and set rates according to local costs and market conditions and in line with their policy priorities.
- (5) GOI transfers to the states would be adjusted for local costs of provision with a possible add-on subsidy for resource constrained states.
- (6) Contingent on GOI approval, states can alter the standard package to address local disease burden.¹³

Fully Subsidized GOI-Financed Ambulatory Care

As part of the GOI-financed standard package for the BPL population, an incremental, demand-side subsidy is proposed for government primary health centers (PHCs). These funds would address financial gaps while stimulating accountability for results and leveraging the supply-side investments underway in these facilities. This arrangement would also promote stronger ties between the GSHISs and the public delivery system. Nevertheless, given current deficits in governance, management, purchasing, and monitoring arrangements, including comprehensive ambulatory coverage within the scope of the newer GSHISs is a

long-term objective. Any movement toward introducing an ambulatory benefit should be done cautiously and through demonstration projects to test their financial feasibility.¹⁴

Another emerging issue concerns the interface between hospital and ambulatory services. Given rapidly changing patterns of disease (e.g., the onslaught of chronic conditions),¹⁵ medical technologies, demand for health care, and availability of health professionals, India needs to explore a less traditional and less hospital-centric care model. Increasingly adopted by countries in the Organisation for Economic Co-operation and Development (OECD), such a model would involve the use of coordinated or integrated delivery approaches that foster strong linkages between primary facilities, hospitals, diagnostic centers, and other providers (box 5.2).¹⁶

Nevertheless, there are certain ways in which the proposed GOI-financed standard package can include ambulatory coverage while also creating linkages between hospitals and primary care providers, including government PHCs. Three options can best be described as initial steps to prepare the way for subsequent, substantial experimentation with coordinated or integrated care approaches to cover outpatient or ambulatory care:

Box 5.2

Health Care Coordination in OECD Countries: Lessons for India?

Health care systems in OECD countries have evolved significantly in the last two decades and offer some lessons to India regarding what to anticipate given an aging population, economic and medical progress, emergence of chronic diseases, and public dissatisfaction with access to and responsiveness of health care. The growing prevalence of chronic disease has been a major driver of calls for coordinated care in OECD countries.

It is well established that people with chronic conditions are high users of health services and absorb a higher share of costs (Mackenbach 2005; Broemeling, Watson, and Black 2005; Thorpe and Howard 2006). Care models are emerging to address the needs of these groups to reduce costs for both patients and institutional payers, improve outcomes, and raise the quality of and satisfaction with care. Although models vary considerably, countries are consciously reducing their hospital capacity, which in many cases reflected a bygone era of hospital-based acute

(continued next page)

Box 5.2 (continued)

care, and moving toward a care model that places greater emphasis on primary care and coordination across care settings (OECD 2009; Hofmarcher, Oxley, and Rusticelli 2007). Care coordination consists of a mix of measures that link professionals and organizations at all levels of the health system, emphasize patient-centered care integration, manage patient navigation through the delivery system, and promote follow-up care as well as the continuity of long-term service provision. The concept is often based on the strong role of primary care as the driver of coordination functions (Saltman, Rico, and Boerma 2006).

Most coordination models target specific patient groups such as seniors or people with one or more chronic conditions. One approach is known as disease management. Disease management programs can consist of a number of components, including multi-disciplinary teams, provider education, provider feedback, information technologies such as electronic medical records (to share patient information), organized provider networks, patient reminder systems, use of evidence-based guidelines, financial incentives to providers, and the use of family physicians that coordinate treatment (Ofman et al. 2004). A similar approach, sometimes referred to as case management, consists of assessing, planning, managing, and monitoring of an individual's social, prevention, and treatment needs. This is performed by a "case manager," who in principle works with providers across all levels to ensure cost-effective treatment. Case management is often used with seniors. Other, and less common, models involve the delivery of a comprehensive package of services to a defined population through integration of financing, professionals, and facilities under a single organizational and managerial structure. Kaiser Permanente and the Mayo Clinic in the United States are examples of an integrated delivery system.

The impact of care coordinated models is mixed. Evaluations have been plagued by methodological issues. In a review of the literature, Hofmarcher, Oxley, and Rusticelli (2007) found disease management programs appear to improve quality and outcomes. Although these programs may reduce hospitalizations, their impact on cost containment appears inconclusive. Evidence from large integrated delivery systems (e.g., Kaiser Permanente, Mayo Clinic) suggest that these organizations are able to follow care management processes (such as clinical pathways), reduce unnecessary hospitalizations and lengths of stay, and provide higher quality care at lower costs than other types of delivery arrangements (Weeks et al 2010; Tollen 2008; Shortell and Schmittdiel 2004). Finally, effective primary care systems have resulted in reductions in often unnecessary and costly hospitalizations in both high- and middle-income countries (OECD 2010a; Macinko et al. 2010; Bynum et al. 2011; Bitran, Escobar, and Gassibe 2010).

- (1) Package payments for a defined period of post discharge, follow-up care for insured patients which can be provided in government PHCs/ community health centers (CHCs) and other contracted primary care providers
- (2) Capitation and package payments for defined bundles of primary care services that are tied to performance in government PHCs/CHCs; non government organizations (NGOs) and private clinics can also be contracted under this arrangement to deliver primary services in areas where the presence of government services is absent, inadequate, or irregular
- (3) Standard outpatient insurance “product” provided by public and private outpatient clinics and hospitals.

These options are summarized in table 5.1.

Package payments for follow-up care. The first and perhaps easiest arrangement is to include in the benefits package essential follow-up ambulatory care for several years (lifelong care will be required in some cases) after procedures such as organ transplants, heart valve replacements, and certain neurosurgical procedures. The need for follow-up

Table 5.1 India: Options for Expanding Ambulatory Care to BPL Population under GSHISs

<i>Options</i>	<i>Payment mechanism</i>	<i>Provider</i>	<i>Benefits</i>
1. Postdischarge packages	Modified hospitalization package rates that include a specified follow-up care component	Government PHCs Contracted NGOs Private clinics	Defined packages of follow-up care that are automatically authorized postdischarge
2. Primary care packages	Performance-based capitation credit for defined package of ambulatory services	Government PHCs Contracted NGOs Private clinics	Defined bundles of services such as maternal and child health services, ambulatory surgery, and chronic care management packages
3. Outpatient “product”	Outpatient capitation rates (or blended payment models)	Empaneled hospitals and public and private clinics	Defined services including outpatient visits, diagnostic tests, and drugs for a specified period

Source: Authors' elaboration.

medications and, in certain cases, diagnostic tests is long term for a number of procedures. Neglecting postsurgical treatment is associated with poorer health outcomes. Such follow-up care is not adequately addressed in the current, procedure-based, inpatient model which includes only a few days of after care, if at all.

Adding such a benefit would be administratively easy (e.g., by including the incremental cost in the current package rates among already authorized and verified beneficiaries) and would not cause significant increases in outlays.¹⁷ Many of these benefits can be easily bundled into a package payment in which the precise services, drugs, and consumables are defined. Public and private ambulatory providers can be contracted by empaneled hospitals to provide these packages of follow-up care.

Primary care packages with performance-based payments. A second arrangement holding great potential for convergence with primary care as well as for strong linkages with the public health service system entails a (demand-side) performance-linked payment for government PHCs. Essentially, PHC providers would be paid for delivering a defined package of primary services to BPL populations. Such an arrangement would require measurable indicators that are also in line with policy priorities and robust monitoring systems to verify performance indicator compliance.¹⁸ The demand-side subsidy would also reduce beneficiaries' OOP spending. This could work in two ways:

- *Capitation credit.* This approach involves paying a credit of, for example, Rs. 500 or Rs. 1,000 (or higher) per covered family per year into the PHC account in return for compliance with indicators such as the families' enrolment with the PHC; meeting requirements for provision of immunizations, antenatal care, and well-baby care; undertaking chronic disease management; providing a gatekeeper role for inpatient care; and ensuring that postdischarge follow-up care and medications are provided (as discussed below). The list of possibilities with which this incentive could be linked is virtually unending, and will depend upon state policy priorities for the state as well as monitoring capacities.

Paying for drugs should be the major use for this credit, based on the understanding that pharmaceuticals are often scarce at PHCs due to underfinancing.¹⁹ Drug purchases account for between 70 and 80 percent of OOP spending in ambulatory settings, and this is a major bone of contention for local populations. The additional financing for drugs will go a long way toward eliminating stock outs while representing a first step toward linking the demand-side schemes with primary

care and existing public health facilities. The availability of a bulk procurement and logistics agency such as Tamil Nadu Medical Supplies Corporation (TNMSC) of the state of Tamil Nadu will also be an essential prerequisite to make this option operational.

Upon verification of compliance with the prespecified performance indicators, the PHC would receive this credit, and the total (or partial) amount of the credit would be redeemable against the purchase of generic pharmaceuticals from the bulk procurement agency established by the state.²⁰ It would be best to start simply, by incentivizing a limited set of benefits at PHCs. Gradually, the benefits package, and corresponding indicators to monitor PHC performance, can be expanded to include coverage of other areas of wellness, prevention, or case management. Indicators can be calibrated for performance on a quarterly or semester basis and therefore the credit could also be released in smaller increments.

- *Ambulatory package rates.* Similar to follow-up care packages, ambulatory services involving easily definable services and corresponding volumes can be bundled into a global fee or ambulatory package rate.²¹ This package rate encompasses all interventions, consultations, diagnostics, and consumables related to a set of outpatient services or an outpatient treatment regime. Service bundling provides incentives for the efficient use of services but at the same time is attractive to providers because payments are linked to provision of the interventions constituting the package. A bundled, single fee can thus be applied to cover services such as mother-infant care (e.g., antenatal care package, childbirth/labor package, and postnatal and well-baby care package), ambulatory surgery, and case management of specific chronic conditions. A scheme could cover all or part of the variable costs of care offered at PHCs.

In addition to paying for drugs and consumables, part of this additional financing can be distributed as performance incentives among staff against compliance with output and quality indicators, which could even be verified by local communities. Nonmonetary incentives are another option that could be considered in lieu of or in addition to monetary incentives.²² Examples of ambulatory packages are provided in box 5.3. In the context of public PHCs in India, any payment can be channeled through Rogi Kalyan Samities to finance consumables, facility upkeep and upgrades, and if feasible, performance incentives to staff.

Performance-based arrangements can also be extended to NGOs to deliver a package of primary care services in PHCs where government has

difficulty recruiting and maintaining professional staff. NGOs can be contracted and paid through a capitated, performance-tied payment. Performance-based contracting of NGOs and nonprofit providers has been found to be an effective means of covering hard-to-reach populations in several countries (Loevinsohn and Harding 2004). NGO contracting is also underway in several Indian states, though in a very limited way. As discussed earlier in this chapter, as the schemes strengthen their purchasing platform, they can contribute to effective extension of basic care while addressing many of the managerial shortcomings related to NGO contracting that have impeded performance in India.²³

Outpatient product. Yet another option to deliver demand-side financing for ambulatory care is to structure an outpatient product. Providers would

Box 5.3

International and Indian Experiences with Ambulatory Package Rates

In the U.S. state of Maryland, global fees (similar to package rates) are applied to ambulatory surgery (e.g., ophthalmologic, arthroscopic) and other treatments (Atkinson and Murray 2008).

In India, some GSHISs already include ambulatory care packages associated with ophthalmology (RSBY, Yeshasvini) and parenteral chemotherapy (AP, TN). A package purchasing model is being implemented through the Chiranjeevi program in the state of Gujarat. The state government purchases a package of maternal and child care directly from private providers. A preliminary assessment has shown that Chiranjeevi has increased institutional births among the poor while reducing their out-of-pocket spending (Singh et al. 2009; Bhat et al. 2009).

In Peru the government created a demand-side payment scheme for public providers to cover a set of maternal and child care interventions. The program was essentially a mother-child insurance scheme for public providers that partially financed the variable (mostly nonsalary) costs of the benefits. Bitran, Muñoz, and Prieto (2010) report that the program had a positive impact on financial protection and access for a number of (but not all) services.

In each of these cases, payments (e.g., fees) to private and government facilities were made against verification that services were delivered. The funding provided an incentive to deliver the covered services.

be paid for a complete set of defined outpatient services on a capitation basis (or using a blended model combining capitation with performance-based payments). Both public and private providers could be chosen by the beneficiaries, similarly as the inpatient care structure, although the choice would not be for each episode of care but for a period of time. The providers would undertake to provide all the defined services, including outpatient visits, diagnostic tests, and drugs for the specified period, to beneficiaries enrolled with them. The claim risk as well as the development of provider networks and a system for paying them could be transferred to insurers or retained in-house by the state purchasing platform. A fee-for-service payment mechanism for this outpatient product is not recommended because it could lead to significant moral hazard and cost containment issues.

Fully Subsidized State-Financed Top-Off Package

States, of their own volition, could choose to offer an expanded set of tertiary care benefits for the poor, drawing on their own resources. Two states, HP and Kerala, are already implementing “top-off” benefits packages to complement RSBY, and Delhi is planning the same. The GOI can underwrite the full cost of the aforementioned standard package of secondary and maternity services—conditional on state financing of a top-off scheme to cover higher-cost, tertiary care events not included in the standard package.

Similar to the standard package, these top-off benefits would be fully subsidized for BPL populations without any premium contribution or cost sharing when using services. The GOI and states may draw on the utilization experience of the existing state-sponsored top-off and tertiary care schemes to guide their design of the benefits package. However, final decisions in this regard should be left to the states for greater ownership.

The fiscal capacity of the states would probably determine the depth of coverage. Therefore, richer states can be encouraged to offer a deeper package. For states fiscally unable to fully or partly finance the proposed top-off scheme, the GOI can consider two options. The first would involve eliminating the top-off package but requiring a cost-sharing arrangement in which the state contributes to the cost of the standard package. This could be similar to the current arrangement under RSBY (e.g., 75 percent or 90 percent central contribution, the rest from the state). The second option could involve a matching-grant arrangement in which the GOI and the state cofinance a limited top-off package. The second option would be feasible for states that can only partially finance the top-off package.

Partially Subsidized, State-Sponsored “Contributory” Point of Service Benefits Package for Vulnerable Non-BPL Populations

This proposed component, also voluntary for the states, is directed at that part of the above-poverty-line population that is classified as the vulnerable poor (NCEUS 2009). This group may not be the poorest in the population but its members are financially vulnerable to health shocks and generally seek care from private providers, paying out of pocket for nearly all services.²⁴ Ideally, this scheme would consist of both the aforementioned standard central (secondary and maternity) and the top-off (tertiary) packages offered to the BPL population. It would thus contribute to equity by reducing population segmentation. However, some diversity will emerge among states.

The scheme would be state-funded but require cost sharing by patients, at point of service when they receive treatment. Potential beneficiaries would join the scheme for free, that is, without any upfront contribution or premium payment, exactly akin to the BPL enrolment.²⁵ However, they would not have to “contribute” copayments when they actually use a hospital service. In other words, they would be required to pay the hospital a proportion of the treatment costs (with the remaining cost subsidized by the scheme). Such copayments could be a defined percentage of the package rates. Applying the state subsidy to the negotiated (and thus substantially discounted) package rates would in effect significantly lower OOP spending compared with the fee-for-service market prices which the intended beneficiaries would otherwise incur. This would give them both a strong incentive to enroll and considerable financial protection. Depending on their fiscal capacity, states can consider designing schemes which provide this vulnerable group with a package-cost subsidy of between 30 and 70 percent. Free enrolment would also facilitate broad population coverage and also minimize any adverse selection. Finally, the copayment required upon service utilization will greatly reduce the subsidy element and overall costs of covering this group relative to the fully subsidized coverage for the BPL population.

Some state GSHISs (e.g., AP and TN) already offer fully subsidized coverage beyond the poor to cover lower-middle income groups, reaching over 80 percent of the states’ population through a narrow, tertiary-oriented benefits package. Covering the nonpoor is a laudable goal. However, this approach poses a policy dilemma for the government: should scarce public resources be used to cover groups that could afford to pay for at least part of their coverage through coinsurance or copayments, or should they be used to deepen coverage for the poorest population segments?

The feasibility of the proposed contributory POS scheme, however, will depend on sharpening targeting and separation of BPL from the vulnerable nonpoor. Feasibility will also depend on sound oversight of providers to control overbilling of beneficiaries. Finally, this scheme (as well as the top-up scheme for the BPL) would be operated by the same state agency responsible for the execution of the GOI-funded standard package and the state funded top-off package (if applicable). All schemes will be administered as one integrated system, using the same operational processes and procedures.

Consolidation of CGHS and ESIS

The fragmented pool of social health insurance schemes (ESIS and CGHS) and the noncontributory health schemes operated by government departments such as railways contribute to system inefficiency through overlapping administrative arrangements, duplication of generally underutilized health facilities catering to their specific member groups, and loss of economies of scale in procuring supplies and services. Although CGHS and ESIS are mandated for specific groups, they contain several common features: funding through contributions from employees and employers, a package of comprehensive benefits, integrated care through facilities they own and operate, systems to recruit and manage clinical staff, bulk procurement of medicines and consumables, and the purchase of care from private super-specialty hospitals. However, these functions are performed through parallel systems and with separate management structures.

As a short-term measure, efficiency gains can be derived by merging the management structures of these two SHIs by establishing an autonomous body outside the Ministries of Health and Labour into which the existing management structures could converge.²⁶ The resultant body will be a single institution that oversees the two schemes operating separately with their existing benefits packages. This initial merger of common administrative functions of these schemes will make use of their shared expertise while contributing to efficiency gains through shared management and purchasing systems. If feasible, this institutional merger could be extended to the captive health services of the Railways Department, the largest employer in India.

However, greater synergies (and efficiencies) can be achieved in the medium term if this merger moves beyond the governing bodies and integrates the health facilities operated by both schemes. The shared use of health facilities by the beneficiaries across the schemes will help minimize

duplication of resources and will also improve the utilization of health facilities, some of them grossly underutilized. Taking this logic further, the primary care infrastructure of ESIS and CGHS can also support the efforts of other GSHISs to extend outpatient services to their beneficiaries. At such a stage, the schemes will serve different groups of covered population under an integrated system that has the combined (and strengthened) expertise, capacity, and structure for more efficient management.

How Are the Recommendations Linked to the Goals of the 12th Five Year Plan?

The proposed pathways to universal coverage described here can contribute significantly to most of the key health sector goals outlined in the approach paper for the 12th Five Year Plan (Planning Commission 2011). Health insurance is known to contribute to health system goals by increasing access to and utilization of health services, protecting the population against financial loss, and improving health status (Escobar, Griffin, and Shaw 2010). By extending benefit coverage for secondary and maternal care (including neonatal care) and improving access and quality of primary care and family planning services, our proposal directly contributes to Plan objectives to reduce infant and maternal mortality as well as fertility rates. The component on performance-based payments for primary care, including services provided by government PHCs and CHCs, would introduce criteria that directly measure and reward performance on maternal and child care (including anemia of pregnant women), and thereby play a part in improving neonatal birth weight and nutrition status. Improving primary care access in general will also contribute to achieving these goals. Also, one of the major uses of the proposed capitation credit for primary care is to direct additional funds for drug procurement by the PHCs/CHCs, contributing in a major way to the secondary objective of the 12th Plan to extend coverage of safe drugs.

The primary care packages will be the first steps towards bundling preventive services (e.g., antenatal and postpartum care, well-baby care, screening of risk factors, and control of chronic diseases) as part of ambulatory benefit coverage. This capitation-based financing mechanism would provide an incentive to primary care providers to increase the offer of preventive services.

This proposal would directly support other goals and approaches under government consideration. First, building upon current GSHIS experiences, concrete steps are proposed toward introducing a government-funded health insurance plan for all citizens, to cover more than 75 percent

of the population. Extending insurance would significantly reduce the number of people falling into poverty due to OOP health expenditures. Second, expansion of insurance coverage would also entail extension of PPP arrangements with insurers, TPAs, and providers, a major component of the aforementioned approach paper. Third, GSHISs have a built-in mechanism for improving accountability by separating financing from delivery and linking funding to actual service delivery. The performance-based financing mechanism for primary care will further strengthen accountability. Finally, extending health insurance can incentivize improvements in purchasing, monitoring, and oversight functions and would contribute to management reforms that improve the efficiency, effectiveness, and quality of service delivery.

What about Private Health Insurance?

The private health insurance industry in India has witnessed rapid growth over the last decade in terms of business volume, population coverage, and number of product lines. Prior to the introduction of the GSHISs, commercial insurers had focused mainly on expanding their market share among corporate entities and upper-income groups residing in metropolitan centers, and to a lesser extent, Tier 2 cities. In addition, they will probably continue, for the foreseeable future, their recently established product line of performing administrative and risk-management tasks for GSHISs.

The largest share of the industry's revenues will depend on the voluntary private health insurance market. The corporate group plans and the fast-growing retail portfolio will contribute over 80 percent of the industry's business in 2010–11 (an estimated US\$2 billion share in a total business of about US\$2.5 billion). Despite the fact that their GSHIS-related business has three times as many members and will remain an important and promising segment for the private insurance industry, private insurers will continue to concentrate on growing the higher-ticket retail lines of their voluntary health insurance business.²⁷ In other words, the retail market garners higher premiums per member and also a higher contribution to their profit margins than their GSHIS-related work.

Private voluntary health insurance will continue to grow in terms of covering the nonvulnerable population: the middle-class and higher-income segments of the population that can afford to purchase private health insurance individually or through their employers. Another emerging segment will be voluntary, supplementary coverage for any conditions, services, or "luxury levels" not covered in government schemes. As GSHISs expand

their member base, particularly to the vulnerable nonpoor, members will become increasingly aware of the concept of health insurance and may be willing to pay out of pocket to extend their protection beyond the GSHIS-financed package.

As major payers of health care, private health insurers can exert considerable influence on providers. Insurers can use their financial leverage to stimulate efficiency, quality, data collection, reporting, and so on. Contrarily, insurers can also induce distortions in provider behavior (e.g., by paying providers different rates for the same procedures). If private health insurers continue with an open-ended, fee-for-service payment system for providers, they will influence (and probably inflate) provider rate structures and contribute to pressure on government-sponsored schemes to steadily increase their package rates (and thereby their total costs) or face the exodus of popular or high-demand providers from public schemes.

The private insurance industry is already part of the implementation machinery for all the new generation GSHISs, and their voluntary health insurance products use the same hospital networks as the GSHISs. Thus, any discussion of the future of GSHISs cannot be “decoupled” and undertaken in isolation from the private insurance industry. This also underscores the need for close, coordinated, but pragmatic, regulation of the entire health insurance sector, including private insurer participation in the GSHISs.²⁸

Since any regulatory regime for private insurance plans has implications for the costs and effectiveness of GSHISs, the schemes will need to coordinate closely with the Insurance Regulatory and Development Authority (IRDA), the national regulator for commercial insurance (and vice versa). The impact of GSHIS cost-containment initiatives will depend on concerted efforts of the entire health insurance sector, including the GSHISs, private insurers, and IRDA. Insurance regulation should contribute to strengthening the aggregate purchasing and negotiating capacity of the insurance industry with the provider network. For example, regulation combined with coordination may help move the private voluntary plans away from open-ended, fee-for-service payment mechanisms and toward case-based payments applied by GSHISs. Using similar payment mechanisms (and rates) across all health insurers would contribute to cost containment (and thereby brake increases in premiums) while also protecting the GSHISs from the distortions and cost-escalation that could result from maintenance of the status quo.

To get providers to espouse and follow appropriate quality norms would be another focus of the coordinated regulatory action. This can be achieved through voluntary health insurance plans and GSHISs adopting

the same quality standards and benchmarks. Transparency and fairness in dealings with providers and patients are other virtues that both GSHISs and the insurance regulator would expect from the insurance industry, and thereby working together in prescribing, monitoring, and enforcing these expectations.

Finally, competition among insurers (for GSHIS contracts) has been an important element of the GSHIS model. Insurers should neither benefit from nontransparent tendering processes that undermine fair competition nor should they be allowed to continuously undercut each other to chase top-line growth. This behavior would jeopardize sustainability of the industry. Coordination of regulatory mechanisms to ensure healthy competition between insurers is also important to ensure fair, economical, and sustainable premium pricing for the insurers' services.

Estimating the Costs of the Proposed Schemes

Government spending on health insurance represents a small but growing proportion of total government health expenditures, as discussed in chapter 3. The quantum of public spending on health has itself increased significantly in recent years. In part as a result of NRHM, nominal GOI (including transfers to states) and states' annual spending (from own resources) on health increased by more than 23 percent and 17 percent, respectively, between 2005–06 and 2008–09 (16 and 10 percent, respectively in real terms).²⁹

Against this backdrop, the estimated fiscal implications of these recommendations are presented in table 5.2. The estimated incremental costs of the proposed schemes are the costs that would involve additional financing required beyond that already projected to be incurred by the GOI and state governments in 2015 based on current trends of expenditure growth.³⁰ This additional expenditure on the redesigned GSHISs would be in lieu of (and not in addition to) the likely expenditure on the new generation GSHISs (RSBY and the new state schemes) in the same year (2015) if they continued to be implemented as such (table 3.6, this volume).

Assuming the introduction of the recommended packages throughout India by 2015, including the benefits to be introduced at states' volition and the performance-based incentive for primary care is set at Rs. 500 per family per year (table 5.2, Scenario 1), the total incremental cost is estimated at Rs. 38,400 crores, accounting for an additional 22 percent of projected total government health expenditure in that same year.³¹ This amount would represent a little less than 0.4 percent of the country's

Table 5.2 India: Estimated Incremental Costs of Recommended Schemes, 2015

Source of financing	Scheme/package	Unit cost per family per year (Rs.)	Scenario	Number of families (million)	Scenario 1 500 capitation (Rs. crores)	Scenario 2 1,000 capitation (Rs crores)
Central	Standard package (secondary and maternity coverage)—BPL	1,000 ^a	n.a.	60	6,000	6,000
	PHC performance-based primary care scheme—BPL ^b	500	(1)	60	3,000	6,000
	Central government total, all components	1,000	(2)			
State	Tertiary care top-off scheme—BPL	900 ^c	n.a.	60	9,000	12,000
	Standard package (secondary and maternity coverage) for vulnerable nonpoor ^d	600 ^e	n.a.	120	5,400	5,400
	PHC performance-based primary care scheme—vulnerable nonpoor	500	(1)	120	7,200	7,200
	Tertiary care scheme: vulnerable nonpoor	1,000	(2)	120	6,000	12,000
	State governments total costs, all components	900	n.a.	120	10,800	10,800
					60 (BPL) + 120 (vulnerable nonpoor)	29,400
Total	Estimated annual costs. all components for BPL and vulnerable nonpoor (77 percent of population)			180	38,400	47,400

Sources: Authors' elaboration.

Notes: n.a. = not applicable.

All figures in nominal terms, estimates for calendar year 2015. Rs. 1 crore = Rs. 10 million = about US\$220,000 at exchange rates in 2010.

a. The price of the secondary and maternity package is estimated at Rs. 500 per family per year at 2010–11 prices with annual growth of 15 percent in nominal terms.

b. These denote additional costs for the performance-based scheme. The primary care package assumes ongoing supply-side financing of services. In Scenario 1, the performance-based primary care package is priced at Rs. 500 per family; in Scenario 2 at Rs. 1,000 per family.

c. The price of the tertiary package is estimated at Rs. 450 per family per year at 2010–11 prices and annual growth of 15 percent in nominal terms.

d. Assumes a 40 percent copayment at point of service.

e. The cost of the secondary and maternity scheme for the vulnerable, nonpoor is estimated at 60 percent of the costs of the BPL package, with a 40 percent copay at point of service. This reduces the costs proportionately (in practice, the cost reduction for the scheme may be higher than 40 percent due to changes in utilization).

The recommendations for CGHS/ESIS and private health insurance components do not require any additional public subsidies and so have not been included above.

projected GDP in 2015. It is not unduly large relative to the above-mentioned recent trends of growth in public health expenditure, and is well within the stated commitment of the GOI to raise the share of public health spending to between 1 percent and 2 percent of GDP.

The share of the additional cost for the GOI is about Rs. 9,000 crores, while the state portion is Rs. 29,400 crores, which would represent an increase by 10 and 33 percent above the base GOI and state health spending, respectively, projected for 2015. Given that nominal GOI spending increased by 23 percent annually between 2005–06 and 2008–09³² (about 16 percent per annum in real 2004–05 prices), these schemes are considered affordable to GOI. However, the situation may be different for some states, as discussed in box 5.4. Although nominal state health expenditure grew by 17 percent between 2005–06 and 2008–09, this rate of increase may be insufficient to cover all the optional components for some states. Converting a share of incremental supply-side subsidies to the demand-side is another, albeit complementary, financing option.

If a higher investment in ambulatory care is possible, and the public policy intention is to move away from fixed supply-side budgets and toward performance-based funding of public facilities, the amount of the PHC incentive could be set higher. In table 5.2, Scenario 2 assumes that this incentive will be Rs. 1,000 per family per year. This raises spending by Rs. 9,000 crores (about \$2 billion), shared between the center (Rs. 3,000 crores) and the states (Rs. 6,000 crores). The total expenditure for Scenario 2 would still be less than 0.5 percent of India's GDP in 2015.

These, of course, are preliminary estimates, and the costs hinge on multiple factors. For instance, the center may choose to provide higher subsidies to states that do not have the fiscal space to take on the voluntary components with their own resources. Some states may have the will as well as the fiscal resources to reduce the copayment component for the vulnerable population. Nevertheless, these numbers do broadly indicate the range of incremental costs associated with the recommended options and the fiscal feasibility of undertaking these initiatives.

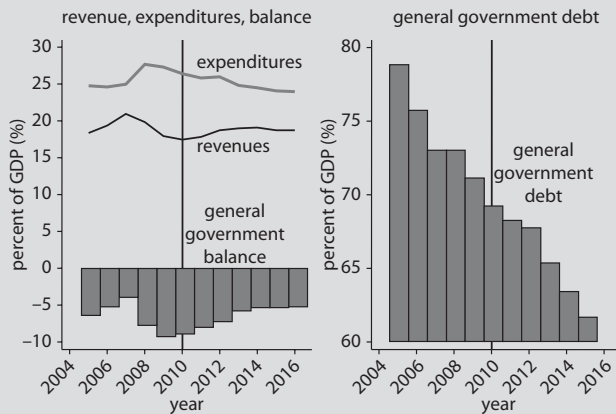
Research Agenda

As noted throughout this book, definitive statements cannot be made regarding the effects of most GSHISs for lack of impact evaluations. Of particular importance would be to measure the schemes' impact on access, use, financial protection, and health improvement.³³ Other issues related to potential ill-effects such as overuse, unnecessary use, increased

Box 5.4**Does India Have Fiscal Room to Finance Coverage Extension by 2015?**

The proposed extension of population and benefit coverage (see table 5.1) will cost the government an estimated additional 0.4 to 0.5 percent of GDP by 2015. At least a quarter of this additional financing will originate from the central government; the remainder, from the states (see table 5.2). Are India's macro-fiscal conditions conducive to increasing public financing for health to attain universal coverage?

India's macroeconomic fundamentals are generally strong. With 10.4 percent growth in GDP in 2010, India was one of the world's fastest growing economies, and annual GDP growth rates are projected at around 8 percent in 2011–16 (IMF 2011). At the same time, the government has committed to undertake fiscal consolidation efforts that are expected to cut the general government deficit by almost half—and the debt-to-GDP ratio to almost 60 percent—over the next five years (graph a). In such an environment, expanding public spending on health might be expected to be challenging unless revenues increase significantly more than projected or the government chooses to reprioritize health (e.g., by reducing expenditure on subsidies), or both. The federal government has announced that the 12th Five Year Plan (2012–17) will focus on health, and the government is expected to significantly increase public spending on health.^a

a. India: Key Fiscal Indicators, Central and State Governments

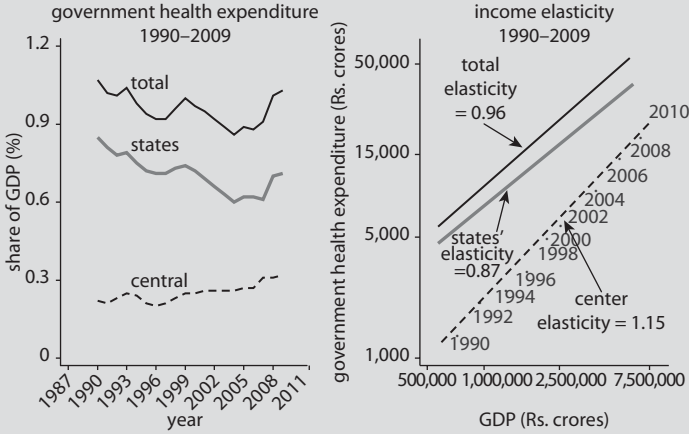
Sources: IMF, World Economic Indicators database, various years; RBI, *Handbook of Statistics on Indian Economy*, various years; MOF, Indian Public Finance Statistics, various years.

Note: Actual 2005–2010; projected 2011–2016.

(continued next page)

Box 5.4 (continued)

b. Government Health Expenditure, Trends and Income Elasticity, 1990–2009



Sources: Expenditure: RBI 2011; MOF various years. Income elasticity: RBI 2011; IMF 2011, 2012; MOF various years.

Given India’s federal structure, with health being largely a “state subject” and state spending averaging about 75 percent of general (i.e., central and state combined), public spending on health over the past two decades, analysis of recent trends in the center-state shares of public spending on health can be informative from the perspective of fiscal space. General government health spending in India averaged about 0.96 percent of GDP in 1990–2009 (this is low by global standards, even after controlling for income). India’s case is anomalous in that, despite decades of strong economic growth and rising revenues, general government health spending has remained fairly static.

Since 1990, central health spending has steadily increased as a share of GDP, but this has been offset by declining state allocations to health for most of 1990–2009 (as shown in graph b). The decline in state-level allocations to health can be traced back to the fiscal crisis that beset the states in the 1990s. The upward trend in state health spending began only around 2008. This responds in part to GOI-mandated state contributions to NRHM, and to a lesser extent, state contributions to RSBY and their own schemes. This upward trend should persist, particularly if the GOI continues to mandate matching health funds from states.

Using data from 1990–2009, the estimated elasticity of general nominal government health spending to GDP in India was about 0.96.^b This is low when

(continued next page)

Box 5.4 (continued)

compared to other low- and lower-middle income countries in which the average elasticity is usually in the vicinity of 1.15. This below average elasticity is driven by a generally slower rate of state health spending growth relative to GDP growth. The elasticity of aggregate state health spending to growth is only about 0.87, whereas the elasticity of central health spending to GDP is commensurate with the average for low- and lower-middle income countries (graph b).

Numerous factors suggest that, barring major policy reversals or unforeseen economic downturns, the central government's financing share for resourcing universal coverage ought to be attainable in the short to medium term. These positive factors include past secular trends, two decades of robust economic growth, strong growth projections, a high elasticity of central health spending relative to GDP, and credible commitments by the Congress-led United Progressive Alliance ever since coming to power in 2004 to increasing financing of social protection policies.^c

Procuring the necessary public financing for universal coverage at the state level, however, is likely to be more of a challenge in India. As mentioned, past growth rates and income responsiveness of aggregate state health spending have been significantly lower than those of the central government. At current projections, securing the requisite financing for universal coverage would require aggregate state health outlays to increase by an estimated 20 to 25 percent per year in nominal terms. An increase in outlays of such a magnitude would require a major reprioritization of the health sector at the state level or substantial improvements in the efficiency of current health spending for many of the states. States such as Uttarakhand have significantly increased health spending in recent years and may have an easier time financing universal coverage, but Rajasthan and other states may be constrained in their ability to do so. Alternatively, the GOI may have to contribute additional funds (beyond the proposed central-financial packages in table 5.2) to the proposed state-financed packages for states unable to generate sufficient funds. Given India's political economy and complex decentralized public health financing structure, a detailed, state-by-state assessment would need to be conducted to better analyze and outline possible options for financing universal coverage. This would include possible additional support from the center for states facing fiscal constraints.

Source: This box was prepared by Ajay Tandon, drawing upon Berman, Ahuja, and Bhandari (2010), and Tandon et al. (2010).

a. *Thaindian News*, August 14, 2011, www.Thaindian.com/newsportal/business9 (accessed September 12, 2011).

b. Elasticity refers to the percent change in health spending for a given percent change in GDP.

c. Another example of the central government's fiscal capacity is evident from India's recently announced plans to provide \$11 billion in official development assistance to other developing countries over the next five years.

OOP spending, inequities in coverage and use, and potential substitution of low-cost care for high-cost care are also important areas of research. Contrarily, there may be positive spillover effects in terms of better targeting of public subsidies, expanding supply in distant locations, promoting greater continuity of care, and improving the performance of both public and private providers. Addressing these issues would require sound methodological designs based on household surveys comparing insured and uninsured populations (including specific subgroups within each such as women, children, the very poor, scheduled castes, and tribes) and on provider surveys matching empaneled and nonempaneled providers.

Most of the new wave of GSHISs contain a common set of institutional and design features. Little is known about their overall effectiveness, or similarly, the robustness of their implementation. Analyzing these features and the incentives they generate for major stakeholders—government, insurers, providers, and beneficiaries—will provide important inputs for future in-flight adjustments. In this light, the following set of “operational” research issues emerges from design elements and implementation processes of the GSHISs described in the case studies (appendix A).

Governance, Regulation, and Institutional Arrangements

Governance arrangements and purchasing functions of most schemes are far from developed. Within the Indian context, research is needed on a viable institutional and regulatory model for supporting and overseeing the GSHISs. The appropriate institutional structure for the governing agency, and the specific skill sets the agency needs to carry out its functions effectively, needs to be determined. In the context of these schemes, new regulatory challenges and complexities are emerging. To what extent can regulation of private health insurance influence the nature of the insurance product, the implementation of the scheme, the claim-management system, and the quality of services? What is the interface between the regulator and the governing agencies operating the schemes? What are areas of synergy, overlap, conflict, and co-ordination in these regulatory and governance arrangements and how do they interplay with each other?

Memoranda of Understanding between purchaser and insurer and between insurer and provider are poorly constructed. Even where insurer-provider contracts provide for certain controls, their implementation is lackluster for want of schemes’ institutional structures to ensure adequate monitoring and supervision of these aspects. Poor purchasing may undermine schemes’ potential to meet stated objectives. Another area of inquiry involves assessing the effectiveness of insurance companies as administrative intermediaries for GSHIS oversight and management.

What is the evidence regarding their control of leakages and moral hazard? How do administrative arrangements of schemes involving TPAs differ in performance from those where risk is transferred to an insurance company? How can feedback from beneficiaries be tapped to improve scheme operations? To what extent do beneficiaries have information regarding benefits and any OOP payments they may incur? How does possessing such information affect utilization patterns?

Cost Containment

The new generation of schemes features a common set of design elements that in principle can contain costs: preauthorization procedures, annual caps, and package rates. Whether these elements are effective cost-containment mechanisms is unknown. Further, insurers may have few incentives to make long-term investments in containing costs, because they can reprice their contracts on annual renewal, raising premiums to cover escalating costs. Does a shift from insurance companies to TPAs reduce costs or, alternatively, does it expand the scope for cost escalation (because not even the risk of short-term impact on the bottom line exists in case of TPAs)? Are providers “maxing out” the annual caps by inducing utilization and unnecessary care? The underlying provider incentives of many GSHISs may result in induced demand for hospital care resulting in overtreatment, unnecessary care, and ineffective treatment. Preauthorization and information systems may not be sufficiently robust to capture these distortions. Finally, research is needed on the composition and costing of the package rates used by nearly all schemes. To what extent are these rates aligned with costs across different markets, territories, and providers? Does provider competition for volume lead them to seek affiliation with GSHISs and accept the mandated rates? Are providers combining different services to maximize earnings? Do rates favor one kind of provider over another? What payment systems could be an alternative to package rates in the Indian context?

Ambulatory Care Coverage

As currently designed, most GSHIS schemes do not provide sufficient coverage for the major cause of health-induced poverty, particularly among the poor: ambulatory care and drug expenditures. A case can be made that these schemes tackle only part of the problem (inpatient care) without tackling other parts (ambulatory care, including drugs and prevention). Confirming this hypothesis is an important area of research. A related area would be to examine the set of specific (and often repeated) ambulatory expenses leading to impoverishment, the most feasible way to deliver these services, and managerial controls to prevent unaffordable cost escalation.

Financial Protection and Provider Behaviors

GSHISs may lower OOP spending for covered procedures at point of service but whether the schemes affect total OOP spending is unknown, considering that the total amount spent in all these schemes is a small fraction of the overall health care expenditure. Increased access and use of health facilities may induce utilization of uncovered services, resulting in additional OOP spending. In some cases, low annual caps may cut off patient benefits and reduce financial protection against catastrophic expenditures. Without proper oversight, providers may balance bill or shift demand from low-margin covered services to higher-earning uncovered services, raising overall OOP spending. Finally, since there is little coverage for postinpatient care, do surgical procedures induce greater OOP spending, or, conversely, if households cannot pay for follow-up treatment, what is the impact on health outcomes?

Quality of Care

Introducing quality consciousness and inducing quality improvement among providers need to be placed on the policy agenda of all schemes. Little is known about the effectiveness of the current hospital empanelment processes in terms of differentiating between high- and low-quality facilities. How can empanelment be improved to guarantee minimal safety standards? GSHISs have yet to use their financial leverage to address quality. What quality and patient safety data can be feasibly collected by all schemes and used to drive quality improvements? Which pay-for-quality arrangements are feasible in the current context?

Links between GSHISs and Public Delivery

How GSHISs are linked with the public delivery system will be a determining factor for their political viability. An important issue is the basis for competition of public and private providers. Is there a market niche for public hospitals vis-à-vis their private counterparts? If so, for which types of services and in which locations? Under what organizational and managerial conditions could public providers compete with private providers?

Hospitals

There is a paucity of reliable information and data in India on the number of hospitals and beds, their capacity in terms of staff and equipment, and their performance in terms of production, utilization, efficiency, diagnoses, costs, quality, and outcomes. Anecdotal evidence and information from micro studies suggest that most hospitals are run inefficiently, collect data irregularly, and pay little attention to basic measures of quality such as control of infections, adverse events, and patient safety. Even less

information exists on spending and types of governance arrangements and management structures in both public and private facilities that can contribute to performance. India needs to support a facility survey to secure basic structural, process, governance, and management characteristics of a large sample of public and private hospitals. The survey should also aim to obtain information on production, patient safety, quality, and efficiency. The results can be used by health authorities, GSPHIs and private insurers to design interventions to improve hospital performance.

Annex 5A Summary of Proposed Expansion of Services

Table 5A.1 Indicative List of Services Covered in the Proposed Packages

<i>Component of proposed coverage</i>	<i>Services included under the component</i>
Ambulatory benefits package (BPL)	<p>Through its linkages to the existing primary care system, the package can be used to incentivize, monitor, and facilitate the delivery of most primary care services, including but not limited to the following:</p> <p>Public health services</p> <ul style="list-style-type: none"> • Antenatal care • Postpartum care • Well-baby care • Family planning services • Nutrition counseling and interventions (including iron deficiency anemia in women and girls) • Cancer detection: Cervical and breast screening • Directly Observed Treatment Strategy (DOTS), treatment for tuberculosis • Testing for human immunodeficiency virus <p>Ambulatory health services</p> <ul style="list-style-type: none"> • Consultation and clinical examination • Basic laboratory testing • Assured availability of quality-tested essential drugs in generic form • Acute care including acute respiratory infection and diarrhea management • Treatment for minor injuries, snake bites, common ailments, skin diseases, minor wounds, and fractures • Chronic disease management including diabetes and hypertension <p>Linkages to hospitalization services</p> <ul style="list-style-type: none"> • Gatekeeper role and referral for hospitalization as necessary • Follow-up care with drugs and diagnostic services postdischarge

(continued next page)

Table 5A.1 (continued)

<i>Component of proposed coverage</i>	<i>Services included under the component</i>
Standard benefits package for secondary and maternity care (BPL)	Similar to current RSBY benefits package, this component will cover all common forms of hospitalization, through secondary and maternity packages. The most common procedures delivered under these services include normal labor, caesarean section, cataract surgery, hysterectomy, appendectomy, dilatation and curettage, treatment for hydrocele, treatment for cystocele, and hernia.
Top-off tertiary package (BPL)	Similar to the benefits package for state schemes such as Rajiv Aarogyasri (AP) and Kalaighar ^a scheme (TN), this component comprises coverage for high-cost procedures for tertiary care. The specialties covered include cardiovascular system, neurology, renal, gastrointestinal, oncological, and polytrauma cases.
Point-of-service package for the vulnerable poor	This package will contain some combination of the services covered in the above three packages. The exact composition will vary by state and depend on state fiscal capacity.

a. In 2011–12, the scheme was modified to include additional procedures and relaunched as the Chief Minister's Comprehensive Health Insurance Scheme, and the executing agency serving the scheme also changed. The maximum coverage was also changed from Rs. 100,000 floating over four years to Rs 100,000 per year. Hereafter, this write-up reflects the scheme details that existed when this study was undertaken, in 2010–11.

Notes

1. These include: integration of public and private delivery, creation of a universal health care fund, increasing the numbers, diversity, and distribution of human health resources, promotion of evidence-based health care practices and rational use of drugs and technology, and creation of decentralized governance structures and social accountability arrangements (Reddy et al. 2011).
2. These recommendations draw on the goals set by the Lancet Group as well as other observers of the Indian health landscape (Jha and Laxminarayan 2009; NCMH 2005). These include: “Ensure the reach and quality of health services;” “reduce the financial burden of health care;” and “empower people to take care of the health and hold the health care system accountable” (Reddy et al. 2011: 104).
3. Between 2005–06 and 2008–09 central health allocations for public delivery increased by 23 percent annually in nominal terms (Berman, Ahuya, and Bhandari 2010).
4. Expanding social insurance coverage based on formal sector growth has not been a robust strategy to reach universal coverage and tends to lead to greater segmentation (Londoño and Frenk 1997; Baeza and Packard 2006)

5. The GOI-financed packages as well as the state-financed “top-off” package are fully subsidized and directed to BPL populations. The “contributory” benefits package is partially subsidized by the state and targets the vulnerable nonpoor.
6. Except for CGHS and ESIS, at least initially.
7. The shortcomings of state purchasing arrangements for contracting health and hospital services from private providers in India have been documented by Raman and Bjorkman (2009). These arrangements tend to lack standardized processes for bidding, monitoring, contract enforcement, grievance, and redressal.
8. As discussed in the next section, the common package would be linked to some primary care coverage which would address high out-of-pocket spending for ambulatory care by the poor.
9. As described in chapter 4, addressing the flaws in the current BPL lists is beyond the scope of the GSHISs. GOI is preparing a new methodology to improve mean testing (Government of India 2009). A BPL census is already underway (in 2011–12) which will provide the data for the new methodology. The recently initiated project on assigning Unique National IDs will also provide a strong basis for improvements in targeting of public programs (see: www.uidai.gov.in). For an in depth review of options for improving targeting, see World Bank 2011.
10. Transfers can be adjusted for local costs. They could also contain an add-on subsidy element for weaker states to support their institutional strengthening for governance and monitoring of the scheme. Institutional arrangements are discussed later in this chapter.
11. To a certain extent this is already happening in the top-up scheme of Himachal Pradesh (HP).
12. Under RSBY, the GOI finances 75 percent of the cost and the states the remainder (for some states, the GOI share is as high as 90 percent).
13. If state resources permit, it may be best to add some benefits to the standard set, rather than substitute coverage from the common standard package. Substitution may create difficulties in the national portability of the common package, requiring technological and operational fixes to ensure portability.
14. Demand for ambulatory coverage is probably high among current GSHIS beneficiaries, and this may manifest itself in political pressure to rapidly (and perhaps carelessly) roll out the ambulatory benefits. In a recent survey of 1,733 eligible Aarogyasri beneficiaries in the Prakasam Region of Andhra Pradesh (AP), more than three fourths stated their interest in ambulatory cover (Reddy 2011). The main reason for such coverage was to provide cashless access to private clinics for consultations, drugs, and diagnostics.

15. On the rapid emergence of chronic diseases in India, see Engelgau et al. 2011.
16. Although the two traditional social health insurance (SHI) schemes (ESIS and CGHS) already cover inpatient and outpatient care, research is required to determine the efficiency and effectiveness of their integrated service models.
17. For example, the total cost of a follow-up regime, including daily low-dose aspirin, quarterly tests for activated partial thromboplastin time (an indicator of the coagulation pathways that helps monitor the anti-coagulation level achieved) and half-yearly heparin injections (required after a heart valve surgery) would cost between \$20 and \$30 per year, at current prices for high volume procurements. Compared with the cost of the hospitalization itself, the annual cost of follow up is small for the insurance scheme (but it would not be small for a poor family which gets no bulk-purchase discounts). In contrast, follow-up treatment for secondary procedures is usually for shorter periods, although some endocrinal gland surgeries and neurosurgical procedures may require longer-term follow up. As an illustration, the cost of supplementing thyroxin after surgery on the thyroid gland may cost only a couple of dollars per year if procured in bulk but could be critical for favorable health outcomes.
18. NRHM is piloting such a system.
19. The performance audit of NRHM 2008–09 found that none of the centers checked in nine states had the requisite two-month stocks of essential drugs and vaccines (CAG 2009).
20. This can be achieved by placing an electronic order with the state bulk procurement agency or any other government entity undertaking this role such as the TNMSC. The TNMSC is a bulk drug procurement and logistics agency serving the health department of the government of Tamil Nadu state. For more details of the TNMSC model, see www.tnmsc.com.
21. Setting rates for individual episodes of ambulatory care (e.g., an outpatient visit) is not recommended because it may lead to moral hazard and cost escalation. Paying for individual episodes of outpatient care is essentially a fee-for-service payment system and may trigger provider induced demand, overutilization, leakages, and consequent cost escalation, which India can ill afford.
22. Nonmonetary incentives could include opportunities for post-graduate education, promotions, training programs, and special recognitions and rewards.
23. Assessments of service delivery by public private partnerships (PPPs), launched by a number of Indian states, found that many PPPs are informal arrangements in which: (1) few bidding and contracting processes are standardized in practice; (2) selection is often based on nontransparent sole sourcing; (3) resource allocation is often unstructured, irregular, and also lacks

- transparency; (4) most lack binding contractual instruments that specify roles, responsibilities, performance, reporting requirements, and enforcement mechanisms; and (5) failure to establish contract management and monitoring units to oversee providers' performance assessments (Raman and Bjorkman 2009, 2006; KPMG 2008; Radwan 2005; Futures Group 2006).
24. Several states already classify this "vulnerable" population as poor, but poverty data suggest that they do have some capacity to pay for care (NCEUS 2009).
 25. International experience suggests that the administrative costs and the complexity of implementing the collection of contributions from the informal sector would be prohibitively high (Baeza and Packard 2006). Further, people will probably enroll and disenroll according to their perceived health needs as appears to be the case in Yeshasvini. Adverse selection under the proposed cost sharing arrangement, however, will remain problematic, but probably less so than for a scheme that requires upfront, annual contributions.
 26. Institutional and political impediments would inhibit merger or close linkage of these schemes with the proposed schemes for BPL and vulnerable nonpoor, at least in the near term.
 27. For commercial insurers, pricing per member in corporate group plans and voluntary retail plans is significantly higher (and generally more lucrative) than the high-volume, low-price segment of GSHISs.
 28. On the complex political economy of regulating private insurers, see Baeza and Packard (2006).
 29. Public health spending data are based on Ministry of Health and Family Welfare estimates (MOHFW 2009). Health insurance data are drawn from table 3.6 in this volume.
 30. To estimate the costs of the standard package and the tertiary top-off coverage, the authors used the existing premium structure of RSBY (about Rs. 500 per family in 2010) and the state tertiary schemes (about Rs. 450 per family in 2010). For these calculations, the overall caps for the secondary scheme were maintained at Rs. 30,000 and for the tertiary scheme at Rs. 150,000. Factored into the calculations was a one-time, conservative 20 percent revision in package rates (and consequently, in the average claim costs). The projected costs for 2015 follow the utilization assumptions mentioned in annex 3C. An additional 30 percent buffer is incorporated to avoid underestimating the likely costs of such a scheme due to higher than expected increases in medical costs. There is no index of change in premium in existence, but, data on past trends for Medyclaim, the largest-selling health insurance product, indicate that premium revisions took place every 3 to 5 years. For the most recent revision, in 2007, the premium increase amounted to between 10 and 15 percent a year. The estimates using the methodology above amount to an annual 15 percent escalation of premium. Finally, in this

estimation, the primary care scheme is set at two levels of Rs. 500 and Rs. 1,000 per family in Scenario 1 and 2, respectively. It is also assumed that states will provide a 60 percent subsidy (and thus require a 40 percent copayment) to the contributory point-of-service scheme for the vulnerable nonpoor.

31. This was discussed in chapter 3 in which, with the current growth trends, public expenditure was estimated at a total of Rs. 175,000 crores by 2015. It is assumed here that, while the same growth in public health expenditure will continue, some of this growth will be directed toward GSHISs. Thus, the total government expenditure in 2015 may not need to increase much beyond the current estimates, even after accounting for the incremental costs of these recommendations. The actual additionality may be lower for two reasons. First, states may exclude certain components or insist on higher copayments for the contributory, point-of-service schemes for the vulnerable nonpoor. Second, some portion of supply-side financing may be converted to demand-side health insurance.
32. The GOI budget presented for 2011–12 maintains a similar rate of increase in budgetary allocation for the health sector.
33. Impact evaluations are planned for R. Aarogyasri in AP and V. Arogyashri in KT.

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APPENDIX A

Employees' State Insurance Scheme

Table A.1 ESIS Summary Matrix

<i>Indicators/name of scheme</i>	<i>Employees' State Insurance Scheme (ESIS)</i>
Launch year	1952
Geographical area	PAN India in notified areas (with higher employer concentration)
Target/eligible population	All employees from any firm having more than 10 employees and earning up to Rs. 15,000 per month. Dependents are also covered.
Number of beneficiaries	55.4 million
Unit of enrolment	Family
Benefits package	Comprehensive coverage includes health related expenses for preventive, primary, secondary, and tertiary care, plus cash benefits for loss of wages due to sickness, maternity, permanent disablement of self and dependents, funeral expenses, and rehabilitation allowance.
Maximum insurance coverage	There is no limit on the maximum care which can be availed.
Hospital empanelment criteria	As per Central Government Health Scheme (CGHS) criteria (appendix B)
No. of empaneled hospitals (government and private)	148 ESIS hospitals plus about 400 networked private hospitals

(continued next page)

Table A.1 (continued)

<i>Indicators/name of scheme</i>	<i>Employees' State Insurance Scheme (ESIS)</i>
Sources of funds	Contribution (from employers and employees) and interest income. States bear one-eighth of medical care costs through direct subsidies.
Total expenditure (million Rs.), 2009–10	Rs. 1,990 crores ^a /Rs. 19,900 million (about US\$440 million ^b)
Premium price, 2009–10	Employees contribute 1.75 percent of wages; employers, 4.75 percent.
Provider payment mechanism	Budgets for own hospitals, salaries for physicians and staff in dispensaries and hospitals, package rates to private empaneled hospitals in case of tertiary/specialty treatment.
Information technology (IT) tools used	Largely manual. But project "Panchdeep" is underway for comprehensive management information system (MIS) tools, digital identity card (Pehchan card). All the branches, hospitals will be connected.
Number of hospitalizations per year	417,498, in 2009–10
Utilization rate	0.75 percent per member per year (for hospitalization)
Most common procedures	—
Governing agency and legal status	ESIC (Employees' State Insurance Corporation)—autonomous corporation under the Employees State Insurance Act, chaired by union minister, Ministry of Labour and Employment
Executing agency	ESIC + State ESIS Departments
Number of full-time staff, including contract personnel, in implementing agency	13,585 (includes hospital and dispensary staff)
Administrative costs as percent of total spending	9.27 percent, 2008–09
Cost-containment measures	Health care provided through its own integrated network, contracted private practitioners, package rates for tertiary care and outsourced diagnostics, rate contracts for procurement of drugs and other consumables

Note: — = not available.

a. In the Indian numeric system, 1 crore = 10 million.

b. US\$1 = Rs. 45 approximately (2010).

Introduction

Introduced by an act of parliament in 1948, the Employees' State Insurance (ESI) Scheme is the oldest health insurance scheme in India. The Employees State Insurance (ESI) Act is akin to the social security legislation of Europe and Latin America. It protects employees in the formal

private sector earning up to Rs. 15,000 per month against medical costs of sickness, maternity care, and occupational injury, and also compensates them for loss of wages or earning capacity due to such events. The benefits of this scheme are also available to the employees' immediate dependents. The scheme, originally introduced in Kanpur and Delhi, is now offered in most industrial pockets of the country. It is administered by the autonomous Employees' State Insurance Corporation, under the chairmanship of the Union Minister, Ministry of Labour and Employment (MOLE).

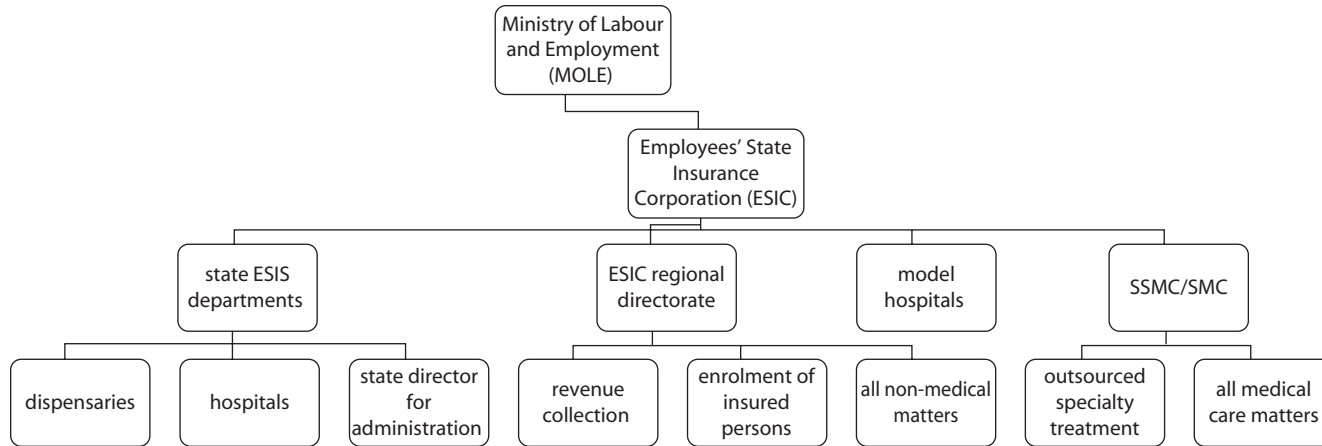
Compared with other health insurance schemes in India, ESIS has been in a league of its own—in terms of its size (it had 33 million members even in 2001, when the country's total estimated coverage under health insurance was just about 55 million persons), comprehensiveness of health coverage (full spectrum of preventive, primary, secondary, and tertiary care, preexisting diseases included), no caps or limits on how much an individual or family may use, compensatory cash benefit programs for loss of wages during sickness, a disability program and finally, a maternity cash benefit program. Similar to social security schemes of Latin America, ESIS delivers an overwhelming share¹ of integrated health services at facilities owned and operated by the scheme. In addition to the fact that contributions to ESIS are income rated, the scheme design further addresses internal equity concerns by not allowing stratification of care among members. In other words, all beneficiaries are eligible for the same level of care and same "class" or category of rooms, regardless of how much they contribute to the scheme.

Institutional Framework

Created as an autonomous agency of the government of India (GOI), the ESI Corporation (ESIC) manages not just the insurance scheme but also the corporation-owned network of medical service providers as well as the arrangements for outsourced tertiary care to private hospitals. No commercial insurers or insurance intermediaries are involved in the scheme; risk management as well as implementation are entirely managed by the corporation through ESIS departments of respective state governments. A recent amendment to the ESI Act supports conversion of state ESIS departments into corporations, similar to the structure at the central level. This measure will increase state units' autonomy in decision making and operations.

As depicted in figure A.1, the ESIC directly manages 22 "model" hospitals² (roughly one in each state with ESIS services) and all operations (including medical facilities) in the state of Delhi. In all other states,

Figure A.1 ESIS Institutional Framework



Source: Authors' elaboration.

Note: SSMC = state senior medical commissioner; SMC = state medical commissioner.

medical facilities are managed by the state ESIS department, and costs up to a specified cap are reimbursed to it by the ESIC. The ESIC also has regional offices in the states, headed by a regional director, who is primarily responsible for enrolment, collection of contributions from employers, and disbursement of cash benefits. The state medical commissioners (SMCs) are responsible for medical care and for networking with private hospitals for outsourced specialty care. As of March 2009, ESIC had 13,585 staff members on its rolls, including those who were directly providing medical services to the beneficiaries but excluding those working in the state ESIS directorates.

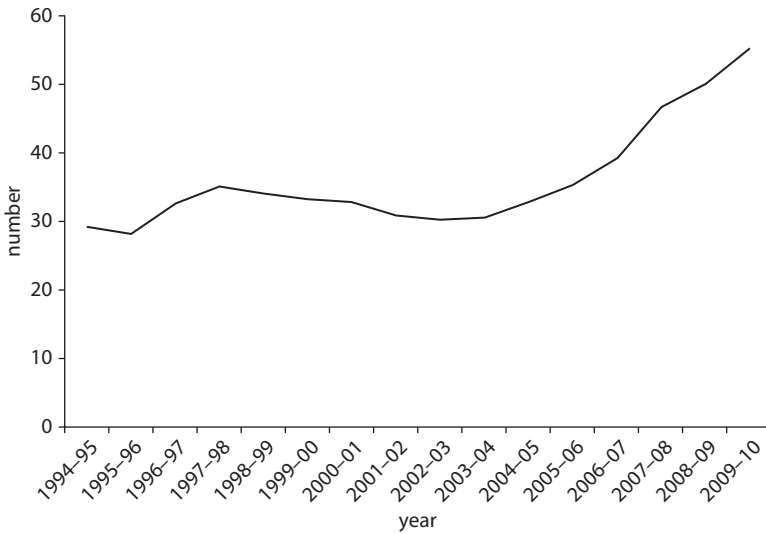
Beneficiaries

ESIS is mandatory for all employers in notified areas with more than 10 employees.³ All such employers are required to be registered with the ESIS (although establishments can be exempted, if alternate equivalent or superior coverage is provided). Employees with a monthly salary below Rs. 15,000 are required to join the scheme, and their contributions are transmitted by the employer through payroll deductions. Since ESIS is only available in notified areas with a higher concentration of employers and employees, an estimated 8 percent of otherwise eligible beneficiaries are outside the ESIS on account of their geographical location. With several rounds of increase in wage ceilings combined with population growth and, to a much lesser extent, growth of the formal sector employment, the ESIS member base has grown steadily (figure A.2), reaching 55.4 million beneficiaries in 2009–10.

By definition, the expansion of ESIS is dependent on the growth of the formal labor market, which accounts for between only 7 percent and 8 percent of the labor force and has not moved much despite the economic growth in recent years (NCEUS 2007). Approximately 300 million workers from the informal, “unorganized sector” are beyond its ambit. According to growth projections for the formal labor sector, it will take several decades—if not generations—to extend ESIS coverage to this unserved population.

Benefits Package

ESIS provides comprehensive preventive, outpatient, and inpatient medical care as well as compensatory cash benefit programs to compensate for loss of wages during sickness. Moreover, it offers a disability program and a maternity cash benefit program, among others. It is the only

Figure A.2 ESIS Beneficiaries, 1994–95 to 2009–10 (million)

Source: ESIS.

large scheme besides CGHS to cover ambulatory care. Preexisting conditions are also covered.

The ESIS benefits package is liberal. It does not charge its beneficiaries any user fees or require other forms of cost sharing such as sublimits, deductibles, and coinsurance. There is also no annual or lifetime ceiling on benefits. Nevertheless, upon using an outsourced service, the beneficiary may have, in some cases, to pay the provider and subsequently seek reimbursement from ESIS. Thus, all costs (barring government contribution) indirectly come through an income-rated mechanism from the employee and the employer with no direct or out-of-pocket contribution from the beneficiaries when using the ESIS-operated health facilities.

The scheme does not usually conduct health or outreach camps for curative services. It does, however, engage in preventive health activities, for instance, its outreach on HIV prevention in collaboration with non-government-organizations (NGOs). Certain occupational disease-screening activities are periodically organized.

Provider Network

ESIS depends largely on its own inpatient and ambulatory facilities to deliver care. In some areas, contractual ambulatory care providers are

being used until ESIS sets up its own dispensaries. Where the ambulatory care facility and hospital are far from each other, secondary care is outsourced to private hospitals. Most outsourcing of inpatient services to private hospitals is for tertiary care, and the pricing and empanelment criteria for these services are based on CGHS guidelines.

The ESIS-owned and -operated hospital network is managed through two organizational arrangements: 121 hospitals (out of 148) are managed by state ESI departments and the remainder—including 22 model hospitals (roughly one per state) and 5 hospitals in Delhi—are directly administered by the central ESI Corporation. While the centrally managed facilities seem to be relatively better-off in terms of infrastructure and equipment, the quality and efficiency of services provided in facilities under either arrangement are unknown.

Ambulatory medical care under the scheme is provided through either ESI-operated dispensaries administered by full-time staff of the state government ESI departments, or a “panel” system consisting of contracted, part-time private medical practitioners (called insurance medical practitioners, IMPs). Table A.2 shows the current status of provision of medical services in the 1,400-odd medical dispensaries under the scheme. The scheme has more than 7,000 doctors on its rolls. The remainder, 1,700-odd medical practitioners are outsourced by the scheme. Despite a small decrease in the medical facilities (captive and outsourced) at ESIS during 2008–09, ESIS possesses the second largest health care network in the country, exceeded only by the publicly owned health care system.

The ESI Corporation has set up five Zonal Occupational Disease centers for early detection and diagnosis of occupation-related diseases for ESI beneficiaries. It also promotes the Indian System of Medicine (ISM) and had established 44 ISM units as of March 2009.

Similar to the government delivery system, nearly all managerial decision making regarding ESIS-owned hospitals is concentrated at the

Table A.2 ESIS: Provision of Ambulatory Medical Services in ESIS Medical Facilities

<i>Scheme status</i>	<i>As of Mar 31, 2008</i>	<i>As of Mar 31, 2009</i>
Number of ESI dispensaries + Indian systems of medicine units	1,397	1,398 + 44
Insurance medical officers (physicians employed by ESIS)	7,099	7,070
Insurance medical practitioners (contracted private providers)	1,753	1,678

Source: ESIS Annual Report 2008–09.

central or state administrative office level. Facilities possess limited autonomy with respect to budgetary processes, procurement, and human resource management, which could result in diffuse accountability and suboptimal performance. International experience has shown that the performance lags for facilities under centralized, direct administration, particularly in terms of efficient use of resources. Whether this holds true for ESIS facilities is an important research question.

Since 2008 all super-specialty or tertiary care has been provided through its network of empaneled private hospitals contracted directly by the ESI Corporation. Hospital empanelment and claim processing are the responsibility of ESI state departments; empanelment criteria and the package rates mirror those of CGHS. About 400 private hospitals were empaneled with ESIS for super-specialty care as of March 2010.

The scheme is intended to be cashless as patients do not incur any costs at ESI facilities. Outsourced private hospitals are also required to extend credit for services rendered to referred beneficiaries and directly bill ESIS, although in some cases, as mentioned, beneficiaries may have to pay first and seek reimbursement subsequently.⁴

Financial Status and Sources of Funds

The ESI scheme is funded by employers and employees in the formal labor sector and by the state governments. Employers contribute 4.75 percent of the monthly wages of covered employees; employees contribute 1.75 percent. Together, these contributions account for 80 percent of ESI revenues. Income from interest is the second largest contributor to ESI revenues. State governments contribute one eighth of the costs of medical care under the benefits package and all costs exceeding the prescribed aggregate limit at state level (currently Rs. 1,200 per insured person multiplied by the total number of insured persons in the state). This cap functions as a “stop loss” reinsurance for the ESIC, although the state government does end up footing the bill. While government subsidy may be questioned from an equity perspective considering that the beneficiaries are relatively better off segments of the population (i.e., formal sector employees, even if blue collared workers, are better off than the poorest in the population), it has been historically justified by the argument that the state’s fully subsidized facilities no longer bear the burden of this population segment.

Huge surpluses have been generated by the scheme in recent years (table A.3) as higher-paid employees have gradually come under the purview of the scheme. The scheme barely managed a nominal surplus

Table A.3 ESIS: Financial Position, 1960–61 to 2008–09 (Rs. million)

<i>Item</i>	<i>1960–61</i>	<i>1970–71</i>	<i>1980–81</i>	<i>1990–91</i>	<i>2000–01</i>	<i>2005–06</i>	<i>2008–09</i>
Total income	94.34	495.99	1,932.15	4,378.45	15,642.82	24,106.18	44,524.57
Total expenditure	69.78	447.4	1,880.59	3,145.12	10,825.81	12,789.62	20,688.30
Surplus revenue	24.56	48.59	51.56	1,233.33	4,817.01	11,316.56	23,836.27

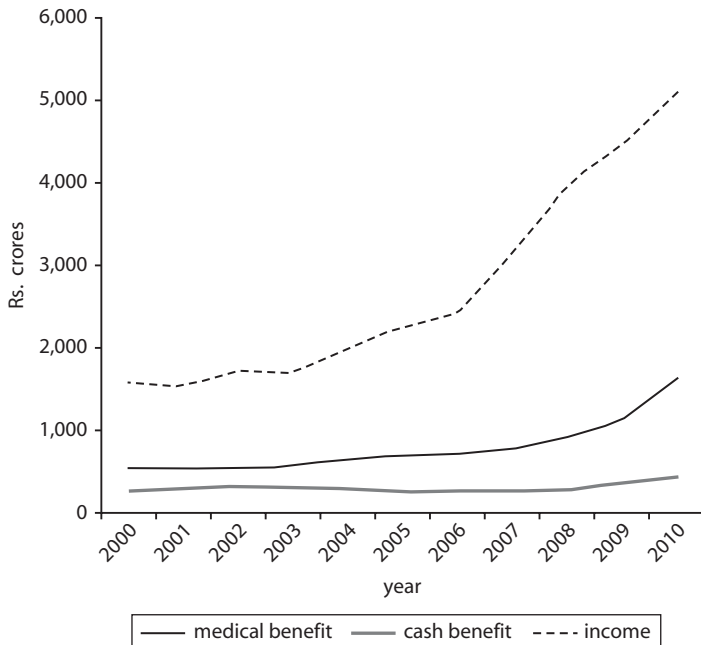
Source: ESIS Annual reports, ESIC data.

until the 1990s when the wage ceiling for the scheme was Rs. 3,000 a month. Subsequently, with the upward revision of the wage ceiling to Rs. 7,500 in 2004, then Rs. 10,000 in 2006, and finally Rs. 15,000 in May 2010, the recently enrolled higher-paying scheme members have contributed substantially to the increased revenues. However, expenditures have not kept pace. Between 2000–01 and 2008–09, revenues increased by 183 percent while expenditures increased by only half as much, resulting in a nearly fivefold increase in the surplus. Figure A.3 reflects this rapid growth in revenues and the relatively slow pace of growth in the two main areas of expenditure, medical care and cash benefits. Anecdotal evidence suggests that the lag in spending may be due to low utilization by the new, higher-income beneficiaries.

The total invested funds of ESIS, as of March 2009, amounted to Rs. 195.8 billion (Rs. 19,583 crores), of which Rs. 62.2 billion (Rs. 6,225 crores) were earmarked reserve funds and Rs. 133.6 billion (Rs. 13,358 crores) were the ESI general and contingency reserve funds. ESIS lacks a specific investment department and unlike commercial insurers where investments play a major role in the bottom line, all the surplus funds of ESIS are kept as term deposits in nationalized banks or as special deposits with the GOI.

Expenditures and Costs

Per capita expenditure on medical care by the scheme during the 2000s shows a flat trend during this period, especially if the steep rise in 2009–10 is omitted. Table A.4 displays total and per capita expenditures on medical care benefits between 2001–02 and 2009–10. Between 2001–02 and 2008–09, coverage and total expenditures increased by 62 and 78 percent respectively, over a period of seven years. However, while coverage grew by only 10 percent, the expenditure in 2009–10 was 58 percent higher than the previous year. The flat trend in per capita spending until 2008–09 may be attributed to expenditure control or more likely decreasing utilization by beneficiaries. Not shown in table A.4, in real terms per

Figure A.3 ESIC: Revenue and Expenditure Trends, FY2000–2010

Source: ESIS Annual reports, ESIC data.

Note: The data in this figure represent spending by the ESI Corporation and do not include state government expenditures, which are included in table A.4.

Table A.4 ESIS: Total Beneficiaries and Medical Care Expenditure, 2001–02 to 2009–10

Year	Total beneficiaries (millions)	Total expenditure on medical care (Rs. million)	Per capita expenditure on medical care (ESIS) (Rs.)
2001–02	31.05	7,090	859
2002–03	30.37	7,270	919
2003–04	30.7	7,670	975
2004–05	32.97	8,060	982
2005–06	35.5	8,280	906
2006–07	39.41	9,130	899
2007–08	46.83	10,920	906
2008–09	50.2	12,600	974
2009–10	55.4	19,900	1,392

Source: ESIS Annual reports, various years.

capita spending actually declined over most of the period displayed in the table. By way of comparison, for the same period per capita health expenditure in the country as a whole doubled (MOHFW 2009b).

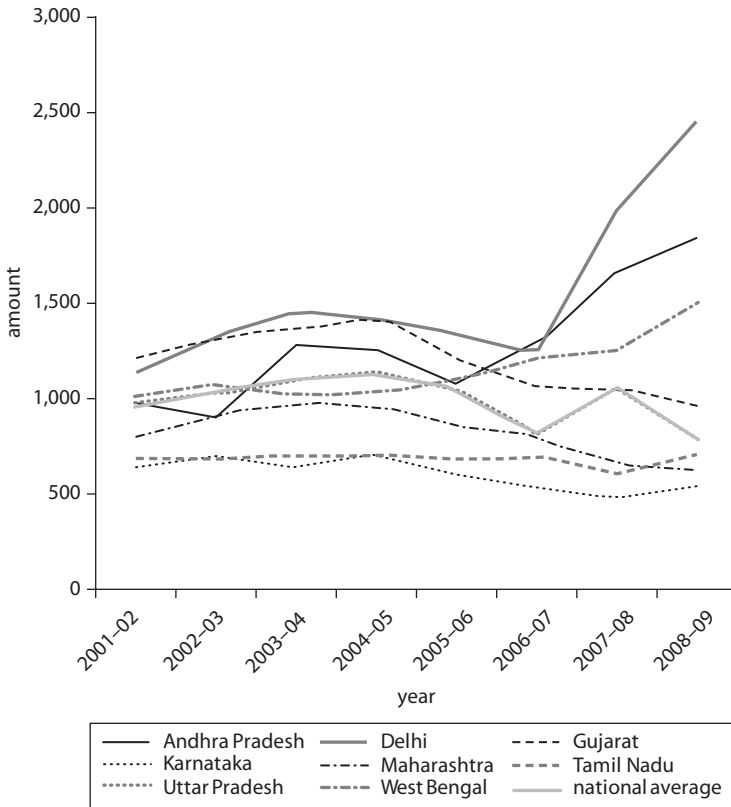
State data on per capita spending (not detailed in table A.3) suggest marked variation in costs. For example, in 2008–09, the all-India average per capita expenditure on medical care was Rs. 974, with Delhi recording the highest (Rs. 2,416) and Uttarakhand the lowest (Rs. 182). This huge gap may respond to easier access to more sophisticated care for beneficiaries residing in larger metropolitan areas (e.g., Delhi) as compared with distant regions (e.g., Uttarakhand). Also ESI facilities in large cities probably experience a higher cost per capita, partly due to the operating costs of large health infrastructure, or higher utilization due to improved access, or both. The wide variation in states could also be due to inequities in utilization or due to poor cost controls in some states and are an area for further research.

The variation in per capita expenditure is not only prominent between states but also for different time periods in the same state. While the national average in terms of cost per insured person (including his family members) per year has been fairly static over the last decade (except for the steep increase in 2009–10), the trends in major ESIS states have been mixed. As shown in figure A.4, Delhi witnessed a significant 114 percent escalation in per capita costs in these eight years, from Rs. 1,137 per person per year to Rs. 2,416 in 2008–09 while Andhra Pradesh (AP) demonstrated an 86 percent increase from Rs. 990 to Rs. 1,844 in the same period. In contrast, costs actually declined by 21 percent from Rs. 1,214 (2001–02) to Rs. 959 (2008–09) in Gujarat, although the state was the highest spender among major states at the beginning of the decade.

In what seems more than a coincidence, AP and Delhi also have the highest per capita expenditure on services outsourced to private super specialty hospitals. Data on this expenditure are available from ESIS only for 2009–10,⁵ and the costs were Rs. 480 and Rs. 338 per capita in Delhi and AP, respectively, as against Rs. 103 in Gujarat, and a national average of Rs. 140. The total expenditure on private super-specialty hospitals was Rs. 178 crores, 9 percent of the medical care expenditure of the scheme in 2009–10. The provisions of the ESI Act require administrative costs to not exceed 15 percent of the revenues. These are pegged by ESI at about 9 percent on a healthy (and rapidly growing) revenue base.

The recently announced financial commitment for establishing ESIS medical colleges calls for closer review. The currently sanctioned capital

Figure A.4 ESIS: Per Capita Spending, Selected States, 2008–09



Source: ESIS data.

cost of each proposed ESIS medical college is Rs. 4 billion to Rs. 6 billion (Rs. 400 to Rs. 600 crores). While an investment of Rs. 50 billion (Rs. 5,000 crores) for these medical colleges has already been approved by ESIC, the huge expenditure required for operational expenses is yet to be factored in. The strategic relevance of establishing these medical colleges to the stated objectives of ESIS and vis-à-vis the benefits to be reaped by ESIS in exchange for capital and upcoming operational costs needs to be carefully evaluated.

Information Environment

Currently, all model hospitals and state units manually report to the central ESI Corporation on various information parameters of the scheme.

The corporation also manually compiles statistics on beneficiaries and utilization for annual publication. The corporation is developing an IT system for generating regular, electronic reports to improve service delivery efficiency and analytical accuracy while flagging “exceptions.” This is also expected to make service delivery more user friendly for beneficiaries. The contracted systems integrator is responsible for design, hardware, networking, enterprise resource planning, and system maintenance once it is up and running.

The IT system is expected to network all branch offices, dispensaries, and hospitals (40,000 nodes across more than 2,200 locations) with dedicated phone lines and computers, and link these to a central database for easy access to information. Video conferencing will support telemedicine and facilitate virtual meetings. All employers are expected to update eligible employee details every month, and this paperless system is expected to reduce delays and errors in collecting their contributions.

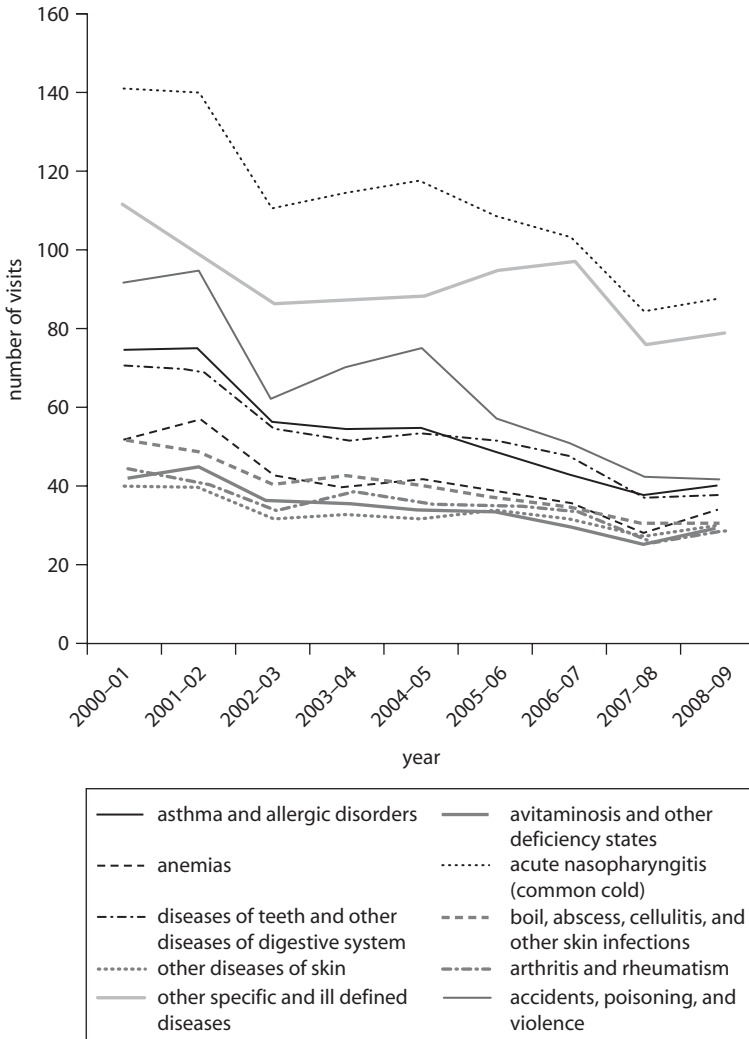
Hitherto, ESIS members were assigned to their nearest dispensary as the first point of medical care and referral for any further care. With modernized “Pehchan” cards being issued across the scheme, beneficiaries will soon be able to obtain care at any point within the ESI network. Beneficiaries and their families will use the magnetic strip-based plastic Pehchan Cards to facilitate online identification across all network health facilities, making benefits portable across the country. Demographic and biometric information about members is collated at the backend.⁶ A major challenge facing ESIC is the lack of an electronic database of insured persons and families. Manual record keeping is fraught with duplication and errors, for example due to temporary/migrant workers who, by definition, move from one employer to another. The implementation of the IT system will be able to weed out such duplication and errors to reflect a more accurate member base of the scheme (akin to the CGHS experience).

Currently, even though most systems are still manual, the usual processing time for claims from private hospitals is reportedly three to seven days. This, however, needs validation and may not be true of all centers.

Claims and Utilization

Data from the scheme (figures A.5 and A.6) indicate that the utilization of ESIS facilities for both outpatient and inpatient care is low and declining. This has contributed to high unit costs of care which are often well beyond market rates for purchasing the same services. In view of this, expansion and investment plans of the scheme call for careful

Figure A.5 ESIS: Trends in New Outpatient Visits for Common Causes, 2000–01 to 2008–09 (per 1,000 insured persons [primary members])

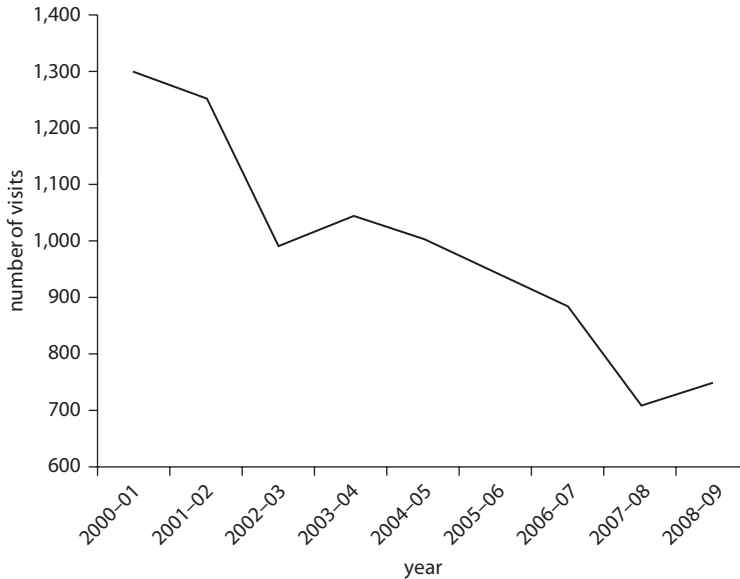


Source: ESIS data.

consideration. According to the published statistics of ESIS for 2008–09, the average total old and new outpatient visits to ESIS facilities per 1,000 family units was 845 and 758 respectively.

Table A.5 shows the substantial variation in outpatient attendance in selected states. Andhra Pradesh, which has the highest number of

Figure A.6 ESIS: Trends in New Outpatient Visits, 2000–01 to 2008–09 (per 1,000 insured persons [primary members])



Source: ESIS data.

Table A.5 ESIS: Number of Outpatient Visits (per 1,000 family units per year)

State	New cases	Old cases	Ratio new:old
Rajasthan	1,913	1,123	0.59
Delhi	2,178	1,343	0.62
Kerala	2,295	2,083	0.91
Madhya Pradesh (SS)	1,369	1,522	1.11
Andhra Pradesh	2,832	3,603	1.27
Gujarat (SS)	416	2,074	4.99
All India	758	845	1.11

facilities, displays much higher utilization rates than Gujarat or Rajasthan. An easier access to medical care facilities may be a driver for these comparatively higher rates.

Recorded disease profiles for new, ambulatory cases show that ailments such as common cold and accidents were the main reasons for outpatient visits (table A.6). While there are no unexpected illnesses in this list of common ailments, there is a divergence in the utilization trends of the primary insured individuals and those of entire families.

Table A.6 ESIS: Most Common Conditions for Outpatient Consultation, 2007–08 and 2008–09

<i>Disease</i>	<i>Insured individuals^a</i>		<i>Family units^a</i>	
	<i>2007–08</i>	<i>2008–09</i>	<i>2007–08</i>	<i>2008–09</i>
Acute nasopharyngitis (common cold)	84.46	87.31	103.46	75.22
Other specific and ill-defined diseases	76.04	78.85	92.32	71.35
Accidents, poisoning, and violence	42.05	41.75	52.49	37.99
Asthma and allergic disorders	38.22	40.67	46.88	42.16
Anemia	28.59	34.15	38.09	36.28
Dysentery, all forms	21.01	26.59	24.86	26.8

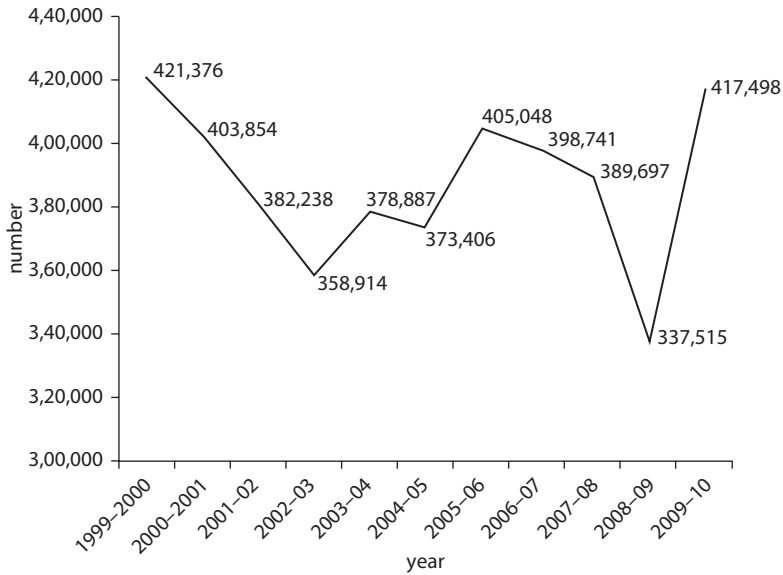
Source: ESIS data.

a. Number of new cases per 1,000 insured persons (i.e., only the primary members form the denominator) and per 1,000 family units (i.e., including the primary member and all members of the primary member's family in the denominator).

While utilization by the insured individual went up across all six disease categories between 2007–08 and 2008–09, it declined for the family as a whole, over the same period. This trend needs further study. One possibility which confounds data on utilization by the insured individual is the component for loss of wages, which applies only for primary members and not for the family. In other words, compensation for loss of wages may be a factor leading to increased utilization by the primary insured.

Temporal trends in outpatient consultation for the above specific diseases and overall out-patient (OPD) visits over the past decade, as depicted in figures A.5 and A.6, show a steep decline. Overall outpatient attendance per 1,000 insured persons declined from almost 5,500 new and old OPD visits per thousand beneficiaries in the early 1990s, to about 1,600 visits in 2008–09.

In terms of inpatient episodes and their geographical variations, in 2008–09 (the latest year for which detailed statistics are available) ESIS hospitals registered 337,515 admissions from among their 50 million beneficiaries, indicating a hospitalization frequency of 0.67 percent per beneficiary per year. Preliminary data from 2009–10 show this number has gone up to 417,498 cases and the hospitalization frequency has also increased to 0.75 percent per beneficiary per year. Under private health insurance, hospitalization frequency was about 10 times greater than that of ESIS in 2008–09. The ESIS figure is also significantly lower than the community incidence of hospitalization as indicated by the 60th round of the National Sample Survey Organization (NSSO) (MSPI 2004). The absolute number of hospitalizations has also declined (figure A.7), despite an increase in the number of beneficiaries over the last decade.

Figure A.7 ESIS:Trends in Hospital Admissions, 2000–01 to 2008–09

Source: ESIS data.

An important topic for research is to ascertain the reason for decrease in utilization of both outpatient and inpatient care. Is morbidity declining among beneficiaries? Are beneficiaries shifting to non-ESIS providers? If so, why?

The bed occupancy rates across ESIS hospitals are generally low (table A.7), and rising fixed costs translate into higher unit costs per bed per day. According to published statistics for 2008–09, only 17 of the 148 ESIS hospitals had a bed occupancy rate of 80 percent or above, suggesting a scope for improving utilization of the available infrastructure, low demand, and/or overcapacity. An analysis of the available data also suggests very high average length of stay (ALOS), well beyond international benchmarks. Longer duration of stay is generally suggestive of inefficient use of available bed days, which in turn may be linked to deficient clinical management practices in the organization. Further investigation is needed to flesh out the drivers of the apparent inefficient use of resources.

The cost per bed per day for ESIS hospitals ranges from a high of Rs. 138,954 (this hospital had a bed occupancy of only 0.21 percent) in a hospital in Orissa to a low of Rs. 496 (where the bed occupancy for the

Table A.7 ESIS: Coverage and Utilization Statistics, Selected States, 2009

State	Implemented areas ^a				Nonimplemented areas ^a			Number of beds committed ^b	Bed occupancy, 2008–09 (percent)	Number of beds per 1,000 beneficiaries	Number of cases admitted in hospitals (2008–09)	Beneficiaries hospitalized (percent)
	Number of centers	Number of employers	Number of employees	Number of beneficiaries	Number of inpatients/family units	Number of employers	Number of employees					
Karnataka	32	25,341	1,488,072	5,795,095	1,493,581	996	51,857	1,587	52	0.274	46,050	0.79
Rajasthan	52	15,597	502,863	2,002,084	515,814	1,821	37,650	644	26	0.322	16,038	0.80
Gujarat	35	23,947	712,710	2,790,039	516,001	3,317	172,760	1,581	37	0.567	1,079	0.04
Maharashtra	43	80,076	1,755,833	6,925,774	1,784,993	6,054	307,736	4,048	44	0.584	4,305	0.06
Punjab	46	6,570	318,822	1,241,185	319,893	45	1,455	585	37	0.471	8,506	0.69
Orissa	54	2,732	189,692	736,680	189,866	108	27,500	347	38	0.471	7,580	1.03
Andhra Pradesh	181	22,854	885,861	3,450,162	889,217	668	28,342	1,177	63	0.341	71,052	2.06
All India	783	394,332	12,569,295	50,197,799	12,937,577	18,266	1,032,329	23,088	—	0.460	337,515	0.67

Source: ESIS data.

Note: — = not available.

a. Implemented areas are where the ESI Scheme has been made mandatory for the employers meeting the ESIS eligibility criteria.

b. Regional coverage as of March 31, 2009.

hospital was 50 percent) in a hospital in Gujarat. The 17 hospitals with high bed occupancy averaged a low cost of Rs. 660 per bed per day. It is evident that the combination of low bed occupancy and high staff costs has led to spiraling unit costs of inpatient care delivery in comparison with, for instance, the package rates paid by RSBY⁷ and other government-sponsored health insurance schemes (GSHISs) to private hospitals. Further research is needed to validate this hypothesis and inform the proposed capital expenditure plans for further construction and upgrading of ESIS hospitals with respect to feasibility and impact in light of utilization and cost-of-care trends.

Table A.7 reveals that Andhra Pradesh leads the other states in terms of bed occupancy and utilization frequency (patients admitted as a proportion of total ESI beneficiaries in the state) for inpatient services as well. The number of beds in ESI hospitals in the Maharashtra region, on the contrary, is high both in absolute (over 4,000 beds out of the total 23,000 beds) as well as in relative terms (0.58 beds per 1,000 beneficiaries compared with the national average of 0.46). However, the overall bed occupancy in Maharashtra is only 44 percent. The most difficult to understand metric in the table is the frequency of hospitalization. It varies from a low of 0.06 percent beneficiaries hospitalized in Maharashtra and as much as 2.06 percent hospitalization in Andhra Pradesh. These anomalies require investigation into their causes.

Cost-Containment Mechanisms

ESIS is an integrated care organization featuring captive facilities that provide outpatient and most inpatient services. It is protected from the supply-side moral hazard issues which might have challenged its provision of ambulatory care. In theory, the referral arrangements required to avail super specialty care filter out improper utilization of tertiary care facilities. Also, the care purchased from outside its own facilities is predominantly tertiary by nature and is procured at preagreed (CGHS) rates. Use of standard package costs for such outsourced care again limits, to some extent, the supply side moral hazard issue common to the fee-for-service payment methodology. However, the effectiveness of the referral system in fostering use of ambulatory care and preventing overuse of inpatient care is unknown.

Approximately 17 percent of ESIS costs are for medicines and pharmaceuticals (table A.8), and controlling these will be an important cost

Table A.8 ESIS: Expenditure on Drugs and Dressings (Rs. million)

<i>Year</i>	<i>2006–07</i>	<i>2007–08</i>	<i>2008–09</i>
Expenditure on drugs and dressings	1,632.7	1,940.2	2,076.2
Total medical care expenditure	9,146.8	10,929.9	12,596.4
Percent share of expenditure on drugs and dressings out of total medical expenditure	17.8	17.8	16.5

Source: ESIS data.

containment initiative. ESIS now procures drugs through a rate contract mechanism; rates obtained through a tendering process are valid for two years and state units procure drugs directly on these rates. A Technical Executive Committee (TEC) updates the list of drugs with inputs from the Medical Superintendents of ESIS hospitals from across the country. A medical scrutiny committee provides details of quantities of each drug required at the state level.

Quality Orientation

ESIS does not systematically monitor or measure quality processes, patient safety, or health outcomes. Quality assurance guidelines or standards for hospital services, specific to ESIC, are lacking. However, ESIS hospitals do follow Central Health Service guidelines and some Standard Operating Procedures, and have constituted Hospital Committees for death audits, infection control committees, and other such systems in keeping with mandated requirements. How often these committees meet, or how effective they are in addressing quality gaps, is unknown. With respect to drugs and pharmaceuticals, the State Drug Controller's Office supports the scheme in providing quality assurance to the drugs procured and requires one sample from each procured batch to be tested at an approved testing laboratory.

Concluding Remarks

ESIS is the oldest and largest health insurance scheme in India, both in terms of its revenue base and total expenditure. It was envisaged to offer a comprehensive benefits package delivered through an integrated network at a relatively low cost. However, a decline in utilization in the recent past has substantially raised its per-unit costs. Three rounds of

expansion of its mandatory coverage in the last seven years have contributed to huge surpluses in its finances. The challenge facing ESIS relates to raising the efficiency and quality of services by exploring strategies to increase utilization (including making available underutilized facilities for use outside the network), considering alternative provider remuneration systems within its network, revisiting its plan to establish a chain of medical colleges; and raising care standards, perhaps through accreditation. A quick deployment of its IT-enabled management information system will also help ESIS in analyzing its own data to effectively address the above challenges.

Notes

1. In 2009–10, outsourced services purchased from tertiary/specialty hospitals not owned by ESIS constituted less than 7 percent of the cost of the scheme.
2. “Model” hospitals are distinct from other ESIC hospitals primarily because these are directly managed by ESIC and not by state ESIS departments. These hospitals seem to be relatively better placed in terms of resources and administrative oversight than those managed by ESIS departments.
3. Notified areas are geographical areas where ESIS has sufficient capacity to provide the services contained in the benefits package. Nearly all cities with a population of 1 million or more are notified areas.
4. Although contrary to ESIS policies, sometimes hospitals do not extend credit and therefore directly charge beneficiaries. This occurs, for example, when package rates are not clear or ESIS payments to hospitals are in arrears.
5. The annual report and other published information from ESIS were available only for 2008–09 when this study was being written. Some, then unpublished, information for 2009–10 was also available from ESI Corporation and was incorporated where available and relevant.
6. Unlike the Rashtriya Swasthya Bima Yojana (RSBY) and Tamil Nadu (TN) schemes, the ESIS card does not have a memory chip and does not store data on the card itself, as off-line access to data is not envisaged in the fully connected ESIS IT system.
7. For nonsurgical treatment, the RSBY package rate is Rs. 500 per day, which is even lower than the unit costs of the ESIS hospitals having high utilization. For a common procedure like normal delivery or caesarean section, the RSBY payout, including consumables, is Rs. 2,500 and Rs. 4,500 for an expected length of stay of two days and three days respectively. Most ESIS hospitals have unit costs (per bed per day) higher than Rs. 1,500 per day.

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APPENDIX B

Central Government Health Scheme

Table B.1 CGHS: Summary Matrix

<i>Indicators/name of scheme</i>	<i>Central Government Health Scheme (CGHS)</i>
Launch year	1954
Geographical area	Pan India, 25 cities, in notified areas in vicinity of CGHS dispensaries.
Target/eligible population	Employees and pensioners of central government, certain autonomous, semi-autonomous government organizations, members of parliament, state governors, accredited journalists and their dependents
Number of beneficiaries	3 million
Enrolment unit	Family
Benefits package	Comprehensive medical care, including ambulatory, inpatient, home care, and medicines and diagnostic services.
Maximum insurance coverage	No limit on maximum care.
Hospital empanelment criteria	100 beds in metropolitan cities; 50 beds in other cities.
Number of empaneled hospitals (government and private)	562 private hospitals for secondary and tertiary care. Beneficiaries can use any public hospitals and seek reimbursement of expenses incurred.

(continued next page)

Table B.1 (continued)

Sources of funds	Employee contribution between Rs. 50 and Rs. 500 per month, depending on salary; balance from central government funds.
Total expenditure (millions Rs.) in 2009–10	Approximately 16,000 (Rs. 1,600 crores)
Premium price in 2009–10	n.a. (see sources of funds, above)
Provider payment mechanism	Salaries for doctors in own network for ambulatory care; predefined package rates for outsourced private hospitals.
Information technology (IT) tools used	Outpatient software module in management information system (MIS) functional for two years. Recently initiated electronic claim settlement using a service provider in a small number of hospitals. Plastic identity cards with national portability. Call center and online claim status tracker.
Number of hospitalizations per year	—
Utilization rate	—
Most common procedures	—
Governing agency and legal status	Ministry of Health and Family Welfare (MOHFW), central government
Executing agency	Same as governing agency
Number of full-time staff, including contract personnel, in the governing agency	—
Administrative costs as percent of total spending	—
Cost-containment measures	Ambulatory care provided through its own integrated network; fixed package rates for inpatient care and outsourced diagnostics

Note: n.a. = not applicable; — = not available; see also note to table A.1.

Introduction

The Central Government Health Scheme (CGHS) is one of the oldest contributory health schemes in the country, providing access to comprehensive inpatient and outpatient care for central government (GOI) civil service employees and retirees as well as their dependents. It also covers other defined groups such as members and ex-members of parliament and employees of certain autonomous institutions. The scheme does not cover all GOI employees; large GOI employers such as the defense and railway departments operate separate health schemes. Further, even among the civil (i.e., nondefense and nonrailway) employees, the scheme

is limited to those residing in the catchment areas of CGHS ambulatory dispensaries and therefore covers roughly one third of GOI civil service employees. The remaining civil service employees are covered by a separate noncontributory scheme under the GOI Civil Services (Medical Attendance) rules, abbreviated as the CS-MA scheme.

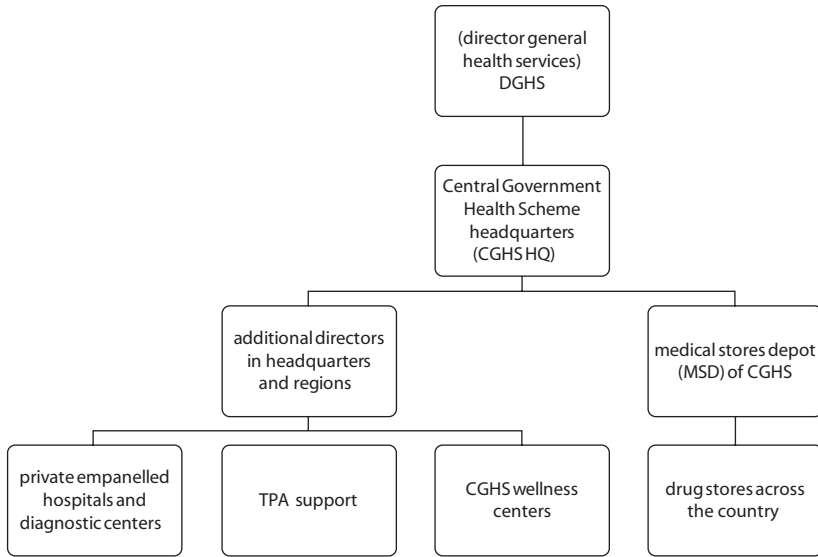
CGHS was introduced in Delhi in 1954 and was gradually expanded to 24 other cities across the country. CGHS owns and operates a network of outpatient dispensaries (now known as “wellness centers”) and polyclinics, supplemented by a network of contracted providers of diagnostic and inpatient services. CGHS does not own or operate hospitals. The scheme has about 3 million beneficiaries. Most scheme beneficiaries live in a handful of large cities where the concentration of GOI departments is high. CGHS has accordingly chosen to emphasize the location of its facilities in these cities.

In terms of depth of coverage, CGHS has the most generous benefits package of those described in this book and is one of the most generous health insurance schemes in the world. CGHS offers a comprehensive package of outpatient and inpatient care, also including preventive care. It also covers ayurvedic, homeopathy, unani, and siddha systems of medicine. There are no exclusions for preexisting diseases, copayments, deductibles, or monetary cap on yearly or lifetime coverage. However, beneficiaries may incur out-of-pocket costs if they do not follow the scheme-mandated referral systems or incur costs in nonnetwork hospitals beyond the specified package rates for any given procedure. However, in contrast to the Employees’ State Insurance Scheme (ESIS), a stratification system exists among beneficiaries; higher-income employees who contribute a relatively higher rate to the scheme are entitled to a better category of hospital rooms.

CGHS pioneered preagreed “package rates” in the Indian health insurance sector, thereby achieving some level of closed-endedness in hospital charges. Many other insurance schemes have adapted this hospital payment mechanism (for inpatient services).

Institutional Framework

Figure B.1 illustrates the institutional arrangements for CGHS. The additional secretary and director general (CGHS) in the Department of Health and Family Welfare, GOI, is the administrative head of the CGHS. The next in line, Director-CGHS, is an official of the Central Health Services, an organizational service in the Department of Health and

Figure B.1 CGHS: Institutional Framework

Source: Authors' elaboration.

Family Welfare. Each city with CGHS services has an additional director (AD) or a joint director (JD) to oversee operations in the network of CGHS wellness centers as well as outsourcing services to private providers. Chief medical officers (or medical officers) manage each of the scheme's 265 wellness centers and polyclinics, clinically and administratively, and are responsible for attending to beneficiaries and referring them to higher level care if needed.

CGHS has a medical stores department (MSD) that is responsible for buying and distributing drugs and medical supplies to outpatient facilities. Nevertheless, since bulk procurement of medicines for clinics' stocks has been outsourced, a key MSD role is procurement of expensive drugs in limited quantities needed by individual beneficiaries.

The offices of additional directors and joint directors also undertake contracting with hospitals and diagnostic centers according to policies and processes prescribed by the headquarters. Given its limited processing capacity and faced with increasing volumes of claims, CGHS had engaged third-party administrators (TPAs) to assist in processing reimbursement claims. It has now also contracted a bill clearing agency, a third party service provider to process bills as well as make payments to hospitals and individuals. This provider is also managing a call center

for facilitating these services. In sum, CGHS has an elaborate institutional structure with significant numbers of clinical and administrative staff. However, the extent to which this structure can meet its requirements and enable effectiveness and efficiency of scheme operations needs to be ascertained.

Beneficiaries

The CGHS beneficiary population includes the following primary beneficiaries (“cardholders”) and their dependent family members:

- All central government employees paid from civil estimates¹—except railway and New Delhi administration employees and New Delhi police force
- Pensioners paid from civil estimates
- Members of parliament
- Ex-members of parliament and former prime ministers
- Sitting and former judges of the Supreme Court and High Courts
- Employees and pensioners of listed autonomous bodies covered under CGHS (New Delhi)
- Ex-governors and ex-vice presidents
- Freedom fighters²
- Accredited journalists.³

Table B.2 shows the number of cardholders in 24 CGHS cities; a 25th city, Jammu, was recently added to the list. As of December 2009, CGHS covered about 3 million beneficiaries—866,687 CGHS cardholders plus their dependents. Active civil service employees of the GOI are the largest single group covered by the CGHS—67 percent of all cardholders. The retired civil service employees of the GOI constituted a little more than 31 percent; all other categories represented only about 2 percent of all CGHS members. The number of beneficiaries has declined sharply from the 4 million estimated to be covered a few years earlier. This change is largely due to improved enumeration with the new identity cards issued to beneficiaries.⁴ Any actual reduction in beneficiary numbers over the years would have been only gradual.

In terms of geographical location of cardholders, the largest number, 38 percent of the total, reside in New Delhi where most central government offices are located. Not surprisingly, New Delhi has more cardholders than the next six cities combined: Kolkata (8 percent) closely followed

Table B.2 CGHS: Number of Cardholders, by City and Category, December 2009

<i>City</i>	<i>Serving employees</i>	<i>Pensioners</i>	<i>Others^a</i>	<i>Total</i>	<i>Percent</i>
Ahmedabad	5,970	1,982	134	8,086	0.9
Allahabad	17,413	5,358	11	22,782	2.6
Bangalore	29,326	12,001	496	41,823	4.8
Bhopal	3,103	1,343	16	4,462	0.5
Bhubaneswar	2,708	724	77	3,509	0.4
Chandigarh	3,325	3,104	7	6,436	0.7
Chennai	24,471	15,309	1,167	40,947	4.7
Dehradun	447	1,762	5	2,214	0.3
New Delhi	225,105	99,792	2,246	327,143	37.8
Guwahati	11,298	654	56	12,008	1.4
Hyderabad	38,678	19,260	6,567	64,505	7.4
Jabalpur	15,487	11,883	92	27,462	3.2
Jaipur	4,619	3,552	112	8,283	1.0
Kanpur	18,027	9,779	81	27,887	3.2
Kolkata	42,021	24,905	2,717	69,643	8.0
Lucknow	24,850	5,165	621	30,636	3.5
Meerut	6,488	4,780	55	11,323	1.3
Mumbai	41,160	11,502	172	52,834	6.1
Nagpur	16,447	9,841	98	26,386	3.0
Patna	12,828	2,510	1,199	16,537	1.9
Pune	23,808	21,516	228	45,552	5.3
Ranchi	1,663	819	10	2,492	0.3
Shillong	1,459	175	5	1,639	0.2
Trivandrum	6,697	5,166	144	12,007	1.4
Total (number)	577,398	272,882	16,316	866,596	100
Share of total (percent)	66.6	31.5	1.9	100.0	

Source: CGHS, New Delhi.

a. Includes members of parliament, ex-members of parliament, journalists, freedom fighters, others.

by Hyderabad (7 percent), Mumbai (6 percent), and Pune, Bangalore, and Chennai (5 percent each). Together, these seven metro cities account for 74 percent of all cardholders in the CGHS.

According to the Census of Central Government Employees (2006), the government has 3.1 million civil employees. Of these, 45 percent are in the Ministry of Railways, which is outside CGHS coverage. Of the remaining 1.7 million active civil employees, 34 percent are covered under CGHS; the rest are covered under the CS-MA rules. The CS-MA beneficiaries are typically located in smaller centers where no CGHS facility is located. CS-MA allows outpatient care to

be delivered through authorized private practitioners (in addition to government facilities), and the inpatient provisions of CS-MA are steadily approaching the benefits in CGHS. CS-MA does not require an employee contribution and is essentially a fully subsidized employment benefit.⁵

While active employees are eligible for CGHS facilities only if they live in or near a city served by CGHS (and indeed mandatorily required to join the scheme in such a case), pensioners living in areas not covered by the CGHS can also join the scheme. In this case, the CGHS pensioner card is issued from the nearest CGHS covered city. However beneficiaries assume the transportation costs of accessing care in CGHS-covered cities.

Benefits Package

The coverage is comprehensive and includes both outpatient care and hospitalization. The benefits package includes primary, secondary, and tertiary health services as well as home visits or home care. It also fully covers prescribed medicines, including special imports of recently developed medicines, and all diagnostic services, as medically necessary. The provision of services is without any cost sharing, or any benefit ceilings or caps if beneficiaries receive care in the provider network and follow the prescribed referral system. However, they may face copayments if out-of-network providers charge higher fees than the CGHS package rates. Unlike most other health insurance schemes in India, CGHS provides coverage for therapies under other recognized systems of medicine such as homeopathy and ayurveda. Dental care is also covered, which is again unusual for a health insurance scheme in the Indian context. Antenatal care and immunization, free supply of drugs listed in its formulary,⁶ and select laboratory and radiological investigations are offered at the scheme's own ambulatory facilities. Several other benefits, such as preventive health checks, neurosurgical implants for delivery of drugs, digital hearing aids, and human insulin for diabetics have been added to the scheme over the years, enhancing the benefits package available. In sum, CGHS offers a level of protection in terms of depth of coverage not available in any other health insurance scheme in India.

The wellness centers also serve as the gateway to the scheme's outsourced network for higher investigations and for inpatient services. However, in the case of emergency medical care, beneficiaries can directly

access any public or private health facility. In these cases, any difference in costs vis-à-vis CGHS package rates is borne by the patient.

“Cashless” (or credit) facilities are available to pensioners for treatment in private hospitals and diagnostic centers in the CGHS network with prior authorization or referral by their designated CGHS wellness center. In such cases (and unlike the case for active employees), the hospitals do not charge the pensioners and send the bill directly to CGHS authorities for reimbursement. Pensioner beneficiaries are also allowed to secure medicine refills for chronic ailments for a longer duration than active employees. Thus, the network extends additional privileges to its senior citizens. However, because active employees are reimbursed only later for their hospital expenses, they may need to arrange for large sums of money to pay the hospitals.⁷ This seems to be a major area for improvement in an otherwise very generous scheme.

Provider Network

The CGHS uses a combination of its own facilities for ambulatory care and purchasing services for inpatient care and advanced diagnostics from its panel of public and private health facilities. The CGHS wellness centers also act as gatekeepers for referral to these diagnostic centers and inpatient service providers.

In 2009, the CGHS-owned network comprised of 246 wellness centers, 19 polyclinics (providing specialist consultation services across multiple disciplines), 33 ayurvedic, 35 homeopathic, 10 unani, 3 siddha, and 4 yoga centers, 64 laboratories, 21 dental units, and 1 maternity center (table B.3). Together, these facilities constitute the CGHS ambulatory care network for modern medicine (allopathy) as well as for other systems of medicine. Utilization of these centers varies widely within and between cities (table B.4).

For inpatient services across 24 cities, 562 hospitals are empaneled. There is also a network of 170 diagnostic centers. CGHS beneficiaries can also seek inpatient treatment and diagnostic services in all central and state government hospitals and claim reimbursement of the expenses incurred. For emergencies, they can receive treatment in any nearby or accessible hospital regardless of its network affiliation status. However, they need to obtain postfacto approval to secure reimbursement and submit documentation of the emergency from the attending medical practitioner. Reimbursement in such cases is restricted to the package rate applicable to the network hospitals. When accessing inpatient care in

Table B.3 CGHS: Network of Own Facilities, by City and Type, 2009

City	Starting date							Total wellness centers			Dental	First aid
		Allopathy 2009	Ayurvedic 2009	Homeo 2009	Unani 2009	Siddha 2009	Yoga 2009	Polyclinic 2009	CGHS labs 2009	units 2009	post 2009	
Ahmedabad	Mar-79	5	1	1	0	0	0	7	0	1	1	0
Allahabad	May-05	7	1	1	0	0	0	9	1	1	0	0
Bangalore	Feb-76	10	2	1	1	0	0	14	1	3	1	0
Bhopal	Mar-02	1	0	0	0	0	0	1	0	0	0	0
Bhubaneswar	Aug-88	2	1	0	0	0	0	3	0	1	0	0
Chandigarh	Mar-02	1	0	0	0	0	0	1	0	0	0	0
Chennai	May-75	14	1	1	0	2	0	18	2	2	1	0
Dehradun	Jul-05	1	0	0	0	0	0	1	0	0	0	0
Guwahati	Jun-05	3	0	1	0	0	0	4	0	0	0	0
Hyderabad	Feb-76	13	2	2	2	0	0	19	2	1	1	0
Jabalpur	Oct-91	3	0	0	0	0	0	3	0	1	0	0
Jaipur	Jun-78	5	1	1	0	0	0	7	1	3	1	0
Kanpur	May-05	9	1	2	0	0	0	12	1	4	1	0
Kolkata	Aug-72	18	1	2	1	0	0	22	1	5	1	0
Lucknow	May-05	6	1	1	1	0	0	9	1	2	1	0
Meerut	Jul-71	6	1	1	0	0	0	8	0	2	1	0
Mumbai	Aug-63	26	2	3	0	0	0	31	2	4	3	0
Nagpur	Oct-73	11	2	1	0	0	0	14	1	0	1	0
Patna	Nov-76	5	1	1	0	0	0	7	1	1	1	1
Pune	Jul-78	7	1	2	0	0	0	10	1	1	1	0
Ranchi	Jul-85	2	0	0	0	0	0	2	0	1	0	0
Shillong	Jul-02	1	0	0	0	0	0	1	0	0	0	0
Thiruvanthapuram	Jun-05	3	1	1	0	0	0	5	0	0	0	0
New Delhi	May-05	87	13	13	5	1	4	124	4	31	6	5
Total:		246	33	35	10	3	4	332	19	64	21	6

Source: CGHS, New Delhi.

Table B.4 CGHS Outpatient Utilization, by City and Type of Facility, 2007 and 2009

City	Allopathy						Ayurvedic		Homeopathy		Unani		Siddha		Polyclinic	Laboratories	Dental units
	Old		New		Total		Total		Total		Total		Total				
	2007	2009	2007	2009	2007	2009	2007	2009	2007	2009	2007	2009	2007	2009			
Ahmedabad	133,359	112,939	37,240	19,376	170,599	132,315	1,882	2,509	1,391	4,048	0	0	0	0	0	9,702	1,430
Allahabad	216,705	223,899	80,239	72,675	296,944	296,574	51,034	47,531	31,244	29,236	0	0	0	0	0	0	0
Bangalore	42,029	523,220	9,521	76,852	51,550	600,072	2,198	23,677	1,011	13,662	333	3,916	0	0	326,700	15,382	5,044
Bhopal	15,504	33,495	10,095	2,148	25,599	35,643	0	0	0	0	0	0	0	0	0	0	0
Bhubaneshwar	24,470	21,235	40,226	40,972	64,696	62,207	0	510	0	0	0	0	0	0	0	0	0
Chandigarh	106,946	100,218	16,318	14,346	123,264	114,564	0	0	0	0	0	0	0	0	0	0	0
Chennai	481,684	588,641	54,224	52,722	535,908	641,363	9,386	8,343	10,061	11,900	0	0	13,104	13,205	0	0	0
Dehradun	13,251	23,452	10,475	1,834	23,726	25,286	0	0	0	0	0	0	0	0	0	0	0
Guwahati	54,007	52,243	53,333	60,954	107,340	113,197	0	0	8,449	6,727	0	0	0	0	0	0	0
Hyderabad	717,645	647,987	222,705	207,023	940,350	855,010		82,136		26,071		19,078	0	0	51,608	127,635	4,014
Jabalpur	169,384	9,917	87,138	7,817	256,522	17,734	0	0	0	0	0	0	0	0	0	0	0
Jaipur	193,699	13,122	171,932	15,526	365,631	28,648	9,414	857	9,141	1,000	0	0	0	0	0	0	0
Kanpur	338,575	365,516	238,772	200,192	577,347	565,708	14,768	14,887	40,408	23,169	0	0	0	0	0	0	0
Kolkata	813,336	833,819	82,412	86,166	895,748	919,985	13,635	14,896	23,646	19,287	6,416	4,865	0	0	12,391	20,793	1,868
Lucknow	308,976	39,150	191,782	25,230	500,758	64,380	21,992	28,807	23,171	28,160	11,991	16,260	0	0	19,850	45,210	10,350
Meerut	12,365	14,888	8,872	6,902	21,237	21,790	3,101	4,012	1,668	1,280	0	0	0	0	0	1,324	502
Mumbai	689,256	641,490	159,442	136,846	848,698	778,336	28,701	25,095	47,825	30,197	0	0	0	0	0	0	0
Nagpur	492,283	539,184	133,414	85,036	625,697	624,220	37,461	24,534	16,488	12,896	0	0	0	0	0	0	0
Patna	76,342	100,114	84,997	87,028	161,339	187,142	24,613	24,636	17,603	16,175	0	0	0	0	0	18,530	4,515
Pune	294,364	59,907	43,482	9,425	337,846	69,332	17,484	13,330	20,885	20,420	0	0	0	0	19,016	13,920	2,983
Ranchi	50,125	50,173	6,995	401,719	57,120	451,892	0	0	0	0	0	0	0	0	0	3,378	0
Shillong	11,834	13,932	1,075	757	12,909	14,689	0	0	0	0	0	0	0	0	0	0	0
Thiruvanthapuram	9,044	9,298	1,785	1,861	10,829	11,159	1,158	1,264	999	1,826	0	1,294	0	0	0	0	0
New Delhi	3,031,315	2,250,997	1,998,820	1,158,546	5,030,135	3,409,543	311,920	245,905	375,913	228,585	31,932	26,999	11,413	10,600	0	0	0
Total	8,296,498	7,268,836	3,745,294	2,771,953	12,041,792	10,040,789	548,747	562,929	629,903	474,639	50,672	72,412	24,517	23,805	429,565	255,874	30,706

Source: Table B.5, based on CGHS data.

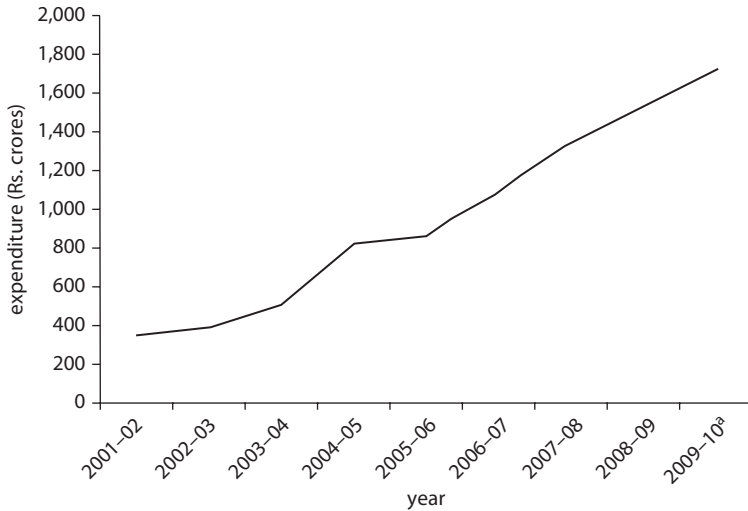
public facilities, higher-income beneficiaries tend to seek admission to medical college hospitals and other prestigious tertiary care facilities with private rooms. This may not work equally across all classes of beneficiaries due to the scarcity of such rooms.

The creation of this outsourced network of private hospitals is of recent origin (1996).⁸ The rationale for outsourcing was to shorten the long waiting lists in public hospitals. These private providers have been empaneled to provide inpatient care and higher-end diagnostic services, neither of which the CGHS provides in its own facilities. Except in the case of pensioners (for whom cashless benefits are available from network hospitals), upon accessing an empaneled private facility, CGHS beneficiaries must pay for services out of pocket and subsequently seek reimbursement from the departments where they work (which charge the expense to CGHS) for all eligible payments made by them. This may be a deterrent to utilization. However, some options such as “medical advances” may be available to the members from their office of employment. But sometimes even pensioners may need to pay first and seek reimbursement later, for instance, whenever they use a public hospital or receive emergency treatment from a private hospital outside the network.

CGHS beneficiaries are registered in the wellness center nearest to their residence and, until recently, were required to first seek care in that center only. However, the introduction of computerization, networking, and bar-coded plastic identity cards is changing this limitation, and beneficiaries are already allowed to access CGHS wellness centers elsewhere without obtaining special permission, particularly when traveling to another city where CGHS is available. In due course, this should also even out utilization across wellness centers as beneficiaries may prefer less-crowded but more distant locations.

Finance and Expenditures

Trends in overall CGHS expenditure are displayed in figure B.2. This includes a rough estimate of the expenditure on active employees. CGHS costs have grown rapidly in the last few years. The GOI/MOHFW component grew 231 percent over the eight-year period to 2009–10, a compound growth rate of 16 percent per year in nominal terms. Because the number of beneficiaries fell by one fourth over the same period, the cost per beneficiary grew much more: 341 percent, a compounded annual increase of more than 20 percent. This rate of increase is much higher

Figure B.2 CGHS: Trends in Total Estimated Expenditure, 2001–02 to 2009–10

Source: Authors' estimates based on CGHS data, New Delhi.

a. Data for 2009–10 are the provisional accounting numbers from the "revised estimates" of the budget.

than inflation and dwarfs the experience of other payers in the country's health sector.

The accounting system for reimbursement to active employees is decentralized to the department or office where the cardholder works and is recorded by that ministry or department. The accounts of the Ministry of Health reflect only the remaining expenditure on CGHS, which includes:

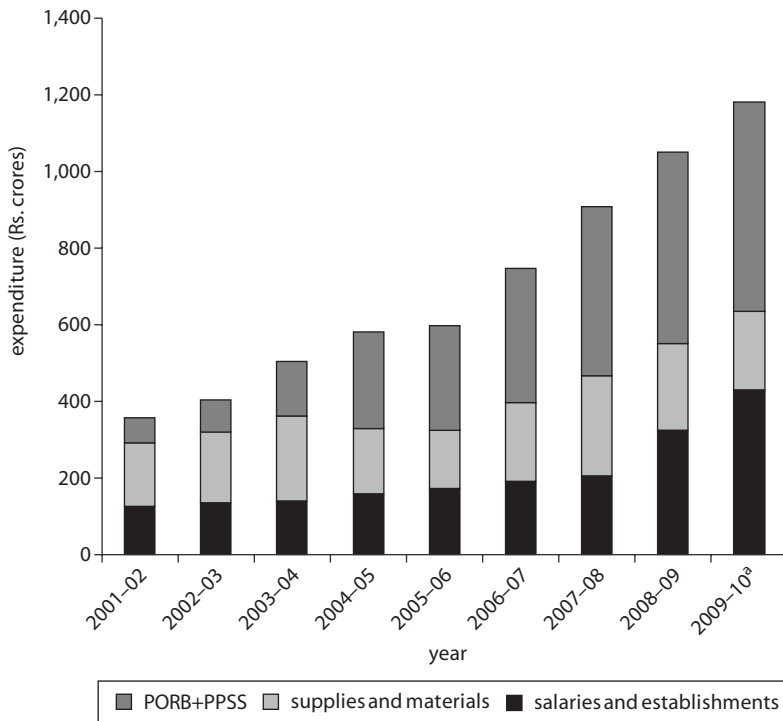
- The costs of operating the CGHS-owned centers, including all salaries and administrative costs
- The costs of all medicines and other supplies provided at the CGHS facilities as well as purchases made by facilities from authorized local pharmacies
- The costs of all hospital and diagnostic network services used by retired beneficiaries (pensioners) whether as direct payments to hospitals and diagnostic centers or as reimbursement to beneficiaries
- Reimbursement of expenses for active employees of the MOHFW.

Since 2005, expenditure for pensioners has been recorded under the budget head Pensions and Other Retirement Benefits (PORB)—the same

head from which pensions are paid. This has helped separate the expenses for active and retired employees. It has aided the CGHS in overcoming its yearly budget crunches, as PORB is seen as an “inevitable” accounting head, being the government’s liability to its past employees, and so is better funded.⁹ However, because the PORB head mixes actual expenses on purchasing inpatient and diagnostic services for pensioners with the share of drugs and consumables expenses estimated to be used for pensioners, in-depth analysis of CGHS expenditure from budgetary data alone is now difficult to interpret.

As shown in figure B.3 and table B.5, MOHFW spending in 2009–10 for the above four expenditure items was about Rs. 1,180 crores (from provisional accounting data). Expenditure on salaried employees from other departments is estimated at Rs. 420 crores, based on the earlier

Figure B.3 GOI Spending on CGHS, by Major Expenditure Component, 2001–02 to 2009–10



Source: Table B.5, based on CGHS data.

a. Data for 2009–10 are the provisional accounting numbers from the “revised estimates” of the budget.

Table B.5 MOHFW Expenditure on CGHS, by Accounting Heads, 2001–02 to 2009–10 (Rs. crores)

<i>Item</i>	<i>2001–02</i>	<i>2002–03</i>	<i>2003–04</i>	<i>2004–05</i>	<i>2005–06</i>	<i>2006–07</i>	<i>2007–08</i>	<i>2008–09</i>	<i>2009–10^a</i>
Pensions, other retirement benefits, and payment for professional services	65.77	82.19	140.73	252.71	273.19	350.10	439.32	500.39	546.30
Salaries and administration	125.34	134.28	139.49	158.69	172.87	191.78	204.19	323.30	428.46
Materials and supplies	165.39	186.04	222.94	170.24	150.26	205.51	263.03	226.42	205.40
Total MOHFW expenditure	356.49	402.52	503.15	581.64	596.31	747.39	906.54	1,050.11	1,180.16

Source: Authors' estimates based on aggregated budgetary data, CGHS, New Delhi.

a. Data for 2009–10 are the provisional accounting numbers from the "revised estimates" of the budget.

study by the National Commission on Macroeconomics and Health (NCMH) (2005) for 2001–02.

The biggest expenditure category for MOHFW was pensioners,¹⁰ amounting to Rs. 546 crores (46 percent of MOHFW expenditure on CGHS). As this category indirectly reflects CGHS costs of inpatient and diagnostic services, it is evident that this has been the fastest growing component of CGHS expenditure over the last decade. The cost of purchased services, when combined with the expenditure on active employees, not visible from MOHFW data alone, accounts for about half of all CGHS costs.

The next largest category was Rs. 428.5 crores (36 percent of MOHFW expenditure, and about 25 percent of total estimated CGHS expenditure). This sum was spent on running the CGHS-owned health facilities and other administrative expenses (as aggregated from various accounting heads for salaries and establishment costs). This category has grown sharply in recent years as a consequence of the sixth pay commission review, which significantly raised GOI employees' salaries in 2006.

Rs. 205 crores (18 percent of MOHFW spending) was spent on materials and supplies, mainly drugs and consumables for CGHS outpatient facilities. This accounting treatment excludes pensioner costs, which are accounted for in the PORB head. Assuming that the expenditure on pensioners was roughly the same per cardholder as active employees, an estimated Rs. 300 crores, about one fourth of all MOHFW expenditure on CGHS, was for drugs and consumables. This category does not seem to have grown as rapidly as the others, which could be attributed to improvements in bulk procurement systems, reduced reliance on local pharmacists, sharper rises in other expenditure heads, and, at least in part, to the change in accounting treatment (as an unknown portion of these costs have shifted to the PORB head).

Table B.6 lists the estimated contributions and sources of funds for CGHS expenditure between 2007–08 and 2009–10. The comprehensive and benevolent entitlements in CGHS come at a substantial cost to the exchequer. The GOI budget is the source of about 94 percent of CGHS spending in 2009–10, and wage-linked contributions of the beneficiaries make up the remainder. Between 2007–08 and 2009–10, spending increased by one third, while contributions rose by 80 percent. Despite the increase in monthly employee contributions in 2009, the share of GOI subsidy remains high and the gap continues to widen.¹¹

Table B.6 CGHS: Sources of Funds, 2007–08 to 2009–10 (Rs. crores)

<i>Year</i>	<i>MOHFW expenditure</i>	<i>Estimated expenditure on active employees^a</i>	<i>Estimated total CGHS expenditure</i>	<i>Employee and pensioner contributions</i>	<i>Net GOI subsidy</i>
2007–08	906	294	1,200	58	1,142
2008–09	1,050	350	1,400	61	1,339
2009–10 ^b	1,180	420	1,600	102	1,498

Source: MOHFW budget data (except estimates of expenditure on active employees).

a. Estimated for these periods based on NCMH (2005) estimates of this amount for 2001–02.

b. Data for 2009–10 are the provisional accounting numbers from the “revised estimates” of the budget.

The contribution rates, varying between Rs. 50 and Rs. 500 as shown in table B.7, became effective June 1, 2009. Based on the estimated numbers of government officials at various levels, about 90 percent of the beneficiaries are among those mentioned in the first three rows of table B.7, contributing between Rs. 50 and Rs. 225 per month. The contribution, progressive with increasing income, also provides an entitlement of progressively higher inpatient room categories (and thus higher GOI subsidies) to the higher contributors.

Upon retirement, pensioners can make a one-time payment equal to 10 years’ contribution that provides them (and their dependents) with lifetime coverage and without any further contributions. By making this contribution, they are also protected against any future hike in contribution rates. However, this system may be contributing to the widening of the gap between claims and contributions observed in table B.6.¹² Further, if the pensioners do not have access to CGHS ambulatory coverage (i.e., when they reside outside CGHS cities) and choose to use only CGHS facilities for inpatient benefits, they also receive a fixed medical allowance of Rs. 300 per month.

To put the above numbers into perspective, the monthly contribution at 2010 pay levels would amount to less than 1 percent of the gross pay of the civil servant. In contrast, the ESIS requires a 1.75 percent contribution from the blue collar employees. The GOI contribution as an employer is much higher (94 percent of total costs) than the 4.75 percent of wages (or 73 percent of total contribution) paid by other formal sector employers under the ESIS and is not based on any specific criteria related to the beneficiaries’ wages. Thus, the government pays the entire difference between CGHS expenditure and income as budgetary support to the scheme. However, the multiple pools within CGHS, including members of parliament, higher echelons

Table B.7 CGHS: Monthly Contribution by Beneficiaries

<i>Grade pay^a (Rs. per month)</i>	<i>Monthly contribution (Rs.)</i>
<1,650	50
1,800–2,800	125
4,200	225
4,600–6,600	325
>7,600	500

Source: CGHS, New Delhi.

a. The sixth pay commission of the Government of India, effective 2006, introduced a concept of grade pay by carving it out separately from the pay scale. This helped merge the large number of pay scales into a smaller number of continuous pay bands. The grade pay is a smaller component of the pay, but indicates the seniority and level in government.

of the judiciary, active civil employees, civil pensioners, and journalists, need to be analyzed and reported separately by the scheme, so that the share of the subsidy for each group is known and prioritized. This will pave the way for transparency in the payroll share of contributions from employees and the government (as an employer).

Information Environment

For most of its first five decades, CGHS has done little to upgrade the “what” and “how” of information management. It has remained largely a manual, paper-based scheme. This reliance on manual procedures has been the main reason for the limited availability of operational information and significant delays in processing of claims. Hospital and pensioner claims have taken several months for processing and payment.

In the last two to three years, however, CGHS has embarked on a massive exercise to automate its processes. This has been entrusted to the IT wing of the GOI, the National Informatics Center (NIC). Computerization of the CGHS outpatient department module, already completed, is expected to enable reduction in the waiting period for doctor’s appointments, facilitate referrals for specialist consultations and for diagnostic and inpatient services, allow on-line placement of orders for drug supplies to local pharmacists when needed, check patient profiles, and provide inventory details on drugs, including usage patterns. As a result of this process, CGHS ended jurisdictional restrictions in March 2011; beneficiaries now have portable access across all CGHS centers, wherever they are located.

Since the proposed MIS is a web-enabled system, CGHS has upgraded broadband connectivity in the dispensaries. The new Managed Leased Data Network provides dual use of leased line and broadband connections that can be monitored remotely. Implementation of this connectivity has commenced in most CGHS cities.

The MIS system, which so far has focused on the ambulatory applications, is testing a claim-processing module for individual beneficiaries and diagnostic centers. Until the pilot is rolled out, any analysis of hospitalization claims, trends, or patterns requires manual compilation of records from different CGHS offices across the country, and information continues to be sparse. CGHS launched a call center in 2009 to register and address beneficiary complaints and grievances. Already, beneficiaries in New Delhi can apply for their plastic identity cards online.

In addition, a decision has recently been made to outsource reimbursement of inpatient claims of hospitals and individuals to a bill clearing agency in an effort to speed up processing. This agency is expected to provisionally pay the hospital bills within 10 days, a big improvement over processing time in the current manual system, which can take several months or longer. In sum, the information environment in CGHS left much to be desired until very recently. However, a wave of change in the last three to four years is dramatically improving information availability and flows within CGHS.

Utilization and Claims

CGHS regularly compiles data on outpatient utilization, summarized in table B.4.¹³ As a result of the recently installed IT system, the availability and reliability of these data are improving.

Overall utilization of CGHS dispensaries fell between 2007 and 2009. As suggested above, this corresponds to the decline in the estimated number of beneficiaries (now 3 million compared with the earlier estimate of 4 million). In absolute numbers, the total number of consultations in allopathic wellness centers dropped by about 17 percent to about 10 million visits in 2009 compared with 12 million visits in 2007. The fall was even steeper in new patient visits (than in “old” visits for follow-up), which decreased by 26 percent (from 3.75 million to 2.77 million) in the same period. Average outpatient department utilization is a low 0.9 new visits per beneficiary per year. This change in demand for outpatient services needs further exploration to see whether it reflects a change in health status of CGHS beneficiaries or a drop in

the perceived utility or quality of these services. Beneficiaries may be opting to seek other sources at prestigious public hospitals (e.g., medical colleges), purchasing private insurance, or paying out of pocket at the point of service.

The 85 wellness centers offering indigenous and other alternative systems of medicine had 1.1 million visits in 2009, an average of about 13,000 visits per center per year, roughly one third the average attendance of about 41,000 patients in allopathic (modern medicine) dispensaries (table B.4). It is not only the variation between systems of medicine, but also the variation across cities and dispensaries that is significant. For instance, modern medicine centers in Meerut and Thiruvananthapuram recorded annual levels below 4,000 visits per clinic compared with more than 60,000 outpatient visits per clinic in Bangalore, Hyderabad, and Kanpur. An assessment of utilization levels may be required to provide inputs into decisions on relocation, merger, or closure of some of the low-volume facilities. Another option worth considering is sharing the use of existing but underutilized primary care infrastructure in schemes such as ESIS or the Ex-Servicemen's Contributory Health Scheme (ECHS), or considering outsourcing to private providers.

The types of claims settled by CGHS can be classified into three categories: claims by individual beneficiaries seeking reimbursement of services availed by them, claims by authorized local pharmacies for supplying medicines outside those available in the centers through bulk procurement, and claims submitted by empaneled hospitals and diagnostic centers for the cashless services rendered to pensioners. The operational characteristics of processing each category of claim can vary depending, for example, on the nature of the claim, procedural complexity, and number of claims received.

Claims for inpatient care and advanced diagnostic services submitted by individual active beneficiaries are processed and paid for by the departments where they are employed. For pensioners, the empaneled health care providers are expected to offer cashless coverage to the beneficiaries and to seek reimbursement directly from the CGHS. For certain emergencies such as cardiovascular illnesses, stroke, acute renal failure, and cardiac emergencies, empaneled private hospitals are also expected to provide cashless care to active beneficiaries presenting a valid CGHS card. Finally, for any emergency services obtained outside the network, pensioners must pay the providers and then claim reimbursement from CGHS or from their former parent department, as per scheme provisions.

Payment Mechanisms and Cost Containment

Since CGHS uses its own network of facilities for ambulatory care (with salaried doctors) and for referrals to higher levels of care, moral hazard and cost escalation in theory should be limited. However, as in some other health system entities using line-item budgets and salaried payment systems, such issues as employee motivation, productivity, and quality of service are likely to need further examination. As mentioned above, salaries and operating costs of CGHS facilities constituted a fourth of all estimated costs in 2009–10. Most of these costs are likely to have been incurred on the provision of care. The scope for controlling the salary costs is limited because these move in tandem with civil service pay structure.¹⁴

The largest CGHS expenditure component is on outsourced inpatient and diagnostic services, which accounted for 50 percent of the scheme's total spending in 2009–10. This is managed through the system of package rates, which CGHS pioneered in India.¹⁵ Reimbursement rates for services in networked private hospitals are based on a package-rate system agreed up front by all providers. The package rates were originally generated by inviting quotes from hospitals on specified procedures and treatments. However, the methodology for arriving at the final package rates has varied over the years. For example, in 2001, the package rates were based on a median of the quoted rates. Subsequently, the scheme has moved to the lowest quoted rates. In the latest round of package-rate revisions, differential package rates have been arrived at for hospitals with and without NABH accreditation.

The CGHS is the only government-sponsored health insurance scheme (GSHIS) that sets rates for each geographical area. Each additional director applies the same process with hospitals within his jurisdiction. CGHS package rates are also used by other public schemes such as ESIS and Railways to pay for inpatient care from private facilities. Most other schemes discussed in this book have used CGHS rates as a benchmark or a framework for negotiation. However, after the new generation of GSHISs managed to negotiate rates lower than CGHS—perhaps facilitated by the high-volume concentration offered by their geography and smaller list of packages—the scheme's package rates increasingly appear high. The perception of delays in CGHS reimbursements may be another factor contributing to quotes for higher rates by hospitals, as the costs of the delay would be factored in.

The third largest source of CGHS's expenses, accounting for about 20 percent of estimated total spending, is the cost of medicines and supplies for its ambulatory care services, including follow-up care after an inpatient episode and chronic disease management. Costs of this component have grown more slowly than the others and, at least in theory, have been controlled through the use of a formulary and by increasing the share of bulk procurement of generic drugs. About 80 percent of drugs are now procured in bulk, reducing reliance on retail purchases of locally sourced proprietary drug formulations.¹⁶ The effectiveness of cost containment on this front varies with the share of bulk procurement vis-à-vis the retail procurement of medicines, which has flip-flopped over the years but has largely been bulk procurement in the last three years, with retail dependence being about 21 percent by quantity in 2009–10, as against 69 percent in 2005–06. Orders for retail purchases can also be placed online by CGHS facilities now, and 99 percent of medications are received the next day.

Quality Orientation

The CGHS is an emerging leader among schemes for stimulating quality improvement among empaneled providers. CGHS currently requires all its hospital to receive National Board of Accreditation for Hospitals and Healthcare Providers (NABH) accreditation; all laboratories to receive NABL accreditation; and all radiology centers to be approved by the Atomic Energy Regulation Board and Bhabha Atomic Research Centre¹⁷ (AERB/BARC).

Provider deadlines for accreditation have been extended time and time again because only a handful could comply within the prescribed time limits. Nevertheless, the direction adopted by CGHS is clear and will be a strong driver for promoting accreditation-based standards in empaneled providers. As an additional motivator, CGHS recently introduced differentiated package-rates, with higher remuneration for accredited providers.

Like other GSHISs, the empanelment process also provides an opportunity for the scheme to evaluate the physical infrastructure and other aspects that could have a bearing on service quality. The scheme introduced a minimum requirement of 100 beds for its network hospitals in larger cities in 2004–05 (although it can be relaxed to 50 beds for single-specialty hospitals). No other GSHIS insists on more than 50 beds as a

prerequisite for empanelment. The original inspection by an internal team of doctors has since been devolved to NABH as part of its accreditation process.

On a more negative note, the scheme does not collect data on quality of care and may even incentivize poor quality as the scheme pays for readmissions (usually resulting from poor quality care) or longer stays resulting from adverse events. Little is known about quality in ambulatory facilities owned and operated by the scheme. Finally, CGHS has yet to measure beneficiary satisfaction with the scheme.

Consumer Information and Protection

By leveraging IT and communication technology, CGHS has steadily improved its responsiveness to beneficiaries. In 2009, CGHS established a call center to provide information about the scheme. The center also receives and registers beneficiary complaints and grievances. CGHS maintains a website in which all Government Orders related to all stakeholders, including beneficiaries and empaneled hospitals, can be accessed in one place. The CGHS MIS has enabled a new web application that allows beneficiaries to track claim status online. Considering the high educational levels of the CGHS member base, most are likely to have adequate access to information through these channels. As a government department, the CGHS must abide by the Right to Information Act¹⁸ and has established grievance channels akin to other government departments.

Recent Developments

The Indian government is contemplating the introduction of a new health insurance scheme for all central government employees and pensioners (and their dependent family members) to be operated through commercial insurance companies as executing agencies. The proposed scheme will be implemented on a voluntary basis for existing employees and pensioners, but may be compulsory for future employees. A request-for-proposal was floated in early 2010 on the CGHS website, but a final decision has yet to be made. Once the new scheme is launched, the CGHS will gradually be phased out through attrition and retirement, similar to the gradual phase-out already in place for the old GOI pension system.

Operated through a commercial health insurer, the scheme may institute a cap on the government's liability, with the employee contributing

the remainder. This is seen by scheme planners as a feasible and effective cost-control measure. This feature is particularly important in light of the widening gap between contributions and expenditures that is covered through GOI subsidies. The proposed insurer-run scheme would provide coverage for meeting expenses of hospitalization and surgical procedures up to Rs. 500,000 annually per family in empaneled hospitals. Within the overall cap, there are likely to be further limits on the amount payable for room rents, costs of specific procedures, and other items. For families, a floater benefit is proposed in which the total cap will be shared across all family members. The MOHFW is currently considering whether and how to proceed further with the proposed health insurance scheme.

Notes

1. The term “civil estimates” is an accounting term used by the GOI to describe the subset of government expenditure that excludes defense spending.
2. Freedom fighters who participated in India’s freedom movement are entitled to several state privileges, including pension, travel, and medical care. In CGHS, they are eligible for the highest hospital room category and the complete range of CGHS benefits. As India attained independence in 1947, all surviving freedom fighters are quite old and medical benefits are a highly valued entitlement.
3. Journalists accredited by the Press Information Bureau in Delhi have been extended partial entitlements for CGHS. They are entitled to outpatient benefits (including drugs), but inpatient benefits are available only in GOI-owned Ram Manohar Lohia hospital. They are not eligible for reimbursements or cashless access to private hospitals or diagnostic centers.
4. For example, pensioners make a one-time contribution, and in a manual system, there is no real way to count how many of them continue to survive, remain in the country, or otherwise continue their coverage. The requirement for reenrolment for issuance of the plastic cards improved the accuracy of CGHS data on its active beneficiaries.
5. The schemes in railways, defense, and CS-MA (the scheme for civil employees in non-CGHS areas) are all noncontributory and funded entirely by the GOI as an employment benefit. In the case of railways and defense, services are delivered through a captive network of health facilities owned and operated by these departments. CS-MA reimburses costs incurred at government hospitals and authorized private medical practitioners. These three schemes rely largely on their captive networks. They are not insurance schemes and have been excluded from this study. However, many of

the issues related to CGHS discussed herein would be relevant to these schemes.

6. Other prescribed drugs are arranged through contracted pharmacies.
7. They have no access to any credit facilities except for a possible medical advance of up to 90 percent of the anticipated treatment costs that could be sanctioned by their office.
8. Private hospitals in the CGHS network were an addition to the public providers, which have always been eligible under the scheme.
9. Inadequate budget allocations in this head could delay pension payments, which would reflect adversely on the government.
10. As booked under the accounting head of PORB (Pensions and Other Retirement Benefits).
11. The MOHFW budget covers salaries of CGHS officials, operational costs of CGHS facilities, procurement of medicines, and reimbursement of eligible expenditures of pensioners and active MOHFW employees for hospitalization and diagnostics. However, these figures do not include the reimbursement of active non-MOHFW employees' expenses for hospitalization or diagnostic investigations received in the CGHS outsourced provider network that are in addition to the MOHFW budgetary source and which the employing ministry pays directly, though under the CGHS provisions. This latter amount for active beneficiaries is not captured in MOHFW financial data, and has been crudely estimated (table B.6, column 3), based on the NCMH (2005) estimates of this amount for 2001–02.
12. The lump sum contribution is fully accounted as CGHS revenue in the year of receipt.
13. Data on inpatient utilization are manually recorded and stored and were not available from CGHS at the time of this writing (December 2010).
14. However, the rationalization and redistribution of CGHS centers in the new environment of portability of membership may be worth considering, especially for low volume centers.
15. Like most other GSHI schemes, CGHS pays for inpatient care through package rates that bundle hospital charges into a single rate. The CGHS package rates include charges for registration, admission, accommodations (including patient's diet), operation, injections, dressings, doctor/consultant visits, anesthesia, operating room, procedures/surgeon's fee, surgical disposables and all sundries used during hospitalization, medicines during hospitalization, related routine and essential investigations, physiotherapy, nursing care, and services. The package rate does not include any transportation costs or posthospitalization treatment, which are additional components that recent GSHISs have tried to incorporate.

16. These are procured through a back-up arrangement involving local pharmacies affiliated with dispensaries and at a small discount from the retail prices.
17. Atomic Energy Regulation Board and Bhabha Atomic Research Centre are public nuclear regulatory entities.
18. India's Right to Information Act of 2005 mandates a 30-day response time, for a nominal fee, to citizen requests for government information (barring some excluded categories, including personal or sensitive information).

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APPENDIX C

Yeshasvini Co-operative Farmers Health Care Scheme, Karnataka

Table C.1 Yeshasvini: Summary Matrix

<i>Indicators/name of scheme</i>	<i>Yeshasvini Co-operative Farmers Health Care Scheme (Karnataka)</i>
Launch year	2003
Geographical area	Entire state of Karnataka, but mainly rural areas
Target/eligible population	Members of rural cooperative societies regardless of poverty status
Number of beneficiaries	3 million
Enrolment unit	Individual
Benefits package	All hospitalizations for more than 1,200 notified surgeries; certain specified exclusions (e.g., implants)
Maximum insurance coverage	Rs. 200,000 per person ceiling
Hospital empanelment criteria	Minimum of 25 inpatient beds, 3 intensive-care-unit (ICU) beds, and specialist doctors and equipment specific to the specialty
Number of empaneled hospitals (government and private)	543 hospitals (including 30 public hospitals)
Sources of funds	Contributions by beneficiaries 58 percent; state government contribution 42 percent in 2009–10
Total expenditure in 2009–10	Approximately Rs. 550 millions (Rs. 55 crores)
Premium price, 2009–10	Rs. 150 per person per year, including Rs. 10 paid to cooperative societies as incentive, 2010–11.
Provider payment mechanism	Predefined package rates

(continued next page)

Table C.1 (continued)

<i>Indicators/name of scheme</i>	<i>Yeshasvini Co-operative Farmers Health Care Scheme (Karnataka)</i>
Information technology (IT) tools used	Electronic claims submission software in 191 network hospitals, linked to third-party administrators' systems; TPAs' proprietary claims software used for operations and MIS.
Number of hospitalizations per year	66,749 (2009–10)
Utilization rate	2.23 percent per beneficiary
Most common procedures	Cardiovascular surgeries
Governing agency and legal status	Yeshasvini Co-operative Farmers Health Care Trust (autonomous trust under Department of Co-operation, Karnataka)
Intermediary	Third-party administrator (TPA)
Number of full-time staff, including contract personnel, in the governing agency	2
Administrative costs as percent of total spending	1.6 percent
Cost-containment measures	Package rates, scrutiny by TPA during preauthorization and verification of high-cost procedures.

Source: Authors' elaboration from scheme data.

Notes: See tables A.1 and A.2.

Introduction

Yeshasvini Co-operative Farmers Health Care Scheme is a voluntary health insurance scheme designed for the members of cooperative societies in rural Karnataka and implemented by a trust constituted by the Karnataka state government. Its genesis is rooted in rural farmers' lack of access to medical care. Yeshasvini was designed by the Karnataka Department of Cooperation and senior doctors from a subset of private hospitals. It is a community-based health insurance scheme, contributory in nature and closely linked to cooperative institution membership of smaller farmers and other informal workers. Yeshasvini qualifies as a government-sponsored health insurance scheme (GSHIS) because of its close links to the Department of Co-operation and dependence on government subsidies for a large share of its revenue.

The scheme, rolled out on June 1, 2003, is the longest-running state-supported health insurance scheme for the informal sector in India. For a fixed annual contribution of Rs. 150 per member, Yeshasvini provides

cashless coverage for a list of surgical procedures.¹ A member can go to any of the 543 networked hospitals across the state for procedures covered under the scheme. As of 2009–10, the scheme has over 3 million enrolled members, up from 1.6 million in the first year of operation (2003–04). Yeshasvini was a forerunner for the new generation of government-sponsored schemes that copied several of its features: package rates, predefined annual limits, and risk pooling.

With its relative longevity, Yeshasvini is one of the few schemes with historical data on claims, utilization, and spending. It is also the only scheme that has already undergone a systematic impact evaluation (Aggarwal 2010).² This case study draws on this available data and the results from the evaluation.

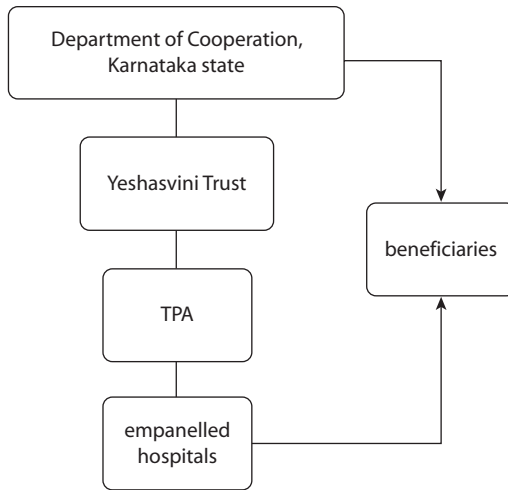
Institutional Framework

Yeshasvini is the outcome of a tripartite arrangement between cooperative societies, Karnataka state, and private hospitals. The state government cofinances, operates, and oversees the scheme; the cooperative societies promote membership and are the main communication channels between the scheme, targeted farmers and other unorganized workers, and the empaneled public and private hospitals.

As shown in figure C.1, the scheme is governed by the Karnataka Department of Cooperation, through the autonomous Yeshasvini Co-operative Farmers Health Care Trust, registered under the Indian Trusts Act.³ A third-party administrator (TPA) is contracted as an intermediary for the scheme to manage hospital empanelment, preauthorizations, claim processing, and payments to hospitals for a flat, lump sum annual fee.

Decisions related to operational design, implementation, financial risk, and enrolment responsibilities rest with the trust. Board members include the principal secretary, Department of Co-operation, the registrar and additional registrar of state cooperative societies, the managing directors of Apex Bank and Milk Federation,⁴ the commissioner of cane development, key officials of five public and private hospitals in the state, and a chartered accountant. In addition to subsidizing the scheme with periodic grants and managing information, education, and communication for the scheme, the Department of Cooperation facilitates the enrolment process and collection of contributions from member cooperative societies.

The trust has only two staff members: the CEO and a computer operator. Due to this limited capacity, the trust has been unable to systematically address hospital and beneficiary complaints or devote much time to

Figure C.1 Yeshasvini Institutional Framework

Source: Authors' elaboration.

innovation and evolution, and it is highly dependent on the TPA. By design, the TPA is contracted only to handle authorizations and payments, but for a low, flat fee regardless of how well it performs and with no monitoring, there is no incentive or reason for the TPA to focus on anything but routine processing of authorizations and payments. Thus, a scheme that began as a pioneer and innovator has become relatively static.

Beneficiaries

Any rural citizen under 75 years of age, who has been a member in any of the participating cooperative societies for at least six months,⁵ is eligible to enroll in the scheme with his family members. The cooperative societies are primarily responsible for enrolment of members and collecting their premiums. An innovative feature of the scheme relates to the linkage of premium collection with another financial transaction such as a payment to a member by the milk cooperative society or an installment payment by a member to a credit cooperative society. This arrangement reduces the administrative cost of collecting contributions.

Enrolment and reenrolment occur annually.⁶ The voluntary nature of the scheme results in variable membership. As indicated in table C.1, since inception, the enrolment has nearly doubled to 3 million (an

increase of 91 percent), registering a 30 percent annual increase between 2005–06 and 2008–09. The jump in enrolment seems to have been driven by two incentive mechanisms put in place during the period. The first involved a 15 percent discount for families enrolling five members. The second was a Rs. 10 incentive to the cooperative society for each enrolled individual.⁷

The scheme covers only a small proportion of its eligible universe, the estimated 20 million registered members of more than 32,000 cooperative societies. Its total enrolment of 3 million also includes the family members of the cooperative society members (table C.2).⁸

Since 2008–09, total membership has remained flat. The scheme achieved only half of its stated internal target of 6 million subscribers by 2009–10. The per capita subscription rate of Rs. 150 may be an impediment for some families. Enrolment data show considerable turnover in members: old members stop contributing, and new ones join in every cycle. Thus, some element of adverse selection cannot be ruled out.⁹ Members may enroll in a particular year and choose to not renew in subsequent years after fulfilling anticipated medical needs. Further research is needed to validate this hypothesis. Some turnover in members can be attributed to closure of loan accounts for some members and opening of new loan accounts for others in credit cooperative societies, inasmuch as these transactions are linked to premium contributions.

Until 2007–08, all scheme beneficiaries were issued photo identity cards that were reissued annually upon renewal of membership. Because dispatch of identity cards involved significant administrative costs and

Table C.2 Yeshasvini: Enrolment Growth, Contributions, and Claims, 2003–04 to 2009–10

<i>Year</i>	<i>Enrolled members (million)</i>	<i>Member contribution (Rs. million)</i>	<i>Government contribution (Rs. million)</i>	<i>Number of claims paid by scheme</i>	<i>Amount of claims paid (Rs. million)</i>
2003–04	1.60	94.9	45	9,047	106.5
2004–05	2.11	128.7	35.7	14,996	180.8
2005–06	1.47	169.4	110	19,443	257.9
2006–07	1.85	215.6	198.5	38,976	380.9
2007–08	2.32	277.5	250	59,984	533.5
2008–09	3.05	361	300	74,028	599.3
2009–10	3.07	413.6	300	65,623	534.8
Percent increase, (2003–04 to 2009–10)	91.7	335.8	566.7	625.4	402.2

Source: Yeshasvini Co-operative Trust.

resulted in delays, an online “Unique Health Identification” system was initiated in 2008–09. Since then, Yeshasvini has maintained web-based information on enrolled members and their family (together with photographs) where network hospitals can verify enrolment and eligibility.

Benefits Package

An enrolled member is entitled to cashless treatment for more than 1,200 defined surgical procedures at any of the 543 empaneled hospitals. The scheme covers all preexisting conditions for the covered procedures. The combination of coverage for existing conditions and voluntary enrolment does increase the likelihood of adverse selection. Each listed procedure consists of a package of services to be delivered by the hospital and includes drugs, diagnostics, hospital bed charges, and the surgeries. Since 2006–07, normal delivery, neonatal care, angioplasty, and selected medical emergencies (e.g., accidents, snake and dog bites) have been added to the benefits package. Annual medical benefits are capped at Rs. 200,000 per person. However, since each package has a predefined, low to moderate price, the limit is relevant only when a member has multiple, high-cost procedures in the same year and is rarely reached.¹⁰

The benefits package does not cover any treatment but the defined surgeries. In other words, Yeshasvini excludes most medical causes of hospitalization and any form of ambulatory treatment. However, network hospitals are expected to provide free outpatient consultation facilities and discounted diagnostic tests. Among the exclusions are joint replacement surgeries, transplants, burns, chemotherapy for malignancies, cosmetic surgery, injuries from road accidents or other medicolegal cases, dialysis, ambulance service, and food. Not even for the covered surgical conditions does the package include diagnostics and surgical consumables such as implants, prostheses, meshes, heart valves, stents, bone screws and nails, or grafts (although the lens is covered for cataract surgeries and is part of the package cost).

This coverage gap probably translates into an unknown quantum of balance billing that providers legitimately charge members and is an area for further study. Finally, follow-up treatment is also not covered, implying high recurring out-of-pocket costs after procedures such as valve replacements or others requiring long-term follow-up. Package rates are reported to be between 40 and 50 percent of private market prices prevalent at inception of the scheme (ILO 2006), and have not been revised since then. In sum, moral hazard on the provider side may be

limited due to the emphasis on surgeries, below-market package rates, and the long list of exclusions. However, providers may have found ways to recover their costs and increase revenues through balance billing and charges for consumables and tests. The extent to which unnecessary services are billed is unknown.

Aggarwal (2010) reported that overall health spending by members increased by 20 percent compared with matched uninsured populations, but this increase was mainly observed in higher-income members. The author did not report on whether this additional spending was for covered procedures or uncovered care. No significant increase in overall spending was observed for lower-income members.

Provider Network

The TPA has empaneled 543 hospitals located across the state to provide services under the scheme. The list includes about 30 public hospitals, most of them district hospitals. Criteria for hospital empanelment are discussed later in the section on quality, although it appears that the minimum 25-bed norm is not rigorously applied. There are no formal contracts with network hospitals. The TPA issues a unilateral document stating the protocols and guidelines applicable to the hospital.¹¹ In addition to providing the covered surgical interventions, the network hospitals are also responsible for conducting free health check-up camps, which were initially the main vehicles for spreading awareness of the scheme.

Of the 543 empaneled hospitals, the top 20 hospitals listed in table C.3 handled more than 35 percent of all cases and received 56 percent of the amount paid under the scheme in 2009–10. In 2009–10, 141 hospitals in the network did not present any claims, reducing the effective size of the network to about 400. However, this latter figure is about four times the number of hospitals that serviced the scheme in 2003–04.

While hospitals have been empaneled and are utilized in all districts in the state, the volume of utilization in Bangalore urban hospitals is higher. This probably reflects greater awareness in the region and also beneficiary preference for hospitals located in the capital city.

The scheme appears to have stimulated private health care expansion and a commensurate decline in utilization of public facilities. A provider survey by Aggarwal (2010) found that 75 percent of empaneled hospitals have invested in expansion of their facilities postempanelment with Yeshasvini. This comes as no surprise, considering that only 30 public facilities (mostly district hospitals) are part of the empaneled network

Table C.3 Yeshasvini: Number and Value of Claims Paid to Top 20 Hospitals, 2009–10

<i>Hospital name</i>	<i>District</i>	<i>Number of cases</i>	<i>Value (Rs.)</i>
Narayana Hrudayalaya	Bangalore Urban	3,730	88,771,400
Jayadeva Institute of Cardiology	Bangalore Urban	2,819	62,960,000
K.L.E.S. Prabhakar Kore Hospital and Medical Research Centre	Belgaum	1,668	32,929,661
Vikram Hospital and Heart Care	Mysore	1,522	23,203,500
J.S.S. Hospital	Mysore	1,973	13,880,300
Sri Dharmasthala Manjunatheshwara College of Medical Sciences and Hospital	Dharwad	1,372	11,544,900
BGS Global Hospital	Bangalore Urban	598	9,721,900
S.S. Institute of Medical Sciences and Research Centre	Davangere	1,007	7,897,000
Kims Hospital and Research Centre	Bangalore Urban	1,052	7,617,200
A.J. Hospital and Research Centre	Dakshina Kannada	388	7,333,300
Narayana Netralaya	Bangalore Urban	2,153	6,679,100
M.M. Joshi Eye Institute	Dharwad	1,828	5,542,700
City Central Hospital	Davangere	600	5,359,700
Sagar Hospital	Bangalore Urban	148	4,770,500
Kerudi Hospital	Bagalkote	747	4,316,800
Patil Nursing Home	Gulbarga	573	3,996,900
Shri Dharmasthala Manjunatheshwara Narayana Hrudayalaya Heart Center	Dharwad	377	3,896,600
M.S. Ramaiah Narayana Hrudayalaya Heart Center	Bangalore Urban	181	3,857,500
Latha Nursing Home	Davangere	622	3,448,300
Kasturba Hospital	Udupi	255	3,257,143
Total		23,613	310,984,404

Source: Yeshasvini Co-operative Trust.

and that private facilities deliver most of the care. Aggarwal also found that the scheme contributed to a 17 percent increase in utilization of private hospitals by the better-off members. However, no significant changes were seen among lower-income members. In general, the insured decreased their use of public facilities by 19 percent.

Information Environment

Because the scheme is cashless for covered expenses, it needs smooth flows of information from hospitals for preauthorization of expenses and

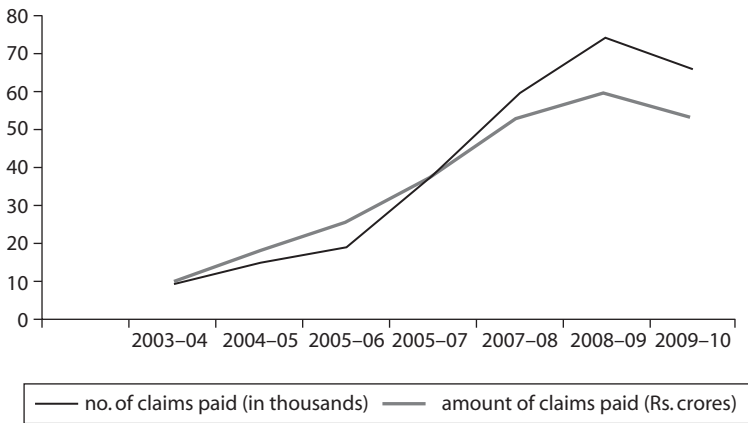
thereafter for the settlement of claims. However, it takes considerable manual and paper-based processing to generate this information. In this context, two important IT initiatives have been recently introduced in the scheme. The first is electronic connectivity of the TPA with hospitals. This is especially vital for preauthorization and claim submissions, and is available in 191 hospitals through a connectivity vendor. This shortens the delay in communications between the hospital and the TPA and enables better generation of utilization data for the scheme. The second initiative is the online database of beneficiaries being used by the hospitals to verify care seekers. While this database is a step toward an IT-enabled environment, its use is compromised by irregular internet connectivity in smaller and remote facilities. Also, the trust has not deployed any IT tools for an MIS and is largely dependent on outputs from the TPAs' claim processing system for its information needs. This dependence may limit the extent to which the trust can monitor scheme operations in real time (because it may receive the information after lengthy delays). In addition, the information may not be adequate for monitoring every aspect of scheme operations—including the performance of the TPA itself.

Utilization and Claims

Growth in utilization and spending has significantly outpaced enrolment since scheme inception. Both the number and amount of claims have increased over the seven years of its existence except for a conspicuous dip in 2009–10 (figure C.2). Although the membership base has fluctuated, it experienced a much smaller overall increase in the same period (table C.2). For example, total spending on claims increased fourfold (table C.2), and the number of cases paid increased more than sixfold (table C.2, penultimate column) compared with a 91 percent growth in membership.

Frequency of utilization soared from 0.7 percent (claims per beneficiary) in 2004–05 to 2.7 percent in 2008–09. These trends may reflect increased awareness, and improved access (with expansion of hospital network). Adverse selection is also a probable reason, particularly in light of the increase in the annual subscription amount from Rs. 60 to Rs. 120 over this period (and, recently, to Rs. 150).

The increase has been steeper in the number of claims than in the total amount claimed, hence, the average claim size has actually come down. This could be due to a higher utilization of lower-cost packages such as normal childbirth, and calls for further study. The frequency of utilization

Figure C.2 Yeshasvini: Trends in Number and Value of Claims, 2003–04 to 2009–10

Source: Yeshasvini Co-operative Trust.

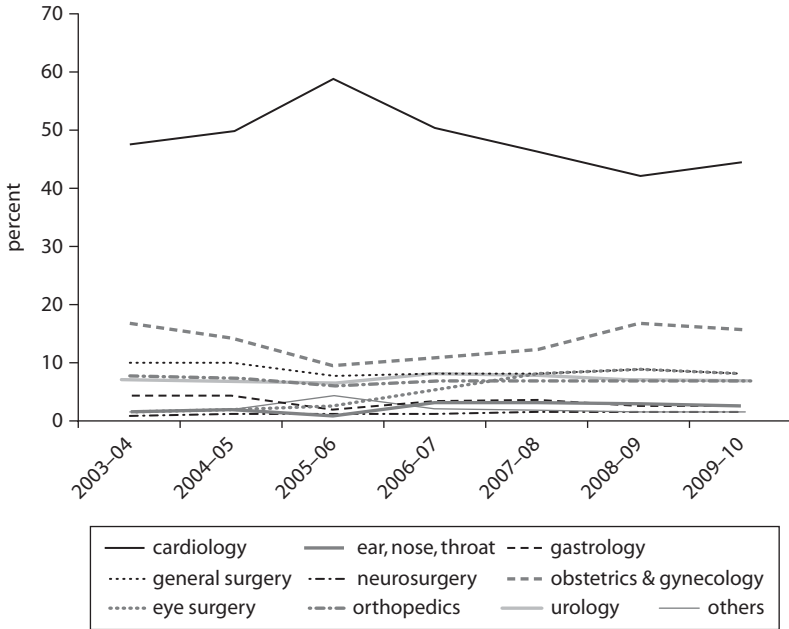
for this surgical-only benefits package was about 2.2 percent in 2009–10. This ratio appears high when compared with the 2.3 percent frequency from the National Sample Survey Organization (NSSO) 60th round for community-level frequency of all types of hospitalization in rural Karnataka in 2004–05 (MSPI 2004).¹² Again, higher frequency than the expected community average could be due to improved financial access provided by the health insurance coverage, adverse selection, or both.

According to the trust, 90 percent of the claims are settled in fewer than 45 days. This efficiency may be consequent to the built-in disincentives for late submission of claims by hospitals. The scheme levies a 10 percent penalty for claim submissions delayed beyond 30 days, and 30 percent for submissions between 60 and 90 days post-discharge. In 2009–10, 8 and 1.4 percent of claims suffered the 10 percent and 30 percent penalties, respectively.

Turning to conditions for which treatment was sought, figure C.3 depicts trends in specialty treatment as a share (by value) of all claims. Details are provided in table C.7.

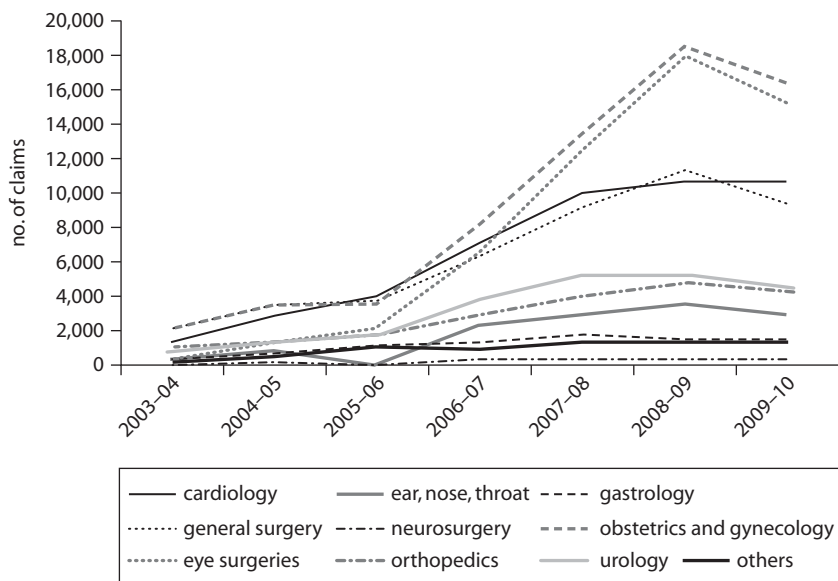
Cardiovascular, ophthalmology, and obstetrics and gynecology-related conditions were commonest, constituting about half of all claims in 2009–10. However, in terms of claim value, cardiology is not just the predominant specialty utilized under the scheme, it has accounted for as much as 40 to 60 percent of the total amount paid under the scheme since inception.

Figure C.3 Yeshasvini: Trends in Specialty Claim Shares of Total Claims, by Value, 2003-04 to 2009-10



Source: Yeshasvini Co-operative Trust.

As depicted in figure C.4, ophthalmology-related claims have grown the fastest in numbers, particularly in the last three years, followed by obstetrics and gynecology. This suggests that a large number of cataract surgeries are being paid for by the scheme, and this may be due to adverse selection. The escalation in claims related to obstetrics and gynecology (beyond the possible impact of hysterectomies in the early years of the scheme) is due to the extension of coverage in 2006-07 to include normal delivery. With steep hikes in claim numbers for several specialties, 2006-07 appears to be a watershed year. This occurred despite lagging growth in the member base. Increased awareness of patients (probably augmented by coverage for common conditions such as normal labor) may have been a contributing factor. Also, as discussed previously, while the member base remained almost the same between 2008-09 and 2009-10, most specialties witnessed a decline in the number of surgeries in the period after the significant jumps of the previous three years. The reasons for these trends need further study.

Figure C.4 Yeshasvini: Trends in Number of Claims, by Specialty, 2003–04 to 2009–10

Source: Data from Yeshasvini Co-operative Trust.

Table C.4 Yeshasvini: Number and Value of Rejected Claims, 2007–08 to 2009–10

Year	Claims rejected	
	Number of cases	Value (Rs.)
2009–10	78	471,000
2008–09	264	1,748,200
2007–08	190	1,837,450
Totals	532	4,056,650

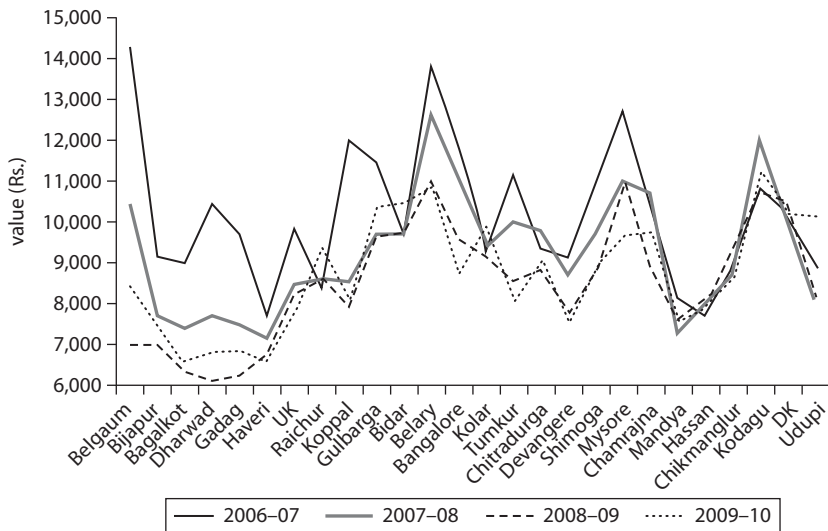
Source: Yeshasvini Co-operative Trust.

Between 2007 and 2010, a minuscule 0.3 percent (532) of the 200,000 claims filed were rejected (table C.4). The trust clarifies that most rejections were due to delayed submission of claims after the 90-day limit set in the scheme guidelines for hospitals. These trends and the reasons for rejecting claims run counter to those most prevalent in the private health insurance industry, where a larger number of claims are rejected, often for incomplete supporting evidence or inappropriateness of the medical procedure done. However, since the scheme covers all

preexisting conditions, this common cause for claim repudiation is completely irrelevant for Yeshasvini. Further, the TPA has little incentive for closer scrutiny of claims or plugging leakages because its flat fee is delinked from the effort it makes in screening out suspicious claims. Furthermore, the trust itself has no internal capacity for close monitoring. Closer monitoring of both claims and providers is an area in need of capacity building inasmuch as the scheme keeps risks in-house.

Over the last four years, the average value of hospital claims has generally declined in all districts, which could be due to an increase in the number of lower-cost claims. This would be true of the recently added maternity coverage at the very low package rate of Rs. 1,200, or similarly, the increasingly frequent eye surgeries also priced low. In a few districts (Bidar, Raichur, Kolar, and Kodagu), the trend has been the opposite for unknown reasons needing exploration. There is also considerable variation in average claim size across districts. Figure C.5 shows that the average claim size in such districts as Bhagalkot, Mandya, Hasan, and Haveri is consistently lower across time periods than in the Bellary, Mysore, Kodagu, and other districts. These differences could stem from a varied case mix, beneficiary migration, or difference in medical costs.

Figure C.5 Yeshasvini: Trends in Average Claim Values, Different Districts, 2006–07 to 2009–10



Source: Data from Yeshasvini Co-operative Trust.

As mentioned earlier, the emphasis on surgeries, below-market package rates, the long list of exclusions, and a functional preauthorization system may limit moral hazard and hospital-induced demand. Although Aggarwal (2010) found little evidence of moral hazard, she did indicate that the better-off members reported a higher incidence of illness. In addition, low-income members used more outpatient care than did other groups, perhaps because of the free access.

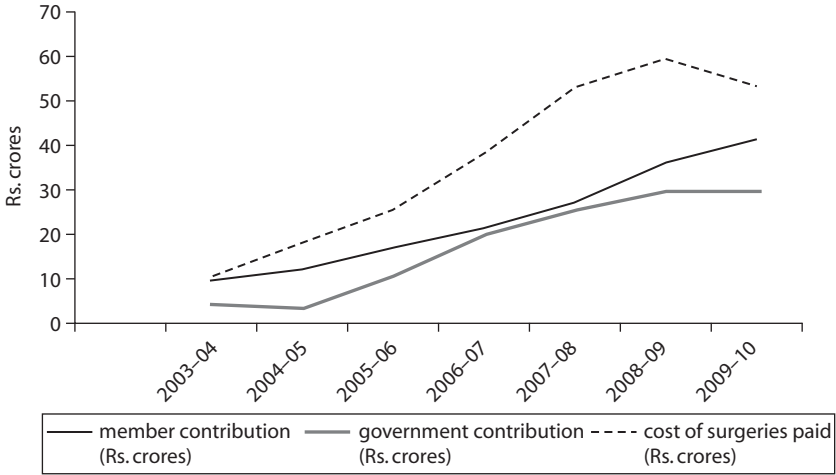
The utilization of services at government hospitals constituted a very small share of the claims (except for the autonomous Jayadeva Institute of Cardiology, second ranked by patient traffic in the Top 20 list, table C.3). The few public hospitals empaneled with the scheme appear to lack the wherewithal (or the will) to step into the IT-enabled environment of electronic beneficiary identification, e-preauthorization, and online claims submission. Indeed, as many as 12 district hospitals in Karnataka state showed no utilization in 2009–10, while the remaining reported a very small number of claims.

Financial Status

In principle, Yeshasvini is a contributory scheme, though substantially subsidized by the state government. The scheme does not shift risk to an insurance company and therefore bears all risk. The state government, as a “reinsurer,” provides a subsidy to cover all liabilities not met by member contributions.

The net member contribution received by the scheme, after allowing for the Rs. 10 incentive allocated to the collecting cooperative societies, is currently Rs. 140 per member per year. In 2009–10, the member contribution constituted 58 percent of the scheme’s total funds (contributions stood at Rs. 41.64 crores) while the state governments’ subsidy of Rs. 30 crores accounted for the rest. Figure C.6 graphically depicts the contributions, state government subsidy, and the total scheme expenditure over the years.

Table C.5 summarizes the trust’s financial statements from its inception. Yeshasvini started out with small deficits in the initial years when utilization, size of the hospital network, and possibly awareness about the scheme, too, were lower. Since 2005–06, the scheme has been running large deficits, bridged by the state government. The government subsidy as percent of total revenues has grown from 8 percent in 2005–06 to 42 percent in 2009–10. In nominal terms, the state subsidy has grown 14-fold over this period compared with a 171 percent increase in member contributions.

Figure C.6 Yeshasvini: Contribution, Subsidy, and Expenditure, 2003–04 to 2009–10

Source: Yeshasvini Co-operative Trust financial statements.

The up-front collection of contributions has allowed the trust to earn some interest income every year, but it is a very small source of revenue. Since 2009–10, the trust has also been handling the state's *Suvarna Arogya Chaitanya Scheme* (a state-funded health insurance scheme for school children), which reimburses the trust for claims paid on its behalf. Some surplus trust funds (between Rs. 5 crores and Rs. 6 crores) are invested as a term deposit in the Karnataka State Cooperative Apex Bank.

The major expense of the scheme is claim payments. The operational expenses for running the trust include the flat fee of the TPA and a small human resource component of the trust—totaling Rs. 9 million in 2009–10, 1.6 percent of that year's total expenses. There is actually financial room and a pressing need to invest in strengthening the trust's supervisory and monitoring function.

Cost Containment

Although scheme design and its packaged prices for surgical procedures leave room for balance billing by providers, Yeshasvini deserves credit for implementing a package rate system agreed with providers. At its

Table C.5 Yeshasvini: Summary of Trust Finances and Expenses, 2004–05 to 2009–10 (Rs.)

<i>Particulars</i>	<i>2004–05</i>	<i>2005–06</i>	<i>2006–07</i>	<i>2007–08</i>	<i>2008–09</i>	<i>2009–10</i>
<i>Revenues</i>						
Member contribution	119,755,440	163,439,922	215,454,243	276,294,553	364,582,592	416,442,172
Interest	4,880,368	3,311,414	5,062,398	12,534,937	27,147,335	34,477,028
Suvarna Arogya	n.a.	n.a.	n.a.	n.a.	n.a.	666,183
Total income	124,635,808	166,751,336	220,516,641	288,829,490	391,729,927	451,585,383
<i>Expenses</i>						
Medical claims	120,220,941	248,125,477	379,519,463	468,946,302	607,457,734	539,462,259
Other expenses	6,194,962	7,471,938	8,848,075	10,169,839	10,349,527	9,055,467
Total expenses	126,415,903	255,597,415	388,367,538	479,116,141	617,807,261	548,517,726
<i>Surplus/deficit</i>						
Deficit	-1,780,095	-8,886,079	-167,850,897	-190,286,651	-226,077,334	-96,932,343
Government contribution	n.a.	20,000,000	125,788,000	208,500,000	250,000,000	300,000,000

Source: Yeshasvini Co-operative Trust.

Note: n.a. = not applicable.

inception, package rates were a new concept in the Indian context and were generally lower than providers' usual fees for services. By making the claims closed-ended, the scheme reduced its risk of moral hazard and cost escalation.

The trust's other cost-containment mechanism has been the online platform for preauthorization of claims linking 191 network hospitals with the TPA. The genesis of this online platform has to be viewed in the backdrop of about 10 percent of requests for authorizations being rejected due to coding errors or requests for uncovered procedures. Now about 40 percent of the network hospitals use this online system, which accounts for an overwhelming number of all preauthorizations, facilitating efficiency and timeliness. About 85 percent of preauthorization requests are received from this system (or from an alternative email-based request system) and are addressed the day the request is received. The scheme has a very low administrative overhead due to minimal staffing at the trust and the negotiated flat fee for the TPA. Both account for about Rs. 2 per beneficiary per year, 1.6 percent of the total spending in 2009–10. This low level of administrative spending may lead to adverse consequences, however, such as poor monitoring by the trust and insufficient cost-containment effort on the part of the TPA.

Quality Orientation

Like nearly all the schemes in this study, Yeshasvini has yet to address quality of care and patient safety. Its primary quality-control mechanism is its empanelment system, which calls for the availability of 25 inpatient and 3 intensive care unit (ICU) beds, qualified surgeons for the respective specialty, qualified anesthetists and ventilator support, among other structural items. The bed requirement for sub-district level hospitals and nursing homes is further relaxed to 15 beds. Some specialty criteria are also defined such as the availability of cath lab and intensive cardiac care unit (ICCU) for cardiac surgeries and C-arm for orthopedic cases. However, the extent to which these criteria are met in practice requires validation, as it is likely that not all the hospitals in the network meet all the criteria set by the scheme. Although the trust reports on periodic, infrastructure-centric "quality audits" of the hospital network, it does not always inspect hospitals at renewal of empanelment.

Disempanelment and other disciplinary action against hospitals is usually in reaction to a grievance received by the trust. Penalization and

Table C.6 Yeshasvini: Reasons for Disempanelment of Network Hospitals, since Inception

<i>Reasons</i>	<i>Number of cases</i>
Collecting unauthorized payments from patients	18
Indulging in other irregularities or fraud	26
Voluntary disempanelment	3
Nonfulfilment of minimum criteria for empanelment	4
Other	7
Total cases	58

Source: Yeshasvini Co-operative Trust.

disempanelment of network hospitals are also used to protect consumer entitlements. The trust reports penal actions having been taken against hospitals found to be indulging in irregularities or fraud such as referring patients to nonnetwork hospitals, overcharging patients, or submitting fake claims. These are also the most common reasons for disempanelment of network hospitals by the trust (table C.6).

Consumer Information and Protection

Considering that Yeshasvini beneficiaries pay a significant annual contribution, some level of consumer awareness is expected. However, there is a fair likelihood that credit societies or milk societies deduct contributions but give members little or no information about the scheme.

The scheme requires its network hospitals to organize health camps for consumer information, conduct medical examinations, and arrange for patient referrals. Hospitals see these camps as an opportunity for screening potential “cases,” invariably disseminating information about the scheme and its coverage. With no built-in incentives to conduct these camps or mechanisms to monitor them, it is likely that the camps are not being held on any significant scale. In addition to these camps, the scheme uses mass media such as radio and TV to create awareness.

A study commissioned by the trust and conducted by M/s Nabard Consultancy Services in 2006, substantiated that the scheme is well received by the target population with 60 percent, 30 percent, and 10 percent of the sampled beneficiaries expressing full, partial, and no satisfaction, respectively. Dissatisfied members of the scheme have the option of approaching the Consumer Disputes Redressal Forum, since the trust comes under the purview of consumer courts. In fact, the trust

Table C.7 Yeshasvini: Trends in Number of Claims, by Specialty, 2003–04 to 2009–10

Specialty	2003–04		2004–05		2005–06		2006–07		2007–08		2008–09		2009–10	
	Number of cases	Claims value (Rs.)	Number of cases	Claims value (Rs.)	Number of cases	Claims value (Rs.)	Number of cases	Claims value (Rs.)	Number of cases	Claims value (Rs.)	Number of cases	Claims value (Rs.)	Number of cases	Claims value (Rs.)
Cardiology	1,420	50,820,640	2,763	91,785,500	4,117	153,771,450	7,193	195,022,000	10,000	251,554,500	10,638	258,173,000	10,656	244,792,500
Ear, nose, throat	418	2,096,468	683	3,401,500	244	2,198,132	2,313	11,854,500	3,105	16,873,600	3,551	18,279,600	2,873	15,204,200
Gastroenterology	443	4,793,664	736	8,100,200	1,132	5,572,200	1,319	13,767,750	1,916	19,552,000	1,681	16,059,000	1,609	16,024,500
General surgery	2,117	10,645,010	3,411	18,862,200	3,882	20,180,650	6,455	31,052,200	9,245	43,912,100	11,244	55,324,300	9,462	45,588,800
Neurology	33	783,693	92	2,143,500	136	3,310,000	186	4,986,500	335	8,471,500	380	9,704,000	365	9,626,000
Obstetrics and gynecology	2,286	18,140,831	3,399	26,411,800	3,553	24,865,750	8,147	42,571,500	13,492	67,230,750	18,468	102,714,950	16,400	86,747,250
Eye	623	1,573,383	1,338	3,523,550	2,187	7,328,100	6,474	21,623,300	12,449	44,111,300	18,024	53,759,500	15,312	43,141,900
Orthopedics	806	8,251,965	1,322	13,826,400	1,596	15,812,825	2,873	27,052,800	3,946	37,422,700	4,699	43,793,000	4,176	39,334,850
Urology	748	7,576,086	1,219	12,732,200	1,842	17,224,700	3,793	31,530,600	5,157	42,928,300	5,229	43,775,600	4,414	38,098,200
Other	153	1,853,677	273	3,946,500	988	11,430,300	863	8,139,700	1,214	11,137,000	1,391	11,128,500	1,482	11,489,000
Total	9,047	106,535,417	15,236	184,733,350	19,677	261,694,107	39,616	387,600,850	60,859	543,193,750	75,305	612,711,450	66,749	550,047,200

Source: Yeshasvini Co-operative Trust.

has had to pay out awards granted by the forum in response to lodged complaints.

Experience with the online requests for authorizations and the rejection of nearly 10 percent of these requests demonstrates the lack of clarity among beneficiaries and providers regarding the entitlements in the benefits package. More needs to be done by way of managing information, education, and communication to strengthen awareness about the scheme.

In her evaluation of the Yeshasvini scheme, Aggarwal (2010) established that the scheme had significantly improved its members' financial protection—reducing total borrowings and asset sales by 36 percent for higher-income and 30 percent for lower-income members. Moreover, coverage has financially protected worse-off members from outpatient costs (a not fully expected benefit because these services are not explicitly covered, although network hospitals are supposed to provide free outpatient facilities and discounted diagnostic tests). These lowest income affiliates reported a 61 percent decrease in borrowings and asset sales for ambulatory care. Better-off members displayed higher utilization rates for inpatient care. This probably stems from their ability and willingness to bear out-of-pocket expenditure for uncovered services and consumables. The better-off members also reported a 20 percent increase in their total health expenditures as a result of coverage in comparison with the uninsured.

Concluding Remarks

Yeshasvini pioneered a new model of health insurance that required a small contribution, minimized administrative costs by coupling members' contribution to the scheme to ongoing financial transactions with cooperatives, and successfully “packaged” hospital prices at preagreed, reasonable levels. The scheme was successful in channeling a large number of rural, informal workers under its coverage. However, its member base has stagnated, benefit design has not witnessed any evolution, and the scheme has lost its original innovative spirit. Limited or absent institutional capacity of the implementing agency for monitoring, internal controls, analysis and use of data, and designing innovations are among the major constraints. Yeshasvini must counter the stagnation that has set in. The scheme also needs to strategically expand its benefit offering and address issues such as balance billing and service quality. It may also need to rediscover its niche segment because other GSHISs in Karnataka are offering similar coverage for free or at minimal annual costs.

Notes

1. The term “cashless” here means to the extent that the insurance scheme is liable. In other words, the beneficiary does not have to pay the hospital first and then file a claim with the scheme for a subsequent reimbursement of covered expenses. The scheme and the hospital settle these costs directly. As discussed in the section on benefits package, Yeshasvini does not cover certain costs (e.g., implants), which patients have to pay for themselves.
2. Aggarwal (2010) used a propensity score-matching methodology in which a group of covered individuals was compared with a group of uninsured.
3. The Yeshasvini trust also implements two other schemes for the Government of Karnataka through the same TPA and using the same network of hospitals—the Suvarna Arogya Chaitanya Health Care scheme for children studying in government schools in the state, and the Prevention of Parent to Child Transmission (PPTCT) scheme for HIV patients and pregnant women ensuring safe delivery.
4. These are two large cooperative organizations in the state.
5. These organizations include primary agricultural credit cooperative societies, cooperative sugar factories and other processing societies, self-help group members, fishermen and Beedi (hand-rolled leaf cigarette) co-op societies, weavers, industrial, and artisans co-op societies. The urban members of the last two societies are also eligible.
6. Enrolment occurs during a five month period coinciding with the harvest season when farmers have cash income.
7. According to trust officials, a small number of cooperative societies pay their members a subsidy of Rs. 20 to encourage them to enroll and reenroll.
8. Only one member of the family has to be a member of the cooperative for the entire family to become eligible for Yeshasvini membership.
9. Aggarwal (2010) found significantly higher utilization rates among the insured when compared to uninsured. She rules out adverse selection as the cause for this difference since her studied sample matched both groups by health status. Significantly, she did not compare individuals who have maintained enrolment with those with variable enrolment.
10. The average claim amount was only Rs. 8,150 in 2009–10.
11. As discussed in the section on quality, the Yeshasvini empanelment guidelines require hospitals to have at least 25 inpatient beds including 3 intensive care beds, qualified surgeons for the respective specialty, qualified anesthetists, ventilator support, and such. Once empaneled, the TPA sends a network hospital protocol that mandates a separate counter for scheme beneficiaries, a board displaying empanelment with the scheme, a photo album of patients treated, free outpatient care, discounted diagnostic tests,

connectivity and an online preauthorization mechanism to verify identity cards, and adherence to timelines and requirements for claim submission. Since the arrangements for claim submission are a prerequisite for the hospital reimbursement, they are put in place. However, other requirements are not closely monitored (e.g., the offer of adequate specialist doctors, free outpatient services). Finally, since the patient identification is left to hospitals or their staff members, some impersonation may slip through.

12. The NSSO data pertain to all causes of hospitalization, many of which (the nonsurgical causes) do not form part of the Yeshasvini benefits package.

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APPENDIX D

Rajiv Aarogyasri Community Health Insurance Scheme

Table D.1 Rajiv Aarogyasri: Summary Matrix

<i>Indicators/name of scheme</i>	<i>Rajiv Aarogyasri Community Health Insurance Scheme (AP)</i>
Launch year	2007
Geographical area	Entire state of Andhra Pradesh (AP)
Target/eligible population	All families holding a below-poverty-line (BPL) white ration card or scheme-issued health card (criteria of annual income below Rs. 75,000) are automatically enrolled
Number of beneficiaries	20.4 million families, about 70 million individuals
Unit of enrolment	Family
Benefits package	938 identified hospitalization procedures—surgical and medical, largely tertiary care and some secondary care
Maximum insurance coverage	Rs. 150,000 per family per year with additional buffer of Rs. 50,000
Hospital empanelment criteria	Minimum of 50 beds and other infrastructure criteria, e.g., intensive care unit (ICU) with two ventilators
Number of empaneled hospitals (government and private)	241 private and 97 government hospitals
Source of funds	100 percent from state government, through the health budget and through levy on alcohol sales
Total expenditure (Rs. million), 2009–10	10,750.00 (Rs. 1,075 crores)

(continued next page)

Table D.1 (continued)

<i>Indicators/name of scheme</i>	<i>Rajiv Aarogyasri Community Health Insurance Scheme (AP)</i>
Premium price, 2009–10	Rs. 439 per family (varies between phases and districts)
Provider payment mechanism	Fixed package rates for all covered procedures, including post hospitalization medications and transportation
Information technology (IT) tools used	Comprehensive management information system (MIS), field functionaries on mobile phone group, electronic operations and payments, digital signature for all users, electronic claims process, including requirement for patient photographs pre and post procedure
Number of hospitalizations per year	322,723 (2009–10)
Utilization rate	Claims frequency about 1.6 percent per family (about 0.46 percent per beneficiary) per year, claim ratio between 69.6 and 128.3 percent and averages 89 percent
Most common procedures	Oncology, cardiovascular, polytrauma, genitourinary surgeries, general surgeries
Governing agency and legal status	Aarogyasri Health Care Trust, an autonomous trust established by the AP government
Executing agency	Trust and insurance company (Star Health and allied)
Number of full-time staff, including contracted personnel, in governing agency	117
Administrative costs as percent of total spending	4 percent for trust + insurer's costs, which are not available
Cost-containment and internal control measures	Prior authorization, package rates, MIS monitoring, surveillance and medical vigilance teams, and field staff in hospitals

Introduction

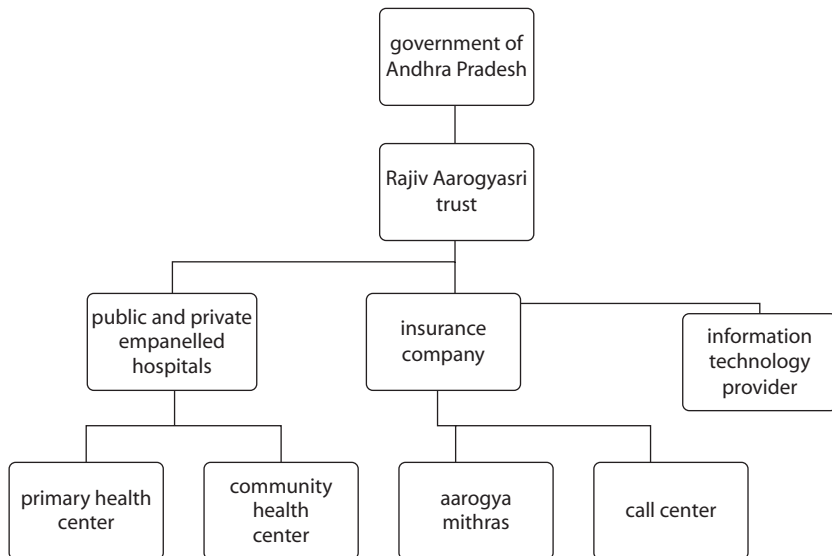
Rajiv Aarogyasri Community Health Insurance Scheme, launched in Andhra Pradesh (AP) state in April 2007, provides tertiary cover for the treatment of serious and life-threatening ailments. Coverage for these ailments was previously provided since 2004 under the chief minister's relief fund, which evolved into the scheme. The stated objective of the scheme is to "improve access of BPL families to quality medical care for treatment of diseases involving hospitalization and surgery/therapy through a defined network of health care providers." The geographical population coverage of the scheme (breadth) and its depth (in terms of number of procedures covered) have expanded in phases. The scheme now covers 20.4 million families across the state, comprising all poor families and a significant segment of the

lower-middle class. According to the state, coverage is available to anyone earning less than Rs. 75,000 per year. The scheme offers cashless treatment for 938 medical conditions, predominantly those requiring major surgical interventions.

Institutional Framework

The Aarogyasri Health Care Trust established by the state government is an autonomous, nodal implementing and oversight agency for this scheme. It is chaired by the chief minister, and has a separate minister as its vice chairman. The principal secretaries of several departments are the members of the trust; while the CEO of the scheme is the trust's secretary. The scheme enjoys strong political support at the highest level. The CEO is empowered by the trust board through resolutions for making policy decisions and, based on these, facilitating implementation. Figure D.1 shows the institutional framework, with the trust being the governing agency and sourcing services from its insurer (for risk management and administration of the scheme), the empaneled hospitals and the IT vendor.

Figure D.1 Rajiv Aarogyasri: Institutional Framework



Source: Authors' elaboration.

The risk is partly retained by the trust and partly transferred to an insurance company, chosen through a bidding process. The two teams work closely together.

Some 5,000 full-time personnel work across various entities involved in Rajiv Aarogyasri. The trust itself has 117 employees, including 42 physicians who are not involved in the delivery of care but in claims management, quality oversight, and other operational processes. The IT vendor has deployed 55 persons for managing the IT infrastructure. The remaining personnel are employed by the insurer and include 3,600 field staff called aarogyamithras,¹ 280 call center personnel, and about 180 doctors employed by the insurer.

Beneficiaries

All families holding a white BPL ration card issued by the state government or a scheme-issued health card based on the BPL database, are automatically enrolled in the Rajiv Aarogyasri. Citizens earning up to Rs. 75,000 a year in urban areas and Rs. 60,000 in rural areas are also eligible. The annual benefit ceiling per family is a floating one, such that the maximum annual treatment cost of Rs. 150,000 can be used individually or collectively by any or all members of the family within that cap. An additional sum of Rs. 50,000 is provided as a buffer to manage expenses beyond Rs. 150,000. This buffer effectively raises the annual cap to Rs. 200,000 per family.

The member base was estimated at 20.4 million families in 2009, about 85 percent of the state's population. Citizens not covered by the scheme but needing a subsidy for high-cost medical treatment can also approach the chief minister's office for relief.² Once authorized, the treatment processing for these petitioners is also handled by the Rajiv Aarogyasri Trust. It is safe to surmise that Rajiv Aarogyasri is fast-approaching universal coverage, though only for the limited set of conditions covered in the benefits package.

Benefits Package

The scheme's cashless treatment for 938 surgical and medical procedures pertains to defined specialties including cardiology, neurology, urology, and oncology. Treatment for burns and polytrauma are also covered. These procedures were selected primarily because of their unavailability at community health centers or area hospitals, their serious nature,

requirement for specialist doctors and special equipment, and verifiable diagnostic and posttreatment protocols.

All the packages include complete inpatient costs (no cost sharing by the beneficiary), reimbursement of the patient's transportation costs (the lowest cost by public transport, e.g., intercity public buses), and medicines provided by the hospital for 10 days after discharge. One-year follow-up packages, including consultation, medication, and diagnostics, are also available for 125 procedures requiring longer periods of follow up. Under their memorandum of understanding with the scheme, network hospitals are expected to provide patients with free outpatient consultations. However, as described in the next section, such consultations are used mainly to screen and select patients with covered conditions for subsequent admission.

Provider Network and Referral System

Hospitals must possess at least 50 beds as well as certain equipment and manpower, according to the standards for empanelment to provide services to Rajiv Aarogyasri beneficiaries. Enrolled members can seek treatment for covered conditions at any of the 338 empaneled network hospitals (241 private and 97 public). Of these, about half have between 50 and 100 beds, and a fourth have more than 200 beds, reflecting the involvement of larger hospitals in a tertiary-focused scheme. Network hospitals are expected to earmark a significant share of their beds for Rajiv Aarogyasri patients.

Since the scheme aims to be paperless and extensively uses IT-enabled processes in its operations, hospitals are also required to maintain a computer, printer, scanner, digital camera, and broadband internet connectivity. Network hospitals also provide space for a helpdesk manned by the insurer's field workers, the aarogyamithras, to facilitate outpatient appointments for "walk-ins," coordinate the admission process for walk-in and referred patients (e.g., from camps, primary health centers), and assist in the discharge process. Aarogyamithras are also mandated to conduct exit interviews of patients at discharge to assess satisfaction and elicit information on any nonallowable charges levied by hospitals. They also coordinate with the hospital at discharge to give patients the public transport reimbursement (included in the package rate paid to hospitals).

Beneficiaries seeking care for covered disease conditions are referred to network hospitals through: screening camps organized and operated by groups of network hospitals, referrals by field personnel (e.g., public

health functionaries and aarogyamithras) staffing primary health centers, area and district hospitals, referral through the scheme's call center, referral from the chief minister's camp office, and spontaneous demand ("walk-ins") to outpatient clinics at empaneled hospitals. According to trust estimates, patients first identified at a health camp account for 45 percent of beneficiary utilization in the scheme; "walk-ins" to network hospitals, 25 percent; referrals from primary health center-based aarogyamithras, 20 percent; referrals from chief minister's camp office, 5 percent; and telephone referral from the call center, 5 percent.

Each network hospital is required to participate in one free health camp a week—typically an outreach activity in a community location involving multiple hospitals, local leaders, and the district administration. Such camps help build awareness of the scheme and provide free specialist consultations, limited medicines for common ailments, and free screening for scheme-covered conditions. As of September 2010, more than 20,000 camps had been organized in Andhra Pradesh with participation of more than 3.5 million beneficiaries.

Aarogyamithras, assigned to primary health centers and to area and district hospitals, help identify patients diagnosed for covered conditions and arrange for a referral consultation at empaneled hospitals on a specified date. They also track appointment openings and bed occupancy at empaneled hospitals using the call center and contacting aarogyamithras posted at referred facilities. Aarogyamithras visit the homes of some patients referred by them and slated for admission to a hospital to ensure that the patient visits the hospital and gets admitted. Aarogyamithras also liaise with patients on follow-up appointments for postsurgical care.

Evidence suggests that the private health care sector has made substantial new investments in Andhra Pradesh in response to the infusion of resources derived from the scheme. Officials estimate that all leading hospital chains in the state have opened new hospitals, and that 6,000 beds in 29 new hospitals have been added since the scheme was launched. Other infrastructural capacities have also been augmented; for instance, the supply of linear accelerator machines for treatment of cancer have reportedly increased from 13 to 29.

Although government hospitals account for a relatively small share of utilization (table D.2), the scheme has generated revenue for them, facilitating investments in infrastructure. Currently, 80 percent of revenues earned by government hospitals through the scheme are retained by these hospitals while the remaining 20 percent of revenues is retained by

the trust and pooled for infrastructural investments in public hospitals throughout the state. Of the amount retained in public hospitals, 65 percent is deposited into the bank account of the facility's Hospital Development Society for infrastructure improvement and the purchase of drugs, supplies, and equipment; the remaining 35 percent is used to pay bonuses to the treating team of doctors, nurses, and paramedics.

Financial Status and Sources of Funds

The scheme is entirely funded by the Andhra Pradesh state government. Part of it is innovative financing through the Chief Minister's Relief Fund, in turn financed through an earmarked tax on liquor sales.³ The residual funding (about Rs. 818 crores in 2009–10) is provided to the trust through the state health budget and draws on general revenues. From these funds, the trust pays the premium to the insurance company for the components outsourced to it. For the components of care not outsourced to the insurer (Aarogyasri-II package of benefits in 15 districts),⁴ the trust settles hospitalization claims directly without any intermediation. However, this split of tasks is internal, and the process is identical for hospitals regardless of the payer. For the outsourced components, the premium amount paid by the scheme has varied across the districts and across the different phases in which the scheme was rolled out. The average premium is approximately Rs. 267 per family per year and ranges from Rs. 119 to Rs. 439 per family for different districts, phases, and benefits packages.⁵

From inception to September 2010, the cumulative authorized expenditure under the scheme was more than Rs. 21 billion for 750,000 cases. The resources dedicated to Rajiv Aarogyasri have significantly increased, reaching Rs. 1,075 crores in 2009–10. This sum includes expenditures from the Chief Minister's Relief Fund (Rs. 257 crores in 2009–10) and from the general revenues of the state. Expenditures from general revenues (Rs. 818 crores) amounted to 28 percent of all health spending from the state's own resources in that year.⁶

Turning to the supply-side financing, state expenditures on secondary level services through the Andhra Pradesh Vaidya Vidhan Parishad (APVVP⁷) hospitals, for the same period, have remained more or less stagnant at Rs. 286 crores in 2008–09 (actual) and Rs. 306 crores (revised estimates) for 2009–10, which is about 10 percent of the state's expenditure on health from its own resources. This may indicate a preference for the demand-side financing scheme, which has also meant a constraint

on additional resources for the public health facilities providing secondary care, even though the scope of the demand-side financing scheme is largely around tertiary care. On another note, the Andhra Pradesh government already spends an additional 20 percent of its total health allocation on medical education and tertiary care (for medical college hospitals and other tertiary institutions)⁸ raising the total share of tertiary care to about half of the state's own health expenditure.⁹ The state government appears to have chosen to increase resources for health through demand-side financing, but in doing so, it may be overemphasizing tertiary care.¹⁰

Information Environment

Rajiv Aarogyasri makes such extensive use of IT solutions as to set it apart from other health insurance schemes in India. The scheme is largely paperless; all operational processes are electronic and integrated with a web-enabled MIS. While internal documentation is incorporated into the IT system, correspondence is through email. About 5,000 users are on the system, and officials manage their roles using ascribed digital signatures.

The IT processes, entailing electronic submission and approval of prior authorization requests, are initiated at the web-enabled identification and preauthorization system installed at the Rajiv Aarogyasri kiosk of network hospitals. The IT system is extensively used at every stage: from document submission to internal processing and final payment of claims through electronic fund transfer systems. Operational process timelines are monitored in real time. These processes include internal controls and innovations for fraud mitigation such as a requirement to upload the preoperative, postoperative, and "discharge" pictures of the beneficiary with the hospital doctor and the hospital aarogyamithra. The innovative "discharge" picture is the photo documentation of the handover of transportation money and medicines to the patient for the postdischarge period.

The scheme has established a call center to respond to beneficiaries' queries and grievances. The scheme's field staff also use the call center to refer patients and facilitate identification of appropriate hospitals (with requisite clinical specialties and availability of beds). By September 2010, the call center had handled more than 3 million incoming and outbound calls. The existing ambulance and emergency transport network in AP, also known as the "108" system after the telephone access number for the network, is linked to Rajiv Aarogyasri and refers patients to the scheme network hospitals. Aarogyamithras are connected to each other, the call

center, and scheme officials through a closed user group for mobile phones that allows unlimited, free calls within the group.

Utilization and Claims

Table D.2 presents a snapshot of empaneled hospitals' volume and claims for surgeries and medical treatment rendered from scheme inception to mid-August 2010 by provider type. The cumulative value of preauthorized claims under the scheme stood at Rs. 2,046.6 crores (about US\$450 million) for treating around 704,000 cases. The average claim amount was about Rs. 29,000 (about US\$640). More than 80 percent of the beneficiaries were treated in private hospitals, 19 percent were admitted to government medical college and tertiary institutions, and less than 1 percent received treatment at government district hospitals.

Almost 65 percent of the beneficiaries were under 45 years of age, and 12 percent were children, indicating that the scheme serves a far greater proportion of young people than the older age groups. This is

Table D.2 Rajiv Aarogyasri: Distribution of Procedures, by Institution, 2007–August 2010

<i>Hospital type</i>	<i>Number of surgeries, procedures, treatments</i>	<i>Share of total number of procedures (percent)</i>	<i>Preauthorized value (Rs. crores)</i>	<i>Share of total preauthorized value (percent)</i>
Private	566,858	80.5	1,674.5	81.8
Government autonomous tertiary institutions ^a	53,581	7.6	142.7	7.0
Government APVVP hospitals ^b	6,020	0.9	16.1	0.8
Government DME ^c hospitals (medical college hospitals)	77,540	11.0	213.3	10.4
Total	703,999	100	2,046.6	100

Source: Rajiv Aarogyasri Trust, August 2010.

Note: APVVP = Andhra Pradesh Vaidya Vidhan Parishad; DME = Directorate of Medical Education.

a. Autonomous tertiary institutions, e.g., Nizams Institute of Medical Sciences (NIMS), Sri Venkateswara Institute of Medical Sciences (SVIMS).

b. APVVP is entrusted with managing AP secondary hospitals. These are usually 100- to 300-bed district and subdistrict secondary hospitals.

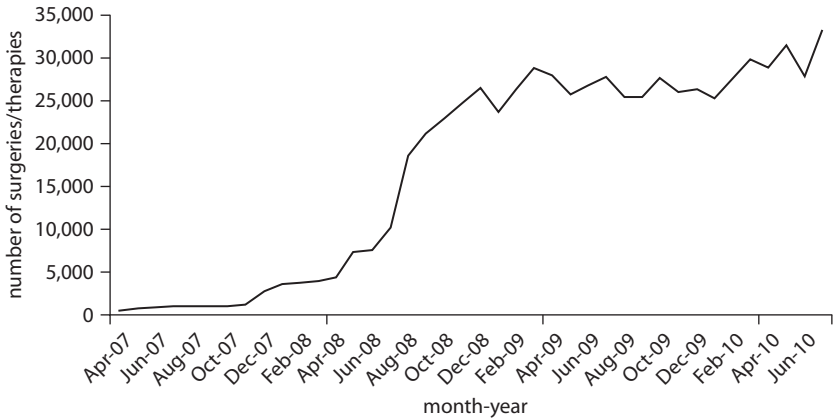
c. The DME oversees education in the AP public medical colleges. The medical college hospitals are typically large, tertiary institutions, often with more than 1,000 beds and multiple specialties.

somewhat unexpected, considering the tertiary care emphasis of the benefits package. Further, since this age group has a residual life expectancy of several decades, quality of life, health outcomes, and long-term after care will become important areas of focus for the scheme in the future.

Figure D.2 depicts the monthly trends in the number of claims authorized under Rajiv Aarogyasri between April 2007 (inception) and July 2010 (latest month for which detailed claims data were available). At first, claims grew steadily as the scheme expanded to new districts and inculcated awareness among potential beneficiaries. The steep rise in 2008–09 corresponds to the scheme’s roll-out to all districts and the expansion of the benefits package in July 2008. Thereafter, claims have held steady at about 25,000 to 30,000 claims a month.

Morbidity patterns over the same period (inception to July 2010) indicate that oncology-related procedures (144,759 cases) were highest, accounting for more than 20 percent of total cases,¹¹ followed by cardiac surgeries (92,876 cases, 13 percent), and polytrauma procedures (75,639 cases, about 11 percent). Procedures with low uptake were dermatology related (209 cases), prosthesis related (44 cases), and infectious disease related (7 cases). Further research is required to ascertain why utilization of treatment is so low under certain disease groups. Two explanations come to mind: the infrequency of the specific condition¹² or the relatively

Figure D.2 Rajiv Aarogyasri: Monthly Volume of Authorized Claims for Surgeries and Therapies, 2007–July 2010



Source: Rajiv Aarogyasri Trust, Aug 2010.

low package rate, which demotivates providers from actively screening and treating the condition.

Geographical analysis of claim distribution in 2009–10 shows that the highest absolute number of beneficiaries seeking treatment under the scheme resided in the East Godavari, Krishna, and Guntur districts, and the lowest numbers lived in the Nizamabad and Adilabad districts. Since the population and scheme launch dates are different in each district, the absolute numbers need adjustment for these variations. Thus, as illustrated in figure D.3, the highest utilization per million population and per year of coverage was from Hyderabad, the state capital and largest city in AP. Hyderabad registered a claims frequency five times that of the lowest utilizing district, Ananthapur. Availability of and distance to hospitals, as well as variability in how district health camps are conducted could substantially affect utilization and is a subject for further research.

Figure D.3 traces the variation in frequency of hospitalization across districts over the years, showcasing a steady rise from 2007–08 to 2009–10 in all districts. The overall frequency of hospitalization per beneficiary rose from about 0.1 percent in 2007–08 to 0.34 percent in 2008–09, and then to 0.46 percent in 2009–10. Growth tapered off as the scheme matured, despite an expansion of the benefits package. This pattern closely reflects the monthly trends seen in figure D.2.

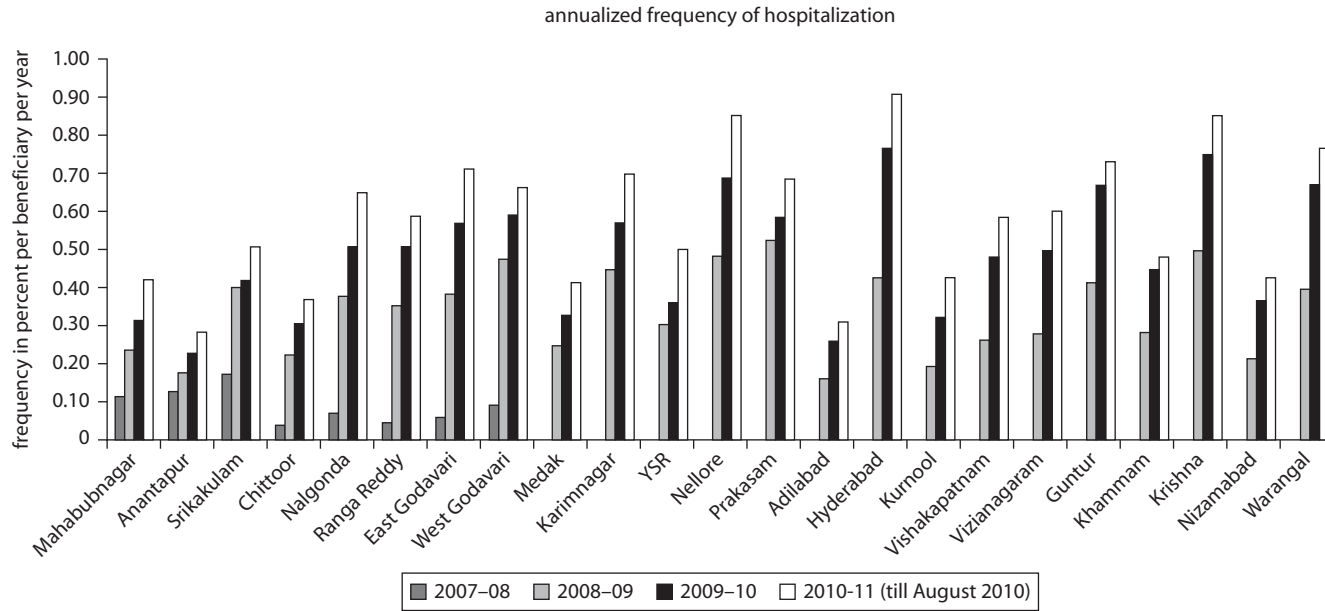
The trends observed in figures D.2 and D.3—a sharp increase in early years and a leveling off thereafter—may reflect the combined impact of rising awareness and benefits package expansion coupled with the latent demand in the community for surgical intervention during the early years. This would be a subject for further research.

Expenditure and Costs

Table D.3 shows the phased roll-out and trends in premiums and claims pertaining to the components serviced by the insurer (i.e., Aarogyasri-1 packages in all districts and Aarogyasri-2 packages in 8 districts) for the Aarogyasri Trust. The defined time periods mentioned in column 1 refer to the respective durations of the insurance policy.

The per family premium has varied between Rs. 119 and Rs. 439 over the lifetime of the scheme. The insurer's claim experience in different phases of the scheme has also been highly variable, between 69.6 percent and 128.3 percent, and has averaged 89 percent since inception. The table also shows that the phases with the highest claim ratios also had much

Figure D.3 Rajiv Aarogyasri: Frequency of Hospitalization, by District and Year



Source: Rajiv Aarogyasri Trust.

Table D.3 Rajiv Aarogyasri: Phased Rollout, Premiums, Claims, and Claim Ratio, 2007–10

<i>Phases</i>	<i>Number of BPL families (million)</i>	<i>Premium per family (Rs.)</i>	<i>Number of surgeries or hospital episodes</i>	<i>Number of claim-paid cases</i>	<i>Actual paid value (Rs. crores)</i>	<i>Claim ratio (claims/premium = percent)</i>
Phase I (April 1, 2007 to March 31, 2008) Anantapur, Mahabubnagar, Srikakulam	2.3	330	11,622	11,192	50.6	76.6
Phase I (1st Renewal, April 5, 2008 to April 4, 2009) Anantapur, Mahabubnagar, Srikakulam	2.5	119	16,648	15,902	38.6	128.3
Phase I (2nd Renewal, April 5, 2009 to April 4, 2010) Anantapur, Mahabubnagar, Srikakulam	6.7	439	91,067	82,820	205.2	69.6
Phase III (1st Renewal, April 15, 2009 to April 14, 2010) Medak, Karimnagar, YSR, Prakasam, Nellore						
Phase II (December 5, 2007 to December 4, 2008) Chittoor, Nalgonda, Ranga Reddy, East Godavari, West Godavari	4.7	219	36,589	34,322	114.6	108.5
Phase II (1st Renewal, December 5, 2008 to December 4, 2009) Chittoor, Nalgonda, Ranga Reddy, East Godavari, West Godavari	5.2	237	44,085	41,159	113.1	98.6
Phase III (April 15, 2008 to April 14, 2009) Medak, Karimnagar, YSR, Prakasam, Nellore	3.5	249	33,283	31,729	96.7	111.3

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Table D.3. (continued)

Phase IV (July 17, 2008 to July 16, 2009) Adilabad, Hyderabad, Kurnool, Visakhapatnam, Vizianagaram)	3.9	238	30,181	28,350	85.0	98.0
Phase V (July 17, 2008 to July 16, 2009) Adilabad, Hyderabad, Kurnool, Visakhapatnam, Vizianagaram	4.5	279	45,334	43,253	127.8	115.1
Phase IV (1st Renewal, July 17, 2009 to July 16, 2010) Adilabad, Hyderabad, Kurnool, Visakhapatnam, Vizianagaram	8.4	299	80,403	69,477	191.0	75.8
Phase V (1st Renewal, July 17, 2009 to July 16, 2010) Nizamabad, Khammam, Warangal, Guntur, Krishna						
Total	20.4	267	389,212	358,204	1,022.4	89.1
		(average)				

Source: Rajiv Aarogyasri Trust.

lower premiums than the other phases. Thus, the phase with the lowest premium (Rs. 119) saw the highest claim experience (128.3 percent); conversely, the phase with the highest premium (Rs. 439) also had the most favorable claim ratio (69.6 percent). As in other Government-Sponsored Health Insurance Schemes (GSHISs), a large part of the variation in the claim ratio is associated with incorrect pricing of the insurance coverage rather than a commensurate variation in utilization.¹³ The real utilization numbers, in absolute rupees per family, have been less variable: Rs. 234 per family for all the policies ended in 2008 and 2009 and Rs. 318 per family for the policies ended in 2010.

Internal Controls and Cost-Containment Mechanisms

Standard package costs for all identified procedures covered under the scheme have more limited supply-side moral hazard than under open ended fee-for-service pricing.¹⁴ The standard package costs include all

hospital charges for treatment, room, board, transportation (i.e., cash reimbursement for public transport), follow-up consultation, and medication for up to 10 days after discharge. Nevertheless, certain specialties such as cardiovascular diseases, in which hospitals have low marginal costs on their existing infrastructure investment, may still be attractive enough to induce providers to target and treat this group of patients. The package rate system, applied by nearly all GSHISs, may also induce hospitalizations for conditions that could be treated more effectively on an outpatient basis and provide additional, uncovered services and even unnecessary care. The uncovered and unnecessary care would be charged directly to patients. Package rates continue to be an imperfect system as packages are often not aligned with real costs of producing the service and may induce distortions such as providers' preferring to serve only the packages which are most remunerative. Nevertheless, as a starting point for better case-based payment mechanisms, package costs certainly have a role and will continue to evolve as the schemes mature.

The IT-enabled preauthorization process with dual checks (by the insurer and the trust) and the physical verification by the aarogyamithra stationed at all hospitals, combined with the surveillance and medical vigilance teams deployed for sample physical checks in hospitals, affords the scheme some protection against fraudulent claims and unnecessary procedures. Innovations such as the requirement of uploading photographs of beneficiaries at various stages of treatment also prevent impersonation and false claims.

The MIS tools employed by the scheme and the rigorous monitoring mechanisms are customized to identify and highlight misutilization. For example, when the MIS highlighted the possibility of provider induced demand for renal stone lithotripsy (e.g., higher than expected utilization patterns), the scheme guidelines for approving payment were revised to specify the size of the kidney stone and a requirement was set for an 80 percent minimum clearance of the stone.¹⁵ The scheme is aware of the likelihood of provider induced demand in procedures such as appendectomy, hysterectomy, laminectomy, and discectomy and has strengthened prior authorization processes to minimize such situations (there are requirements such as a patient counseling video to be uploaded for each hysterectomy performed). Further research is called for to ascertain the incidence of these distortions and the impact of scheme interventions.

An Empanelment and Disciplinary Committee under the aegis of a chief medical auditor has been established by the scheme and charged

with provider oversight. The committee checks for hospital compliance with the empanelment criteria, terms and conditions, as well as the package prices. Regularly scheduled and unscheduled inspections of all providers aim to ensure continued compliance with these requirements. These arrangements are further buttressed by a robust MIS and a grievance redressal system that highlight instances of noncompliance so the committee can initiate disciplinary action. The 24/7 toll-free call center is also available for beneficiaries to register complaints against providers. District grievance reports are maintained and updated regularly to facilitate 100 percent review of all cases by the trust officials. Multiple infractions or failure to address an infraction triggers disciplinary action.

By December 2010, 95 hospitals had been delisted, disempaneled, or suspended by the scheme for failure to comply with the scheme conditions. Major reasons for delisting and suspension included unwillingness to participate in camps and inadequate or insufficient infrastructure and manpower. Filing of false claims, charging patients for “disallowed” additionalities, and “lapses” in treatment were other, albeit infrequent, reasons.

Quality and Patient Safety

The preauthorization screening process used by the scheme is also a tool to ensure the appropriateness of proposed medical care. Evidence in the form of photographic documentation of postoperative status, post procedure X-ray, and such is used to assess service outcomes. The recently constituted Mortality Committee reviews hospital deaths within 30 days to determine if the death was preventable and the extent to which an adverse event or improper care was a contributory factor. Nevertheless, beyond the empanelment criteria (which is restricted to minimal standards for infrastructure, equipment, and manpower), surprise inspections, and investigation of reported grievances, there is no system for periodic reporting of quality indicators. This lack of reporting requirements leaves a wide gap in quality control. The scheme has yet to leverage its financial clout to impel quality improvement.

Consumer Information and Protection

Health camps conducted by empaneled hospitals are the main source of consumer information (and patient referrals) to Aarogyasri. This is

augmented by mass media activities and word-of-mouth endorsement from the beneficiaries of the scheme. The state government's rural outreach campaign, *Prajapatham*, has a strong information, education, and communication component for the scheme. About 35,000 individuals who sought treatment under the scheme were included in the larger set of 4 million participants in these rural outreach meetings organized by public representatives.

The backbone of scheme consumer protection is its MIS, which records all filed grievances and has a time-bound escalation system if they remain unresolved. Another effective mechanism for consumer information and protection is a letter from the chief minister that is automatically generated at the trust's office and sent to all beneficiaries who have sought treatment. To date, the scheme has reported a 10 percent feedback ratio to this letter, including more than 800 instances of negative feedback that were addressed by the trust. Grievances can also be made through the 24/7 call centers. The major reasons for complaints filed in 2010 were related to requests for additional coverage for follow-up care, reimbursement (or requests) for follow-up drugs, treatment for postsurgical complications, and disallowable charges levied by providers.

Concluding Remarks

Rajiv Aarogyasri pioneered health insurance coverage for low-frequency, high-cost ailments—a model replicated by several Indian states since then. The scheme has also deployed an impressive IT system, made major investments in its institutional capacity and monitoring systems, and demonstrated high political ownership and interest. Such characteristics may not have been emulated as effectively in other schemes. As a pioneer in its category, the scheme is expected to demonstrate leadership in revisiting its provider remuneration system and in emphasizing the quality of care delivered to its beneficiaries, both areas that need more attention from the scheme management. The fact that the scheme receives widespread public and political support and has moved beyond the BPL population to cover the “vulnerable poor,” extending its reach to nearly 85 percent of AP's population, has resulted in a relatively large share of the state's health expenditure being allocated to the scheme. This situation has brought it face to face with the evolutionary choice between a targeted, deeper benefits package or a universal, limited benefits package, to be accommodated within the available fiscal space.

Being able to rein in moral hazard, cost escalation, and any compromise on service quality or patient safety will continue to be important areas of focus for the scheme.

Notes

1. Aarogyamithras (literally translated as “friends of health”) are the field functionaries in the scheme, employed by the insurer and deployed by the trust in field hospitals. Further details of their functions are provided in the “Provider Network” section of this case study.
2. The chief minister’s office assesses petitioners’ socioeconomic status and authorizes treatment case by case.
3. Although the earmarked tax on liquor is the major contributor, the Chief Minister’s Relief Fund also receives voluntary donations and philanthropic contributions.
4. Rajiv Aarogyasri was rolled out in 3 districts of Andhra Pradesh in April 2007 (Phase 1). Gradually, in successive phases, coverage was expanded to 8 districts and then 13, and finally, to all 23 districts by July 2008. The same month, a new set of about 600 conditions was added to the coverage, and christened Aarogyasri-2. The insurer covered Aarogyasri-1 conditions in all districts, and the trust covered Aarogyasri-2 conditions statewide. Subsequently, the insurer expanded its coverage to also include Aarogyasri-2 conditions in 8 districts, so in September 2010, the trust directly covered Aarogyasri-2 conditions in only 15 districts of the state.
5. This is further detailed in the section on Expenditure and Costs. The scheme started with a smaller benefits package in a subset of districts, and gradually expanded its package and geographical coverage over time.
6. According to AP Finance Accounts for 2008–09, a total of Rs. 2,898.65 crores was spent under the major heads for health (2210, 2211, 4210, and 4211).
7. These are equivalent to district hospitals, and are under the aegis of the special purpose vehicle APVVP.
8. Authors’ estimates for 2008–09 are based on analysis of the Detailed Demand for Grants for 2010–11.
9. It is important to mention here that, beyond the state’s own funds, substantial GOI funds are spent in the state mainly for primary health care but are not included here in the numerator or the denominator.
10. Simultaneously, the central government has been the major contributor towards primary care resources in the state through National Rural Health Mission, which have steadily increased, unaffected by the state’s own resource distribution.

11. This could be driven by the need for multiple procedures per cancer patient every year (until the annual ceiling is reached), raising the overall frequency of cancer claims.
12. Within each specialty, only the listed procedures form part of the benefits package. If the covered conditions under a specialty are only the rare ones, the overall utilization under the specialty itself will be low.
13. Competition among insurers to secure volumes by quoting low (even unviable) prices, non-availability of good quality actuarial data for better pricing of the risk, and lack of prior experience with a similar cover are some of the likely reasons for which insurers may have missed the mark.
14. Moral hazard could have been a real challenge for Rajiv Aarogyasri had the payment mechanism been an open-ended fee-for-service system, as is prevalent in the private health insurance industry in India.
15. The lithotripsy technique for treating kidney stones has lower efficacy for larger stones. In the absence of such guidelines, providers could do the procedure and make a claim despite poor clearance of the stone.

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APPENDIX E

Rashtriya Swasthya Bima Yojana

Table E.1 Rashtriya Swasthya Bima Yojana: Summary Matrix

<i>Indicators/name of the scheme</i>	<i>Rashtriya Swasthya Bima Yojana (RSBY)</i>
Launch year	2008
Geographical area	Pan India eventually; currently implemented in 25 states
Target/eligible population	Below-poverty-line (BPL) families included in the district BPL list prepared by state governments and from central government Planning Commission estimates of their total count. Total target BPL population is 60 million families, 300 million individuals. New groups being added: National Rural Employment Guarantee Act (NREGA) beneficiaries, building construction workers (BCW), contractual postmen, railway porters and hawkers, domestic workers
Number of beneficiaries	23.4 million families, 70 million beneficiaries (March 2011)
Unit of enrolment	Family
Benefits package	All hospitalization episodes (except certain specified exclusions) restricted by package limits and subject to an annual ceiling of Rs. 30,000 per family. Maternity and preexisting conditions are covered. Package rates include post hospitalization drugs for five days and transportation costs of Rs. 100 per visit (maximum: Rs.1,000 per year)

(continued next page)

Table E.1 (continued)

<i>Indicators/name of the scheme</i>	<i>Rashtriya Swasthya Bima Yojana (RSBY)</i>
Maximum insurance coverage	Rs. 30,000 per family per year
Hospital empanelment criteria	At least 10 inpatient beds; fully equipped medical, surgical, diagnostic facility; qualified physician and nursing staff; well-equipped operating room; registration with income tax department and hardware for use of smart card and internet connectivity.
Number of empaneled hospitals (government and private)	8,103 (5,600 private, 2,503 public)
Sources of funds	Central government 75 percent, state government 25 percent. In the northeastern states and Jammu and Kashmir (J&K), funding is 90 percent central government and 10 percent state, plus Rs. 30 collected as a registration fee from the beneficiary at the time of enrolment.
Total expenditure (millions Rs.) in 2009–10	Approximately 4,800 (Rs. 480 crores)
Premium price in 2009–10	Average: Rs. 540 per family per year including service tax
Provider payment mechanism	Package rates have been defined for more than 700 procedures and preauthorized fee-for-service rates for non-defined packages
Information Technology (IT) tools used	Photos and biometric data of families collected on smart chip at enrolment. Smart cards enable offline authorization and batch transfer of data, as well as interoperability across geographical areas and insurers.
Number of hospitalizations a year	Approximately 400,000 in 2009–10
Utilization rate	Average claim ratio: 66.8 percent as of January 2011
Most common procedures	—
Governing agency and legal status	Ministry of Labour and Employment (MOLE), GOI; state nodal agency (society or trust)
Executing agency	State nodal agency and insurance company
Number of full-time staff, including contract personnel, in the implementing agency	About 10 employees at center About 100 employees total working at state nodal agencies
Administrative costs as percent of total spending	—
Cost-containment measures	Smart card for identity verification; closed-ended package rates for common procedures; In-depth analysis of claims experience and action against defaulting providers

Note: — = not available.

Introduction

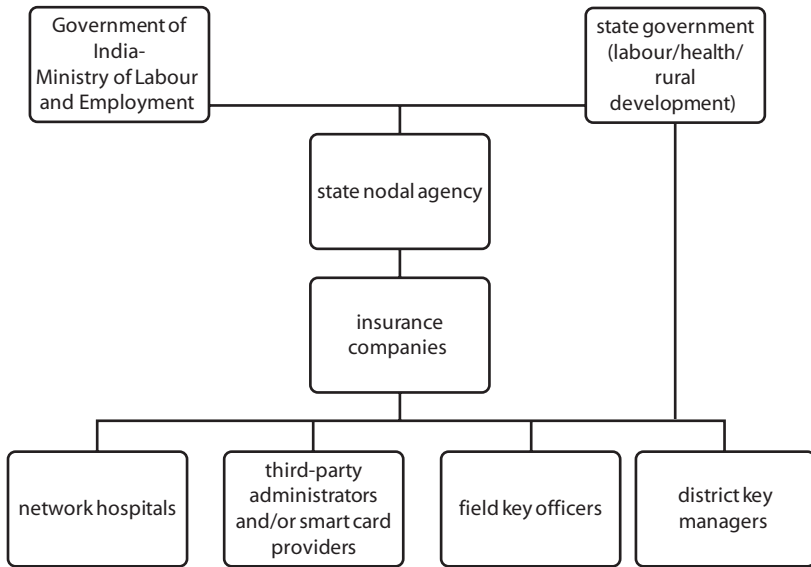
Rashtriya Swasthya Bima Yojana was launched by the government of India (GOI) in October 2007 to provide BPL families with access, choice, and financial-risk protection for inpatient health care. The scheme provides an annual cashless coverage up to Rs. 30,000 per family for inpatient treatment in more than 8,000 empaneled hospitals. Financing is shared between central (75 percent) and state governments (25 percent). RSBY is being set up across the country in phases, with the goal of reaching 60 million families, 300 million persons, by 2013. By March 2011, 23.4 million families, about 70 million beneficiaries, had been enrolled in the scheme using information technology (IT) tools such as biometric smart cards. The scheme has been implemented in 376 districts in 25 states and union territories (representing about 60 percent of the districts in the country). The only large states where the scheme has yet to take hold are Andhra Pradesh (AP), Madhya Pradesh (MP), Rajasthan, and Jammu and Kashmir (J&K). An important feature of the scheme is its national portability, made possible by the standard enrolment card and beneficiary identification process.

RSBY is one of the few schemes in which sufficient data and research have been conducted to assess scheme implementation and early stage performance. Available evidence from micro studies suggests high beneficiary satisfaction. Despite many challenges, RSBY appears to be on track to achieve its objective of increased access to inpatient care for the poor while reducing their financial burden.

Institutional Framework

The central coordinating and policymaking agency for RSBY is the central government Ministry of Labour and Employment (MOLE), particularly the Office of the Director General–Labour Welfare. MOLE plays a major role in decisions on scheme structure and implementation and also drafts standard documents, defines operational processes, and monitors implementation. Figure E.1 displays the institutional schematic of RSBY.

The scheme is implemented at the state level through a specially created entity known as the state nodal agency (SNA). SNAs have been established in different departments: Department of Labour (in 13 states), Department of Health (in 10 states), and by Department of Rural Development (2 states). The choice of which department should house the nodal agencies has been left largely to the respective state

Figure E.1 RSBY: Institutional Framework

Source: Authors' elaboration.

governments, based on state-level considerations such as reach, involvement in similar activities, and the like. The state nodal agency is registered as an independent society or trust in most states; or otherwise, this task is assigned to an existing society or trust under the implementing department.

The SNA is the main supervisory and implementing agency for the scheme at the state level and is involved in contracting insurance companies in accordance with the guidelines issued by MOLE. These insurance companies (public as well as private sector) are contracted through a competitive bidding process. Eligibility criteria include a valid license from the Insurance Regulatory and Development Authority at the time of application. As of March 2011, a total of 14 insurance companies had participated in bidding for different districts, and 11 companies were engaged by RSBY. Four are public sector companies (owned by the central government) and seven are private health insurance providers. In terms of the number of districts served, four of the five leading insurers for RSBY are public. ICICI Lombard (121 districts) is the only private insurer in the top five.

The insurance companies are responsible for empanelment of hospitals and ensuring that their institutional infrastructure meets scheme

empanelment criteria (including requirements for biometric scanners, smart card readers and software). Insurance companies are also responsible for ensuring the enrolment of beneficiaries, which is conducted by the insurance company's representatives in the presence of a government functionary assigned the role of a "field key officer." These officials are supervised by the district key manager, the district-level authority identified for the scheme. In addition to their role in authorizing the beneficiary enrolment, district key managers are responsible for monitoring and evaluation of the scheme in their jurisdiction.

Insurance companies are mandated to establish a RSBY helpline and call center in each district. Insurance companies are also responsible for information, education, and communication (IEC) activities during the pre-enrolment stage (motivated by the prospect of enrolling as many families as possible, thus bolstering their revenue from premiums collected for each family). After enrolment, IEC becomes primarily the state responsibility.

Insurance companies often hire third-party administrators (TPAs) to support beneficiary enrolment, hospital empanelment, and claim processing services. The insurers or their TPAs may also hire smart card providers to support the enrolment process and issuing of smart cards.

Like most other new government-sponsored health insurance schemes (GSHISs), RSBY has yet to establish the institutional arrangements to systematically perform key functions such as oversight, supervision, transparency, regulation, consumer information and protection, and data management and analysis. RSBY relies heavily on insurance companies as intermediaries to perform some of these functions. State nodal agencies are ill-equipped to fill the void. Also, since about half the nodal agencies are located within state labour departments, they are unfamiliar with the health system and dealing with hospitals. District key managers are often officials from the department of labour, and the quality of training for their roles and responsibilities in RSBY varies widely across the states. To address some of these gaps, MOLE is tendering for a Data Management Agency to collect and analyze claims, utilization, and other data.

Beneficiaries

The target population for RSBY are the BPL families based on definition and numbers provided for each state by the GOI Planning Commission. According to current estimates, there are 60 million BPL families nationwide. Each family can have up to five covered members: the head of

family, his/her spouse, and three dependents as specified in the BPL list. The family composition can be changed upon renewal, modifying affiliation due to birth or death of family members or inclusion of family members not covered in the earlier year. The family head, his/her spouse, and other family members to be covered must enroll in person.¹

The RSBY enrolment stations fulfill a number of functions: enrolment, correcting personal information in the BPL lists, photographing family members, taking their thumb prints, registering biometric information, and issuing the smartcards. The insurer is required to issue the card on the spot in the village location. This is a unique and praiseworthy characteristic of the scheme. A contribution of Rs. 30 per family is collected at enrolment and at every annual renewal.²

The field key officer, as mentioned earlier, validates the identity of the beneficiary using her thumbprint and key card before the smart card can be issued.

This enrolment process imposes substantial logistic and administrative requirements on the scheme, but given the massive scale of the operation, the costs are relatively low: about US\$3 per family or less. These costs are borne by the insurer within its quoted premium (which averages about US\$12 per family, and so the card issuance still accounts for a high share of the insurer's total costs). RSBY authorities maintain that gain from increased awareness and a robust identification system outweighs the registration cost.

The *conversion ratio*—the share of families successfully enrolled as against the number of eligible BPL families is about 50 percent (in March 2011), although it is highly variable across states. Himachal Pradesh (HP) and Nagaland have had enrolment conversion ratios of about 80 percent; most other states stand at between 34 and 66 percent. RSBY is not yet implemented in the states of AP, J&K, and MP, and in large tracts in Tamil Nadu (TN) and Rajasthan. In AP and TN, the states operate their own scheme; in Rajasthan and MP, RSBY has made some inroads but has not yet been able to convince the political leadership to start implementation of the scheme.

Detailed analysis has been undertaken by the scheme to understand problems and identify the determinants of enrolment performance. Based on a small sample of 248 BPL households³ (1,478 individuals) in Delhi, the scheme reports that a significant proportion were not clear about eligibility criteria, covered benefits, or cost of the smart card (Grover and Palacios 2011). However, once aware of the scheme, more than 70 percent of those eligible applied for enrolment. Regression

analyses showed that enrolment improved when the household head was between 30 and 45 years of age and/or had completed primary education. Site visits and interviews by the RSBY team suggest supply-side constraints on enrolment such as cost of transportation, wages foregone by missing work, incorrect information on identification documentation, and absence of head of household. Sun (2011) examined RSBY data from 24 districts (17,000 villages) in seven states and found that in-depth village-level analysis displayed even greater variation. For example, in 10 percent of villages there was no enrolment while in 2.5 percent villages there was full enrolment of BPL families. The main problem may rest with the quality of BPL listings (a problem beyond the scheme's direct control), but distance and BPL village density may also affect enrolment. The entities outsourced by insurers to conduct enrolment face additional logistics costs and therefore have little incentive to enroll potential beneficiaries in remote villages or in villages with few BPL families.⁴ Sun found that the major determinant of take-up was village BPL density, which makes sense in terms of the incentives offered to the insurers' enrolment teams.⁵

Recently, the affiliation of new target groups of beneficiaries have been announced by the RSBY. These include: beneficiaries of the National Rural Employment Guarantee Scheme (NREGA), building construction workers, contractual postmen, railway porters and hawkers, and domestic workers. MOLE has also announced that RSBY will be open to any group of individuals willing to pay the full premium out of pocket. However, MOLE will vet the composition of the group before such groups can be covered, to avoid adverse selection.⁶ These new groups will be covered under clearly identifiable, unique IDs (for monitoring their utilization patterns) and will have a different financing structure from the one the BPL group currently follows. This would, however, also make the scheme more complex and will bring new challenges to address in terms of enrolment logistics, technology, and management of multiple risk pools.

In March 2011, about 23.4 million cards (covering 70 million persons) were active under the scheme. An estimated 3 members per family have enrolled in the scheme. The pace of enrolment so far is encouraging. However, to sustain this trend, the scheme will have to achieve a breakthrough in uncovered states and districts. RSBY also needs to expand outreach deeper into partially covered districts and achieve enrolment from all "missing" and remote villages. Realignment of incentives to enrolment agencies would contribute to achieving a higher number of family members enrolled per card.

Benefits Package

The scheme covers inpatient (hospitalization) care on a cashless basis through its network of public and private hospitals. Most forms of hospitalization are covered with fixed close-ended prices as specified in a list of over 700 defined service “packages.” These “package” rates are in the form of a national guidance list that state governments can adapt appropriately. These 700 procedures are classified by 18 broad categories of interventions, which include dental, ear, nose, and throat (ENT), obstetrics and gynecology, endoscopic, hysteroscopic, neurosurgery, ophthalmology, orthopedic, pediatric, endocrinology, urology, oncology, and general surgery.

There are some exclusions to the inpatient services covered by the RSBY. It does not cover congenital external diseases, drug- and alcohol-induced illness, sterilization and family planning-related procedures, or vaccination. Conditions resulting from war and attempted suicide are also not covered. Treatments using alternative systems of medicine are also excluded. Other than these, however, all forms of hospitalization are covered up to the scheme cap. Preexisting conditions are covered as well as maternity. The latter includes automatic coverage for a newborn until the next renewal cycle (even if five members are already covered for that period).

Upon enrolment, each family receives one smart card with encoded biometric details of all enrolled family members. With the card in hand, family members can use inpatient services costing up to Rs. 30,000 per annum at any empaneled hospital.

Although the state buys a group policy for all enrolled beneficiaries in each district (or set of districts), and the package prices and other policy conditions are specific to that state, the smart card is portable across India, not confined to the particular state. The RSBY has developed arrangements for sharing networks created by different insurance companies working across the country. Beneficiaries from Uttar Pradesh (UP), for example, can use services from a network hospital in Bihar, and the respective insurance companies serving each state will settle the claim between them.

The package rate payable to hospitals also includes reimbursement (by the hospital) to the beneficiary for public transportation costs (maximum of Rs. 100 per visit and Rs. 1,000 a year) within the overall insurance cap of Rs. 30,000.

Ambulatory care is not covered by the scheme, except for medicines for five days posthospitalization (which are provided by the hospital and

included in the “package” rates). However, the memorandum of understanding with all networked hospitals requires the hospitals to provide free outpatient consultations to RSBY beneficiaries. Other costs (ambulatory diagnostics, pharmaceuticals, and so forth) are borne by the beneficiaries, except if investigations or consultations lead to inpatient admission within a day. The extent to which hospitals in practice provide free outpatient consultations is unknown. These uncovered services may lead to higher out-of-pocket spending for these services.

The absence of ambulatory coverage and the relatively modest cap of Rs. 30,000 imply that RSBY benefits package constitutes a small slice of the overall spectrum of health expenditure. Although it makes a creditable contribution to the financial protection of its BPL beneficiaries for lower-cost inpatient procedures, it does not cover the higher-cost inpatient episodes and the frequent, ambulatory care episodes. In theory, the public health system provides free or nearly free services that can fill some coverage gaps, but the links of GSHISs, including RSBY, to the public health system have been variable at best. In particular, linkages for posthospitalization follow-up care with the public health system can be a good starting point for the scheme to consider. The RSBY also plans to pilot ambulatory coverage in a small geographical area, but this will require considerable planning and the design of provider payment mechanisms that minimize moral hazard while reducing out-of-pocket burden for the BPL beneficiaries.

Provider Network

Beneficiaries can access health care through any of the 8,103 empaneled hospitals (table E.2) spread across 376 districts (March 2011). Private hospitals make up 70 percent (5,600 hospitals) of the network; all the others are public facilities. In HP, Chhattisgarh, Jharkhand, and Kerala, the share of public hospitals in the network is very high. The opposite is the case in Delhi, TN, Maharashtra, and West Bengal. This probably reflects the working relationship of the state government department that supervises the scheme in each of these states vis-à-vis their public health systems.

According to the standardized process laid down by RSBY, once the beneficiary reaches the empaneled hospital, a designated RSBY helpdesk, manned by hospital staff (a requirement for empanelment), becomes the first contact point. The helpdesk registers and validates the beneficiary’s details, using the information encoded on the smart card and the patient’s

Table E.2 RSBY: Districts and Hospitals, by Type and by State

<i>State</i>	<i>No. of districts</i>	<i>Private hospitals</i>	<i>Public hospitals</i>	<i>Total hospitals</i>
Andhra Pradesh	No RSBY coverage	No RSBY coverage	No RSBY coverage	No RSBY coverage
Arunachal Pradesh	6	—	—	—
Assam	5	27	21	48
Bihar	37	633	37	670
Chandigarh	1	8	3	11
Chhattisgarh	18	223	417	640
Delhi	10	111	Nil	111
Goa	2	2	Nil	2
Gujarat	27	779	317	1,096
Haryana	21	561	61	622
Himachal Pradesh	12	42	135	177
Jammu and Kashmir	No RSBY coverage	No RSBY coverage	No RSBY coverage	No RSBY coverage
Jharkhand	21	174	151	325
Karnataka	6	113	66	179
Kerala	14	157	133	290
Madhya Pradesh	No RSBY coverage	No RSBY coverage	No RSBY coverage	No RSBY coverage
Maharashtra	31	921	8	929
Manipur	1	4	Nil	4
Meghalaya	5	7	65	72
Mizoram	8	10	62	72
Nagaland	4	6	Nil	6
Orissa	12	47	67	114
Punjab	20	329	157	486
Rajasthan	4	—	—	—
Tamilnadu	2	32	Nil	32
Tripura	4	Nil	29	29
Uttar Pradesh	71	1,014	692	1,706
Uttarakhand	15	63	82	145
West Bengal	19	337	Nil	337
Total	376	5,600	2,503	8,103

Source: RSBY data.

Note: — = not available.

thumbprint. If the beneficiary's medical condition requires hospitalization, the hospital ascertains the specific "package" of treatment required and the availability of funds (within the Rs. 30,000 yearly cap for the family), which is also encoded in the smart card. If the required service is not listed in the predefined packages, a prior authorization is required, and the hospital helpdesk coordinates with the insurer in ascertaining the

amount applicable. The hospital then proceeds to “block” the required amount on the smart card. On completion of the treatment, the amount is confirmed and deducted from the insured amount stored on the chip. The hospital also sends an electronic report to the insurer or TPA for reimbursement of the claim. Claims must be paid within the time limit agreed in the contract between insurer and the network hospital (21 days). In certain states, network hospitals have arrangements with ambulatory diagnostic centers and pharmacies to integrate services.⁷

Detailed information on the size distribution of network hospitals is not available, but RSBY primarily attracts small and medium-size hospitals located in semi-urban areas and small towns. RSBY prices the package rates conservatively, which larger hospitals may not find attractive.

Financial Status

The scheme is jointly funded by the central and the state governments. The central government contribution is 75 percent of the premium charged by the insurance company, which is enhanced in the case of northeastern states and Jammu and Kashmir to 90 percent. The remaining share is borne by the respective state. The beneficiary families pay Rs. 30 a year toward registration and card issuance, the state nodal agency’s main revenue source of financing for administration, information, education, and communication activities, and so forth. The states transfer their share of the premium to the nodal agency and inform the central government of the same. The central government then contributes its share of the premium, and the state nodal agency pays the insurance company.

According to RSBY guidelines, the center’s share is limited to paying for the number of BPL families in the Planning Commission’s estimates, up to a cap of Rs. 750 per family. So far, however, the health insurance market has been fiercely competitive, and in a bid to gain volume and revenue growth, aggressive bidding by the insurers has resulted in significantly lower quotes for premiums, such that this Rs. 750 limit has so far not been breached. The premium paid by the scheme has varied within and across states, and also for different years, ranging between Rs. 331 and Rs. 748 per family per year, inclusive of service tax. The average per family premium was about Rs. 541 (US\$12) in March 2011.

The total expenditure on RSBY was about Rs. 1 billion in 2008–09, Rs. 4.8 billion in 2009–10, and was expected to reach about Rs. 8 billion in 2010–11. According to the projected financial requirements for the

scheme in 2014–15, estimated for this book with actuarial support, spending on RSBY is expected to be in the range of Rs. 42 billion (Rs. 4,200 crores).⁸ This steep increase (about 54 percent compounded annually) will be driven largely by growth in enrolment and only marginally by the change in annual costs per family. For comparison, GOI health expenditures (excluding RSBY) increased by about 23 percent a year between 2006–07 and 2009–10. Even in 2014–15, GOI expenditure on RSBY will be only about 5 percent of its total estimated health spending for the year and will constitute about 30 percent of all public spending on GSHISs that year. Thus, despite its impressive growth in enrolment, the modest benefits package implies that the actual impact of the scheme on government finances will be relatively small (Nagpal 2011).

Information Environment

The RSBY scheme has deployed IT applications widely and innovatively, particularly at the enrolment and provider levels. About 35 million microchip-enabled “smart” cards had been issued under the scheme by March 2011. It is safe to say that RSBY represents one of the largest deployments of smart cards globally. The smart card technology helps make the scheme cashless and paperless by allowing offline verification of beneficiary status and electronic recording of transactions at the hospital level, which is particularly relevant for a scheme using a network of remote, small hospitals. The technology keeps the processes ongoing even if internet connectivity is erratic. The pertinent information is stored on the card, which is all the hospitals need to deliver a service. Subsequently, they can transfer the transaction data to scheme servers when connectivity is restored.

The scheme requires that issuance of each smart card is verified by the field key officer and that the card is printed and delivered on the spot in the village itself. This mandate attempts to prevent misuse and identify theft. This, however, is still an area in which compliance is far from complete. Studies by RSBY with small sample sizes indicate that cards are not being delivered on the spot in a significant proportion of cases. According to scheme officials, this is being monitored and action has been taken against defaulting intermediaries. The elaborate enrolment process and use of smart biometric cards for identification has led to active consideration of possible additional uses or applications of the beneficiary cards, such as for the subsidized food provided to BPL families or for storing health records of the beneficiaries.

Several software applications are deployed in the scheme, including those pertaining to key management and security systems for the data stored on the card. These have been developed internally by the National Informatics Center, the IT solutions department in GOI. Other applications include data management, including one application developed with technical assistance from the World Bank. Further, insurance companies and TPAs have deployed proprietary software for claim processing and managing internal information and control requirements. Although RSBY does not yet feature an integrated management information system (MIS), IT systems are used for financial transactions between hospitals and insurance companies, between insurance companies and the state nodal agencies, and between the state nodal agencies and central government. Recently, the scheme has worked out a plan to create an integrated data exchange platform that will facilitate real-time data movement to the concerned agencies and provide MIS inputs to all entities in the system.

The RSBY estimates that less than 10 percent of hospital-level data is transmitted offline through pen drives or CDs, and this is often due to temporary power, internet, and system malfunctions. Similarly, the scheme estimates that less than 10 percent of the claims are processed manually—a big improvement over past practice. The onus is on the insurer to provide functional hardware and software in public hospitals to process all claims electronically.

A major challenge in the information environment is the lack of a central MIS for the scheme. Although enrolment data are well captured, it resides at state level (or with the intermediaries) and needs to be compiled, cleaned, and analyzed with much more effort than would be required were an integrated MIS available. Also, the scheme still does not have a claim processing solution of its own, and data on claims, utilization, and payments to hospitals are still being generated by the insurers and the TPAs and then transmitted electronically to the scheme. The absence of such a solution (or a middleware application linking insurer and TPA claim processing systems with the central MIS) would also prevent real-time monitoring of claims (and possible leakages) by the scheme itself. This situation is compounded by the automatic, offline preauthorization of hospitalization enabled by the smart cards, and delays in online submission of this offline information by the hospitals. In due course, when the proposed data exchange platform becomes available, much of these flows will no longer be manual but automatic and in real time, considerably improving the scheme's information environment.

Utilization and Claims

By March 2011, RSBY had processed 1.65 million claims since its inception.⁹ At an average cost of about Rs. 4,100 per claim,¹⁰ the scheme paid out claims worth a cumulative Rs. 7 billion. In the six months from October 2010 through March 2011 alone, Rs. 4 billion was paid out, indicating the rapid pace of growth.

For a subset of the implementing 193 districts, which had been covered for a full year by January 2011, more detailed, state data are available (table E.3). The table shows the high variation in the frequency of hospitalization (number of hospitalization claims per 100 beneficiaries), claim ratio,¹¹ and average claim amount (total cost of claims divided by the number of hospitalization claims) across the states implementing RSBY. The variations are likely to be even more pronounced across villages.

Table E.3 RSBY: Hospitalization and Claims, by State, Inception to January 2011

<i>State</i>	<i>Hospitalization frequency</i>	<i>Claim ratio</i>	<i>Average claim amount</i>
Assam	0.09	2.2	4,250
Bihar	1.33	42.4	4,368
Chhattisgarh	1.14	31.2	4,368
Delhi	3.63	121.8	4,986
Goa	0.11	1.4	3,500
Gujarat	4.33	139.4	4,384
Haryana	2.79	75.5	4,678
Himachal Pradesh	0.49	25.6	5,037
Jharkhand	1.02	54.4	4,939
Kerala	5.21	100.3	2,576
Maharashtra	1.81	52.3	4,570
Nagaland	2.82	149.1	8,450
Orissa	0.40	7.2	2,992
Punjab	1.25	54.2	6,225
Tamil Nadu	2.62	22.0	2,227
Tripura	2.69	51.4	2,250
Uttar Pradesh	3.34	70.6	4,769
Uttarakhand	1.35	29.4	5,530
West Bengal	1.24	68.2	5,366
Chandigarh	0.08	6.7	8,647
Total	2.52	66.8	4,097

Source: RSBY data.

For the country as a whole the frequency of hospitalization was 2.52 percent. This figure is not very different from the national community-level frequency of hospitalizations estimated by the 60th round of National Sample Survey Organization. The frequency was estimated at 2.3 percent for the rural population and 3.1 percent for the urban group (MSPI 2004). However, the interstate variation was significant in RSBY, ranging from a low of 0.08 percent in Chandigarh (and a similar 0.09 percent in Assam) to a high of 5.21 percent in Kerala (and an equally high 4.33 percent in Gujarat). The reasons for these variations require further study, but given the early stage of scheme implementation, contributing factors would be the correspondingly low beneficiary awareness and the limited accessibility of the hospital network. States such as Kerala and Gujarat, with high awareness levels, extensive hospital networks, and more implementation experience in RSBY, stand out with high utilization compared with states such as Assam and Goa where the scheme is relatively new and the hospital networks are restricted.

The claim ratios demonstrate similar patterns, but they are attenuated by the premium variations between states. Kerala has a high claim ratio of 100 percent, but Nagaland, with a much lower utilization, displays a claim ratio of 149 percent. This suggests that the insurer was way off the mark in predicting potential claims in the state. Other states with evidence of an “adverse” claim ratio and where insurers lost (or are losing) money are Delhi and Gujarat. Nonetheless, the average claim ratio is a reasonable 67 percent for this entire subset of districts. Considering that the insurers spend an estimated 20 to 30 percent of their premium on enrolment and other administrative costs, the industry probably managed a small profit.

The average claim size has also varied between Rs. 2,222 and Rs. 8,647 per claim in TN and Chandigarh respectively, but both states represent extremes on a small base. Nevertheless, the claim size is likely to vary based on the case mix in the state, the incidence of “combined” claims (e.g., two or more packages claimed for the same patient), and the extent of upward revisions in the standard package rates by the state nodal agency. Price crawl could be a function of health care costs in the state. This appears to be the case for Nagaland, where the higher average claims may correspond to higher medical costs in the hilly state.

In the states where the claim ratios were adverse, premium bids in subsequent years are likely to rise. This trend is visible in Kerala: the premium quotes in 2011 were close to Rs. 750 per family, a nearly 50 percent

increase over the previous year (Rs. 510). In contrast, in states with low claim ratios, subsequent bids may be lower.

Cost Containment

The use of standard package rates for most procedures is the predominant cost-containment tool in RSBY. Package rates limit the opportunity of supply-side moral hazard but do not eliminate it entirely. In particular, there is evidence from preliminary data that providers combine procedures (such as hernia surgery with appendectomy). The extent to which this occurs requires further research but the data indicate that providers are trying to maximize their billing by adding on additional, perhaps unwarranted, services. Considering the low package rates, these behaviors are aligned with providers' underlying incentives to maximize revenues. The use of IT tools such as biometric smart cards for beneficiary identification at the hospital, combined with data analysis and monitoring by the insurance company, state nodal agency, and the GOI, are the other tools deployed to control leakages and unwarranted costs. The exact impact of these tools needs further study.

RSBY officials maintain that the design is such that the incentive structures for stakeholders are aligned, contributing to cost containment. In other words, given the per capita premium, insurers have an incentive to minimize their claims. However, this may not be entirely the case as insurers continue to quote lower premium bids than the past experience in some states and districts would justify. The predominance of government-owned insurers could partly explain this apparent paradox.¹² The fact that insurers have a limited, one-year horizon to control claim costs may be an important factor discouraging increased investments in controlling costs. In other words, insurers may have few incentives to invest in cost containment since an adverse claim ratio in any year can result in a "re-pricing" of the district's premium in the next (annual) round of bids. Even three-year contracts in the districts that have them are designed to be renewable annually by mutual agreement. Thus, the insurer's liability in a loss-making district is reduced to a one year horizon.

Quality Orientation

Empanelment criteria constitute the main quality-control provision. Hospitals empaneled by the insurance company or TPA must meet scheme-specified criteria prescribed with a view to balancing quality

parameters vis-à-vis adequate availability of hospitals in rural areas. The requirements include a minimum of 10 inpatient beds (and can be relaxed further by the state), qualified physicians and nurses available 24/7, pharmacy and diagnostic services (or linkages to other providers that could provide them to the inpatients), hardware and internet connectivity complying with scheme requirements, and acceptance of package rates. There is no provision for inspections postpanelment. The scheme is trying to introduce an incentive system to promote quality of care through a proposed grading system.

The extent of monitoring by the insurer and the state also affects the quality of services received by the beneficiaries. However, no data are collected on service availability nor is there any provision to make a definite statement on standards of care. The scheme has provisions for dispanelment, fines, and denial of claims, and has applied them, as evidenced by dispanelment of more than 50 hospitals since inception. However, such actions are generally a response to a complaint and not a consequence of monitoring systems, which are for the most part inadequate.

Consumer Information and Protection

RSBY officials maintain that the act of paying a nominal sum for the scheme at the time of enrolment is a powerful consumer-awareness tool. At the same time, the extent to which the consumers understand their health insurance coverage appears variable and needs further research.

Insurance companies are responsible for informing potential beneficiaries about the scheme to encourage enrolment. They have an incentive to do so since payment is related to the number of families enrolled. The role of the field key officer is in principle to ensure that information about the scheme is provided to the beneficiaries at the grassroots level. After enrolment, the officer is the source of information on scheme features and provisions for the beneficiaries at the grassroots level. The RSBY representatives in network hospitals also have a role as a source of information, besides providing facilitation for the beneficiaries. The extent to which field key officers or RSBY representatives understand and fulfill these expectations is unknown and is an area for further study.

Health camps, organized from time to time, are another mechanism to provide information to the beneficiaries. Community-level public health functionaries, including Auxiliary Nurse-Midwives and other voluntary link workers are expected to act as information sources for the

beneficiaries. However, the degree of their participation depends on the extent of involvement of the district administration and the state health department.

Early findings from small household surveys also suggest that word-of-mouth messaging from scheme beneficiaries may be an important awareness mechanism. Villages that had an inpatient episode under the scheme were more likely to see further utilization than villages that did not have any such episode.

The scheme has established a grievance-redressal mechanism in its contractual terms with the insurers. This is in addition to the recourse that beneficiaries have to the district administration, state nodal agency, and the GOI.

Concluding Remarks

RSBY pioneered enrolment of its BPL beneficiaries on a mass scale. This was achieved at a low cost of under US\$3 per family. This cost was included in the insurance premium, itself low at an average of Rs. 540 (US\$12) per family per year. The scheme's use of smart cards for offline identity verification and automatic authorization at the hospital is an innovative feature of RSBY. The scheme introduced health insurance coverage to millions of families and thousands of hospitals that had never before interacted with insurers. Early gains and recognition have set the bar high for the scheme to raise performance by strengthening monitoring and evaluation, enhancing financial protection for its beneficiaries, achieving greater linkages with the public health system, expanding coverage to ambulatory care, improving its quality orientation, and minimizing systemic leakage and fraud.

A major constraint for the scheme will be its institutional capacity: both central government and state resources are limited for governing an already large and growing scheme. Piggybacking on the existing private health insurance system facilitated rollout and early gains, but the scheme's overwhelming dependence on those insurers without an adequate monitoring system is another area for concern. Finally, the scheme cannot exist in isolation and needs to invest more in ownership at the state level, coordinating with the state departments and forging closer integration with other state GSHISs.

Notes

1. When the wife's name is mentioned in the BPL list, her enrolment in one of the allocated beneficiary slots (out of the five) is mandatory.

2. This charge is used to cover the administrative costs of the state nodal agencies and is not applied toward the insurance premium.
3. Of these households, 100 were enrolled.
4. Sun reports that, although the average village in his sample had 145 BPL families, the range spanned from 1 to more than 10,000.
5. Insurers invariably outsource the enrolment function for RSBY to enrolment agencies at a fixed cost per family. Insurers have an incentive to reduce their own cost of undertaking enrolment and therefore would focus on villages with high densities of BPL families. Nevertheless, villages with a higher likelihood of claim costs are not likely to be known at the time of enrollment. This may also be a reason that “cream skimming” was not observed.
6. Ideally, opening up a scheme to such groups requires that a high proportion of the group’s membership actually enroll to avoid adverse selection. Further, this group should have been constituted for reasons other than to obtain health insurance. It is not known whether these safeguards will be required or monitored by RSBY.
7. RSBY also provides coverage for interhospital transfers (from one empaneled hospital to another) as long as there is a positive balance in the insurance coverage. Thus, if a beneficiary develops complications and needs to be shifted to a higher level of care, transfer is possible under scheme provisions.
8. This represents an average claim size of Rs. 5,000 per year (up from about Rs. 4,100 currently, due to likely upward revision in package rates), a projected utilization frequency of 2.8 percent per year, coverage of four members per enrolled family, and an 80 percent claim ratio, which translates into an estimated premium of Rs. 700 per year for 60 million enrolled families.
9. RSBY website at www.rsby.gov.in; accessed April 6, 2011.
10. This average figure is based on data from 193 districts that had completed a full year on January 31, 2011.
11. Proportion of premium paid out as claims.
12. The emphasis on bottom lines and profits could have weaker incentives for insurers owned by the government than for privately owned counterparts. Public sector insurers may also be motivated to attain greater visibility in social sector schemes such as RSBY.

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APPENDIX F

Chief Minister Kalaaignar's Insurance Scheme for Life Saving Treatments

Table F.1 Kalaaignar Summary Matrix

<i>Indicators</i>	<i>Chief Minister Kalaaignar's insurance scheme for life-saving treatments, Tamil Nadu (TN)</i>
Launch year	2009
Geographical area	Entire TN state
Target/eligible population	Below poverty line (BPL), and, —families having annual income less than Rs. 72,000 —families of members of 26 welfare boards
Number of beneficiaries	13.4 million families/36 million individuals
Unit of enrolment	Family
Benefits package	Surgical procedures (more than 400) across various specialties
Maximum insurance coverage	Rs. 100,000 over four years, per family
Hospital empanelment criteria	Minimum of 30 beds
Number of empaneled hospitals (government and private)	692 hospitals, including 56 public hospitals
Sources of funds	Entirely financed by TN state government
Total expenditure (Rs. million), 2009–10	Rs. 5,170 (about 517 crores)
Premium price, 2009–10	Rs. 469 per family + service tax

(continued next page)

Table F.1 (continued)

<i>Indicators</i>	<i>Chief Minister Kalaingar's insurance scheme for life-saving treatments, Tamil Nadu (TN)</i>
Provider payment mechanism	Package rates linked to five-tier categorization of hospitals.
Information technology (IT) tools used	Web based preauthorization and claim submission Microchip-based smart cards to identify beneficiaries Webcams and closed user group for coordination and monitoring of liaison officers in network hospitals
Number of hospitalizations per year	153,410 in first year
Utilization rate	0.43 percent per beneficiary in first year
Most common procedures	Orthopedics (20.6 percent), oncology (17 percent), urology (12.1 percent), ENT (9.7 percent), and cardiac diseases (9.5 percent)
Governing agency and legal status	TN Health Systems Society (autonomous society)
Intermediary used	Insurance company (Star Health and Allied Insurance as lead insurer of a multi-insurer consortium)
Number of full-time staff, including contract personnel in governing agency	<10
Administrative costs as percent of total spending	—
Cost-containment measures	Preauthorization, preagreed package costs according to hospital categories, in-depth analysis of claims, surveillance teams for fraud control

Note: In 2011–12, the scheme was modified to include additional procedures and relaunched as the Chief Minister's Comprehensive Health Insurance Scheme, and the executing agency serving the scheme also changed. The maximum coverage was also changed from Rs. 100,000 floating over four years to Rs. 100,000 per year. Hereafter, this write-up reflects the scheme details that existed when this study was undertaken in 2010–11.

— = Not available

Introduction

Chief Minister Kalaingar health insurance scheme was launched in the state of Tamil Nadu on July 23, 2009. The scheme aims to ensure access to treatment for identified serious and life threatening ailments through a network of public and private hospitals. The stated objective of the scheme is to provide quality health care to all citizens of the state, with an enhanced focus on the poorest of the poor as well as low-income vulnerable groups and unorganized sector workers needing financial protection for these high-cost ailments.

By targeting families earning less than Rs. 72,000 a year, the scheme covers not only the BPL group but also the lower-middle class families earning below this income level. The available insurance coverage is capped at Rs. 100,000 per family over the four-year insurance period. In other words, utilization by any enrolled family member at any time during the four-year term counts toward the cap, and the available sum for the remaining period is accordingly reduced.¹ The scheme has many similarities with the Rajiv Aarogyasri scheme in Andhra Pradesh (AP) in terms of its benefits package, a subset of features of the IT applications, and the monitoring mechanisms.² The key areas in which the TN and the AP schemes differ are:

Institutional structure. Unlike AP, there is marked dependence of Kalaingar on the insurer's staff, with very few full-time resources available to the scheme from the governing agency.

Variable package pricing. Contrary to the uniform package rates across all hospitals in AP, package rates vary across hospitals in TN, which are classified into categories by their geographical location and infrastructure.

Single state-wide contract with fixed pricing for four years. The single insurance contract for the entire state at a predetermined price for the entire four-year period is unlike the multiple bidding processes, prices, and yearly contracts in AP. However, this also prevents a reset of the coverage to full availability of the sum insured every year.

IT system. The insurer owns and deploys an off-the-shelf software application for preauthorization and claim submission, not a customized, integrated, and more extensive management information system (MIS) as is used by the AP governing agency.

Institutional Framework

The state government, through the Department of Health, provides oversight to and funding for the insurance scheme. Although this insurance scheme is not funded by the World Bank, the state has charged the Tamil Nadu Health Systems Society (TNHSS, established by the Department of Health to implement the World Bank-funded Tamil Nadu Health Systems Project [TNHSP]) to implement the health insurance scheme (figure F.1).

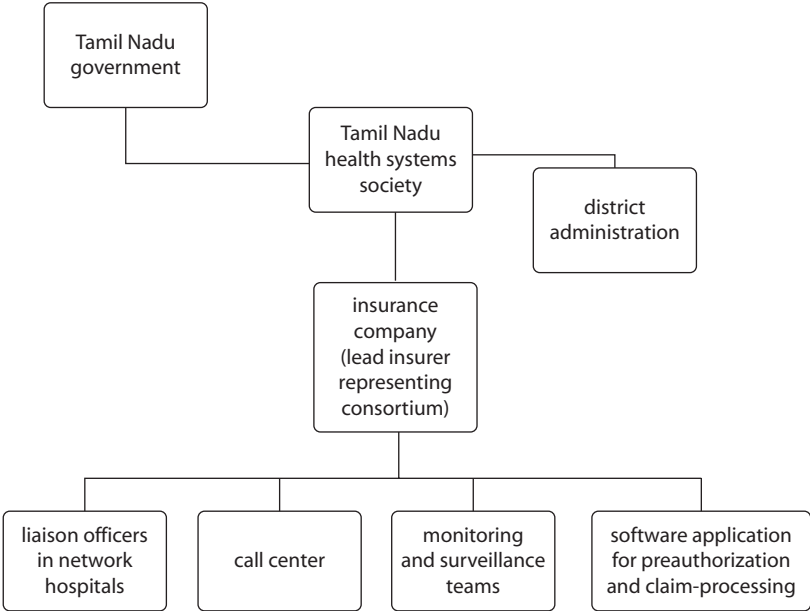
The health insurance unit of the above-mentioned society is steered by the State Empowered Committee, which, under the chairmanship of the chief secretary, is responsible for monitoring the scheme. The TNHSP

project director is the member-convener of the committee and the insurance scheme's nodal officer.

The scheme has devolved some monitoring functions to the district administration, implemented by a district core group under the chairmanship of the district collector, the executive head of district administration. His deputy for social security schemes, the deputy collector, acts as the convener of this core group, which also comprises the district labor officer, joint director of medical and rural health services, deputy director of health services, dean of the medical college, TNHSP district program manager, and representatives of the departments of rural development and municipal administration.

Star Health, the lead insurer in a consortium of scheme underwriters, has the administrative responsibility for enrolling beneficiaries, empaneling hospitals, and providing services through empaneled hospitals. The insurer is also responsible for day-to-day monitoring of scheme operations. Physical monitoring is done by a battery of 21 vigilance teams of retired police personnel that make random, unannounced visits to hospitals and

Figure F.1 Kalaigiar: Institutional Framework



Source: Authors' elaboration.

patient residences. Other functionaries such as district coordinators, district program officers, and district collectors are also entrusted with scheme monitoring responsibilities. The scheme's presence at the interface of patients and hospitals is in the form of liaison officers appointed by the insurer in each network hospital. Liaison officers staff the scheme's hospital kiosk and coordinate and facilitate the beneficiaries' treatment.

Beneficiaries and Enrolment

Any family already identified as BPL or with an annual income of up to Rs. 72,000 is eligible for the scheme. Members of 26 welfare boards constituted by the state government for identified vulnerable segments of the population, including groups engaged in agriculture, construction, manual laborers, auto rickshaw drivers, washermen, artists, goldsmiths, and tribal persons are also entitled to the benefits of the scheme irrespective of income criteria. Although the original number of beneficiary families was estimated at 11.6 million in March 2011, 13.4 million families were actually enrolled, expanding the Kalaingar's reach to about 36 million individuals.

Beneficiaries were enrolled at village camps for three months. This was followed up with *taluk*³-level kiosks functioning for the next six months, where enrolment was undertaken on the basis of the list of eligible citizens provided by the welfare board or from eligibility certificates provided by the local revenue officials, the *tehsildars*. After the initial enrolment phase, missed or remaining beneficiaries could enroll at the district kiosk at any time.

Enrolment relies primarily on the state government's BPL database. The process consists of photographing BPL family members, taking their thumbprints, and registering their personal data. After enrolment, a smart card is generated for each family. However, unlike Rashtriya Swasthya Bima Yojana (RSBY), the cards are not issued in the field and are subsequently delivered through the government functionaries (village administrative officers and revenue inspectors). The entire enrolment process is monitored by two TNHSS deputy directors at the central level and the district revenue officer at the district level.

Originally, all eligible beneficiaries were to receive smart cards within four to six months of commencing the scheme⁴ but, due to delays, arrangements were made for them to access scheme benefits without the smart card, by simply furnishing a BPL card or any other income document as proof of eligibility. No contribution is required from the beneficiary during

or after the enrolment process, either as a registration fee or any subsequent cost sharing for the insurance package.

Benefits Package

The scheme emphasizes high-cost, tertiary procedures and offers free treatment for more than 400 listed inpatient conditions under 14 broad specialties⁵ including surgical corrections for congenital disorders. In cardiac cases, drugs worth Rs. 500 (covering a two-month, postdischarge supply) are included in the benefits package. In a similarity it shares with other state schemes, the TN scheme covers hospitalization only for the defined procedures and does not cover ambulatory expenses. However, unlike most other recent GSHISs, which commonly reimburse patients for transportation expenses incidental to hospitalization, the TN scheme does not.

The stated rationale for selecting the listed procedures was the long waiting list for treatment of these conditions in the public health care delivery system. Many of the listed conditions are also similar to the Rajiv Aarogyasri scheme in Andhra Pradesh, which preceded the Tamil Nadu scheme by about two years.

The health insurance coverage is capped at Rs. 100,000 per family over a four-year period. The premium for this benefits package—Rs. 469 (about \$10) per family per year—was determined through a competitive bidding process where the insurers bid for the given benefit package and for the defined number of beneficiaries. The insurers are required to use their managerial and cost-containment experience to maintain the viability of this premium for four years without any increases, despite cost pressures.

Provider Network

There are 692 hospitals, public and private, in the scheme's empaneled network. Of these only 56 are public hospitals, a common pattern across most GSHISs. Interestingly, also included are some hospitals in neighboring states for the convenience of members residing in districts near the state borders, something not seen in other state GSHISs. A beneficiary has the option of seeking care in any network hospital and does not have to use a provider from any specific geographical location.

The insurer grades empaneled hospitals at the time of their empanelment and again on their subsequent request for an upward review of their

grading. There are five hospital categories, A+, A, B, C, and G, based on location, facilities, infrastructure, and ownership (all public hospitals are uniformly placed in the G [government] category based on ownership). The minimum requirements for empanelment, apart from having more than 30 beds, are to have a built-up area of at least 7,500 square feet, an operating room with a C-arm imaging scanner intensifier, an intensive care unit (ICU) with centralized oxygen and suction, and minimum of 4 ICU beds, diagnostics like X-ray and ultrasound, a 24-hour pharmacy, two ventilators, and a medical audit system.

Each empaneled hospital is provided with a liaison officer, a dedicated field official from the insurance company. This official serves a function similar to that of the aarogyamithra of the Andhra Pradesh scheme, which includes facilitating and guiding the beneficiaries, coordinating the preauthorization and claims processes with the hospital, and generally serving as the scheme's on-site representative.

The top 25 hospitals (by value of claims) serving the scheme in the first year of the policy are tabulated in table F.2. These leading providers in the TN scheme network are distributed across the state, without concentration in one district or one geographical area. These 25 hospitals account for 42 percent of the claims under the scheme.

An interesting feature of this list is the large presence of missionary or faith-based institutions that serve an overwhelming share of the scheme beneficiaries. It is likely that these nonprofit, lower-priced, and relatively high-volume hospitals would already be catering to the medical needs of the vulnerable income groups. The insurance scheme has been a good "fit," giving these institutions an opportunity to further reduce patients' out-of-pocket costs by joining the insurance network.

Financial Status

The entire scheme is funded by the state government from its general revenues. The state provides funds to the TNHSS through the budget of the Department of Health, under a special component of the state's 11th five-year plan. The quarterly premium is paid to the insurance company—Rs. 469 per family per year, plus service tax. Apart from the premium paid, the government also incurs an annual expenditure of about Rs. 10 million toward administrative costs of TNHSS—primarily for the salaries of scheme officials.

From inception through August 2010, the state's total premium paid to the insurance companies, including taxes, was Rs. 628.80 crores. For

Table F.2 Kalaignar: Top 25 Network Hospitals by Claim Value, July 2009 to July 2010

<i>Name of hospital</i>	<i>District</i>	<i>Number of claims</i>	<i>Value of claims (Rs.)</i>	<i>Share of total value (percent)</i>
Sri Ramachandra Medical Centre, Porur	Kancheepuram	2,897	153,047,901	3.7
Sri Ramakrishna Hospital, Coimbatore	Coimbatore	5,324	146,863,380	3.5
Ganga Medical Centre and Hospitals Pvt. Ltd.	Coimbatore	3,428	133,058,710	3.2
Narayana Hrudayalaya	Bangalore	1,821	112,231,386	2.7
Vinayaka Mission Hospital	Salem	1,633	90,888,250	2.2
Billroth Hospital	Chennai	1,594	89,475,880	2.2
Madras Medical Mission	Tiruvallur	876	87,307,002	2.1
Chettinad Hospital and Research Institute	Kancheepuram	1,756	85,188,550	2.0
PSG Hospitals	Coimbatore	1,665	82,949,211	2.0
Life Line Multi Speciality Hospital	Kancheepuram	975	71,806,900	1.7
K.G. Hospital	Coimbatore	810	65,972,411	1.6
MIOT Hospitals	Kancheepuram	928	60,267,000	1.4
Kavery Medical Centre and Hospital	Trichy	1,258	53,460,590	1.3
Vadamalayan Hospital	Madurai	972	52,865,800	1.3
Malar Hospital	Chennai	498	49,611,000	1.2
S. Palaniandi Mudaliar Memorial Hospital	Salem	876	47,867,820	1.2
City Hospital	Dindigul	1,635	47,432,000	1.1
G. Kuppusamy Naidu Memorial Hospital	Coimbatore	1,284	47,101,818	1.1
Kovai Medical Center and Hospital Ltd.	Coimbatore	799	41,225,100	1.0
Meenakshi Mission Hospital and Research Centre	Madurai	1,079	41,062,800	1.0
Global Hospitals and Health City	Kancheepuram	593	36,500,800	0.9
Kurinji Hospital	Salem	1,058	35,168,050	0.8
CMC, Vellore	Vellore	999	34,846,144	0.8
Royal Pearl Hospital	Trichy	1,371	34,210,000	0.8
Saravana Hospital	Madurai	1,076	33,286,540	0.8

Source: Kalaignar Scheme Data (TNHSS and Star Health Insurance).

the same period, the insurance companies incurred expenses of Rs. 613.04 crores (97.6 percent of revenue). These expenses include preauthorization amounts committed to hospitals, printing and distribution of smart cards, advertising, field work costs, and administrative expenses. The insurer's claim expenses began only toward the end of the enrolment period. Since then, they have been growing rapidly as a result of increasing subscriber awareness, expanding empanelment of hospitals, and issuance of smart cards to beneficiaries. By April 2010, monthly preauthorized claims exceeded the pro-rata premium for the same month. As data for a longer period becomes available, a clearer picture may emerge.

The insurance cost to the government of Tamil Nadu, regardless of claim experience, will remain static till July 2013 under its four-year contract with the insurers. In 2013, however, the prices quoted for renewal of the insurance coverage are likely to reflect the scheme's claim experience.

Information Environment

The Kalaingar scheme demonstrates a fair degree of use of information technology, but it is not yet at par with the Andhra Pradesh scheme, its model on several fronts. The governing agency itself does not have IT tools for monitoring the scheme although it has access to MIS reports generated by the insurer.

Smart cards, in addition to all beneficiary data, hold financial information on the amount allocated and utilized, despite the relatively small memory capacity of 8 kb (as compared with 32 kb for the RSBY smart cards). The existence of a well-functioning alternate system bypassing the smart cards (beset by distribution delays and technical issues with network hospitals' card readers) had led to a sudden decline in the use of the smart cards at the hospitals for several months in 2010.

The insurer has created IT processes for claim preauthorization and processing using acquired rights for a third-party claim processing software. The system is regularly used to preauthorize, process, and settle claims electronically submitted by network hospitals. Technology is also being innovatively used to centrally monitor the functioning of liaison officers and their activities at the hospitals through a webcam-based system. A closed user group mobile telephony system provides free voice connectivity to liaison officers and other field functionaries.

Utilization and Claims

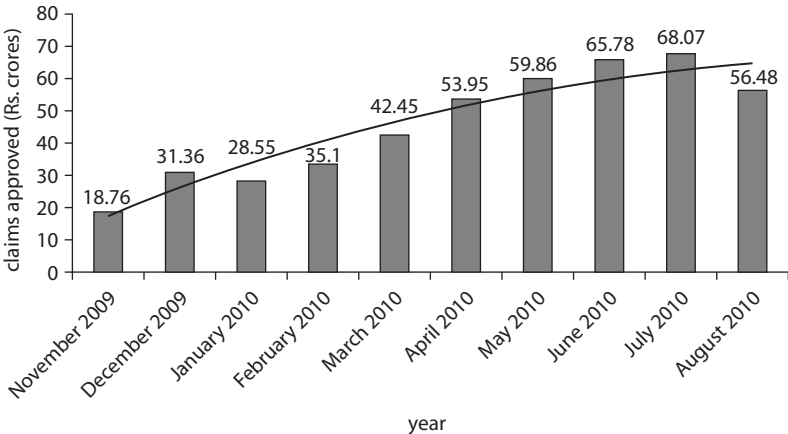
Figure F.2 shows a steady pick-up in scheme utilization for the first six to eight months of operations and a leveling-off at about Rs. 60 crores a month by August 2010. Analysis of longer-term data will be useful to understand the trends better.

Table F.3 summarizes the scheme’s utilization pattern by specialty during the first complete year of operations (July 2009 to July 2010). In terms of the number of claims, the leading conditions were related to orthopedics (20.6 percent), oncology (17 percent), urology (12.1 percent), ENT (9.7 percent), and cardiac diseases (9.5 percent) (see also figure F.3). The high share of orthopedic cases in TN needs further study, because both their number and value were much higher than in AP and Karnataka. Hysterectomy, though a subsequent addition to the benefits package, already accounted for 8 percent of all claims in TN by the end of the first year.

Due to the much higher average claim size in cardiology (more than three times the average in other specialties), cardiology accounted for the highest share of claims, by value (30 percent). Orthopedic surgery was the next highest share (22.4 percent), as also depicted in figure F.3.

For 153,410 claims approved in the first year of the scheme, the insurer authorized an amount of Rs. 415.7 crores, with an average claim size of Rs. 27,099. Although still in a relatively early stage of implementation, its

Figure F.2 Kalaingar: Utilization Trends since Inception, August 2010



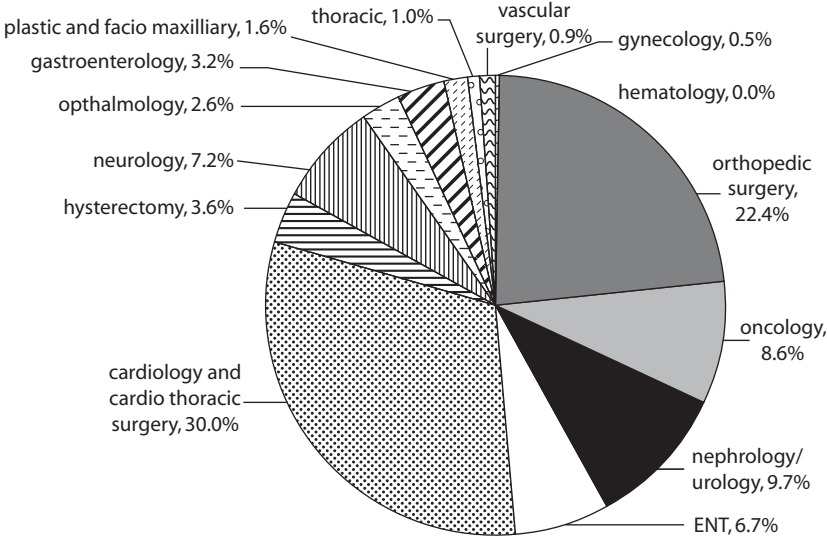
Source: Kalaingar Scheme Data (TNHSS and Star Health Insurance).

Table F.3 Kalaigiar: Share of Claims in First Year of Policy, July 2009 to July 2010

<i>Specialty</i>	<i>Number of claims</i>	<i>Approved amount (Rs. million)</i>	<i>Average claim size (Rs.)</i>	<i>Share, by number (percent)</i>	<i>Share by value (percent)</i>
Orthopedic surgery	31,660	929.6	29,361	20.6	22.4
Oncology	26,039	357.4	13,726	17.0	8.6
Nephrology/urology	18,497	402.3	21,751	12.1	9.7
ENT	14,931	276.5	18,517	9.7	6.7
Cardiology and cardio thoracic surgery	14,638	1,247.9	85,249	9.5	30.0
Hysterectomy	12,344	149.0	12,067	8.0	3.6
Neurology	9,247	300.0	32,442	6.0	7.2
Ophthalmology	9,051	108.7	12,010	5.9	2.6
Gastroenterology	5,812	131.7	22,667	3.8	3.2
Plastic and faciomaxillary	3,220	65.6	20,361	2.1	1.6
Thoracic	2,289	40.4	17,636	1.5	1.0
Vascular surgery	1,707	36.4	21,335	1.1	0.9
Others	1,692	91.0	53,792	1.1	2.2
Gynecology	1,571	19.0	12,069	1.0	0.5
Hematology	712	1.8	2,587	0.5	0.0
All specialties	153,410	4,157	27,099	100.0	100.0

Source: Kalaigiar Scheme Data (TNHSS and Star Health Insurance).

Figure F.3 Kalaingar: Share of Claim Costs, by Specialty, July 2009 to July 2010



Source: Kalaingar Scheme Data (TNHSS and Star Health Insurance).

average claim value is comparable to Rajiv Aarogyasri’s, due to a case mix that is not dominated by high-cost cardiac care (unlike Vajpayee Arogyashri and the early stages of Rajiv Aarogyasri). Kalaingar’s case mix includes a high proportion of orthopedics, oncology, ENT, urology, hysterectomy, and eye surgeries, which have much lower average costs. The reasons for such a case mix early in the scheme’s evolution need further study. They might include differences in package rates as compared with other states (possibly reducing the incentives for cardiology), lesser use of health camps as the main tool for awareness than in both AP and KA, or the differences in the nature of the TN hospital network with its many faith-based and mission hospitals.

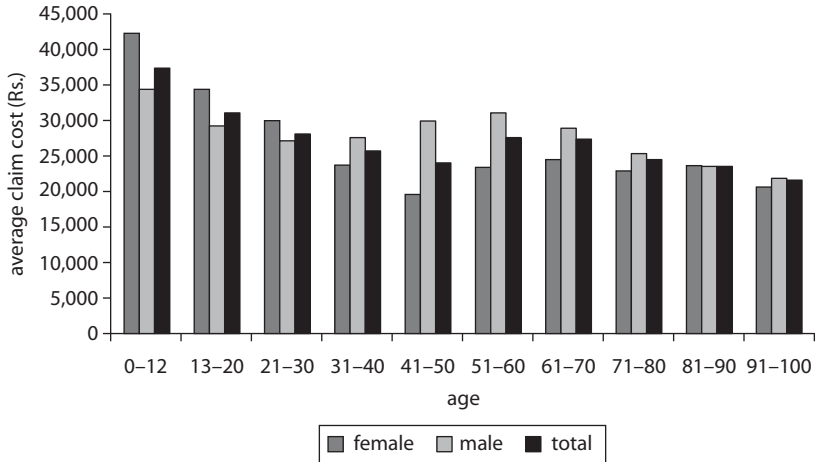
The maximum expenditure in the first year was on the 31-to-60-year age group, indicating that despite the tertiary focus, productive age groups were responsible for most utilization. The gender equity is fair, too, with about 45 percent of the claims being made by women (table F.4).

Figure F.4 shows that the average claim values were more or less similar across all groups after 20 years of age but higher below this threshold. This seems to be due to the high cost of treatment for congenital heart anomalies or other congenital diseases that were more likely to be treated early in life (but it also reflected high average costs of the “others” group).

Table F.4 Kalaigiar: Approved Claims, by Gender and Age, July 2009 to July 2010

<i>Age (years)</i>	<i>Female</i>		<i>Male</i>		<i>Total number of claims</i>	<i>Total value of claims (Rs. million)</i>
	<i>(number of claims)</i>	<i>Value of claims (Rs. million)</i>	<i>(number of claims)</i>	<i>Value of claims (Rs. million)</i>		
0–12	3,769	159.5	6,242	213.4	10,011	372.9
13–20	3,218	110.7	6,237	182.1	9,455	292.8
21–30	6,939	206.9	12,280	333.0	19,219	539.9
31–40	12,601	298.2	13,839	381.1	26,440	679.3
41–50	20,653	405.4	14,762	440.1	35,415	845.5
51–60	13,103	306.7	14,962	465.2	28,065	771.9
61–70	6,896	167.8	11,257	325.0	18,153	492.8
71–80	1,770	40.6	3,983	100.5	5,753	141.1
81–90	245	5.8	624	14.6	869	20.4
91–100	4	0.1	26	0.6	30	0.6
Total	69,198	1,701.6	84,212	2,455.6	153,410	4,157.2

Source: Kalaigiar Scheme Data (TNHSS and Star Health Insurance).

Figure F.4 Kalaiggar: Average Claim Costs, by Age and Gender, July 2009 to July 2010

Source: Kalaiggar Scheme Data (TNHSS and Star Health Insurance).

While average claim costs were higher for females up to 30 years of age, they were higher in males in the older age groups. This difference was particularly marked for the 41-to-60-year group, which may be due to higher frequency of cardiac diseases in men (which have a higher average cost) as against hysterectomy in women which is capped at Rs. 12,000. The reasons for these trends require further study.

In terms of total claim costs, males continue to corner a higher share, in keeping with the higher total number of claims by male patients and also the higher average claim size. This is depicted in figure F.4 and detailed in table F.4.

The distribution of claims, by district, in the first year of the scheme is depicted in table F.5. The distribution of first year claims among the state's districts resembles the distribution of the top 25 hospitals, except that some concentration of claims is evident in Coimbatore, Chennai, and Kancheepuram. These metropolitan areas of the state account for 40 percent of all scheme expenditure. However, the remaining 60 percent seems to be relatively better distributed with each of the next 10 districts accounting for between 3 percent and 8 percent of claims. The low utilization in some districts could be linked to the number of beneficiaries in the district, the smaller size of the hospital network, and the state of development of medical facilities in the district, and is an area for further study.

Table F.5 Kalaaignar: Claim Distribution, by District, July 2009 to July 2010

<i>District</i>	<i>Number of claims</i>	<i>Value of claims (Rs.)</i>	<i>Share of value (percent)</i>
Coimbatore	25,175	774,884,486	18.6
Kancheepuram	10,326	490,048,358	11.8
Chennai	10,511	400,108,039	9.6
Salem	10,345	314,804,740	7.6
Trichy	11,279	273,188,680	6.6
Madurai	10,307	267,204,175	6.4
Erode	12,750	210,568,090	5.1
Dindigul	90,693	158,514,255	3.8
Kanyakumari	7,488	143,470,371	3.5
Krishnagiri	2,819	136,418,486	3.3
Cuddalore	4,643	127,262,625	3.1
Thanjavur	5,960	123,209,670	3.0
Tiruvallur	1,530	115,748,002	2.8
Ariyalur	647	9,298,400	0.2
Namakkal	4,663	97,648,734	2.3
Tirupur	3,264	67,823,880	1.6
Vellore	2,491	63,152,394	1.5
Tirunelveli	2,734	59,725,125	1.4
Virudhunagar	3,228	49,216,000	1.2
Villupuram	2,310	40,036,950	1.0
Dharmapuri	8,259	33,268,150	0.8
Sivaganga	1,964	32,886,480	0.8
Theni	1,845	31,986,670	0.8
Karur	1,463	27,757,200	0.7
Tuticorin	1,485	24,534,800	0.6
Tiruvarur	1,139	19,065,450	0.5
Nagapattinam	989	18,759,500	0.5
Pudukkottai	978	16,187,690	0.4
Ramanathapuram	655	11,035,800	0.3
Perambalur	627	9,644,100	0.2
Tiruvannamalai	477	8,808,900	0.2
Nilgiris	56	926,800	0.0

Source: Kalaaignar Scheme Data (TNHSS and Star Health Insurance).

Internal Controls and Cost Containment

The scheme has several features that can theoretically contribute to cost containment. Use of standard package rates for all identified procedures covered by the scheme provides an opportunity to contain cost to some extent, by limiting supplier-induced demand that could be rampant in a fee-for-service system. The preauthorization process allows control over potential misuse of the scheme, limiting supplier-induced demand as well

as demand-side moral hazard. The liaison officer at the network hospital helps validate the patient's identity, with back office support from the preauthorization and monitoring teams, further reducing the chances of fraud or malpractice by providers. Before settling a claim, the postoperative procedures are validated against the approved preauthorization by a group of doctors engaged by the insurer.

The medical vigilance teams, which are part of the scheme's innovative vigilance mechanism and serviced by retired police officers, also play a crucial, deterrent role in cost containment. This is achieved through unannounced visits to hospitals and beneficiaries' addresses as well as quick response to any adverse reports or suspicion of malpractice in a network hospital. These teams could perhaps assume a far greater role than deterrence, through assessing patient satisfaction and hospital commitment to patient safety. Currently, the incentive to the insurer mainly exists in weeding out fraudulent claims, which pinches the insurer's pocket (particularly in light of the fact that it does not have the liberty to re-price the premium till July 2013). Focus on other areas for internal control, such as developing the governing agency's own MIS which reflects data and reports in real time, would require re-emphasis and continued monitoring by the scheme's governing body, which will also need to be strengthened in terms of its human resource capacity.

Quality Orientation

The state government plays a significant role in maintaining scheme quality orientation, primarily by determining the empanelment criteria for network hospitals and also through the disciplinary activities conducted by its Empanelment and Disciplinary Committee (EDC). The EDC, together with insurance company officials, is charged with setting the empanelment criteria. The committee is also responsible for monitoring the quality of care provided by network hospitals and delisting hospitals where it finds any underperformance, corruption, medical negligence, or violation of stated norms.

Several other committees are involved in scheme oversight, including the Morbidity and Mortality Committee, Ortho Cardiac Cochlear Committee, Vigilance Committee, and Package Cost and Inspection Committee. These committees are entrusted with various operational and policy roles associated with their areas of intervention.

Consumer Information and Protection

Health camps for patient screening and referral, organized by the district health officials in tandem with the public health system officials, play a crucial role in consumer information. Liaison officers, together with district coordinators, program officers, collectors, and revenue officers, are responsible for protecting consumers and providing them with information. The Indian Medical Association, too, has been involved at the state level and disseminates information about the scheme to its members and, through them, to the beneficiaries.

To address beneficiaries' grievances, district grievance-redressal committees under the chairmanship of district collectors, have been established. Recourse is also available from the grievance-redressal systems set up by the insurer and the TNHSS.

Concluding Remarks

While it is too early to draw trends from the Kalaignar scheme, they are likely to follow a trajectory somewhat similar to that of the Rajiv Aarogyasri scheme in AP. The slope of these trends may be different (and reduced) as a result of the lower ceiling and four-year floater nature of the sum insured. Current data from other schemes indicate a high likelihood of claim cost increases from the 2009–10 levels, which the insurer will have to bear until 2013. Losses could add up as the insurer tries to reduce its exposure and costs. In this potential scenario, the governing agency will need to exercise oversight of patient experience and service quality and ensure timely payments to hospitals. Thus, a major challenge facing the governing agency is to build its capacity in internal controls for adequate monitoring. Investing in an MIS tool of its own could be a starting point, in addition to building adequate human resource capacity to manage scheme tasks. Tamil Nadu is well positioned to innovate and improve upon the design and benefits package of the scheme so as to forge stronger linkages with primary health care and the existing public health system.

Notes

1. Thus, a claim for Rs. 20,000 by one family member in the second year would reduce the available sum insured to Rs. 80,000 for the rest of the policy term.

A claim of Rs. 30,000 the third year would leave only Rs. 50,000 available for the remaining part of the third year and for the fourth year.

2. Some of these common features are traceable to the fact that the same insurance company serves both the Rajiv Aarogyasri scheme in AP and the Kalaingar scheme.
3. Taluk is an administrative unit at the subdistrict level—several taluks constitute a district.
4. By 2010, the beneficiary identification systems were not fully operational, and a small number of cards (less than 5 percent) had not been distributed.
5. These include: cardiac and cardio thoracic, oncology, nephrology, neurology, orthopedics, ophthalmology, vascular surgery, gastroenterology, reconstructive surgery, ENT, gynecology, thoracic, hematology, and certain other defined procedures.

APPENDIX G

Vajpayee Arogyashri Scheme, Karnataka

Table G.1 Vajpayee Arogyashri Scheme: Summary Matrix

<i>Indicators</i>	<i>Vajpayee Arogyashri Scheme (Karnataka)</i>
Launch year	2009
Geographical area	Seven districts in the Gulbarga division of Karnataka, proposed statewide rollout by 2012
Target/eligible population	Below-poverty-line (BPL) cardholder families residing in Gulbarga, in the database of Foods, Civil Supplies and Consumer Affairs
Number of beneficiaries	1.5 million families (7.5 million individuals)
Unit of enrolment	Family
Benefits package	402 predefined packages and 50 follow-up packages. Scheme covers only tertiary care
Maximum insurance coverage	Rs. 150,000 per family per year and Rs. 50,000 buffer on case by case basis
Hospital empanelment criteria	At least 50 beds, well equipped operation theatre; post operative rooms with ventilator; round-the-clock lab and radiology support; trained paramedics; availability of specialists
Number of empaneled hospitals (government and private)	94 hospitals (86 private and 8 public)

(continued next page)

Table G.1 (continued)

<i>Indicators</i>	<i>Vajpayee Arogyashri Scheme (Karnataka)</i>
Sources of funds	100 percent from state government
Total expenditure, 2009–10	Nil (claim expenditure commenced in 2010–11)
Premium price, 2009–10	n.a.
Provider payment mechanism	Predefined package rates
Information technology (IT) tools used	Proprietary software of third-party administrator (TPA) Comprehensive management information system (MIS) planned for the trust; RFP issued.
Number of hospitalizations per year	3,738 hospitalizations until November 15, 2010
Utilization rate	—
Commonest procedures	Cardiovascular surgeries (72 percent by amount)
Governing agency and legal status	Suvarna Arogya Suraksha Trust (autonomous trust)
Intermediary used	Licensed TPA
Number of full-time staff, including contract personnel, in governing agency	<10
Administrative costs as share of total spending	—
Cost-containment measures	Package rates, prior authorization, physical verification by arogyamithras

Source: Authors.

Note: n.a. = not applicable; — = not available.

Introduction

Launched in 2009–10, the Vajpayee Arogyashri (VA) scheme was inspired by the Rajiv Aarogyasri scheme of Andhra Pradesh (AP). The VA provides similar tertiary coverage for the treatment of serious and life-threatening ailments for the vulnerable segments of society (primarily people living below the poverty line). The state launched the VA as a pilot in the seven districts in the Gulbarga division in the northern part of Karnataka state with the objective of covering all the eligible BPL population by 2012. As of November 2010, it covered 1.5 million families in the Gulbarga division listed on the state's BPL register.

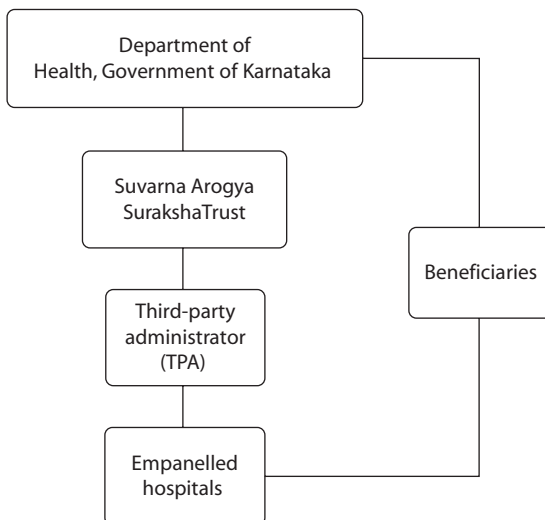
The VA scheme offers cashless treatment for 402 listed procedures (and an additional 50 follow-up packages), with a dominant focus on those requiring major surgical interventions. The scheme was initiated primarily to protect the BPL population against health shocks caused by serious and high-cost ailments. The emphasis on tertiary care is a conscious attempt to compensate for its limited availability in public institutions and to enlist the substantial capacity available in the private sector.

Institutional Framework

As depicted schematically in figure G.1, the Government of Karnataka has established a separate governing agency for the VA scheme, the Suvarna Arogya Suraksha (SAS) Trust. It is an autonomous trust under the aegis of the Department of Health and Family Welfare (DOHFW). The trust is responsible for all strategic decisions related to scheme design and implementation. For day-to-day functioning, the trust has contracted for a three year period an intermediary, a licensed third-party administrator, selected through a competitive bidding process. This TPA undertakes the empanelment of hospitals and manages preauthorization and claims processing activities on behalf of and in consultation with the trust. The TPA has hired field officials for the scheme, known as arogyamithras, who have been placed in each network hospital and are managed by district level coordinators. In addition to TPA fees, all costs of these field officials are borne by the trust.

The trust has an executive committee empowered to ratify and approve policy decisions concerning the scheme. Any changes in scheme design, guidelines, implementation, and internal controls are made with the prior concurrence of the executive committee. The CEO and executive director of the trust is a senior Indian Administrative Service (IAS)

Figure G.1 VA: Institutional Framework



officer, who is supported by a small team of medical specialists and administrative staff.

Beneficiaries

All families residing in the Gulbarga division of the state and listed on the BPL database of the state government are automatically eligible for the VA scheme (whether they already hold BPL identity cards or have alternative documentation of their BPL status). In November 2010, 1.5 million families (an estimated 7.5 million beneficiaries) were covered under the scheme. There is no separate enrolment process. Also, VA does not issue a parallel identity card for the scheme. To enhance beneficiary awareness and utilization, the VA undertakes information, education, and communication activities and sponsors health camps and mass media activities to inform people about their eligibility for coverage and their benefits. To use benefits, beneficiaries need only submit proof of residence in the Gulbarga division and their BPL status (e.g., BPL identity cards, temporary BPL identity slips, or alternative documentation issued by the state government) at the preauthorization stage.

The VA is gradually expanding coverage to the rest of Karnataka, starting with the Belgaum division (TPA bids were invited in December 2010 and rollout commenced in early 2011). This will be followed by rollout to families residing within Bangalore municipal limits and then the remainder of the Bangalore and Mysore divisions. By 2012, all the 6.3 million BPL families in Karnataka will be covered. This would correspond to about 31 million beneficiaries, about 50 percent of the state's current population of about 61 million people.¹

Benefits Package

The SAS Trust designed the scope of coverage largely on the lines of AP's Rajiv Aarogyasri scheme. The VA benefits package in Karnataka consists of 402 mostly surgical procedures. These are organized within broad specialty groups: cardiology, cardiothoracic surgery, cardiovascular surgery, neurosurgery, genitourinary surgery, oncology (medical, surgical, and radiation), pediatric surgery, polytrauma, and burns. In addition, the scheme covers 50 defined follow-up packages that include posthospitalization care for a subset of covered procedures, including consultations, diagnostics, and drugs for a year.

"Package prices" are predefined for each of the covered procedures and include all inpatient charges, prehospitalization screening costs, costs of

medicines for 10 days post discharge, and reimbursement of public transport costs for the patient. The number and range of procedures and their corresponding package rates were deliberated and discussed by several specialty committees constituted by the trust. These committees consulted existing coverage and package prices elsewhere in the country, particularly for other government-sponsored health insurance schemes (GSHISs). The package rates are generally priced at the lower end of market prices. For example, heart valve replacement (mitral or aortic) costs Rs. 120,000 including preoperative and postoperative investigations, consumables (including the valve), hospital stay, physicians' fees, and transport costs to be reimbursed by the hospital to the patient. Similarly, angioplasty with one stent is priced at Rs. 60,000 and open removal of kidney/bladder stones is packaged at Rs. 10,000. The market prices for these procedures can be 20 to 100 percent higher depending on the facility and the geographical location. The total cap on claims per family per year is Rs. 150,000, although an additional buffer amount of Rs. 50,000 can be added to this cap after a case-by-case review and approval by the trust. In summary, the benefits package consists mainly of tertiary care, with an emphasis on high-cost surgical care. The annual cap is commensurate with the higher costs of these procedures.

Provider Network

As a tertiary care scheme, the capabilities and quality of its provider network is an important factor that contributes to the success of the VA—or not. Hospital empanelment criteria are similar to those applied in Rajiv Aarogyasri and other such GSHISs. Hospitals meeting the criteria (largely based on infrastructure requirements) and accepting the package prices are eligible for empanelment. The empanelment process itself is operated by the TPA following scheme guidelines. A total of 94 hospitals (86 private and 8 public) were empaneled by the scheme as of November 2010. However, 40 hospitals in the network had not served any scheme patients until November 2011.

The provider network in Gulbarga division is very limited—19 hospitals (7 in Gulbarga, 6 in Raichur, 5 in Bellary, and 1 in Bidar). This number is a fifth of all hospitals in the scheme network. Limited supply of medical facilities is typical of underdeveloped districts throughout India. While many smaller hospitals are likely to be present in all the districts, they probably do not have the capacity to perform the sophisticated procedures covered by the benefits package. Seventy-five network hospitals are located outside the division and among these, 33 mostly large facilities are

located in Bangalore, the state capital. Bangalore is situated several hundred kilometers from the aforementioned districts where the scheme currently operates. As discussed later, the share of Bangalore hospitals in the scheme's total expenditure is even higher than its share in the number of network hospitals, indicating beneficiary preference for these facilities.

Beneficiaries are free to choose any provider from among the empaneled hospitals. Once approached for treatment, the *arogyamithras* in each of these hospitals assist the beneficiaries and the treating doctors in completing the preauthorization requests. The TPA then checks the request for completeness of documentation and for medical necessity and passes on its recommendations to the trust for approval. Treatment does not commence without trust approval. The preauthorization process is supposed to be completed in 24 to 48 hours, but it can sometimes take several days while the trust does all processing manually, awaiting the implementation of its IT system. On completion of treatment, the hospital sends the claim documents to the TPA for processing and forwarding to the trust with its recommendation for payment or rejection. Trust-approved claims are paid to the hospitals at the preagreed package rates for the procedure performed. Normally, this process should be completed in two to three weeks but can take several weeks for the same reasons mentioned above and should improve after the process is automated.

Table G.2 shows that the top 20 hospitals provided 76.7 percent of all care by monetary value, and the top 3 hospitals alone accounted for 40 percent of claims. Thirteen of these twenty hospitals, including the top 6 facilities, are located in Bangalore. The only three hospitals from this list located in the Gulbarga division account for a combined share of 8.1 percent of all claims. The only public hospitals in the top 20 list are 2 prominent autonomous hospitals in Bangalore that together account for about 10 percent of the total claim amount. In short, beneficiaries choose to travel long distances, especially for the more sophisticated, higher-cost procedures, and prefer the "prestigious" large hospitals in the capital.

Financial Status

The VA is funded by the state government from its general revenues.² The state government provides funds to the *Suvarna Arogya Suraksha Trust* (SAST) as a grant-in-aid,³ and the SAST uses this money to pay the network hospitals for claims and for its own administrative expenditures.

The scheme began to authorize claims in 2009–10 (and also incurred administrative expenses in setting up the institutional infrastructure and

Table G.2 VA: Top 20 Hospitals, by Value of Authorized Claims, to November 15, 2010

<i>Hospital name</i>	<i>Location</i>	<i>Share, by claim value (percent)</i>
Narayana Hrudayalaya	Bangalore	16.5
Sagar Hospitals, Banashankari	Bangalore	12.0
BGS Global Hospital	Bangalore	11.3
Vydehi Hospital	Bangalore	8.1
Sri Jayadeva Institute of Cardiovascular Science	Bangalore	6.0
Apollo Hospital	Bangalore	5.4
Rajiv Gandhi Super Speciality Hospital	Raichur	3.9
Jeevani Health Care Hospital	Bangalore	3.9
Kidwai Memorial Institute of Oncology	Bangalore	3.7
Trinity Hospital and Heart Foundation	Bangalore	3.3
Bangalore Institute of Oncology	Bangalore	2.4
KLES Dr. Prabhakar Kore Hospital	Belgaum	2.3
VIMS Speciality Hospital	Bangalore	2.3
SDM Narayana Hrudyalaya	Dharwad	2.3
Shree Hospital	Bidar	2.2
Mallya Hospital	Bangalore	2.1
Patil Nursing Home	Gulbarga	2.0
Srinivas Cardiac Center	Bangalore	1.8
City Central Hospital	Davangere	0.9
NMR Curie Centre of Oncology	Dharwad	0.8
Top 20 hospitals, by claim value	Various	76.7

Source: Suvarna Arogya Suraksha Trust data, November 2010.

processes for the scheme), but claim payment did not commence until 2010–11. Table G.3 presents the financials for the first 4.3 months in 2010 for which data are available. By August 2010, the state had released Rs. 210 million to the trust for meeting the cost of claims and administrative expenses. According to VA officials, the state government is committed to make adequate funding available for the scheme, not just for the expenditure incurred for current beneficiaries in the Gulbarga division, but also for future beneficiaries in the still unserved districts of the state.

Utilization and Claims

As shown in table G.4, cardiovascular cases predominated in the early months of utilization of the VA scheme, representing 51 percent of claims and 72 percent of total expenditures. These cardiovascular cases consist of valve surgeries, bypass surgeries, angioplasties, and septal defects, among others. The predominance of the higher-priced cardiovascular

Table G.3 VA Financial Status, August 2010 (Rs. million)

<i>Particulars</i>	<i>2009–10</i>	<i>2010–11 (4.3 months)</i>
<i>SAST revenues</i>		
Grants released by state government	150	60
Grants from other sources	4.34	6.8
Total grants	154.34	66.8
<i>SAST expenditures</i>		
Claims	Nil	34.74
Administrative cost	18.43	10.41
Total expenditure	18.43	45.15
Balance	135.92	157.57

Source: Suvarna Arogya Suraksha Trust data, August 2010.

Table G.4 VA: Claim Distribution, by Specialty, to November 15, 2010

<i>Specialty</i>	<i>Total claims preauthorized</i>		<i>Share in numbers (percent)</i>	<i>Share in value (percent)</i>	<i>Average claim value (Rs.)</i>
	<i>Cases</i>	<i>Amount (Rs. million)</i>			
Cardio vascular diseases	1,894	157.93	50.7	71.9	83,386
Cancer	753	27.99	20.1	12.7	37,167
Neurological diseases	466	18.90	12.5	8.6	40,554
Genitourinary and renal diseases	485	9.83	13.0	4.5	20,264
Burns	71	2.82	1.9	1.3	39,718
Polytrauma	6	0.17	0.2	0.1	28,333
Neonatal	63	2.13	1.7	1.0	33,833
Total	3,738	219.77			58,793

Source: Suvarna Arogya Suraksha Trust data, November 2010.

cases in the initial months is also the reason for the high average claim size in the VA scheme: Rs. 58,793 per claim in November 2010. As the scheme matures and the case-mix changes, the average claim amount should decline. At the outset of the VA, there may have been unmet demand for cardiovascular procedures partly due to limited supply in the public sector and high prices in the private facilities.

Nevertheless, the likely lower incremental costs for hospitals⁴ and the relatively attractive package rates (even at package rates lower than market prices) may be inducing providers to ferret out cardiovascular cases in the health camps. Indeed, the significantly higher average claim amount for cardiovascular diseases suggests that providers are favoring

these procedures. Oncology is a distant second in terms of utilization, followed by neurology and genitourinary and renal diseases. Burns, polytrauma, and neonatal surgical procedures were little used. Further study is needed to discover whether the frequency of occurrence of the covered conditions in these specialties is related to the incentives offered by the package rates. Higher package rates may induce providers to seek beneficiaries with certain conditions and avoid treating those with less remunerative conditions. This differential rate setting is a possibility because package rates are set by groups of medical specialists specific to each specialty and are subjective. Some specialties may end up with more liberal (and attractive) package rates than the others.

Table G.5 shows the geographical distribution of claims across the seven districts in the Gulbarga division as of November 2010. With the exception of Gadag, a recently created district, there is little variation in average claim values, ranging between Rs. 53,402 and Rs. 61,938. The shares in claim value may reflect the differing sizes of the districts and the number of beneficiary residents. Based on the available data, it is difficult to determine any geographical deterrents to utilization. However, since all the covered districts are far from Bangalore, where most hospitals (and utilization) are concentrated, whether they suffer low utilization as a group is difficult to ascertain but is certainly a potential subject for future research.

Information Environment

The VA is still far behind the AP scheme in the adoption and use of information systems, although it intends to install information technology tools. As of March 2011, the governing agency had no IT tools for monitoring and depended entirely on the MIS reports generated by the TPA using its own claim-processing system.

Table G.5 VA: Claim Distribution, by District, to November 15, 2010

<i>District</i>	<i>Cases</i>	<i>Amount (Rs.)</i>	<i>Share of claim value (percent)</i>	<i>Average claim value (Rs.)</i>
Bellary	805	48,660,000	22.1	60,447
Bidar	658	39,305,100	17.9	59,734
Gulbarga	931	49,717,100	22.6	53,402
Yadagiri	350	20,693,500	9.4	59,124
Koppal	522	31,962,600	14.5	61,231
Raichur	464	28,739,100	13.1	61,938
Gadag	8	690,000	0.3	86,250
Totals	3,738	219,767,400		58,793

Source: Suvarna Arogya Suraksha Trust data, November 2010.

A firm was engaged to conduct the functional requirements study and develop the request for proposal (RFP) to select a service provider for design, development, testing, installation, and maintenance of IT solutions. The RFP publication and the procurement and deployment of the IT solution was scheduled for 2011–12.

Internal Controls and Cost Containment

If properly priced, standardized package rates for covered procedures in theory can contain costs. The preauthorization process allows some control over overutilization of the scheme, limiting supplier-induced demand as well as demand-side moral hazard. The *arogyamithras*, as discussed, are an additional check against impersonation and other such leakages.

Nevertheless, the trust has limited human resources of its own to monitor the various processes conducted by the TPA. In addition, the TPA is paid on a predetermined fee structure which provides a weak incentive to invest resources in reducing leakages and monitoring providers. Thus, the trust needs to develop its own capacity to perform these functions, investing in monitoring and evaluation systems to tighten internal controls, especially considering that all risk is retained by the trust.

Quality Orientation

Similar to other schemes discussed in this book, the VA has yet to consider using its financial leverage to improve quality beyond the empanelment process. However, according to VA officials, the trust plans to issue quality assurance guidelines and standards, set up a medical audits process, and explore other options for evaluating service quality. The proposed medical management and monitoring and evaluation departments in the trust will eventually perform these functions.

Consumer Information and Protection

Massive health camps with the participation of senior state political leaders have marked the launch of the VA scheme in each district it serves. The associated preparations, media activities, and word of mouth messaging from beneficiaries who attended these camps have been important in creating awareness about the scheme.⁵ The *arogyamithras* facilitate the camps and the network hospitals are responsible for providing the manpower and diagnostic tools to conduct the free health check-up.

Other outreach media—handbills, posters, bus panels, and the like—have also been used to widen awareness of the scheme. There has been some involvement of the public health system for referring patients to the scheme. The potential of the public delivery system, however, has not been fully tapped.

The scheme plans to undertake a baseline study of beneficiary awareness, household health expenditures, access, and utilization patterns as part of an impact evaluation. The VA is the only scheme that has built in plans to conduct a baseline study as part of its rollout.

Concluding Remarks

As a new venture, the Vajpayee Arogyashri scheme still has much ground to cover in terms of its geographical expansion, IT system implementation, stakeholder monitoring (TPAs, hospitals, arogyamithras), and quality improvement. This necessitates a focus on institutional strengthening, especially in terms of adequacy and capacity of its human resources. The scheme has strong political support and has an advantage of being able to learn from its predecessors as it increases its geographical footprint in the state.

Notes

1. Provisional population estimates from the Census of India (2011).
2. A minor share of expenditure is eligible for financing under the World Bank–assisted Karnataka Health Systems Development and Reforms Project (KHSDRP).
3. Grant-in-aid, a public accounting term in India, signifies lump sum grants made by government to nongovernment entities (as a registered trust, SAST is a legal entity outside the government). These grants are associated with a prior agreement determining the use of funds and the reporting requirements to government. As an illustration, the National Rural Health Mission in India widely uses grants-in-aid to the state and district health societies.
4. The infrastructure already exists and is therefore a fixed cost; the cost of consumables reflects only a smaller component of the costs of cardiovascular treatment.
5. These health camps have been continued at the district and Taluka level. Regular schedules for these camps have been prescribed. For example, Taluka level camps are conducted on the 5th of every month in Bidar and Koppal

districts, 10th of the month in Yadgir and Bellary, and 15th of the month in Gulbarga and Raichur. District-level camps are held on the 25th of every month.

Reference

MOHA (Ministry of Home Affairs, India). 2011. *Census of India*. Registrar General and Census Commissioner. MOHA. New Delhi, India.

APPENDIX H

RSBY Plus Scheme, Himachal Pradesh

Table H.1 RP: Summary Matrix

<i>Indicators/scheme name</i>	<i>RSBY Plus (RP)</i>
Launch year	2010
Geographical area	Entire state of Himachal Pradesh (HP)
Target/eligible population	All beneficiaries enrolled under Rashtriya Swasthya Bima Yojana (RSBY, appendix E). These are the already identified below-poverty-line (BPL) population in the HP list.
Number of beneficiaries	0.24 million families (0.8 million individuals)
Unit of enrolment	Family
Benefits package	A top-up scheme covering tertiary care services not adequately covered under RSBY. Also pays for transport expenses and limited pre and posthospitalization medical expenses.
Maximum insurance coverage	Rs. 175,000 beyond the Rs. 30,000 covered by RSBY
Hospital empanelment criteria	At least 50 beds plus the requisite surgical infrastructure and human resources
Number of empaneled hospitals (government and private)	16 (2 public hospitals and 1 private hospital in HP and 13 private hospitals outside HP)
Source of funds	State government general revenues
Total expenditure (Rs. million), 2009–10	2009–10, none; 2010–11, Rs. 85.6 million (March 2010– February 2011)
Premium price, 2009–10	Rs. 364 per family including service tax

(continued next page)

Table H.1 (continued)

<i>Indicators/scheme name</i>	<i>RSBY Plus (RP)</i>
Provider payment mechanism	Fixed package rates for all covered procedures
Information technology (IT) tools used	No management information system (MIS) in the implementing agency Beneficiary identification tools of RSBY Insurer and its third-party administrators (TPAs) use their own tools.
Number of hospitalizations per year	241 (March 2010–February 2011)
Utilization rate	0.1 percent (in 12 months) per family
Commonest procedures	—
Governing agency and legal status	HP Swasthya Bima Yojana Society, autonomous society under HP Health and Family Welfare (HFW) department
Executing agency	State HFW department and contractual staff
Number of full-time staff, including contract personnel, in the implementing agency	5
Administrative costs as percent of total spending	—
Cost-containment measures	Prior authorization, package rates

Note: — = not available.

Introduction

RSBY Plus (RP), one of the newest entrants on the government-sponsored health insurance schemes (GSHISs) scene in India, was launched by the state government of Himachal Pradesh in early 2010. It was designed as a top-up scheme for RSBY during the older scheme's expansion across the state. RP features tertiary-focused coverage which was designed as an additional benefits component atop the RSBY coverage for all enrolled BPL beneficiaries in the state. It is served by the same insurer and for the same policy period as RSBY. The first policy was initiated on March 1, 2010, with a one-year term.

The RP scheme does not have a separate enrolment process; it shares beneficiary identification and eligibility validation mechanisms as well as the technological platform with RSBY. However, the RSBY platform is not used for the preauthorization and claim-settlement processes. These functions are performed and managed by the insurer (and its TPAs) using their proprietary systems.

In RP design, planners recognized the limitations in the supply of tertiary care facilities under the public health delivery system. The scheme aims to increase access to select tertiary procedures. However, even the private

providers of health care are few and far between in HP state, and this scarcity continues to challenge RP and the state's health system in general.

Institutional Framework

The HP Department of Health and Family Welfare (HFW) is the institutional owner of the RP scheme. The department has created an administrative arrangement to govern the implementation of RSBY as well as RP in an integrated manner, through the HP Swasthya Bima Yojana Society. This is an autonomous society, legally outside the state government, but still a public institution in terms of its stewardship, affiliation, internal procedures, and financing. The principal secretary of health is the ex-officio chairperson of the society. A contracted full time CEO manages the society's day-to-day functioning.

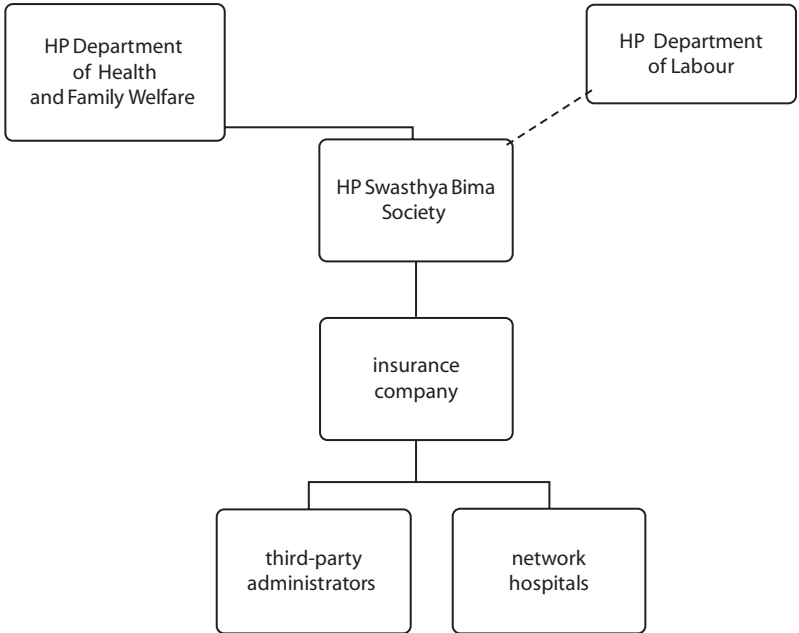
The society has engaged the same insurance company as an intermediary for both RSBY and RP. The insurer was selected through a competitive bidding process. The insurer is responsible for hospital empanelment and ensuring their connectivity and for managing the preauthorization and claims-processing activities. To support it in the performance of these functions, the insurer has engaged two TPAs. The society is responsible for overall supervision, but the breadth and depth of oversight is still not adequate with the society's small staff.

The institutional architecture is illustrated in figure H.1. The society has upward linkages to the parent department (HFW) and the Department of Labour (to coordinate for RSBY), and downward linkages to insurers that contract TPAs for implementation support, and through them, manage the providers. The society is not yet manned with adequate full-time human resources other than the CEO, a finance officer on deputation, and 3 support staff on a contract basis (as against 10 sanctioned posts in the society). However, senior officials of the department of health do participate in the supervision of the RP scheme.

Beneficiaries

The beneficiaries for RSBY Plus are BPL families already enrolled in RSBY. HP is one of the few states where the BPL list is updated quarterly. HP has also enrolled a relatively high number of BPL families in RSBY. For example, in 2010–11 out of the total state BPL list of 298,291 families, 235,131 families were enrolled in RSBY (and also in RP). Of the estimated 1.18 million rural families in the state as a whole, BPL families

Figure H.1 RP: Institutional Framework



Source: Authors' elaboration.

make up 25 percent of the state's own BPL list. HP is also one of the few states whose BPL numbers closely correspond to the central government planning commission estimates used by RSBY. This suggests that the BPL targeting in HP may be more focused than seems to have been possible in other states running similar GSHISs. This, however, requires further study before it can be established either way.

All enrolled families have the RSBY biometric identity card, which is their primary means of identification for their coverage under RSBY Plus. The RP scheme thus rides on the same beneficiary identification platform as RSBY, and RP does not do any specific enrolment of its own. Finally, no contributions (other than those already made for RSBY coverage) or cost sharing is required from the beneficiaries.

Benefits Package

RSBY Plus covers 326 procedures within the broad specialties of cardiac and cardiothoracic surgeries, genito-urinary surgery, neurosurgery, radiation oncology, trauma, transplant surgeries, spinal surgeries, and surgical

gastroenterology. Similar to other GSHISs, all preexisting conditions are covered.

In a departure from other new generation GSHISs, treatment under the system of ayurveda is included in the RP scheme. However, the practical experience with ayurvedic system claims filed and paid under a benefits package of predominantly tertiary surgical procedures remains to be seen. No ayurvedic hospitals had been empaneled as of December 2010.

RSBY Plus has a liberal provision for transportation costs in contrast to RSBY, where it is capped at Rs. 100 per episode. RP includes a transport provision of up to Rs. 1,000 per inpatient visit and is subject to an annual ceiling of Rs. 3,000 per beneficiary family. This may be justified in view of the hilly terrain and the out-of-state location of most empaneled hospitals.

The package rates under RSBY Plus also include longer periods of pre and posthospitalization expenses than other new generation GSHISs. Hospitals are mandated to provide treatment up to 15 days prior to hospitalization and up to 60 days postdischarge, within the prescribed package rates. How this is monitored in practice is not clear, inasmuch as most hospitals would lodge claims well before the end of the prescribed post-hospitalization period. The scheme does not include follow-up packages for any tertiary conditions beyond the 60-day period applicable to all packages.

The RP scheme bears the entire cost of the episode, without any contribution from the RSBY. In theory, RSBY also covers the same episode (since it covers all forms of hospitalization and RP covers only a subset of the RSBY benefits package) payable under RP, but for a smaller cap of Rs. 30,000. The sharing of some costs by RSBY would reduce the state's financial burden (as RSBY is largely subsidized by the center) but also end up using some or all of the total coverage available to the family under RSBY. With low utilization under the RP scheme, and a common insurer unaffected by the transaction being under either scheme, this is not currently a pressing concern. However, it is an issue that will have to be worked out for the future.

Provider Network

RSBY Plus beneficiaries can seek care in any public or private hospital within the network, and are not confined to using a provider from a specific geographical location. The insurer can empanel hospitals from any location within the state as well as outside the state. However, hospitals

need not be empaneled by the RSBY or agree to the RSBY rates. The empanelment criteria are similar to RSBY's except that the minimum bed size is 50 beds (compared with 10 for RSBY), and RP has specific infrastructure and equipment requirements related to tertiary care. If not already empaneled by RSBY, hospitals must install the smart card-related hardware and software for beneficiary identification and validation. The remaining operational processes for obtaining preauthorizations for treatment under RSBY Plus are performed by the insurer and are similar to those applied in the private health insurance industry.

RP has a limited provider network of just 16 hospitals. Of these, only 9 were used in the first 11 months of operations (table H.2). Only 3 of these hospitals being used under the scheme (two public medical colleges and one private hospital) are located in HP state. All the others are private and located outside the state. Unlike RSBY, which has empaneled 22 private hospitals in the state, RP has empaneled only one private hospital in HP. The bulk of the utilization (58 percent by number of cases and 78 percent by claim value) is reaped by a single public hospital, the Indira Gandhi Medical College (IGMC) in Shimla. IGMC is a public medical college with no user fees and receives supply-side budget support from the state. A case can be made that existing private hospitals in HP are capable of providing services for some of the covered procedures and access to these hospitals may improve scheme utilization. Since the responsibility for hospital empanelment lies with the insurer, the governing agency needs to put pressure on the insurer to deliver.

Similarly, some of the largest and most utilized tertiary care public hospitals in the region, such as the Post Graduate Institute of Medical Education and Research in Chandigarh, were not empaneled (as of January 2011). A restricted provider network may defeat the purpose of health insurance by constraining access to care and offering few provider options beyond what was already available to beneficiaries prior to gaining insurance coverage.

Financial Status and Sources of Funds

The market-determined premium for RSBY Plus was Rs. 364 per family including service tax in its first year of operation (2010). This amounts to an estimated annual premium of Rs. 85.6 million, paid by the state government to the insurer for covering about 235,000 families. This expenditure is borne entirely by the state government, drawing on its general tax and nontax revenues. The total cost of this insurance coverage

Table H.2 RP Hospital Network and Its Utilization, March 1, 2010, to February 15, 2011

<i>Location</i>	<i>State</i>	<i>Hospital</i>	<i>Ownership</i>	<i>Number of cases treated</i>	<i>Claim value (Rs.)</i>
Shimla	HP	IGMC, Shimla	Public	139	9,541,750
Kangra	HP	Dr. RPGMC Kangra at Tanda	Public	0	0
Amritsar	Punjab	EMC group of Hospital, Shakti Nagar	Private	0	0
Amritsar	Punjab	EMC group of Hospital, B-13, Ranjeet Avenue	Private	0	0
Amritsar	Punjab	EMC group of Hospital, Greet Avenue	Private	0	0
Amritsar	Punjab	Escorts Fortis Hospital, Majitha Verka By Pass Road	Private	0	0
Chandigarh	Union Territory	Kidney Centre, SCO 32, Sector 34A	Private	16	465,200
Chandigarh	Union Territory	Nins Hospital, Sector 34	Private	8	916,398
Jalandhar	Punjab	Tagore Hospital and Heart Care Centre, Mahavir Marg	Private	12	721,609
Jalandhar	Punjab	Jammu Hospital, Jalandhar	Private	4	52,000
Mohali	Punjab	Silver Oaks, Phase 9, Mohali	Private	1	30,000
Mohali	Punjab	Indus Hospital, SCO 98–100, Phase 3	Private	39	115,000
Mohali	Punjab	Indus Super Speciality Hospital near SDM Office	Private	0	0
Mohali	Punjab	Ivy Hospital, Sector 71, Mohali	Private	0	0
Fatehgarh	Punjab	Sh. Guru Teg Bahadur, Fatehgarh Sahib	Private	19	172,500
Manali	HP	Lady Willington Hospital	Private	2	72,000
		Total		241	12,261,457

Source: RSBY Plus, HP HFW department data.

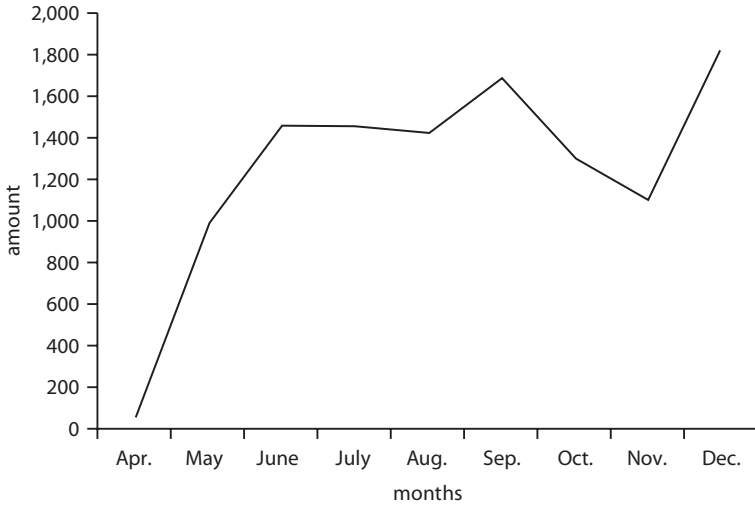
is marginally higher than the amount paid for the underlying RSBY coverage (Rs. 77.8 million for the same period). However, in terms of claims reported to the insurer, RSBY Plus registered claim utilization of only Rs. 11.3 million in the first 10 months, compared with Rs. 77.25 million claimed under the RSBY insurance coverage over the same period. The limited network of hospitals for RSBY Plus, lack of awareness, or both may contribute to low levels of claims.

The RP scheme requires no contributions from the beneficiaries. This was the policy option chosen by the HP planners. Similar to the evolutionary history of other state schemes, RP's predecessor was the relief funding available through the chief minister, provided as grants, decided case by case, to a small number of beneficiaries for treatment of tertiary illnesses. The "relief fund model" did have limitations. First, access to the funds was mostly patronage driven. Second, equity was probably compromised because the poorest were unlikely to be aware of the funds or have the political access to pursue such options as easily as higher-income groups. Further, relief funds did not cover the full cost of care, often resulting in a large financial burden for the patient. Similar to other states, HP chose to move away from the relief funds and embrace fully subsidized insurance mechanisms.

Utilization and Claims

During the first 11.5 months of the scheme (March 1, 2010, to February 15, 2011), RP registered 241 claims amounting to a claim expenditure of Rs. 12.26 million (against the insurance premium of Rs. 85.6 million received by the insurance company for the full year—a claim ratio of about 15 percent). Figure H.2 shows the monthly trends in claim amounts for the first 10 months of the scheme. The first couple of months observed little utilization as awareness was low. Since the third month of implementation, monthly expenses have hovered between Rs. 1 million and Rs. 1.8 million. Compared to other GSHISs, utilization appears on the low side. For example, with about six times the number of covered families as RP, the VA scheme in Karnataka recorded more than 3,000 claims in its first 10 months against just 188 claims in HP. Both schemes feature similar benefits packages. In terms of frequency of utilization by the beneficiaries, RSBY Plus experienced a utilization frequency of only 0.08 percent in the first 10 months, which translates to an annualized rate of 0.1 percent. This is 4 to 5 times lower than other state schemes with similar tertiary care benefits packages.

Figure H.2 RP: Monthly Trend in Claim Value, March through December 2010 (Rs. thousand)



Source: RSBY Plus, HP HFW department data.

Access in terms of the limited provider network and the difficult geography of this hilly state emerge as possible reasons for this lower than expected utilization. The state has already incorporated a liberal transportation allowance into the benefits package design to partly compensate for high transportation costs. However, provider network inadequacy is an area for focus. Building awareness among beneficiaries is another area that may require close attention by scheme officials.

Information Environment

The RSBY Plus piggybacks on the beneficiary identification systems of RSBY, which provides the scheme with lists of enrolled families, biometric information, and smart ID cards that can be processed online or offline. To process claim information, the insurer and TPAs apply their own proprietary IT systems, which they also use to process private health insurance claims. The governing agency does not have IT tools of its own. Nor are IT investments planned for any time soon. The society is entirely dependent on the information and reports made available from the intermediaries. Given that an insurer and two TPAs engaged by the insurer together serve the scheme, coordinating with multiple agencies for the

required information is in itself not an easy proposition. Limited institutional capacity in the governing agency also restricts its ability to monitor trends and to introduce new design features. The multiplicity of their responsibilities in the state department of health severely limits the time that the leadership can devote to the scheme. Capacity building in the governing agency will help improve the information environment as well as the scheme's ability to act on the information.

Internal Controls and Cost Containment

The society's institutional capacity needs to be strengthened to improve the internal control environment, as discussed above. Cost-containment mechanisms already deployed by the scheme include package rates and prior authorizations. However, at this early stage of rollout and with the low utilization levels, the scheme management should be more concerned with factors hampering utilization, which may contain costs (and lead to higher profits) for the insurer but not deliver the required benefits.

Quality Orientation

Similar to other GSHISs, the empanelment criteria prescribing the minimum infrastructure requirements at empanelment are the main check on provider quality. There are no explicit follow-up mechanisms or other quality review systems.

Consumer Information and Protection

The scheme elicits feedback through letters sent by the chief minister to the scheme beneficiaries. Letters informing about the scheme and seeking feedback are also sent from the chief minister and the health minister to the *gram pradhans*, who are elected village officials, usually the chairperson of the village council. Information on the content of the letters and responses to them is not available. All providers are required to conduct health camps (12 per provider per year), but the extent to which this is practiced or monitored is unknown.

Media activities are also undertaken by the society, but much more outreach is needed. As suggested above, given the lower than expected utilization, creating greater awareness of the scheme benefits is an important activity for the governing agency.

Concluding Remarks

Himachal Pradesh has taken the “genealogical” next step of designing a tertiary, state-funded coverage riding on RSBY’s secondary and maternity coverage. The same state agency manages RP and RSBY. Several challenges have come to the fore: fragile institutional capacity, low utilization, weak information environment, and lack of empaneled hospitals. However, as a recent arrival on the GSHIS landscape, RP has an opportunity to learn from earlier schemes’ experience. If it does not, it might repeat their errors. HP could leverage its public health system to establish closer linkages for long-term follow-up treatment after the surgical procedures in the RP scheme.

Both RP and RSBY use the same private insurer as intermediary. So far, no issue of sharing of claim costs has arisen, but this situation needs to be clarified for the future, and technologically enabled. The scheme will also need to consider empaneling more hospitals within the state to improve access for its beneficiaries. Finally, the scheme needs to use its financial leverage to improve patient safety and quality.

APPENDIX I

Apka Swasthya Bima Yojana (Proposed), Government of National Capital Territory (NCT) of Delhi

Table I.1 ASBY: Summary Matrix

<i>Indicators/scheme name</i>	<i>Apka Swasthya Bima Yojana (ASBY)</i>
Launch year	Proposed for launch in near future ^a
Geographical area	Entire NCT of Delhi ^b
Target/eligible population	Identified below-poverty-line (BPL) and other vulnerable population of Delhi and also follows the specific enrolment already conducted by Rashtriya Swasthya Bima Yojana (RSBY, appendix E)
Number of beneficiaries	0.65 million families in launch year (proposed)
Unit of enrolment	Family
Benefits package	A “top-up” scheme aimed at covering high-cost, mainly tertiary care services not adequately covered under RSBY
Maximum insurance coverage	Rs. 150,000 per family per year
Hospital empanelment criteria	Minimum 50 inpatient beds
Number of empanelled hospitals (government and private)	Still in planning
Sources of funds	Entirely funded by state government

(continued next page)

Table I.1 (continued)

<i>Indicators/scheme name</i>	<i>Apka Swasthya Bima Yojana (ASBY)</i>
Total expenditure (Rs. million), 2009–10	Nil. Projected budget for first year: Rs. 400 to Rs. 600 million
Premium price, 2009–10	n.a.
Provider payment mechanism	Predefined package rates
Information technology (IT) tools used	Online monitoring system planned with the help of National Informatics Center (NIC)
Number of hospitalizations per year	n.a.
Utilization rate	n.a.
Most common procedures	n.a.
Governing agency and legal status	Apka Swasthya Bima Yojana trust (autonomous trust)
Executing agency	Insurance companies and third-party administrators (TPAs)
Number of full-time staff, including contract personnel, in implementing agency	Still in planning
Administrative costs as percent of total spending	n.a.
Cost-containment measures	Prior authorization, concurrent review, in-depth analysis of claims experience

Note: n.a. = not applicable

a. ASBY was on the drawing board when this study began. The expected launch in 2011–12 had not happened when this book went to press.

b. The National Capital Territory (NCT) of Delhi refers to the Delhi metropolis excluding its suburbs located in the state of Uttar Pradesh (UP) and Haryana. Technically, it is a union territory, administered by the central government, but the political administration of the NCT of Delhi today more closely resembles that of an Indian state with its own legislature, high court, and an executive council of ministers headed by an elected chief minister.

Introduction

On the drawing board for most of 2010, Apka Swasthya Bima Yojana (ASBY), is a health insurance scheme slated for launch by the state government of Delhi (also known as the Government of NCT of Delhi) in the near future. The state government has already constituted a trust under its Department of Health and Family Welfare (DOHFW), known as the Apka Swasthya Bima (ASB) Trust, to govern the scheme. Planners propose to use insurers as intermediaries to implement the scheme.

The scheme has been designed as top-up, tertiary-focused complementary coverage to RSBY for all current and future BPL beneficiaries holding RSBY identity cards. In this manner, the scheme will be able to share RSBY's identification and validation mechanism and the technological platform. The stated objective of the ASBY is to improve access of vulnerable groups in the NCT to tertiary care facilities (which are not

adequately covered under their RSBY policy) and to prevent their falling into poverty when they access tertiary care.

The scheme management recognizes the limitations in the availability of tertiary care facilities under the public health system and is implementing demand-side financing for select tertiary procedures instead of building more tertiary care hospitals. ASBY officials describe the scheme in terms of a “virtual hospital” concept: instead of investing in building, equipping, and operating hospitals, public funds will be used to buy hospital services from existing private hospitals. ASBY has many “geographical” advantages, including those related to operating in a relatively compact geographical area in an urban setting with easy access to many providers and technical support from locally based development partners. It also has the “genealogical” advantage of being the newest kid on the block and can learn from the experiences of other states that have implemented similar tertiary-oriented schemes in the recent past, such as Andhra Pradesh, Karnataka, Tamil Nadu, and Himachal Pradesh.

Institutional Framework

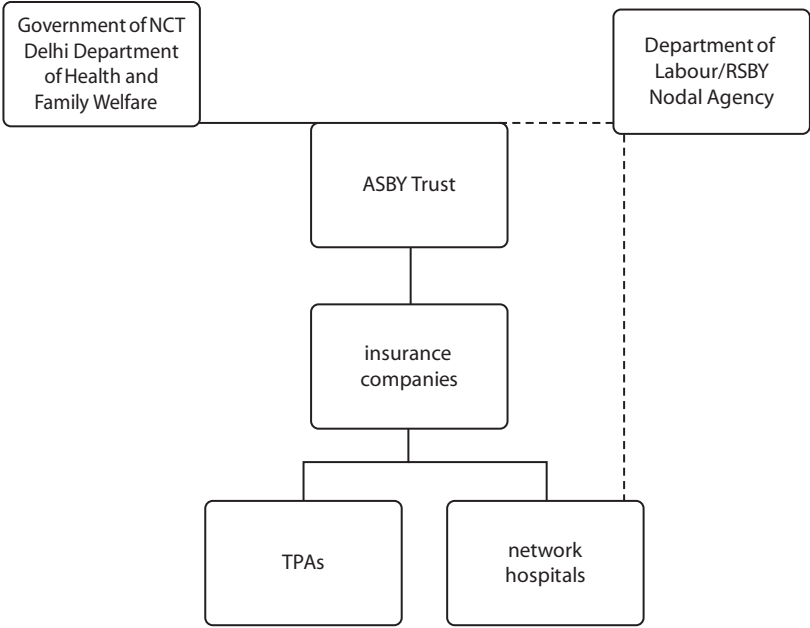
The Delhi NCT DOHFW is the institutional owner of the ASBY. The department has created an administrative arrangement to govern the scheme implementation in the form of the autonomous ASB Trust, which is legally outside the state government. However, it is still a public institution in terms of its stewardship, affiliation, internal procedures, and financing.

The trust will engage insurance companies for day-to-day operations as well as risk management. Supervisory responsibilities will remain with the trust, but the form and scope of such oversight is unclear. The trust intends to build effective internal control mechanisms for scheme operations, including internal and statutory audit mechanisms.

Figure I.1 displays the institutional architecture of the scheme. The trust will be linked to the parent department (DOHFW) and the Delhi NCT Department of Labour to coordinate for RSBY. It will contract one or more insurers (that may contract TPAs) for implementation support, and through them, manage the providers.

The ASB Trust is not fully staffed. The CEO designate is leading the planning process for ASBY in addition to handling his other responsibilities as a senior official in the DOHFW. Several donor partners are technically supporting the trust in the formative stages of the scheme. The scheme seems to have strong support within the Delhi government, and

Figure I.1 ASBY Institutional Framework



Source: Authors' elaboration.

adequate budget and corresponding human resources are likely to be made available to the trust.

Beneficiaries

The ASBY proposed beneficiaries are the identified BPL and other vulnerable population groups in Delhi. The scheme had originally planned to build upon RSBY enrolment in Delhi—212,000 households in 2009–10. However, RSBY enrolment in Delhi was considerably smaller in 2010–11 than the ASBY coverage target of 650,000 households for the first year. Consequently, ASBY may have to consider alternative plans to augment the enrolment.

The BPL population of Delhi already enrolled by RSBY is proposed to be automatically enrolled in the ASBY. Geographically, the scheme will cover all of Delhi immediately with no phasing or staging of geographical coverage. By 2014, when all phases of the ongoing vulnerability assessment in Delhi are complete and all eligible beneficiaries are enrolled, the scheme expects to reach its full potential of about one million households.

By design, the ASBY addresses only the most vulnerable population segments to improve equity in access to health services. However, the robustness of targeting will finally depend on the list of eligible beneficiaries that emerges from the vulnerability assessment now underway and the enrolment system for bringing these families under the health insurance coverage.

Benefits Package

The scheme will focus on high-cost, tertiary procedures and will offer free treatment for specified inpatient conditions including cardiac and cardiothoracic procedures, oncology, nephrology, neurology, and orthopedic procedures. Similar to other state schemes, ASBY proposes no coverage for ambulatory expenses or hospitalization for any other causes.

The stated rationale for selecting the listed procedures is the long waiting list and inadequate capacity for treating these conditions in the public health care delivery system. Many of the proposed procedures will be similar to the Rajiv Aarogyasri scheme (AP), the Vajpayee Arogyashri scheme (Karnataka), and the Kalaingar scheme (TN), from which the Delhi scheme draws heavily. The health insurance coverage is proposed to be capped at Rs. 150,000 per family per year, and will also have package rates prescribed for each covered procedure. A proposed pool of Rs. 1 crore (Rs. 10 million, about US\$ 220,000) may be created as a “buffer” to provide additional coverage of Rs. 50,000 on a case to case basis for beneficiaries requiring higher expenditure than Rs. 150,000. This buffer will be borne by the trust, not the insurance company. No cost sharing by beneficiaries is proposed; the scheme will be entirely cashless and based on electronic preauthorizations to the empanelled hospitals. The scheme also plans to develop and include follow-up packages for select tertiary conditions, for ensuring adequate follow-up care after discharge.

Provider Network

The scheme proposes to empanel hospitals based in the state of Delhi, none in the bordering states. As a metropolitan centre, Delhi has a large number of hospitals that provide inpatient services of the nature proposed in ASBY. Several hundred hospitals in Delhi are already affiliated with public and private health insurance scheme networks. Consequently, there are enough hospitals for the scheme to craft a network of providers. At present, there are no plans to categorize hospitals or to have differential

rates for providers. Beneficiaries will have the option of choosing any hospital in the network for care, public or private.

The minimum requirements for empanelment have yet to be finalized. However, they may be similar to those set by other state schemes in terms of minimum number of beds, physical infrastructure, staffing, electronic connectivity, and acceptance of the prescribed package rates.

Financial Status and Sources of Funds

The state government is contemplating exploring financing options such as earmarked “sin taxes,” philanthropic contributions, or other mechanisms. As of end-2010, when the information for this case study was compiled, a critical issue vis-à-vis the scheme’s relationship with RSBY was yet to be decided: how the cost of specific procedures will be shared between RSBY and ASBY and whether and how much of a “first-loss”¹ position RSBY will take.

The scheme envisages competitive mechanisms for premium price setting, allowing all eligible insurers to bid for the scheme. The estimated budget for the first full year is expected to be somewhere between Rs. 40 crores to Rs. 60 crores for the proposed coverage (650,000 households). Because the scheme has not started operations, it has no assets, liabilities, or financial statements for analysis. Similar to other state schemes, ASBY’s predecessor is a state relief fund known as Delhi Arogya Nidhi together with the discretionary relief funds available through the chief minister and the lieutenant general. These funds provide grants to a few hundred beneficiaries a year, case by case, for treatment of tertiary illnesses.

The scheme also plans to include a clause for “profit sharing” by insurers in the event of a low claims ratio. If the claims ratio falls below a set level, the insurer will be required to give back part of the premium paid for the insurance. This device may reduce undue repudiations by insurers, but at the risk of providing insurers with a disincentive to exercising adequate risk management, fraud control, and claims cost containment.

Information Environment

The scheme plans to introduce regular reporting requirements from its insurer and network hospitals and is seeking technical support to help design the information system. In the meantime, the provider connectivity and beneficiary-identification platforms will piggyback on the RSBY

platform, which will be customized for ASBY. As a late entrant, the scheme has an opportunity to learn from and build on the information environment and capabilities of the older health insurance schemes.

Internal Controls and Cost Containment

Proposed cost-containment mechanisms include prior authorizations, physical verification of admitted patients,² and in-depth analysis of claims experience through data mining. The scheme will require providers to obtain preauthorization and also to submit their final bill electronically. The preauthorization process is expected to minimize unnecessary utilization, limiting supplier-induced demand as well as demand-side moral hazard. Use of standard package rates for all identified procedures provides an opportunity to contain cost to some extent by limiting supplier-induced demand which could be rampant in the fee-for-service system.

Quality Orientation

It is too early to make a statement on the quality orientation of the scheme; there are no plans so far for scheme-specific quality assurance guidelines or standards. The empanelment criteria are likely to be the main check on provider quality, which may be augmented by the above-mentioned reporting mechanisms expected from all networked providers. ASBY plans to craft operational manuals for hospitals and organize training workshops for providers through the insurance companies serving the scheme.

Consumer Information and Protection

Unlike many other GSHISs, ASBY will operate in a compact urban geographical area, in contrast to the vast statewide geographical area and predominantly rural beneficiary base for most other new generation GSHISs. Accordingly, the scheme does not plan to use health camps or outreach services but will focus on raising awareness through the mass media. Similar to the Andhra Pradesh scheme, ASBY also plans to send feedback letters to beneficiaries who receive treatment. This measure will obtain commentary on care and out-of-pocket payments from people who actually utilize the services. The insurers and the ASB Trust will also institute grievance-redressal mechanisms.

Concluding Remarks

ASBY has many geographical and genealogical advantages. Operating in a metropolitan setting makes it easier to communicate with beneficiaries and providers as well as monitor the scheme. As a newcomer to the insurance landscape, ASBY can learn from the experiences of earlier schemes. However, ASBY has no institutional structure at this conceptualization stage and runs the risk of repeating problems observed in other schemes in terms of governance and control. The risk of provider induced demand, especially for the more remunerative packages, is a distinct possibility. The mechanism of sharing of claim costs between RSBY (first loss) and ASBY needs to be clearly defined, as well as technologically enabled. The scheme also needs to plan for effective purchasing of services from the private hospitals and incorporate quality parameters in contractual arrangements.

Notes

1. RSBY covers all forms of hospitalization (with a smaller cap) as against the ASBY which covers a smaller subset of the hospitalizations but with a larger cap. For a hospitalization which falls within the scope of coverage of ASBY, RSBY coverage is also triggered. Therefore, RSBY may take a first-loss position. In this case the initial admissible amount or share of the total costs is paid from the RSBY coverage while the charges exceeding this first loss are assumed by ASBY. Even in the absence of ASBY or other top-up insurance coverage, RSBY would have paid the hospital charges up to its cap (currently Rs. 30,000) while the rest would have to be paid out of pocket by the beneficiary. It is this latter part that schemes such as ASBY are targeting.
2. It is easier to reach patients within Delhi borders than it is in some other states.

APPENDIX J

Tool for Collecting Information on Government-Sponsored Health Insurance Schemes in India

Data compiled by: _____

Respondents from the Insurance scheme (Names and Designations):

I. Institutional Features

Name of the Scheme:	
Name of the Implementing Agency:	
Ministry/Department to which affiliated, if any:	
Stated Objectives/Mission of the scheme:	
Eligible (Target) population/groups/ individual/family units:	
Enrollment Criteria Specific enrolment done or scheme identity cards issued	
Context: Why was the scheme created? Stakeholder support to the scheme (e.g., government, charitable organizations, healthcare organizations) Factors that favored development and implementation	

Factors that contributed to scheme design	
Geographical Location and Geographical Coverage (states, districts) of the scheme—present	
Geographical Location and Geographical Coverage (states, districts) of the scheme—proposed (as per present plans, at full implementation of the scheme)	
Ownership of the Implementing Agency (entity which created and owns the implementing agency)	<input type="checkbox"/> Government or government agency <input type="checkbox"/> PPP <input type="checkbox"/> Private nonprofit <input type="checkbox"/> Private for-profit
Administrative arrangements for management of the scheme (if different from ownership)	<input type="checkbox"/> Government or government agency <input type="checkbox"/> PPP <input type="checkbox"/> Private nonprofit <input type="checkbox"/> Private for-profit
Legal Status of the implementing agency	<input type="checkbox"/> Government department or government body <input type="checkbox"/> Autonomous agency established by government <input type="checkbox"/> Trust <input type="checkbox"/> Society <input type="checkbox"/> Others (specify)
Which executing agency manages the day to day functioning of the insurance scheme including beneficiary enrolment, hospital empanelment, etc.?	<input type="checkbox"/> Government or government entities directly <input type="checkbox"/> Engaging an insurer with or without TPA <input type="checkbox"/> TPA directly engaged, no insurer <input type="checkbox"/> Other mechanisms or combinations
Which agency or entity is primarily responsible for supervisory oversight of the insurance scheme?	<input type="checkbox"/> Government ministry or department (specify) <input type="checkbox"/> Independent agency (specify) <input type="checkbox"/> Others (specify)
What is the form and scope of supervisory oversight?	
Is internal auditing of the scheme's operations and processes done on a regular basis?	Yes/No If yes, please describe.
Is external auditing of the scheme's operations and processes done on a regular basis?	Yes/No If yes, please describe.

<p>Is there any possibility of a potential conflict-of-interest situation for the supervisory or executing agency in the implementation of the scheme?</p>	<p>Yes/No If yes, details thereof. _____</p>
<p>How frequently does the Board meet and review the scheme?</p>	<p><input type="checkbox"/> >3 times per calendar quarter <input type="checkbox"/> 2–3 times per calendar quarter <input type="checkbox"/> Once per calendar quarter <input type="checkbox"/> Half yearly <input type="checkbox"/> Annually <input type="checkbox"/> Less than once per year</p>
<p>What is the extent, depth, and detail of board/management oversight and stewardship on scheme design, implementation, internal controls, etc.</p>	
<p>What is the extent of detail and robustness of contracting instruments used by the scheme—with executing agency (where applicable), with hospitals, and with any other service providers? (specimens to be attached where relevant)</p>	<p><input type="checkbox"/> The contracting instruments are very robust and clearly list responsibilities, expectations, benchmarks, etc. <input type="checkbox"/> The contracting instruments are fairly robust though not fully capturing the range of possible “friction points.” <input type="checkbox"/> The contracting instruments are largely based on similar ones used in the industry and have not been further customized to the scheme’s requirements. <input type="checkbox"/> The contracting instruments are fairly basic and only minimally capture the range of responsibilities, expectations, benchmarks, etc. <input type="checkbox"/> No contracting instruments have been entered into/contracting instruments not available with the agency.</p>
<p>Notes on institutional architecture (relationship among and differentiation of roles and responsibilities of different agencies, who appoints head of agency, etc.)</p>	

II. Finances of the Scheme and Level of Competition

<p>What are the key sources of financing the scheme and their relative contribution in the previous fiscal (2009–10)?</p>	<p>Source</p> <p>Government Funds—Direct Premium Subsidies based on enrolment by insurers (If multiple government agencies involved, share thereof)</p> <p>Government Funds—support through supply side subsidies to hospitals</p> <p>Government Funds—Claim subsidies to insurers based on claims paid (including excess of loss mechanisms)</p> <p>Cost-sharing by beneficiaries—deductibles, co-insurance/copayments</p> <p>Premium contributions by beneficiaries: including basis for calculation— income rated (and caps, if any), community rated</p> <p>Premium contributions other than government and beneficiaries (e.g., employers, philanthropic organizations, etc.) and basis of contribution by employers</p> <p>Registration fees</p> <p>User fees and other health facility-level charges including balance billing</p> <p>Any others (specify)</p>	<p>Contribution (%)</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Does the scheme have any reserves? If yes, where are those invested?</p>	<p>Yes/No</p>	
<p>Does the scheme have any liabilities? If yes, how are those funded presently and how will those be repaid eventually?</p>	<p>Yes/No</p>	
<p>Competition among insurers: Where insurance companies are used, how many insurance companies participated in the bidding process? How many insurance companies are presently serving the scheme?</p>	<p>_____</p>	

<p>What is the relative share of the top 5 insurers serving the scheme (where less than 5 insurers service the scheme, share of each of them)?</p> <p>What is the duration of the insurance contract?</p>	<p>_____</p> <p>_____</p>
<p>Competition among providers: How many hospitals are presently participating in the scheme?</p>	
<p>Are any further details on participating hospitals available—public/private, size distribution, geographical distribution, etc.?</p> <p>How many non-hospital health providers (clinics, pharmacies, diagnostic centres, etc.) are presently participating the scheme?</p> <p>Please annex a list of top 20 hospitals by claims and their relative share in % among all claims.</p>	<p>_____</p> <p>_____</p>
<p>Are any reinsurance mechanisms available to the scheme from formal reinsurers, direct insurers, or from the government? If yes, what is the kind of reinsurance protection?</p>	<p>Yes/No From which agency: _____ Type: Stop Loss Proportional Others _____</p>

III. Scheme Design Features

<p>Is population coverage on a voluntary or mandatory basis?</p>	<p>Voluntary/mandatory</p>
<p>Who are the eligible groups to be included in the scheme? (Please define including eligibility unit definition, location, and other characteristics.)</p>	

Criteria for targeting (de jure and de facto) and validation process, if any.	
Total numbers eligible presently.	
Out of the above, total numbers covered presently.	
Total number proposed to be eventually covered in the scheme. (Please give annual estimates for the next 4 years.)	At the beginning of 2011: At the beginning of 2012: At the beginning of 2013: At the beginning of 2014:
What is the enrolment process for beneficiaries?	
Equity consideration incorporated at the time of the scheme, e.g., utilization by poor, share of BPL v/s APL, real access by BPL groups like rural and tribal patients.	
Services covered under the insurance scheme.	All hospitalizations (except certain specified exclusions) Predominantly covers high end surgical hospitalization as per defined list Comprehensive cover—includes hospitalization and outpatient Any others _____
Where conditions covered are as per a defined list, how are these defined.	As positive lists (what is covered) As negative lists (exclusions/not covered) Combination of positive and negative lists Others The listing in turn is based on: ICD-10 codes Packages or broad categories of service Use of DRGs Others
Major exclusions, and whether these are provided under the public health system.	
Sum insured, Sub-limits and other cost sharing provisions applicable to the scheme.	
If insurance companies are involved, what is the duration of the insurance contract and the renewability arrangements?	

<p>Claims process and turn around time for claims</p>	<p>Cashless to patient: Yes/No Paperless: Yes/No IT Tools used: Yes/No If yes, which ones: _____ Usual time taken to process claims (from receipt of documents to dispatch of cheque): _____ days</p>	
	<p>Time within which 90% of all cashless claims are settled by the scheme _____ days</p>	
<p>Claims ratio since scheme inception</p>	<p>Claims ratio in 2009–10: (%) _____ Claims ratio in 2008–09: (%) _____ Claims ratio in 2007–08: (%) _____ Claims ratio in 2006–07: (%) _____ Administrative costs as a share of premium (%): _____</p>	
<p>Monitoring and reporting requirements</p>	<p><input type="checkbox"/> Routine reporting requirements—enrolment, claims payment, provider management, quality, etc. <input type="checkbox"/> Monitoring and reporting systems to ensure compliance and remedial actions <input type="checkbox"/> Information made publicly available <input type="checkbox"/> Information provided to us but not publicly available <input type="checkbox"/> Information obtained from other sources <input type="checkbox"/> Key information not collected/ not available/ not shared</p>	
<p>Empanelment/selection criteria for hospitals and healthcare providers</p>		
<p>Any quality assurance activities, guidelines, or standards.</p>		
<p>Any reporting requirements from providers and contents of such reports.</p>		
<p>Use of outreach services, health camps, etc.—current practices, number of patients recruited through this route as a proportion of all patients.</p>		
<p>Are there any efforts towards provider education (discouraging inappropriate use, dealing with uncovered procedures, etc.)?</p>		
<p>Provider penalty mechanisms for breach of guidelines.</p>	<p>Penalty mechanism Fines Denial of claims Disempanelment Others</p>	<p>Number of cases</p>

<p>Provider payment mechanisms Methods presently used for each provider type. How are provider rates determined? Reimbursement/payment procedures including any reports of balanced billing.</p>	
<p>Awareness and Communication: How are beneficiaries/consumers informed of benefits and responsibilities? Complaint and redressal systems including statistics of grievances received and settled. Comparative information on provider infrastructure, statistics, or quality (given to consumers) if any. Consumer protection mechanisms.</p>	
<p>Premium rate setting How are premium rates determined? Underwriting/actuarial analysis being done, if any, at design or during implementation</p>	
<p>Cost containment mechanisms applied in practice</p>	<p>Prior authorizations Screening Concurrent review In-depth analysis of claims experience Gatekeepers Second opinion Utilization review and control Discharge planning Others? Pls specify</p>

IV. Assessment of Performance (data and supporting documents to be collected)

- Enrollee satisfaction (from any survey or monitoring data)
- Financial stability (from income and expenditure statements)
- Utilization and claims: Number & Amount of claims received, paid and repudiated, including details on geographical distribution,

disease-wise distribution (including analysis of top 10 diseases/procedures paid under the scheme and their costs), utilization by different income quintiles etc as available.

- Share of hospital charges, physicians' professional charges, medicines and consumables etc in the claimed amounts.
- Impact on OOP (for both inpatient and outpatient care), overall and by income quintiles, over periods of time (if available)
- Impact on health outcomes (if available)

V. Overall Assessment: opinions and perceptions of insiders

What challenges face the scheme in achieving its said objectives? Does the scheme design address the stated objectives/mission?

- How is the scheme placed in terms of eligibility of enrolment, plans for enrolment and present status?
- What "growing or expansion" opportunities and pains does the scheme face?
- How is the scheme linked to the public primary care and ambulatory network for referrals, provider coordination and provision of primary care and public health services?
- How does scheme fit with the overall central and/or state and health policies?
- Principal Strengths and Weakness in addressing the following

Adverse selection

Moral hazard

Cost escalation

Cost control measures and their robustness

Administrative costs

Provider induced demand

Quality of care of provider networks, including

- Unnecessary or Ineffective care
- Adverse outcomes
- Impact on health outcomes

Equity of access and utilization

Financial protection for health shocks suffered by beneficiaries

Fraud and corruption

Effective catchment of targeted population

Transparency in terms of information

Solvency, sustainability, and actuarial soundness

Glossary

Ability/willingness to pay. Often inappropriately assumed to be equivalent. Willingness to pay (WTP) is mediated by ability to pay (ATP) and by individual and cultural aspects that determine the perceived benefit to self and to the community. There are two ways to assess WTP: (i) data on past health care utilization and expenditure, and (ii) contingent valuation methods based on surveys. Ability to pay (ATP) is largely determined by affordability. ATP for health insurance must be considered in the context of copayments and transaction costs. The concept of fairness may be an important consideration in designing a microinsurance scheme and setting premiums.

Accountability. Result of the process that ensures that decision makers at all levels actually carry out their designated responsibilities and that they are held accountable for their actions.

Accreditation. Process involving external peer assessment of competency, credibility, or authority, used by organizations voluntarily to accurately assess their level of performance in relation to established standards and to implement ways to continuously improve.

Actual premium. The premium arrived at by estimating the average benefit payout and adding a safety margin for contingencies.

Actuarial analysis. Analysis done by an *Actuary* (see below).

Actuary. A professional trained in evaluating the financial implications of contingency events. Actuaries need an understanding of the stochastic nature of insurance and other financial services, the risks inherent in assets, and the use of statistical models. In the context of insurance, these skills are often used, for example, in establishing premiums, technical provisions, and capital levels.

Adverse selection. Also called antiselection. Problem of asymmetric information that disturbs the operation of the insurance market, resulting in an inequitable transaction. The insured, knowing the likelihood of events, chooses to insure against only those that pose a strong risk. The insurer, having less information, accepts a contract that does not include adequate premium for the risks covered. The insured gains from the insurer's inability to distinguish "good" and "bad" risks. Providing asymmetric information allows people who are sick and require care to seek health insurance coverage. Constitutes a key concern for insurers that can lead to higher losses, which is countered by medical underwriting, which minimizes insuring high-risk individuals.

Affordability. See *Ability/willingness to pay*.

Ambulatory care/services. Health care services provided to patients who are not admitted overnight to a hospital. These services are performed at outpatient clinics, urgent care centers, emergency rooms, ambulatory or same-day surgery centers, diagnostic and imaging centers, primary care centers, community health centers, occupational health centers, mental health clinics, and group practices.

Annual caps. The maximum amount given to the provider (or reimbursed to the insured) for delivering all covered services to an insured person, regardless of the number of services the covered individual receives.

Antiselection. See *Adverse selection* and *Cream skimming*.

Arbitrage. The simultaneous buying and selling of securities, currency, or commodities in different markets or in derivative forms in order to take advantage of differing prices for the same asset.

Asymmetrical information. Parties to a transaction have uneven access to relevant information that governs an informed choice. Such asymmetry can result in an inequitable transaction in favor of the party with the most information, or it can result in the abandonment of the exchange.

Balance sheet. Statement showing the financial position at a particular point in time (e.g., at the end of the financial year), listing all assets and liabilities at that time.

Bayesian method. A method (originally enunciated in 1763) for revising the probability of an event's occurrence by taking into account data as they come to hand. The usefulness of this approach depends on the relevance and power of the additional data.

Below poverty line (BPL). A term used in the Indian context as an economic benchmark to denote the poor who have an income below the official poverty threshold or "poverty line," usually defined in terms of per capita income and other factors.

Beneficiary or principal. The person designated to receive payouts from the scheme. This is typically the policyholder or a family member, but it may be an employer.

Benefit exclusion. Refusal of access to a specific benefit for an insured. Because this exclusion could be subject to abuse if it is based on arbitrary decisions made at the time of claim rather than as set out in the contract, it tends to be regulated. Reasons for exclusion that are typically allowed include a qualifying period and preexisting illness.

Benefits package or scope of coverage or compensation. A list of specific benefits agreed upon in the health insurance contract, such as outpatient consultations, inpatient services, ambulance services, prescription drugs. While private insurance typically offers modules of benefits from which to choose, microinsurers may offer a standard package for simplicity and fairness.

Biometric. Based on the measurement of biological characteristics, such as fingerprints, DNA, or retinal patterns, for use in verifying the identity of individuals.

Bottom-up. See *Top-down global strategy*.

Broker. An intermediary who sells on behalf of another.

Budget head. An accounting term, used in some countries, under which budgetary line item entries are made, usually as part of a chart of accounts. Budget heads can consist of multiple hierarchical levels. The term is similar to "accounting head," "cost center," or "budget category."

Capacity. Has two meanings: (i) Insurers' ability to underwrite a large amount of risk on a single loss exposure or many contracts on one line of event. Reinsurance enables a greater capacity among primary insurers. (ii) Organizational and individual skills. Organizational capacity implies appropriate systems for information and management and adequate resources for handling operations.

Capacity building. Increasing organizational and individual skills and establishing frameworks for that increase to continue.

Capitation payment. Under a capitation payment, the provider receives a fixed fee per individual per month to provide all covered services regardless of how many services are provided to any of the individuals covered.

Cashless hospitalization. Receiving treatment at a hospital without the insured patient's having paid the hospital a fee or copayment. The payment is settled directly between the hospital and the insurer.

Catastrophic health shocks. Health problems/diseases of major magnitude, often defined in terms of exceeding a percentage of household income or expenditure.

Claim load. The amount of benefits paid to the insured in a period. Fluctuations in claim load in the short term are covered by contingency reserves and in the long run by contribution increases.

Coefficient of variation. The ratio of the sample *standard deviation* to the *sample mean*. It measures the spread of a set of data as a proportion of its mean. It is often expressed as a percentage. This coefficient enables, for example, estimation and comparison of ranges of likely expenses for various communities.

Coinsurance. An insurance policy provision under which the insurer and the insured share a proportion of costs incurred after the deductible is met, according to a specific percentage formula that facilitates risk sharing between the two parties. In some plans, the insured meets coinsurance obligations through a *copayment*.

Collection rate or compliance rate. The proportion of possible subscriptions from members that the microinsurer collects. Lack of complete compliance can result from cultural as well as economic factors. It may be used as a measure of a microinsurer's efficiency/commercial orientation. Members are more likely to pay contributions if their perceived risk is higher.

Commercial insurance or private insurance. Commercial insurance is a contract between an insurer and an insured whose purpose is to minimize the owner's

risks against losses (or expenses) from the covered perils. In the health insurance context, typical covered perils are illnesses and injuries.

Community. A group of people with a common interest. Often implies locality, but can be occupation-, leisure-, or religion-based.

Community-based health insurance scheme. A voluntary community prepayment health insurance scheme for pooling risks. The community's policyholders share social values, are involved in the management of health plans, and elect a group of their members to act as managers. CBHIs are common in many low-income countries, where options are unavailable.

Community financing scheme. See *Community-based health insurance scheme.*

Community participation. Sharing by citizens in any kind of community in communal decision-making processes and definitions of problems.

Community rating. A method for determining insurance rates on the basis of the average cost of providing health services in a specific geographic area. This method ignores the individual's medical history or the likelihood of the individual's using the services. All members of a community pay the same premium without considering individual health status.

Compensation. Benefit payout.

Complementary private insurance. Insurance that provides coverage for all or part of the costs not covered under the public program.

Compliance. Payment of contribution owed by members.

Compliance gap. Difference between contributions due and contributions collected.

Compliance rate. The ratio of actual contributions over potential contributions. See *Collection rate.*

Compulsory insurance. Any form of insurance the purchase of which is required by law. Governments typically require the purchase of liability insurance with respect to three types of potential loss-causing activities: those whose severity could be particularly great, with the possibility of large numbers of innocent persons being harmed because of a single event; those whose frequency is sufficiently great to affect large numbers of innocent persons independently; and those judged to be inherently dangerous.

Conditional cash transfers (CCT). Conditional cash transfer programs give money to the poor in return for fulfilling certain behavioral conditions—with a twin objective of generating additional income for the poor household and improving their health or educational status.

Confidence interval. A range of values that is estimated to contain the population parameter. To be 95 percent confident that a range contains the parameter requires a larger range than to be 90 percent confident. For example, analysis of data from a community might suggest a 90 percent chance that the number of people seeking hospitalization in a year will be between 1,100 and 1,500, but the confidence interval for 95 percent confidence is 978 and 1,747.

Conglomerate risk. Insurance companies that are participants in insurance groups can be exposed to some additional sources of risk, such as (but not limited to) intragroup exposures, contagion, and risk concentration.

Contingency reserves or equalization reserves. Funds held by the insurer that are in excess of expected benefit payouts in order to cover unexpected events (contingencies) that cause fluctuations in benefit payouts. They are typically regulated in order to ensure the insurer's solvency.

Contribution. Payment of an agreed sum of money by a member to a social insurance system in return for specified benefits. The implied assumption is that other sources of income complement members' payments. See also *Premium*.

Contribution base. The amount that would be available to the insurer if all members contributed fully. When contributions are set as a percentage of income, this base relies on full disclosure of income (disclosure rate).

Contribution rate. The percentage of contribution base actually collected or expected to be collected.

Copayment or cost sharing. The fixed amount of medical expenses paid by a member or beneficiary at the time of the visit under coinsurance policy provisions. This amount is the balance remaining after the insurer has paid its portion.

Corporate governance. Set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set and the means of attaining those objectives and monitoring performance

are determined. It also includes compliance with legal and regulatory requirements.

Cost drivers. A vast array of factors that directly or indirectly contribute to rises in the cost of health care services.

Cost sharing. See *Copayment*.

Coverage breadth. A term used to denote the number of people and share of population groups protected by health insurance.

Coverage depth. A term used to denote the number of services provided in the benefits package.

Cream skimming (preferred risk selection). An exercise whereby an insurer selects only a part of a heterogeneous risk group ("preferred risks"), in which all individuals pay an identical risk-adjusted premium or the premium variation does not fully account for changes in risk. When the insurer reduces its loss ratio compared with the expected average cost that determined the premium, the insurer can retain a profit from cream skimming. This profit depends on the insurer's ability to distinguish several subgroups with different expected costs within the larger group and to predict the (lower) future health care expenditure of individuals in the preferred group. The term can also be used in relation to health providers that choose patients for some characteristic(s) other than their need for care, which enhances the provider's profitability or reputation. Under capitation or other fixed payment schemes, this often means that providers choose less-ill patients.

Credit risk. Most commonly, the risk of financial loss incurred by an insurer when a vendor or service provider ultimately does not provide agreed services they have been paid to provide under a binding contract. Credit risk may also result from default or movements in the credit rating assignment of issuers of securities (in the company's investment portfolio), debtors (e.g., mortgagors), or counterparties (e.g., on reinsurance contracts, derivative contracts, or deposits) and intermediaries, to whom the company has an exposure. Sources of credit risk include investment counterparties, policyholders (through outstanding premiums), reinsurers, and derivative counterparties.

Crore. A unit in the Indian numbering system equal to ten million.

Cross-subsidies. Amounts effectively paid when the wealthy members pay more than poor members or when the healthy pay the same as the sick for lower

expected benefits. The poor and the sick are said to receive cross-subsidies from the wealthy and healthy.

Crude birth rate. A summary measurement of the total number of live births in a specified population at the end of a specific time period (generally one year), divided by the midyear total population count. Expressed as the number of births per 1,000 people within that population.

Crude death rate. A summary measurement of the total number of deaths in a specified population at the end of a specific time period (generally one year), divided by the midyear total population count. Expressed as the number of deaths per 1,000 people within that population.

Data envelope analysis. A methodology for estimating technical efficiency (the ratio of outputs to inputs used). It ranks productive units, such as hospitals, in order of their relative efficiency. It also indicates differences in input allocation between efficient and inefficient units.

Declaration rate. See *Contribution base*.

Deductible. A provision requiring the insured to pay part of the loss before the insurer makes any payment under the terms of the policy. Deductibles typically are found in property, health, and automobile insurance contracts. The purpose of establishing deductibles is to eliminate small claims and reduce the average pure premium and administrative costs associated with claims handling. Deductibles can also reduce moral hazard by encouraging persons to be more careful with respect to the protection of their property and prevention of loss.

Defined benefit. The amount, usually formula-based, guaranteed to each person who meets defined entitlement conditions. The formula usually takes into account the individual number of contribution or insurance years and the individual amount of earnings during the same period.

Delphi method or nominal group technique. A method of business forecasting that consists of panels of experts expressing their opinions on the future and then revising them in light of their colleagues' views so that bias and extreme opinions can be eliminated.

Demand. The amount of a good or service that consumers seek to buy at a given price. *Solvent demand* implies the ability to pay as well as the willingness to pay. *Elasticity of demand* is a measure of the responsiveness of total spending on a particular good or service to a change in its price. *Elastic demand* implies that as the price goes up the total expenditure falls. *Inelastic demand* implies

that as the price goes up total expenditure also goes up. Necessities typically have inelastic demand (given an adequate income base). For example, the imperative to have an aching tooth removed means that the dentist is in a position of power to charge a high price; such dental services have inelastic demand, and it is unlikely that a lower price would attract people not suffering from toothache to have a tooth removed. The concept of “necessity” and therefore of what has an inelastic demand is cultural. In some cultures prenatal care may not be considered a necessity. Demand for some procedures may be truncated in poor communities. *Truncated demand* means that although the demand for surgery (for example) is inelastic and does not change with price, above a certain price it becomes zero. As half an operation is not an option, the demand is truncated because of poverty.

Demand-side financing. Demand side financing entails directing subsidies to the targeted group of beneficiaries to enable them to purchase specific services. It can also involve the directing of subsidies to providers selected by beneficiaries.

Derivative. A derivative is a financial asset or liability whose value depends on (or is derived from) other assets, liabilities, or indexes (the “underlying asset”). Derivatives are financial contracts and include a wide assortment of instruments, such as forwards, futures, options, warrants, swaps, and composites.

Derivative contract. A contract whose value derives from an underlying financial instrument like a stock, commodity, or index.

Direct public delivery. Provision of services to the people through government facilities.

Disempowered. Removal from the list of networked providers under the insurance scheme, usually due to fraudulent behavior or inability to meet specific criteria set by the insurer.

Dual theory of risk. The theory that describes the attitudes of individuals toward insuring themselves, by weighing their wealth against their aversion to risk. Two possible modifications could swing the balance in favor of insurance: decreasing the premium or increasing aversion to risk. Even with identical feelings toward monetary loss, individuals would likely adopt different attitudes toward insurance because their feeling is different toward the probability of monetary loss; the higher that assessment, the more attractive insurance is. Consequently, two individuals sharing the same utility index for certain wealth cannot have a different degree of aversion to risk (and the converse).

Dumping. Termination or transfer of membership of the sick and/or older people by the insurer.

Duplicate private insurance. A policy that offers coverage for health services that are already included under a public program. The individual remains covered by the public program but opts to buy and use private health insurance instead in order to obtain broader access or better quality. Individuals are not exempted from making their required contribution toward the public program.

Empaneled hospitals. Hospitals on the list of networked hospitals of an insurance plan or a third-party administrator (TPA) from which services can be used under the insurance scheme. Empanelment involves meeting specific criteria on availability of infrastructure, equipment, and professional staff. In the Indian context, this also implies availability of cashless services arranged by the insurance plan or TPA in the hospital.

Endemic disease. A sickness habitually present in an area or population.

Enrolment. The process by which a group of individuals or families register to receive scheme services.

Epidemic. The occurrence of any disease, infectious or chronic, at a frequency greater than expected, based on prior patterns of disease incidence and prevalence.

Epidemiological transition. The changing pattern of health and disease within a specified population from a predominantly infectious disease pattern of low life expectancy and high mortality, to a predominantly chronic disease pattern of high life expectancy with high morbidity. In the intermediate stage of transition, high survival rates from endemic infectious disease, combined with high rates of chronic illness in survivors, result in a “double burden of disease.” The latter is typical of many developing countries.

Equalization reserves. See *Contingency reserves.*

Estimation. The process by which sample data are used to indicate the value of an unknown quantity in a population. Results of estimation can be expressed as a single value, known as a point estimate, or a range of values, known as a confidence interval. The outcome of estimation is the *estimator*.

Excluded population or excluded communities. Typically agricultural, self-employed, or poor people who have neither formal employers nor steady wages as the basis for access to government-run or commercial health insurance. They may

also be excluded from housing, education, disaster relief, and other social services. They may also be unable to access financial services or to secure formal recognition of property they control or own, including property obtained under traditional (tribal) law.

Experience rating. A system in which the insurance company evaluates the risk of individuals or groups by examining their health history and claims experience when setting premium rates. *Modified experience rating* places limits on the extent to which rates may vary based on claims experience or health status.

Explicit entitlements. Clearly stated or defined coverage and the terms and conditions associated with such coverage.

Externalities. Benefits or costs with an impact beyond the parties to a transaction. That impact is not considered in the buy/sell decision and so is not reflected in the price. Pollution is an example of an external cost; safe waste disposal has external benefits.

Fairness. See *Ability/willingness to pay*.

False negatives (undercoverage). Overlooking subjects/persons that possess the attribute for which the criterion is laid out.

False positives (leakage). Selection of subjects/persons that do not possess the attribute for which the criterion is laid out.

Fee-for-service payment is a system in which services are unbundled and providers receive a fee for each service they deliver to a patient, such as an office visit, test, procedure, or other health care service.

Fiduciary. A person who holds something in trust for another.

First-line insurer. See *Insurer*.

Fiscal limit. The fiscal limit is defined as the point at which the government no longer has the ability to finance higher debt levels by increasing taxes, so either an adjustment to fiscal spending or monetary policy must occur to stabilize debt.

Formal sector. The part of the economy/society that is registered with authorities and that is subject to regulations and standards.

Free riding. Exists in health care when persons can benefit from a health care system without contributing to the system.

Gatekeeper. A primary care physician responsible for overseeing and coordinating all of a patient's medical needs. The gatekeeper must authorize any referral of the patient to a specialist or hospital. Except in cases of emergency, the authorization must be given prior to care.

General fertility rate. A measure of the total number of live births per 1,000 women of reproductive age.

Government failure. Occurs where government does not provide goods and services or an adequate regulatory or support framework for the private sector to provide them.

Gross domestic product (GDP). The annual total value of goods and services produced in a country for use in that country.

Health maintenance organization (HMO). See *Managed care plan*.

IBNR provision. Provision for claims incurred but not reported by the balance sheet date. That is, it is anticipated that a number of insured losses would have occurred and would therefore result in a liability on the insurer upon filing of a claim. The magnitude of this provision can be expected to be reduced as the time since the insurance risk on the contract lengthens. The magnitude is also likely to vary depending on the type of insurance risk covered by any particular class of insurance contract.

Imperfect competition. Occurs in markets or industries that do not match the criteria for perfect competition. The key characteristics of perfect competition are a large number of small firms, identical products sold by all firms, freedom of entry into and exit out of the industry, and perfect knowledge of prices and technology. These four criteria are impossible to reach in the real world.

Income effect. A price reduction that gives buyers more real income, or greater purchasing power for their income, even though money or nominal income remain the same. This price reduction can cause changes in the quantity demanded of the good.

Independence. Two events are independent if the occurrence of one of the events gives no information about whether or not the other event will occur; that is, the events have no influence on each other. For example, falling ill with measles may be independent of being injured in a cyclone.

Induced demand. Demand created by physicians who face inelastic demand and so can set both the price and the level of care. This ability to determine their

own income is difficult to control and has great repercussions on health budgets.

Informal risk-protection mechanism. See *Informal sector*.

Informal sector. The part of the society/economy that is not registered with authorities and, whether with legal exclusion or without it (de jure or de facto), is not subject to public regulation and does not benefit from public services or goods. For example, support given by a family, friends, and members of a community in times of loss or illness effectively forms an informal risk-protection mechanism. Despite the presumption that such care is voluntarily given, in some cases (e.g., providing care to foster children), payment may in fact be given.

Initial capital requirement. Minimum initial capital that is required to obtain a license, that must be provided before an insurer commences business, and that cannot be used to finance start-up costs.

Inpatient. Individual admitted to a hospital for health care and allocated a bed for the duration of that admission.

Insolvency. Inability to meet current expenses from current income plus reserves, leading, in the long run, to bankruptcy.

Institution. Social constructs that contain “rules of the games” and thereby both constrain behavior and enable behavior within those rules. By enabling the individual and organization to understand and predict behavior, the social constructs facilitate economic and social interaction. Institutions include regulations and policies of organizations and governments. They also include community-based traditional patterns of behavior and those that have developed in the face of modernization.

Insurability. A risk is insurable if it is random and if there is a party willing to accept the risk for an agreed premium and another party prepared to pay that premium (this means it is solvable). This situation implies that the probability is known; it is free of moral hazard and adverse selection problems; it is a legal proposition; and the premium is affordable. Practical problems associated with information availability may render otherwise insurable risks uninsurable.

Insurance. Insurance is any activity in which a company assumes risk by taking payments (premiums) from individuals or companies and contractually agreeing to pay a stipulated benefit or compensation if certain contingencies (death, accident, illness) occur during a defined period.

Insurance threshold. Insurers typically request that the insured pay the first part of any claim. This cost sharing is a form of deductible, used to simplify administration by reducing the number of small claims.

Insured. Also called principal; the end user contracting with an insurer for insurance coverage.

Insured unit. See *Subscription unit*.

Insurer (first-line, primary, or ultimate). The company that contracts with the end user for insurance. The first-line insurer may be the ceding insurer if it chooses to reinsure.

Intermediaries. Any natural person or legal entity that engages in insurance intermediation (in any medium). Intermediaries are generally divided into separate classes. The most common types are “independent intermediaries” who represent the buyer in dealings with the insurer (also known as “independent brokers”) and “agents” (generally including multiple agents and subagents) that represent the insurer.

Lakh. A unit in the Indian numbering system equal to one hundred thousand (100,000).

Law of large numbers. The concept that the greater the number of exposures, the more closely will actual results approach the probable results expected from an infinite number of exposures.

Licensed insurer. Refers to a financial institution/insurer that receives a permit from a regulator or a supervisor to do specific financial business as defined by that particular license.

Load. The cost of insurance (administration, finance, and so on) as distinct from payouts (benefits). Efficient companies have a low load relative to benefits.

Local government unit (LGU). The term used to describe public authorities at lower-than-national level (e.g., region, province, district, municipality).

Macroeconomic. Refers to factors that operate at the national and global levels, for example, exchange rates, inflation rates, and interest rates. The origins of any factors operating at the local level are large scale. Macroeconomic shocks are changes in the large-scale factors that affect the economy and society.

Managed care plan. A scheme that pools risks and directly provides or arranges for health care services.

Mandated benefits. Minimum coverage standards imposed by government in order to ensure that certain benefits are covered, especially when coverage serves a primary or more extensive role. They provide protection against insurer risk selection that discriminates against high-risk individuals.

Mandatory private insurance. A system in which individuals or employers are required by law to purchase private health insurance.

Market failure. A condition in which a market does not efficiently allocate resources to achieve the greatest possible consumer satisfaction. The four main market failures are public good, market control, externality, and imperfect information. In each case, a market acting without any government-imposed direction does not direct an efficient amount of resources into the production, distribution, or consumption of the good.

Mean. Average. It is equal to the sum of the observed values divided by the total number of observations.

Medical underwriting. A process of detailed medical scrutiny of health status used by insurers to counter adverse selection and accomplish four specific goals: ascertain the level of risk associated with the person or group applying for insurance, decide if a policy should be sold, decide the terms of the policy, and decide the premium level for the policy.

Members. See *Subscription unit*.

Microfinance institution (MFI). Provides financial services to the poor on a sustained basis. The services include saving and credit societies, agricultural insurance, property insurance schemes, and more recently, health insurance schemes.

Microinsurance. A mechanism for pooling a whole community's risks and resources to protect all its participating members against the financial consequences of mutually determined health risks.

Microinsurance unit (MIU). A very small finance institution specifically designed to offer health insurance to the poor by pooling risks across a community.

Moral hazard. An insurance-prompted change in behavior that aggravates the probability of an event in order to access benefits, for example, an insured's

demanding tests not required on medical grounds (*demand-side moral hazard*). Provider-induced moral hazards include overservicing (supply-side moral hazard). Demand-side moral hazard describes consumers' propensity to seek more health care services than they would if they did not have health insurance. Supply-side moral hazard describes providers' propensity to provide more services than they would if the individual did not have health insurance.

Morbidity. Refers to illness from a specified disease or cause or from all diseases. It is a change in health status from a state of well-being to disease occurrence and thereby a state of illness.

Mortality. Refers to death from a specified disease or cause or from all diseases.

Multilateral utility. See *Utility*.

Nominal group technique. See *Delphi method*.

Nongovernmental organization (NGO). Generally refers to a not-for-profit or community organization.

Normal distribution. Statistically speaking, values of events fall in a pattern around the average value with known frequencies. For instance, if the average stay in hospital after childbirth is three days, the values of each stay would be distributed around three, some more, some less, approximately symmetrically, with greater concentration around three than around any other number. The normal distribution is a particular distribution of this kind that is rigorously defined mathematically and gives the typical bell-shaped curve when graphed. This distribution is very powerful in enabling insurers to calculate costs and utilization.

Off-site monitoring. Review not involving physical visits to the regulated entities that evaluates the financial condition and performance of these entities, including checking assets and liabilities valuation, off-balance sheet exposures, and outsourcing.

Ombudsperson. An official appointed to investigate individuals' complaints against administrative deficiencies, especially those of public authorities.

On-site inspection. A physical examination of a regulated entity to see if it meets the required contractual standards of all involved parties. This procedure supplements information needed for analysis of the reports submitted to the supervisory authorities. Inspectors can be staff of the supervisory authority or the task can be outsourced to specialists certified and supervised by the

- authority. On-site inspections can be full scale and comprehensive or be focused on areas of specific concern.
- Out-of-pocket expenses.* The money an individual or family pays a provider directly from their own funds, usually because the service or commodity is not covered by any insurance plan or government scheme.
- Outlier.* Denotes events that fall outside the norm. For example, in a “review of utilization” a provider who uses far fewer or far more services than the average is called an “outlier.”
- Outpatient.* Person receiving health care without admission to a hospital or accommodation in it. The length of stay is less than 24 hours. The care may be a consultation or a technical act (diagnosis or therapeutic procedure).
- Package rate.* Predetermined bundled price for a range of hospital services related to the provision of a specified procedure, episode of illness, or specified treatment, as mutually agreed between hospitals and insurance plans.
- Pandemic.* A disease that is prevalent throughout a locality or population.
- Parameter.* A number that describes a characteristic of a population. For example, the life expectancy of men in a community might be 56 years. Health insurance uses statistical techniques to estimate the parameter, and the estimation of the parameter is called the statistic. One sample of 50 men taken from the community might estimate the average age statistic to be 54 years while another sample might estimate it to be 57.5 years.
- Pay-as-you-go.* Refers to a system of insurance financing under which total expenditure (benefit expenditure plus administrative expenditure) in a given period is met by income (contributions and other sources) from the same period. Pay-as-you-go insurance schemes do not accumulate reserves, except contingency reserves; surpluses and deficits translate into increases or decreases in the premium.
- Per capita premium.* The practice of applying a single premium per head across the population.
- Point estimation.* An estimate of a parameter of a population that is given by one number.
- Population density.* A measure of the size of the population relative to the size of a specified geographic area (region, country, province, city). Typically, it is a count of the number of residents per square kilometer.

Preauthorization. Assurance given by the insurer to the providers and the insured that the plan will reimburse the providers directly for the authorized costs of the services or commodities delivered.

Preexisting condition exclusion period. A mechanism that protects the insurer against adverse selection by delaying coverage for health expenses incurred by an individual that is related to a condition an individual had prior to applying for health insurance. The rules governing exclusion period vary, but often can limit coverage for conditions that received medical attention, or conditions for which the person arguably should have sought treatment, or for which there were clear signs or symptoms. Premiums are still due during this exclusion period.

Preferred risk selection. See *Cream skimming*.

Premium. Fee paid by an insured to an insurance company in return for specified benefits. Under social insurance the premium is called contribution. See also *Contribution*.

Prevalence. The total number of cases or people who have a specified disease, health condition, attribute, or risk factor within a specified population at a specific point in time.

Preventive health care. Medical care directed primarily toward early detection and treatment or prevention of disease or ill health (e.g., immunizations, prenatal care).

Primary health care. The first level of contact by individuals, families, and communities with the health system, bringing health care as close as possible to where people work and live. The organization of primary health care depends upon the socioeconomic and political characteristics of the country, but should address preventive, curative, and rehabilitative services and include education of the population about major health problems and their prevention and control. Such care may be provided by a variety of health workers, acting together as a team, in partnership with the local community.

Primary insurer. See *Insurer*.

Primary private health insurance. Term is used when private health insurance is the only form of health insurance available to an individual because there is no public option available or one is ineligible for it.

Probability. A quantitative description of the likely occurrence of a particular event. Probability is conventionally expressed on a scale from 0 to 1; a rare event has a probability close to 0, a very common event has a probability close to 1.

Probability distribution. The probability distribution of a discrete random variable is a list of probabilities associated with each of its possible values. It is also sometimes called the probability function or the probability mass function. For example, the probability of a woman's delivering a single live baby might be 98 percent, twins 1.78 percent, triplets 0.218 percent, more than triplets 0.002 percent.

Providers. Doctors, nurses, hospitals, clinics, laboratories, imaging facilities, pharmacies, and other deliverers of medical services. The insurer or regulating body typically requires that a provider be qualified or registered in order to be included in a health insurance scheme.

Provider-induced demand. Affecting consumer demands by physician or provider variables when common demand-side variables (such as demand price, income, and clinical needs) are controlled. In other words, demand that would not have existed without provider instigation.

Provider payment mechanisms. Various mechanisms applied to transfer funds from the purchaser of health care services or procedures to the provider of such services to promote access to health services, improve quality and equity, and ensure the efficiency and effectiveness of resources.

Prudential regulation system. Standards that facilitate proper functioning of insurers through licensing, reporting, fit-and-proper requirements, capital adequacy, and product regulation, which limit risk-taking by insurance institutions, ensure the safety of depositors' funds, and keep the stability of the financial system.

Public goods. There are two aspects to public goods: it is difficult to prevent non-payers from consuming them (nonexcludable), and their consumption by one party does not affect their consumption by others (nonrival). Vaccination is an example—those who do not pay and are not vaccinated cannot be excluded from enjoying the lower prevalence of disease, and the fact that they are healthy as a result does not affect another's ability to be healthier as a result of the program. Government usually provides public goods, because private businesses do so profitably.

Public private partnership (PPP). Collaboration/partnership between the private sector and the government sector for the provision of services, intended to maximize each party's resources and skill sets.

Pure premium. The pure premium can be defined as the average loss per exposure unit for a specific coverage or, more specifically, the product of the average severity and the average frequency of loss. The result is the amount that the insurance company should collect to cover all the losses to be met under the predefined types of coverage.

Qualifying conditions. Requirements for acceptance into an insurance plan; also describes the provisions that must be met before a benefit is payable.

Rating. See *Risk rating*.

Recovery gap. An excess of benefit payouts over income, when the *compliance gap* is assumed to be zero. The recovery gap is not random and so cannot be solved by reinsurance.

Reinsurance. The transfer of liability from the primary insurer, the company that issued the contract, to another insurer, the reinsurance company. This mechanism allows a diversification of the risk and enlarges the risk-pooling base, thereby reducing the risk of insolvency. However, reinsurance extends only to risk defined in the cession contract (called treaty). For example, a treaty to cede fluctuations in payouts will not cover the primary insurer against the financial risk of insolvency, for example, because of poorly run or unviable insurance.

Reinsurance premium. The amount charged by the reinsurer to accept an agreed amount of risk.

Reinsurance threshold. Reinsurers typically require that the insurer retain the first proportion of risk for any event. That proportion is the threshold as it is equivalent to the deductible or excess borne by the insured when making a claim against property insurance.

Reinsurer. An insurance company for insurers. A reinsurer offers protection through the sale of a reinsurance contract to a risk-transferring policyholder who is an insurer. If the risk-transferring policyholder is a (re)insurer itself, the risk-assuming insurer is called the reinsurer, and the risk transfer is known as (retro)cession.

Reserves. Funds set aside to meet unforeseeable liabilities (i.e., an obligation that has not yet materialized) or statutory requirements, and stemming either from shareholders' capital or, in the case of mutuals, members' contributions and from accumulated surplus. Reserves are part of own funds (in contrast to provisions) that support liabilities to parties other than shareholders or other

- owners. A major member management goal is to minimize reserves and thus maximize funds available for current use.
- Risk.* The probability or likelihood that a specified health event (e.g., the occurrence of a disease or death) will occur to an individual or population group within a specific period of time.
- Risk factor.* An attribute (e.g., a lifestyle factor or a personal characteristic) or an exposure to an environmental factor associated with an increase in the probability that a specified health event (e.g., onset of disease) will occur.
- Risk pooling.* A health system function in which collected health revenues are transferred to purchasing organizations, and the pooled risk of bearing the health burden of health services is shared and dispersed over large numbers of heterogeneous contributors. Insurers pool risk through reinsurance.
- Risk rating.* Calculation of health insurance premiums based on the risk of each client. Basing the premium calculation on the risk not of a single individual but of a group is called *community rating* or *group rating*. Setting the premium in relation to the client's income is called *income rating*.
- Risk selection.* A practice of excluding those who may present a higher risk for the insurer by making more frequent or more costly claims.
- Risk sharing.* Individuals agree to split the cost of risky events. Insurers share risk through reciprocal relationships and reinsurance. Loan guarantees and insurance are among the many ways of sharing risks.
- Self-insurance or self-protection.* Refers to all the arrangements made by an individual or group to protect themselves from risk. It includes not only saving and establishing contingency reserves but also changing behavior to diminish or avoid risk.
- Simulation.* The technique of imitating behavior and events during an experimental process. Typically involves a computer.
- Social capital.* Refers to the multidimensional "glue" that binds community members together. While concepts of social capital vary from culture to culture, Putnam (1993) defined it as including trust, community involvement, tolerance of diversity, value of life, and extent of connectivity (socially and professionally).
- Social exclusion.* Inadequate or unequal participation in social life, or exclusion from a place in the consumer society, often linked to the social role of employment or work.

Social insurance. An insurance program that is shaped by broad social objectives, not just by the self-interest of each individual principal or agent, while retaining insurance principles that persons are insured against a definite risk.

Social protection. Policies and programs designed to reduce poverty and financial vulnerability. Social protection policies typically focus on labor market policies, social insurance, social assistance, community-based schemes, and child protection.

Social reinsurance. Reinsurance undertaken in pursuit of social goals rather than profit.

Social utility. The gain to society from, in this case, insurance. Where insurance has zero or negative social utility it may be banned; where it has high social utility but low private utility it may be mandated. The choice of rendering a public utility mandatory or not depends on political will or the power of authorities, including community leaders.

Soft budget. A budget with a flexible limit.

Solidarity principle. Applying rules that spread risks and resources across members of a group in a way that provides both insurance coverage and egalitarian distribution. *Risk solidarity* would imply that high-risk individuals receive a subsidy from low-risk individuals, allowing all risk levels equal access to health care coverage. Solidarity between high- and low-income individuals, or “*income solidarity*,” implies income redistribution through organized transfers. In insurance, the solidarity principle is juxtaposed to the *equivalence principle*, which implies that the insurer has to break even on each insurance contract, by applying *risk rating*.

Solvable. An insurance transaction is said to be solvable if the risk is observable; there is no antiselection (adverse selection), and the premium is acceptable to both parties.

Solvency margin. Surplus of assets over liabilities.

Solvency requirements. The whole set of statutory requirements or rules as regards the required solvency margin and eligible capital elements to cover the margin. The set includes the performance of the solvency test to prove compliance with these requirements.

Solvent demand. See *Demand*.

Standard deviation. A statistical term for a measure of the variability in a population or sample.

Subscription unit. Refers to the people covered by a single membership. This may be the individual (usually in developed economies) or the household (usually in developing economies).

Supervisor. An administrator of insurance laws responsible for monitoring of the management of an insurer or intermediary. Also supervisory agency/regulator.

Supplementary private health insurance. Provides coverage for health services that are not covered by a public program, such as luxury care, elective care, long-term care, dental care, pharmaceuticals, rehabilitation, alternative or complementary medicine, or superior amenities in the hospital (differs by country).

Swaps. See *Derivative*.

Target group. Refers to both current and future beneficiaries of the insurance system. The target group can comprise several subgroups of people with similar characteristics (e.g., income, economic sector).

Technical provisions. Funds for outstanding claims or unearned premiums, required by supervisors. Also reserves.

Third-party administrator (TPA). An organization that processes insurance claims or provides other services related to administration of health insurance plans for a separate entity. This can be viewed as “outsourcing” the administration of claims processing, since the TPA performs a task traditionally handled by the company providing the insurance.

Top-down global strategy. Implies that a public policy, for instance the approach to improving access to health care or health insurance, was directed by a powerful global body to national governments and down through the rank and file to the community. This contrasts with the “bottom-up” approach based on the empowerment of communities.

Transaction costs. The costs additional to the price of a good or service, arising, for example, from search costs, travel costs, marketing and distribution, or transfer of ownership costs.

Ultimate insurer. See *Insurer*.

Underwriter. A company that receives the premiums and accepts responsibility for the fulfillment of the policy contract; the company employee who decides

whether or not the company should assume a particular risk; the agent who sells the policy.

Underwriting. The process by which the insurer decides what risks to cover. The profit objectives may conflict with social obligation. For the reinsurer, underwriting considerations determine the risks of the primary insurer that can be accepted for reinsurance, and which the insurer will retain.

Underwriting assistance. Reinsurance companies gather extensive data on the insured and events. They can share this information with insurers to improve the performance of insurers.

Unilateral utility. See *Utility*.

Uninsurable. See *Insurability*.

Unit cost. The average cost of particular health care treatments.

Universal coverage. Implies that all members of a country (or a community) have health insurance.

User fees. Charges payable by users, usually at the point of service.

Utility. The satisfaction gained from having the desire for goods and services met. Multilateral utility means that several parties benefit from outcomes. These parties can be a group of insured or the insurer and the insured. Unilateral utility means that only one party gains. The balance between group and individual utility is a delicate component of relations within a community, between insurer/insured, or between insurer/reinsurer.

Utilization. Refers to utilization patterns of medical services in a location over a period. Data on recent utilization, collected at the national and community levels, are a valuable asset in predicting future patterns.

Variation coefficient. See *Coefficient of variation*.

Vector-borne infectious disease. Infections caused by human contact with an infectious agent, transmitted from an infected individual by an insect or other live carrier. For example, malaria is biologically transmitted from an infected individual to a noninfected person by the same mosquito (the vector) biting both people.

Waiting period. A mechanism that protects the insurer against adverse selection without significantly restricting access by delaying the period before an individual will be covered for any services he or she receives after the effective date of coverage. Policy premiums are still paid during this time.

Working capital. Current assets minus current liabilities. It is the capital available for an organization's short-term financing.

Willingness to pay (WTP). See *Ability to pay*.

Note

This glossary was adapted from "Glossary of Terms," the appendix in *Private Voluntary Health Insurance: Consumer Protection and Prudential Regulation*, by Gregg Brunner, Pablo Gottret, Birgit Hansl, Vijayasekar Kalavakonda, Somil Nagpal, and Nicole Tapay, 77–97, World Bank, Washington, DC, 2012. Definitions derived from the present text were added.

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This is an outstanding piece of work. I strongly recommend it for all persons who are interested in health and in insurance in India.

—**J. Harinarayan**

*Chairman, Insurance Regulatory and Development Authority
Hyderabad, India*

This excellent study has provided, for the first time, a comprehensive understanding of health insurance in India. The recommendations are insightful and need to be carefully examined by the policymakers at the central and state levels when designing future strategies.

—**K. Sujatha Rao**

*Former Secretary, Ministry of Health and Family Welfare
Government of India, New Delhi*

This book is required reading for policymakers and planners in India who seek to strengthen and expand government-supported health insurance as well as improve the broader health financing and delivery systems.

—**G. Kumar Naik**

*Executive Director, Vajpayee Arogyashri Scheme
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This comprehensive study of government-sponsored health insurance schemes (GSHIS) is a highly valuable and timely input to the central and state governments in effecting strategic and operational changes essential for leveraging the full potential of these schemes. This study provides comprehensive policy prescriptions and programme insights that will go a long way in helping the governments address the existing lacunae in design and implementation.

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