Aarogyasri Healthcare Model: Advantage Private Sector

RAJAN SHUKLA, VEENA SHATRUGNA, R SRIVATSAN

Andhra Pradesh's Aarogyasri programme has placed health on the political map in the state and is popular with the masses. However, corporate hospitals handle the biggest share of the cases and there is no provision for outpatient treatment of everyday illnesses that affect the working capacity of the patient. The focus on tertiary healthcare to the exclusion of all other forms of medical assistance leads to an inefficient medical care model with a low level of real impact on meeting the needs of healthcare and the health of the population. There is need for a debate on the healthcare and techno-commercial performance of the programme, especially if it is going to be copied by other states and even by the centre in introducing some form of universal healthcare.

Rajan Shukla (*rishab242@gmail.com*) is with the Indian Institute of Public Health, Hyderabad, Veena Shatrugna (*veenashatrugna@yahoo.com*) was with the National Institute of Nutrition and R Srivatsan (*r.srivats@gmail.com*) is with the Anveshi Research Centre for Women's Studies.

Public health policy and administration in India, as developed over the past 60 years, has been characterised mainly by family planning, immunisation and specific disease eradication programmes. While such programmes (e g, the oral polio immunisation scheme) are given high publicity in the media (often driven by the agenda of global agencies), there has been a comprehensive silence over the widening gap of availability of quality curative care in the healthcare system. It is common knowledge that 80% of healthcare expenditure in the country is borne by the sick person (out of pocket – OOP – expenditure). The complete deterioration of clinical care at the primary health centres (PCHS) is only one indication of a much larger governmental trend.

> Venkatesh is a 27-year-old MPhil student of economics in a central university. He had worked on an agricultural farm, and during the lean period, used the National Rural Employment Guarantee Act to sustain himself. He was suffering from a nagging back pain for nearly six months. Over time the back pain seemed to subside, and lulled into a false sense of security, Venkatesh lifted a 50 kg bag of grain, only to collapse with acute back pain. Unable to walk he stayed in bed for a day, and then went to a corporate hospital in Hyderabad. The hospital advised him spinal surgery. Venkatesh found that he had to spend a considerable amount of money even before accessing Aarogyasri coverage. His mother sold her jewelry, his co-students and his academic guide helped raise the remaining money through donations from the faculty and students. The surgery completed, Venkatesh has now to live a life of anxiety, with a fairly high probability of recurrence of the problem, and with no guidance to help him strengthen his back and cope with the difficulties throughout his life. His family is also poorer by a hard-earned Rs 20,000. Today, it is known that for this kind of back pain, surgery is not the best answer. The best cure is usually rest, pain medication and a lifelong regime of exercise to keep the back muscles strong. In fact this regime is necessary even if surgery is performed.

We trace the Aarogyasri programme to a series of politically significant events that were selectively highlighted by the Andhra Pradesh (AP) government to build an orchestrated consensus for the project.

Healthcare in Andhra Pradesh

The first of these events appears to be the recognition of the precarious health condition of the farmers in the report of the Jayati Ghosh Committee (2006)[1] on economic distress in the agricultural sector. In its chapter on health and nutrition, the report discusses the poor health indicators, the failure of the public health system, and the cost of privatised care, that were contributory factors to farmer indebtedness, distress and suicide. The chapter concluded recommending that,

> … immediate attention of the government should be on enforcing the provision of free care to the poor by the private hospitals, which have benefited from financial incentives, land grants, etc (p 114).

It is possible to speculate that this specific recommendation of the report was a convenient support to the chief minister of Andhra Pradesh, Y S Rajasekhar Reddy's scheme to provide healthcare for all through corporate hospitals. Not many of the other recommendations to tackle farmer suicides (the original objective of the report) have been implemented.

The lack of adequate healthcare for the poor in AP was, perhaps not so paradoxically, paralleled by the burgeoning of corporate hospitals. Starting in the 1980s Hyderabad and Andhra Pradesh have become a major hub of medical diagnostics (Vijaya Diagnostics and Medinova were pioneers) and healthcare (Apollo, Care, Medwin and Yashoda are the foremost examples) providing world class super-specialty procedures (indeed, also in the process trying to become a key destination for global medical tourism). It is possible to speculate that the strong presence of the post-green revolution entrepreneurial castes from AP in the lucrative medical profession in the US with the know-how and the deep cultural attraction for sophisticated western science and technology has led to the establishment of these hospitals. The exorbitant cost of specialty care is well known and is largely due to the need for a better return on investment. The crisis

of cost for the patient is compounded by the fact that healthcare is a basic, essential service, and cannot be considered as a marketable (i e, private) good. The strong asymmetry of information, coupled with geographic restriction of availability, absence of standard treatment protocol, lack of any quality assurance agency, and an urgency of need, results in an oligopoly. Thus super-specialty hospitals form cartels to keep prices artificially high. In the circumstances, these hospitals were willing to accommodate the poor who thronged the streets and neighbourhoods they were standing in, provided the costs were borne by the State.

From 2004 onwards political conditions were ripe for the introduction of some innovative health measures in AP. The chief minister (Rajasekhar Reddy was a qualified medical doctor) needed ways to guarantee his re-election in the coming polls.[2] He also had a long-lasting interest and financial commitment to healthcare. Between May 2004 and June 2007, the Chief Minister's Relief Fund had spent Rs 168.52 crore to help 55,362 below poverty line (BPL) patients needing hospitalisation.[3] However, this aid was ad hoc, and given to those who had the resources and connections to tap into it. In addition, since in order to avail this, the patient also had a significant OOP expenditure, the purpose of using this money, i e, averting a debt trap for the patient, was not effectively met. In 2006, Manda Krishna Madiga, one of the founders of the Madiga Dandora – a wide spread dalit movement demanding the proportionate reservations to different sub-castes among the scheduled castes (SCs) – undertook a padayatra to highlight the problems of young children with heart ailments. Shocking media visuals depicted parents carrying sick children on the city streets in the peak of summer, and led to a focus on heart problems among the children of the poor. Soon after, Rajasekhar Reddy promptly announced free heart surgeries for these children and by August 2006, more than 4,600 children were operated under the Chief Minister's Relief Fund. It must be noted at this point that most of the children had preventable health problems, e g, rheumatic heart disease, or issues to be taken care of in the long run by education, e g, congenital heart problems likely due to consanguineous marriages. None of these contributory factors, preventive measures or health education strategies were discussed, but the magnanimous gesture of funding the heart operations on children set the stage for the Aarogyasri programme. The point to note is that Rajasekhar Reddy's political astuteness and understanding of healthcare were important factors that led to the scheme.

As we shall discuss, the programme by design does not address primary or secondary level healthcare requirements, the assumption being that the public sector has a mandate to provide these services. In fact, Aarogyasri's focus on tertiary healthcare to the exclusion of all other forms of medical assistance leads to an inefficient medical care model with a low level of real impact on meeting the needs of healthcare and the health of the population. At the same time, the enthusiastic popular reception of the programme has to be taken note of.

Rajiv Aarogyasri Scheme (2006)[4]

The scheme aims to provide medical care for BPL families up to a value of Rs 2 lakh per year for tertiary surgical and medical treatment of serious ailments, with the explicit aim of helping them avoid a debt trap. The scheme is implemented through the Star Health and Allied Insurance Company, insurer/third party administrator, which was selected through a competitive bidding process. It provides this care through an established network of corporate hospitals, 50+ bedded private hospitals, government medical colleges, district hospitals and area hospitals (and has almost no role for the PHCs). The scheme is run by a public-private partnership called the Aarogyasri Health Care Trust (AHCT, hereinafter the Trust) between Star Health and Allied Insurance, the corporate hospitals and state agencies. The Trust has an oversight role and also ensures that the government departments help in implementation.

The beneficiaries are the members of BPL families as enumerated and identified by the Rajiv Aarogyasri Health Card/BPL Ration Card. The definition of BPL families for the Aarogyasri programme differs from that used nationally, and includes 80% of the population. Each family is allowed a total reimbursement of Rs 1.50 lakh per annum availed individually or collectively. A buffer of Rs 50,000 meets expenses exceeding Rs 1.5 lakh. There are a total of over 900 procedures with this coverage however cochlear implant surgery with auditory-verbal therapy is reimbursed by the Trust up to a maximum of Rs 6.50 lakh. The healthcare transaction is cashless at the point of service. Basic outpatient department (OPD) examination and some diagnostic procedures to establish whether the condition/proposed intervention is in the eligible list, even if they do not result in the patient undergoing any treatment under Aarogyasri, are supposed to be free. Network hospitals, i e, corporate hospitals, are expected to conduct at least one free medical camp in a week, to screen patients in villages. The entire operational database including all transactions is paperless, real-time and online.

In theory, all the PHCs and, area/district hospitals are the usual first contact point for the majority of the beneficiaries. In practice Aarogyamitras (qualified graduates appointed by the Star Health and Allied Insurance Company), who are responsible for "handholding" patients lacking the confidence and the knowledge to engage with the care providers, control the process of referral. In this handholding role, the Aarogyamitras function without checks and restraints from the local health administration since they are not accountable to them. There is anecdotal evidence of Aarogyamitras diverting cases from government hospitals (and even medical colleges) to private hospitals. The Aarogyamitras in the hospital network play an active role in uploading necessary information (see Appendix 1 for a workflow description of a case in the programme).

See Appendix 2 for the general statistics of the Aarogyasri programme till October 2011. Appendix 3 provides an ABC analysis of the cases covered over a significant period.

Structural Features

Focus on Tertiary Care: The Aarogyasri programme is designed for advanced surgical and medical care. When the system was first implemented, this care was available only in corporate hospitals and medical colleges who had been empanelled in the scheme. However, in the second and third year of the programme, the list has been expanded to include smaller private

hospitals and secondary government hospitals. The corporate hospitals continue to handle the biggest share of the Aarogyasri cases. There is no provision for outpatient treatment of everyday illnesses that affect the working capacity of the patient. This lack of early management of illnesses also often results in complications that are more expensively handled in the programme. In effect, the focus on specialty care results in a suboptimal use of healthcare funds. For example the list covers surgical treatment of gastric perforation, but does not cover gastritis and gastric ulcer, which, while requiring simpler and cheaper medical treatment, would have averted the need for surgical intervention.

Medicine Costs: Originally, the post-treatment medication costs were covered only for a period of 10 days. Since about a year now, this coverage has been increased to one year. Research indicates that the cost of medications for in-patient treatment is more than 40% of the total cost of treatment.[5] For complex procedures which may require lifelong medical support, one year's support is clearly inadequate and will need to be increased through some suitable mechanism.

On the other hand, the paper cited argues that expenditure on drugs constitutes around 82% of the OOP expenditure for outpatient visits, and further suggests that cost of drugs leads to impoverishment (ibid). Therefore the Aarogyasri programme has to include outpatient care also. However, the World Bank downplays the importance of drug costs.[6]

Procedure-Driven: It is an accepted fact that when health insurance schemes are started, for any kind of costing for the treatment of an illness, the average duration of illness, the duration of hospitalisation, and a list of the investigations required, is essential information. None of this information was available for the population in AP – in fact even the disease burden and morbidity profile of the BPL populations were not known. This "technical problem" was not of consequence to the Aarogyasri programme since it is simply designed on the basis of the cost of the procedures of surgical or medical intervention for which corporate hospitals empanelled in the scheme. In other words, the programme subsidises the working costs of advanced equipment in corporate hospitals through the provision of patients who are supported by the insurance programme. Ideally the payment should be done for disease conditions rather than procedures so that hospitals have an incentive to follow a strategy of the best treatment rather than fall back on exorbitant advanced equipment and technology.

For example, in treatment of uncomplicated cases of acute gallbladder inflammation, laparoscopic (keyhole) surgery is the best option because it avoids an 8 inch long scar, minimises the trauma induced by surgery, cuts down hospital stay and recovery time, etc. However, in complicated cases of gallbladder inflammation, a conventional abdominal surgery with a wide incision is the best option and in fact the laparoscopic procedure is contraindicated. Since Aarogyasri covers the treatment only if laparoscopy is performed, surgeons are forced to use the laparoscope in complicated cases, declare that the surgery is not possible, and then proceed with a conventional surgery to be eligible for treatment. Thus, the clinical competence of the doctor to make the appropriate treatment decision is undercut by the procedure-driven form of Aarogyasri insurance. Similarly conservative management of spine stress disorders is not covered, but spinal surgery is, the documented outcome of which is very poor.[7] In addition, the patient has to be managed with physiotherapy, rest, painkillers and movement restrictions after spinal surgery anyway. But hospitals are forced to perform a laminectomy or vertebral fusion, as they cannot opt for conservative management which is cheaper and more effective.[8] Venkatesh's case in the epigraph is exemplary of how, under Aarogyasri, orthopedic spinal care is most often treated by spinal surgery rather than by conservative management. There are three consequences to this unusual route of cost determination:

One, since the focal point is the procedure, there is no protocol for determining the best modality of treating the patient, and whether the patient actually needs the procedure. There is only one to determine, once the procedure is decided upon, whether the hospital follows the standard protocol for that procedure. Thus, in January 2010, it was discovered that several hospitals in the smaller towns in the state were performing unnecessary hysterectomies to benefit from the Aarogyasri largesse. The government has cracked down on this and has instituted protocols. However, the case of unnecessary hysterectomies is only one example of the possibilities of unnecessary surgical interventions that lurk on the horizon.

Two, as we have already noted, the procedures approved are often high cost interventions when compared to their less expensive conventional counterparts: e g, gastrointestinal cases are funded for high cost laparoscopic (keyhole) surgeries rather than for the more conventional and cheaper abdominal surgeries (e g, laparoscopic appendicectomy[9] is funded rather than conventional appendicectomy, the only advantage of the former being the avoidance of a two-three inches scar). Here it is important to note that conventional care has better penetration in rural/quasi-rural institutions compared to advanced high cost care which is sustainable only in metros and big cities. Hence, an insurance funding mechanism which covers only high cost procedures will bias the medical system towards an urban-centric specialty system and against a broader distribution of medical care throughout the state. It also restricts the local availability of treatment (as only advanced treatment is covered under Aarogyasri) in rural and remote areas.

Three, the cost of the procedure is determined at the initiation of the programme based on the current costs at that time. The reduction in the cost of the procedure due to the increased patient base provided by Aarogyasri is not accounted for, leading to a profitable enterprise for the hospitals at the cost of state funds.

Insurance Risk Free: Normally the insurance company maximises its profits by closely monitoring the hospital's practice and claims to limit payouts. In Aarogyasri, the insurance company benefits every time bills are paid since they take 20% of the amount paid out. Even when funds are returned unspent, the insurance company makes 10% of the returned money as a handling fee. Therefore it is not interested in monitoring inflated expenditure at all.

Corporate Hospital Control: It must be quite clear by now that the corporate

hospitals have sought near absolute control over the lucrative programme. Six months ago, there was an administrative move to ensure that some of the less specialised procedures are conducted by government hospitals, thus ensuring both a measure of control, and as a way of funding these hospitals. This led to an uproar in which many corporate hospitals vociferously opposed the diversion of patients to government hospitals, and the health secretary and minister were drawn into media glare. The overall structure of the programme is such that it is a cash-rich no-risk enterprise for the healthcare industry in AP.

This bias towards corporate hospitals is evident in another crucial statistic. One would generally assume that the government has a better presence in rural healthcare due to its long history of PHC, area hospital and district hospital network. However, the Aarogyasri programme figures suggest otherwise. About 32% of the Aarogyasri cases in government hospitals are treated in small towns and district headquarters. Against this, nearly 46% of the Aarogyasri cases in corporate hospitals are treated in small towns and district quarters. Thus there is a growth of tertiary care corporate hospitals in the hinterland, providing advanced tertiary care without the robust foundation of primary and secondary care. In such a context corporate hospitals have increased in size and number, at the cost of the governmental healthcare network, carrying with it all the risks of unnecessary, undefined and excessive medicalisation, uncontrolled use of the patient as an instrument to channel funds, and an absence of any check on medical intervention on patients who are completely out of their depth in the healthcare system.

Health Impact: One of the difficult questions that the Aarogyasri programme raises is about the health impact it has on morbidity and epidemiological profile. While it is designed to take care of catastrophic expenditure due to serious illness it leaves us wondering about the broader effects it has on the general level of health of people. How does one measure this effectively, and how do we measure the relative effectiveness of treatment between the domains of widespread morbidity and sharply defined acute medical care? For example, in 2009, the widespread outbreak of dengue fever resulted in the then Chief Minister Rosaiah declaring that dengue would be treated under Aarogyasri, only to be contradicted the very next day by the Aarogyasri minister, Satyanarayana on the grounds that it was not included in the list of 943 treatments covered under the programme.[10] The complete capitulation of healthcare priority to corporate hospital interests is clear in this result which borders on a medical atrocity.

Expertise, Technology and Industry Dominance: The combination of expert knowledge, high technology and healthcare industry dominance in the programme make for an extremely potent cocktail. On the one hand, expert medical knowledge decides that a specific treatment is necessary, and this decision is driven only too often by an investment decision by the corporate hospital in expensive high technology equipment. The skewed profile of expertise where the doctor has all the knowledge and the patient has none results in a complete submission on the part of the latter. The government has no control over what the healthcare industry decides is necessary for treatment. This scenario is one in which unnecessary, and undefined medicalisation of a problem can occur due to a lack of clear protocols.

No Focus on Epidemics and Region Specific Morbidities: One of the problems of the Aarogyasri programme is the lack of a comprehensive disease management protocol; but the other problem is that it is impossible to recognise any disease that does not fall within the list of problems covered under Aarogyasri. Thus, any disease that does not fall under the tertiary care profile, like malaria, typhoid, cholera, respiratory diseases, and any procedure which does not have a listed profile is neither visible as a disease nor does it qualify for a procedure. This tertiary care driven system does not allow us to determine the ailments of a population that has no access to healthcare. It forecloses the possibility of any indigenous research about diseases that are not epidemiologically important in the west, but are crucial in our conditions.

There has, as of date, been no public debate on Aarogyasri to assess the healthcare and techno-commercial performance of the programme. The patient level data that has been generated and maintained on the Aarogyasri database is not available in the public sphere for analysis and discussion. Only aggregate details are shared in the public domain. In contrast, western countries like the US, UK, Germany and France, which fund medical insurance, allow open access of the data generated by the programme to universities and research institutions. This facilitates sharing information, compounding insights into flaws, generates metadata on the quality of the programme, and acts as a public check on corporate excess. Thus governments look at the healthcare scenario of the population and decide on their healthcare strategy. In Aarogyasri, such a strategic planning dimension for healthcare is completely missing.

Given the interest in the Aarogyasri programme, and the emergent possibility of universal access to healthcare through public-private partnerships in the Twelfth Five-Year Plan, it is essential that the empanelment contract for private hospitals should have a clause that ensures sharing of information for the sake of research, to facilitate mid-course improvements, to map tertiary care epidemiological profiles and to understand patient responses to the programme.

Private Investment and Healthcare: A search on the web about Aarogyasri shows that it has aroused considerable interest in the World Bank and other multilateral funding agencies, institutions like the Ford Foundation which are interested in funding non-governmental work and the social sector, and also finally private equity funds. The high investment, specialised and technically sophisticated corporate hospital, which works on a for-profit basis, but is willing to take the corporate social responsibility to treat the poor if someone is willing to pay, is like a magnet for fund managers interested in strategic, mission related, impact and social investment.[11] This means that such private equity funds would drive ventures to invest in hospitals that are part of Aarogyasri-type programmes which have access to a lucrative guaranteed source of income from insurance schemes. The presence of multinational funding interest only means that these interests will heavily

bias healthcare in India and the kinds of structural flaws described will be even more intense.

Visibility, Charisma and Effectiveness: It is extremely clear from the statement by the panchayati raj minister cited earlier[12] that in the political imagination, the intended purpose of the treatment is a clear memory of the help offered by the benefactor in time of need. Thus, Rajasekhar Reddy had a vision of an electorate which would remember him as the charismatic leader who "took care" of his electorate in their time of dire distress. In this he was singularly successful if the reports of the beneficiaries are taken seriously. However, this is a foothold in a domain where none existed: it was impossible for an ordinary person to imagine that the government would help him in a serious health crisis. How does one convert this foothold into a firm and well-grounded political demand for better healthcare, and how does one administer it in that manner?

Conclusion

The Aarogyasri scheme has been revolutionary in placing health on the political map in the state. It is a major landmark in India's administrative approach to health and has emerged as a popular scheme among the masses. It has given hope to multitudes where none existed. However in its current form, the programme is a means to fund corporate hospital profit and distorts the pattern of healthcare in the state. A re-examination of the Aarogyasri programme is urgently necessary, especially in the context of its emergence as a possible model for universal healthcare.

NOTES

1 The Jayati Ghosh Committee, constituted to look into the problem of farmer suicides in Andhra Pradesh submitted a report in 2006 titled "Report of the Commission on Farmer's Welfare, Government of Andhra Pradesh", informally known as the Jayati Ghosh Committee report. We refer here to chapter 11, "Social Issues, Nutrition and Expenditure on Health and Education".

2 See http://www.hindu.com/2007/04/02/stories/2007040210300500.htm for a statement by the panchayati raj minister on the reasoning behind Aarogyasri: the patient so helped would remember the helper through out his life – note the characteristic focus on memory for vote bank politics rather than on healthcare to ensure welfare. Accessed on 8 October 2011.

3 See Indian Institute of Public Health, *A Rapid Evaluation of the Rajiv Aarogyasri Community Health Insurance Scheme – Andhra Pradesh*, p 45.

4 This description is adapted from the Indian Institute of Public Health, *A Rapid Evaluation*… pp 16-17.

5 Renu Shahrawat and Krishna D Rao (April 2011), "Insured Yet Vulnerable: Out-of-Pocket Payments and India's Poor" in *Health Policy and Planning*, pp 1-9.

6 For the World Bank intervention, see: http://blogs.worldbank.org/developmenttalk/health-system-innovation-in-india-part-ii-aAarogyasri, accessed on 22 October 2011.

7 We are referring here to a laminectomy, which removes a part of the vertebral bone called the lamina.

8 See previous note.

9 An appendicectomy is a surgical removal of the appendix.

10 See *The Hindu*, 29 October 2009, http://www.hindu.com/2009/10/28/stories/2009102856590400.htm, accessed on 1 November 2011. It is quite clear from the recent demand by the BJP MP Bandaru Dattatreya that the treatment of dengue be included in Aarogyasri that this crisis has not yet been resolved. See *Deccan Chronicle*, 26 October 2011, http://www.deccanchronicle.com/channels/cities/regions/visakhapatnam/include-dengue-arogyasri-bjp-147, accessed on 1 November 2011.

11 See interesting position paper by Lions Head Global Partners in http://www.lhgp.com/0904-RoleOfInternationalPrivateCapital.pdf . Also see overview of the Lions Head Global Partners in http://www.lhgp.com/101113-LHGP-Overview.pdf. Accessed on 18 October 2011.

12 See footnote 3 above for a description.

Appendix 1: Theoretical and Actual Steps to Access Aarogyasri-Based Healthcare

Sr No	Steps Taken by a Patient to Access Aarogyasri	What Happens in Reality/Possible Gaps in Functioning of System
1	Beneficiaries approach the nearby PHC/area hospitals/district hospital/public and private network hospital/health camps. Aarogyamitras at these points to assist the beneficiary and guide them through referral and treatment.	Too much influencing power with Aarogyamitras to direct patients to corporate network hospitals. Private hospitals encourage this through incentives. Defunct curative care in public health sector also promotes this behaviour. Many Aarogyamitras have Apple I-phones gifted by corporate hospitals (this needs to be investigated in detail).
2	The Aarogyamitras at the network hospitals examine the referral card and health card/BPL, ration card, register the patients and facilitate specialist consultation, preliminary diagnosis, basic tests and the admission process.	Basic tests are necessary for pre-authorisation. This is done at the same hospital. Thus, there is no gatekeeping mechanism or mechanism of recording findings at PHC to cross-check clinical presentation of the patients. Overdependence on reports can lead to reports being manipulated.
3	The hospital admits the patient and sends a preauthorisation request.	The hospital is solely responsible for sending pre-authorisation details. Patient has no say. Can lead to a tendency of referral of complicated/high risk/non-profitable cases to Government facility or worst, ignoring them altogether.
4	Specialists working with the insurer and the trust examine the pre-authorisation request and approve the case within 12 working hours.	Specialist have incentive for processing more pre-authorisations/day and handling them ASAP. Pre-authorisation processing requires going through many medical records in detail online. This leads to a contradiction in process and incentives.
5	The corporate hospital extends cashless treatment and surgery to the beneficiary. The post-operative notes on the patients are updated on the website.	Again no physical verification of patient findings. Over dependence on records and patient notes can lead to manipulation. The Trust should have mechanisms to randomly clinically audit 5% of cases when in hospital, some before pre-authorisation and others after completion of procedures.
6	The hospital forwards the original bills for surgery/therapy/transport/medication, reports/records, discharge summary with patient's signature and his comments.	Despite developing packages, again line-item billing is done (inefficient). At time of discharge it is too early to gauge if patient has received any relief/benefit from the procedures especially in chronic conditions. Feedback at time of discharge can be influenced by hospitals.
7	Insurer scrutinises the bills and approves payment within the stipulated period online.	Very good system – Transparent and reviewable.
8	Free follow-up for 121 identified procedures.	No way to ensure the quality of follow-up. Only frequency can be counted. Another independent feedback should be taken at six months and end of one year after treatment for all cases.

Appendix 2: General Statistics of the Aarogyasri Programme Till October 2011

Type of Hospital	Number of Surgeries/ Treatments	Value of Surgeries/ Treatments (Rs Crore)
Government hospitals	2,62,661	672
Corporate hospitals	9,42,885	2,683
Total	12,05,546	3,354

Appendix 3: Treatments Undertaken by Medical/Surgical Specialties (as of January 2009)

Conditions Category	Frequency	%
Cardiac	23,627	26.3
Cancer	21,325	23.8
Neurology	13,937	15.5
Renal	8,824	9.8
Poly-Trauma	8,686	9.7
General surgery	4,791	5.3
Gynaecology	2,314	2.6
Paediatrics	2,184	2.4
Plastic surgery	1,554	1.7
Orthopaedics	965	1.1
Gastroenterology	825	0.9
Critical care	224	0.2
Pulmonology	146	0.2
ENT	140	0.2
Ophthalmology	69	0.1
Rheumatology	28	0.0
Endocrinology	26	0.0
Dermatology	4	0.0
Total	89,669	100.0

(1) Note the absence of coverage for widespread infectious diseases like malaria, diarrhea, coughs and colds which may be screened at the primary and secondary levels of healthcare.
(2) Orthopaedic procedures are often spinal surgeries for back pain. Conservative treatments are not covered.
(3) Gastrointestinal procedures are not laparotomies but are usually expensive laparoscopic procedures to remove the appendix, gall bladder, etc.
(4) This table is taken from IIPH, *Rapid Evaluation*… p 33.