

Healthcare Utilisation in Rural Andhra Pradesh

ANDREW MITCHELL, AJAY MAHAL, THOMAS BOSSERT

The Government of Andhra Pradesh has invested in the Rajiv Aarogyasri Community Health Insurance Scheme as a means to reduce burdensome health expenses incurred by the state's below-the-poverty-line population. However, recent household data collected in two districts of AP suggest that poor patients continue to spend significantly on conditions that are not covered by the RAS at both government and private facilities. These findings suggest that the RAS alone is not likely to reduce the financial burden (of illness) on the BPL population. Instead, fundamental changes to the health system, including introduction of a gatekeeping system, may be warranted.

Andrew Mitchell (amitchel@hsph.harvard.edu) and Thomas Bossert (tbossert@hsph.harvard.edu) are with the Harvard School of Public Health, Ajay Mahal (amahal@hsph.harvard.edu) is with the Monash University and the Harvard School of Public Health.

Among the many challenges India faces in improving the health of its population is lowering the financial burden of seeking health services. Out-of-pocket spending on health is the dominant form of healthcare financing in India and reaches inordinately high levels. Households with members requiring hospital care face financial catastrophe: the cost of hospitalisation in India has been estimated to reach almost 60% of individuals' total annual expenditures – with around 40% of individuals nationwide borrowing money or selling assets to pay for expenses – and results in almost one-quarter of those hospitalised falling below the poverty line (BPL) (Peters 2002). In 2004, only the richest 20% of urban households spent less than 10% of income on health (a two-fold increase compared to the previous decade) and around 40% of low-income residents – urban or rural – who do not seek care cite financial hardship as the primary driver for that decision (Yip and Mahal 2008).

There are many drivers of such a high degree of financial risk to patients in India. One factor is that insurance or other forms of pre-payment which might lower the financial burden of seeking care are not yet well-developed in India. A second is lack of accessibility to “free” care available through the public system's primary care health network. For decades, the

government vastly underfunded India's public health system (spending just 1% of GDP on health) and currently only one-third of that spent by other lower-middle income countries (WHO 2008), which has resulted in an “ailing” primary care system (Peters 2002; De Costa and Diwan 2007; Yip and Mahal 2008; Dalal and Dawad 2009). Despite a renewed commitment to investment in primary care structures under the National Rural Health Mission (NRHM), widespread shortages of skilled healthcare professionals at lower-level facilities remain, while poor governance, including historic lack of financial investment and poor supervision, contribute to poor quality of services provided, shortages of drugs, and high levels of staff absenteeism (MOHFW 2007; Yip and Mahal 2008).

A third – which is due in large part to the long-standing “benign neglect” of the public system – is dominance of the private sector and heavy reliance on higher-level health facilities. Over three-quarters of health expenditures take place in private facilities (De Costa and Diwan 2007), and even the poor – who frequent public primary health centres (PHCs) to a greater extent than the rich for outpatient care – still seek care in private facilities almost 80% of the time (Peters 2002). As the public sector provides the bulk of primary care among licensed providers and with 75% of physicians working in private compared to public facilities (National Health Profile 2008), heavy reliance on the private sector results in patients not only paying out-of-pocket for services but doing so in higher-cost facilities (e.g. private hospitals).

In 2007, the Government of AP (GOAP) introduced the Rajiv Aarogyasri Community

Health Insurance Scheme (RAS) to address this constellation of factors and reduce the financial burden of spending on health to the state's poorest citizens. The GOAP introduced RAS as a major part of the Rajiv Health Mission,¹ a programme to improve access of BPL families to treatment of selected diseases that require hospitalisation and/or are relatively expensive to treat (i.e., all procedures covered are emergency/life-saving in nature and require specialist physicians and/or equipment not available in most district government hospitals). Currently covering almost 950 surgical procedures and therapies through an established network of healthcare providers (primarily private), the GOAP fully finances the scheme which is implemented by the Star Insurance Company under a public-private partnership framework. All members of BPL families – who are identified based on the state's previously existing ration card systems – are eligible as beneficiaries with an annual benefit per family of Rs 2 lakh (BPL families may also receive additional funds in certain cases in which costs exceed the maximum benefit). Importantly, it is an entirely cashless system from the point of view of beneficiaries: the modest annual premium of Rs 400 is paid for by the state government and approved care is provided for free at the point of service.

There are signs that the roll-out of RAS has significantly diminished barriers to BPL patients in accessing high-cost healthcare. An unpublished evaluation conducted in 2009 indicated that as of September, 2008, RAS had been availed of by approximately 11% of the BPL population in AP and appeared to particularly benefit those living in rural populations, with 87% of beneficiaries having rural addresses (almost 15% above the state average). Beneficiaries overwhelmingly reported satisfaction with RAS, and close to 90% reporting improvement following treatment of their conditions (most common conditions treated were cardiac, cancer and neurological interventions). However, the evaluation also noted wide variations in claims paid for individual procedures covered by the RAS and that more than one-half of interventions financed by the RAS took place in less than 10% of participating RAS network hospitals (located primarily in AP's four

largest cities). It was additionally noted that patients in AP spent on average Rs 10,085 for hospitalisations in urban settings and for a wide range of conditions that, in large part, are not covered by RAS (e.g., diarrhoea) (IIPH-Hyderabad 2009).

Does RAS Provide Financial Risk Protection?

To what extent will the RAS address the underlying weaknesses of AP's health system and offer financial protection to BPL households? In the following part, we begin to answer that question using results of a household survey conducted in 2009 in two districts of AP – Warangal and Nalgonda. Compared to other districts in the state, both Warangal and Nalgonda are relatively rural (population densities of 252 and 227 persons per square km, respectively, are below the state average of 262 persons/km²). In terms of socio-economic development, Warangal ranked 18 (out of 23 districts), 11, and 15 in terms of income, education and health dimensions of the human development index (HDI) while Nalgonda ranked 20, 12 and 18, respectively (Centre for Economic and Social Studies 2008). In short, both are average districts in many ways within AP.

Data on household use of health services were collected through administration of a household survey conducted six months apart in 2009 and 2010.² A total of 2,151

households in Warangal and 2,724 households in Nalgonda were randomly sampled in villages served by 10 PHCs in each district (the PHCs were selected according to a number of pre-selected criteria).³ The surveys, administered to women, collected data on a number of health knowledge and care-seeking behaviours, such as use of health facilities for illness (and associated costs of treatment), antenatal care (ANC), and family planning/reproductive health. While the results are relevant to the RAS in many ways, it should be noted that the data focused on usage of health-seeking behaviours for services that are not covered through the RAS.

Households sampled were typical of those in these districts more generally. Over 80% of households held BPL ration cards and only around one-third reported having access to a toilet, while almost all (97%) had electricity in their home and three-quarters had access to tap water. These percentages were all in line with those from the District Level Household Survey 3 (DLHS-3) administered in 2008 in which 87% of households in these two districts had BPL cards, between 29% and 41% had toilet access, and between 90% and 94% had electricity (IPS-Mumbai 2010). Around three-quarters of households surveyed for this study also reported that their households held a RAS health insurance card (80% in Warangal and 71% in Nalgonda).



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On the health front, around one-half of respondents (48%) indicated that at least one family member had been ill in the month preceding the survey, with respondents reporting that family members were sick for an average of around nine days. In terms of indicators of maternal and child health, 12% of women aged 15 to 45 reported having sexually transmitted disease (STD) symptoms, while one-quarter of mothers with children aged two years or younger reported their child having a watery stool in the month prior to the survey.

Table 1 presents findings related to care-seeking behaviours for four types of conditions and services: general ill health (among any family members), STD symptoms (among women surveyed), watery stool among children of women surveyed

Table 1: Use of Health Facilities (in %)

District	General Ill Health*	STD Symptoms*	Child Ill Health**	ANC Services**
RMP	6	10	5	0
Private physician	5	5	0	0
SC	1	4	3	5
PHC	1	2	1	30
Hospital (government)	6	10	7	61
Hospital (private/NGO)	70	69	81	2
N	2,482	574	459	3,877

* Percentages refer to first place where treatment sought.

** Percentages refer to any place where treatment sought among women who had delivered in 2009.

two years of age or younger, and ANC services (among respondents reporting presence of these four health conditions/needs, almost all (upwards of 97%) reported seeking care). It is apparent that respondents generally eschew primary-level facilities for health needs: for the three of four illness-related conditions – general ill health, STD symptoms, and ill children – only a handful of respondents reported using primary level SCs and PHCs (2% to 6%), while somewhat higher percentages reported seeking care from rural medical practitioners (RMPs) for general ill health and STD symptoms (10% to 16%). Conversely, around 70% to 80% of respondents sought services at hospitals, with the vast majority going to private/NGO facilities. In a countertrend, substantially higher percentages of respondents used primary care level public facilities for ANC services (35%) as well as government hospitals (61%) while only a handful of

Table 2: Reported Treatment Expenses – by Household RAS Status (in Rs)

Source of Treatment	Without RAS			With RAS			Total		
	Average Costs		N	Average Costs		N	Average Costs		N
	Total	Per Day		Total	Per Day		Total	Per Day	
RMP	489	72	87	464	76	303	470	75	390
Private physician	1,926	192	25	1,581	153	86	1,659	161	111
SC/PHC	240	50	5	831	66	8	604	63	13
Hospital (government)	900	120	8	1,369	142	66	1,318	140	74
Hospital (private/NGO)	1,804	204	367	1,924	207	1,259	1,897	207	1,626
Total	1,547	182	492	1,624	184	1,722	1,607	184	2,214

Table 3: Reported Treatment Expenses – by Number of Days Ill (in Rs)

Source of treatment	1-5 Days		6-10 Days		11-15 Days		16-30 Days		Total	
	Total	N	Total	N	Total	N	Total	N	Total	N
	RMP	384	241	580	114	673	22	703	16	470
Private physician	851	38	1,654	50	1,850	8	3,620	15	1,659	111
SC/PHC	340	5	663	4	500	1	1,000	3	604	13
Hospital (government)	663	32	1,815	27	790	5	2,173	11	1,307	75
Hospital (private/NGO)	983	718	1,983	559	2,699	151	4,365	210	1,916	1,638
Total	825	1,034	1,736	754	2,361	187	3,957	255	1,620	2,230

respondents (2%) made use of non-public hospitals for ANC services.

What were the financial implications to respondents of seeking care? Tables 2 and 3 present reported costs of care associated with family members experiencing general ill health, disaggregated by RAS insurance status (Table 2) and number of days ill (Table 3).⁴ Four findings are highlighted. First, respondents reported incurring treatment expenses associated with care-seeking at all levels of health facilities, including the primary care level, and with average expenses highest in hospitals, particularly private hospitals. Second, households with RAS insurance cards generally reported higher treatment expenses than those without, particularly among those using facilities. Third, average treatment expenses reached significant thresholds in some cases, reaching, for instance, almost Rs 1,900 in private hospitals (and around Rs 1,660 among private physicians) whether households

held RAS insurance cards or not. Finally, average treatment expenses generally rose in the number of days family members were reported to be ill, and averaged almost Rs 4,000 for those ill more than two weeks.

Financial Risk Protection

Together with services freely available in government facilities, it is claimed that the RAS “fully meets the medical requirements of BPL population, including primary and preventive” care (Aarogyasri Health Care Trust 2010). There is little doubt that the RAS has the potential to greatly increase access to high-cost healthcare to AP’s rural poor and complement other services as hoped. Around three-quarters of households surveyed in this study reported having a RAS insurance card, and over 10% of beneficiaries had already benefited from RAS subsidies according to an evaluation conducted in 2008. Expanded health service coverage to these households and

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reductions in catastrophic spending already experienced are substantial achievements in themselves.

However, our study findings suggest that the ability of RAS to reduce the financial burden of illness on BPL households within AP's current health system structures is limited in two main ways. First, as pointed out by others, RAS is designed to cover costs of only the most expensive and rarest of health conditions, whereas all hospitalisations for BPL patients arguably incur burdensome expenditures (IIPH-Hyderabad 2009). Indeed, households surveyed here incurred out-of-pocket expenses not only for care at hospitals, but at all levels of health facilities and providers. The fact that RAS card holding-households reported as high or higher treatment costs compared to those without suggests that few of conditions being treated at the hospital level are being covered by RAS but that care at these facilities is far from costless.⁵ Reported costs of treatment ranged from around Rs 500 for those who sought care with RMPs, to over Rs 1,900 for those seeking care at private hospitals. Further, those experiencing protracted illnesses (i.e., a duration of more than two weeks) faced costs upwards of Rs 4,300 at private hospitals. With over 80% of sampled households qualifying for BPL ration cards (whose income threshold is Rs 20,000 in rural areas), such spending equates to between 9% and 21% of household income for just one episode of illness treated at the hospital level. This is burdensome by just about any yardstick.

Second, availability of RAS for high-cost/tertiary-level procedures is not likely to dampen entrenched and widespread population preferences for treatment outside the public sector and at higher-level facilities – both of which are drivers of high levels of out-of-pocket spending. Even though access to primary care facilities is relatively good in AP compared to other states in India – and primary health facility infrastructure in the two districts studied here is on a par with, and in some respects better than, that of other districts within AP (Sekhar, Rajeswari et al 2009) – our findings suggest that actual utilisation for common primary care needs is modest to non-existent. Women surveyed

in this evaluation reported next to no household member usage of sub-centres or PHCs for a variety of health conditions, including general ill health, STD symptoms, and ill health of children. Instead, the vast majority – 70% or more – reported going directly to the hospital level. Survey findings provide no indication that characteristics of either the districts or individuals sampled are in any way unique in ways driving these results and therefore that the results are somehow not applicable to AP more generally. Instead, our findings are consistent with previous accounts suggesting that patients both avoid public facilities (it is noteworthy that, with the exception of ANC services, patients widely favoured by private/non-governmental organisations (NGOs) hospital care over those at public facilities) as well as bypass lower levels of care. As others have suggested, such findings may imply that future attempts to strengthen public sector health facilities may not ultimately be the most cost-effective approach to strengthening health systems in India (Peters 2002).

Our findings reinforce the argument that a much stronger gatekeeping and referral system is required as a first step to truly increasing BPL household protection from financial risk. One way to reduce burdensome health spending among the BPL population would be to expand the RAS coverage of medical procedures. However, with the RAS already costing the

government approximately Rs 10,000 more per beneficiary than government spending prior to RAS for BPL persons needing hospitalisation (under the Chief Minister's Relief Fund (IIPH-Hyderabad 2009)), significant service expansion anytime soon is unlikely. A second, more realistic way forward is to establish and enforce mechanisms requiring BPL patients avail themselves of services in public primary and secondary care facilities for conditions not requiring hospitalisation before seeking higher-level care. Currently, as evidenced by our survey results, patients in AP may present themselves at any health facility (public or private) and at any level of care regardless of severity of the motivating health condition.⁶ Such unfettered freedom of choice results in overconsumption resources among patients and clogs higher-level facilities with unnecessary patient loads. As pointed out by others, a gatekeeping system for those who use government facilities and consume governmental resources is long overdue (IIPH-Hyderabad 2009). Under such a system, RAS cardholders would be required to obtain a referral from PHC Medical Officers in order to be eligible for making claims at RAS hospitals.

Challenges to more effective gatekeeping and referral systems are undoubtedly many and will require significant strengthening of the health system. Patients are likely to strongly resist such changes. Given the current state of public primary/secondary

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care facilities and/or provider absenteeism, resistance would not be entirely unfounded (indeed, teams administering facility-level interviews as part of this study found that patients coming to several PHCs were pleasantly surprised that the doctor had even showed up that day). A stronger gatekeeping system would therefore likely require additional financial investment in strengthening primary health structures on top of the already sizeable commitment made by the government of India through the NRHM. Providers are also likely to create barriers that may change their practices and income stream. As importantly, there are major governance-related obstacles to implementing an integrated gatekeeping system. Alongside private facilities contracted directly with the RAS, separate governing bodies in AP manage public primary care SCs/PHCs (overseen by the Directorate of Health Services), secondary community health centres and area/district hospitals (overseen by the Andhra Pradesh Vaidya Vidhan Parishad) and tertiary teaching hospitals/medical colleges (overseen by the Directorate of Medical Education). And not only is the RAS itself not integrated into the overall health system, it operates alongside the national Rashtriya Swasthya Bima Yojana health insurance scheme (which is more comprehensive in coverage of services but limits financial coverage to Rs 30,000 per household) which has already garnered governmental calls for institutional integration (*Deccan Chronicle* 2010). Establishing a functioning gatekeeping and referral system which relies on both publicly and privately provided services and could involve more than one insurance scheme will therefore be a significant challenge.

Conclusions

The RAS has generated keen interest from other states in India that are also seeking ways to reduce the financial burden of health on their populations. This study provides cautionary evidence that reducing financial duress involves much more fundamental health system changes than provision of limited health insurance targeting high-cost and relatively rare procedures. With households in our study continuing to spend significant amounts of

out-of-pocket resources on healthcare despite widespread access to the RAS, coupled with findings of low use of primary care facilities, stronger gatekeeping and referral systems are needed to meet goals of financial risk protection.

NOTES

- 1 Other components of the Rajiv Health Mission include provision of emergency services through a toll-free telephone line known as 108, and a health information helpline through a toll-free telephone line known as 104.
- 2 The surveys were part of an evaluation of a PHC performance improvement intervention in Warangal.
- 3 The criteria were: two PHCs from five administrative divisions including one high- and one low-performing facility (according to select health indicators); five of ten PHCs in each district offered 24-hour services; and all PHCs were non-urban (ie, between 30 and 70 km from the district capital).
- 4 To limit the influence of outlying observations in terms of treatment expenses or number of days ill, analysis excludes respondents reporting household member illness of more than 30 days and those reporting the highest 1% treatment expenses (Rs 30,000 or higher). Exclusion of those observations results in conservative estimates of treatment expenses incurred and does not result in qualitative differences of findings.
- 5 Higher treatment expenses reported by RAS cardholders may also suggest that these households have sicker household members than non-RAS households (motivating procurement of a household RAS card) and therefore are likely to have greater needs for treatment of conditions both covered and not covered by RAS. If so, this finding would only reinforce the message that RAS is fundamentally limited in offering financial risk protection to BPL households.
- 6 RAS itself implicitly acknowledges a lack of gatekeeping system: according to RAS literature, its

"appropriate referral system" includes seven entry points with one entry point listed as "direct to hospital" (Aarogyasri Health Care Trust (2010), Rajiv Aarogyasri Health Insurance Scheme Brochure (2010)).

REFERENCES

- Aarogyasri Health Care Trust (2010): Rajiv Aarogyasri Health Insurance Scheme Brochure.
- Centre for Economic and Social Studies (2008): "Andhra Pradesh Human Development Report 2007", Hyderabad, Government of Andhra Pradesh.
- Dalal, K and S Dawad (2009): "Non-utilisation of Public Health Care Facilities: Examining the Reasons through a National Study of Women in India", *Rural Remote Health*, 9(3): 1178.
- De Costa, A and V Diwan (2007): "Where Is the Public Health Sector? Public and Private Sector Healthcare Provision in Madhya Pradesh, India", *Health Policy*, 84(2-3): 269-76.
- Deccan Chronicle* (2010): "Centre May Adopt Aarogyasri", *Deccan Chronicle* (Hyderabad: Deccan Chronicle Holdings Limited).
- IIPH-Hyderabad (2009): "A Rapid Evaluation of the Rajiv Aarogyasri Community Health Insurance Scheme - Andhra Pradesh - Hyderabad", Indian Institute of Public Health, Hyderabad.
- IIPS-Mumbai (2010): "District Level Household and Facility Survey (DLHS-3) 2007-08: Andhra Pradesh", International Institute for Population Sciences, Mumbai.
- MOHFW (2007): "Rural Health Care System in India", Ministry of Health & Family Welfare.
- Peters, D H (2002): "Better Health Systems for India's Poor: Findings, Analysis, and Options" (Washington DC: World Bank).
- Sekhar, P S and N V Rajeswari et al (2009): "Facility Survey of Public Health Institutions in Andhra Pradesh", Indian Institute of Health and Family Welfare, Hyderabad.
- WHO (2008): *Primary Health Care: Now More Than Ever*, Geneva, Switzerland, World Health Organisation.
- Yip, W and A Mahal (2008): "The Health Care Systems of China and India: Performance and Future Challenges", *Health Affairs*, 27(4): 921-32.

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