Health Insurance Schemes and Out-of-Pocket Expenditure

Evidence from the latest NSS rounds

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Keywords: Out-of-pocket expenditure, government funded health insurance, hospitalisation, PMJAY, health expenditure

Introduction

High Out-of-pocket expenditure (OOPE) on healthcare pushes the population, especially the marginalised ones, to a more vulnerable state, economically, socially, physically and emotionally. The government's role in terms of reinstating a fair situation in the healthcare market is thus widely sought. In 2005, the World Health Organisation (WHO) came up with the agenda of Universal Health Coverage (UHC), which advocates for an increasing role of the government in the health sector through greater public investment. Since then, member countries have embarked on different trajectories to ensure the increasing role of the government in the health sector. With the acceptance of New Public Management (NPM) ideas in the public sector under the UHC regime, several countries have prioritised purchasing care rather than providing it. Subsequently, quite conspicuously, the concept of "Strategic Purchasing" was elucidated in the National Health Policy of India in 2017. Over the last two decades, both the Union and state governments have launched several government funded health insurance (GFHI) schemes.

Either in the form of insurance premiums or through direct payment to providers, governments sponsor access to high-cost, low-frequency hospitalisation care, particularly in the private sector. The stated objective is to provide free care and bring down financial hardships faced by households engaged in the informal sector, particularly those below the poverty line (BPL) or those who are socio-economically disadvantaged.

In this article, we attempt to compare the OOPE while seeking hospitalisaiton services to understand whether the Pradhan Mantri Jan Arogya Yojana (PMJAY), along with other state government sponsored GFHI schemes, was able to bring a certain level of respite to the beneficiaries by lowering the OOP expenditure. We use descriptive statistics from the latest available NSS Health and Social Consumption data (80th round) and the Household Consumption Expenditure Survey of 2023-24 to study the effectiveness of these schemes in ensuring financial protection.

The following section discusses a brief history of GFHIs and current coverage of the schemes. Section three deals with OOPE on health; section four is on the catastrophic expenditure of households; and we end with a discussion in section five.

History and Coverage of GFHI

Since 2003, India has witnessed a plethora of GFHI Schemes at both the national and state levels. The Yeshasvini scheme started as an insurance scheme for worker cooperatives in 2003 in Karnataka, including all rural co-operative society members, members of Self-Help Groups / Sthree Shakti Groups and their family members (including members of joint family). The Rajiv Aarogyasri Scheme (RAS), specifically targeting the BPL population of Andhra Pradesh was introduced in 2007. The scheme became popular and was soon extended to almost the entire population.

The Rashtriya Swasthya Bima Yojna (RSBY), launched in 2008, is at the other end of the spectrum. It is also voluntary in enrolment and was initiated by the Central Government (Ministry of Labour and Employment) as a national health insurance scheme targeting the BPL population. Other notable state-sponsored schemes included Chief Minister's Health Insurance Scheme in Tamil Nadu (2009), Vajpayee Arogyasri (2009) in Karnataka and Swasthya Saathi (2018) in West Bengal.

Prime Minister's Jan Arogya Yojana, launched in 2018, is an extension of these schemes which aims to merge all the existing schemes and provide coverage up to 5 lakh rupees for hospitalisation. This is a merger of two on-going centrally sponsored schemes - Rashtriya Swasthya Bima Yojana (RSBY), Senior Citizen Health Insurance Scheme (SCHIS), and other state-sponsored schemes..

All the state sponsored GFHIs have now been merged into PMJAY. The most recent addition being Swasthya Saathi, the West Bengal Scheme. States like Rajasthan, Kerala, Haryana have often put in additional resources to include non-poor sections with low and heavily subsidised premiums.

According to the NSS 80th round, around 41.1 per cent of the population – 45.5 per cent in rural and 31.8 per cent in urban areas - is covered by different GFHIs. This has been achieved mainly by more than a two-and-a-half-fold increase in coverage between 2017-18 and 2025 of GFHIs schemes such as the PMJAY and Swasthya Saathi (in West Bengal).

Table -1 shows that 25.6 per cent of the population covered by GFHI belongs to households that draw a major component of their income from casual wage work or are self-employed. The share of the same in urban areas is 18.3 per cent. Around 57.4 and 39.6 per cent of individuals belonging to households with a major share of income from self-employed work are covered by PMJAY and State Health Insurance.

In rural areas, around 52.4 and 45.7 per cent of the top two quintile groups are covered under GFHI, while in the urban sector, coverage is almost evenly distributed across quintile groups (Table-2).

To sum up, GFHI schemes cover individuals across all income groups and household types. Although the scheme was launched to cover poor and marginalised sections, greater inclusion of salaried households and high-income groups suggests otherwise. Inclusion of households above the

Table-1
Population covered by GFHI across Household Types (%)

Type of Households	Rural	Urban
Casual	25.6	18.3
Regular Wage/salary earning	14	36.6
Self-employed	57.38	39.6
Others	2.9	5.6

Source: Authors' calculation using unit records of NSS Social Consumption Health -80th round.

Table-2
Coverage of GFHI across income groups (%)

Income Group	Rural	Urban
Q1	25.6	18.3
Q2	14	36.6
Q3	57.38	39.6
Q4	2.9	5.6
Q5	45.7	25.3
Total	**45.5**	**31.8**

Source: Authors' calculation using unit records of NSS Social Consumption Health -80th round.

poverty line is not problematic since these households may be equally vulnerable to high OOP expenditure. The problem lies in the poor coverage of casual labourers and poor households. As the evidence suggests, the coverage of individuals from casual labourer households and the poorest income group in rural areas are around 25.6 and 38.1 per cent, respectively. The same for the urban sector are 18.3 and 36.5 per cent. Quite obviously, the GFHI schemes suffer from an inefficient targeting approach (Bonu and Bhusan, 2026).

Hospitalisation and OOPE

Among those covered by GFHI, around 53.6 per cent of hospitalisations occur in public facilities. The same figures for rural and urban areas are 44.1 and 53.3 per cent, respectively. Table- 3 shows that at private facilities, there is little difference between the average medical expenditure and transportation costs (per hospitalisation) for those covered under GFHI and those not covered by any insurance scheme. In fact, in rural areas, the average medical expenditure at private facilities for those covered under GFHI was higher than that of those not covered (Table- 3). People covered under GFHI, and going to private facilities in rural areas, ended up spending more on average on blood-related problems, cardiovascular diseases, ear problems, endocrine and meta bolic diseases, infection, kidney Failure, psychiatric & neurological, and respiratory problems. Excess average expenditure across a few diseases is also observed in urban private facilities.

Although Table- 3 indicates slightly lower OOP expenditure incurred by those covered by GFHI compared to those without financial protection, the extent of these benefits cannot be measured. As per the instructions in the field investigators' document, for cashless services, information on the cost of treatment is supposed to be reported

Table- 3
Average OOP expenditure across facilities and sectors (INR)

	Medical Expenditure			Transportation		
Facility Type	**Rural**	**Urban**	**Overall**	**Rural**	**Urban**	**Overall**
Covered under GFHI						
Public	3795	3980	3836	901	665	849
Private	43340	48259	44779	1614	1149	1478
Not covered						
Public	4994	5339	5096	813	667	770
Private	40869	51672	44974	1357	981	1214

Note: Childbirth included
Source: Authors' calculation using unit records of NSS Social Consumption Health -80th round

under reimbursement. As per the database, the total reimbursement for GFHI beneficiaries is zero. This may indicate two things: first, none of the GFHI beneficiaries received any benefit during the reference period, which seems unrealistic and second, the information is not collected and documented judiciously, and that it is a quality issue.

Nonetheless, the question at hand remains the same. Now, with this limitation, another way to dig into it is to look at whether the beneficiaries received any of the services for free during hospitalisation or not. By comparing beneficiaries with their counterparts, we find that more than 50 per cent of those covered by GFHI had to pay, either partially or fully, for services they received during hospitalisation. Table 4 shows that beneficiaries received services for free, fully or partly, during hospitalisation in more than 80 per cent of the cases at public facilities, whereas at private facilities, in more than 80 per cent of the cases, services were provided on payment. In other words, beneficiaries who had gone to private facilities had to bear the entire cost of the services they had received most of the time. This again reinforces our previous findings of higher OOPE during hospitalisation in the private sector.

Our findings are consistent with the existing evidence that the GFHIs have limited or no effect on financial protection. A large number of studies on GFHIs in India, and on the centrally funded RSBY suggest that cashless insurance mechanisms failed to reduce OOPE (Nandy S. et al., 2022; Ranjan A et al., 2017; Sakthivel 2018). A systematic review of literature by Reshmi et al., (2021) provides information related to the impact of GFHIs on financial risk protection and utilisation of healthcare. The review found inconclusive evidence for financial risk protection, which is one of the avowed goals of any GFHI. Further, there is a lack of substantial evidence for the reduction in OOPE by GFHI schemes in India.

A recent analysis of the PMJAY scheme by Kamath and Brand (2023) concludes that multiple impact evaluation studies of the RSBY and state GFHIs show very little or no impact on the reduction of OOPE. GFHIs are prone to double charging, where the hospital makes the patient pay for some or all services/medicines/diagnostics which are covered under the GFHI and also claims reimbursement from GFHI. Global evidence also suggests that GFHIs in a private provider-dominated ecosystem fail to reduce OOPE (Indranil et al 2025).

Catastrophic expenditure of households

When households face a health shock, a significant portion of their household budget gets diverted from other requirements to meet health expenses. A key measure of financial hardship is the share of OOPE in total household budget. Anything above 10% is called Catastrophic Health Expenditure (CHE). We use HCES 23-24 round for analysis of CHE.

Evidence suggests that less than one in every eight hospitalisation cases (11.75%) in rural areas and one in every ten in urban areas (9.65) benefit from GFHIs. Even for the bottom three quintile groups, in case of only one out of every eight hospitalisation episodes, some form of benefits is provided, while the remaining seven are left uncovered (Fig- 1).

Overall, almost half of those who benefited from GFHI cards during hospitalisation in rural areas ended up incurring CHE, measured at 10% of household budget (CHE-10). In urban areas, this is as high as 45%. For the bottom 20% of the population in rural and urban areas, the incidence of CHE-10 is higher among those who received some benefits from GFHI cards than among those who did not use the cards (Table-5). This clearly indicates the ineffectiveness of GFHIs in reducing financial hardship.

CHE incidence is significantly higher in the private sector, where more than two-thirds (68.4%) of beneficiaries in rural areas and 60 per cent in rural areas experience CHE-10. By contrast, individuals seeking care in private hospitals without using cards are less likely to face CHE. As expected, CHE incidence remains much lower in public hospitals. These findings indicate that GFHIs fail to provide effective financial protection, particularly when care is sought in the private sector.

Discussion

While the state devises different means for achieving UHC for different populations, efficient targeting of each cohort becomes the most critical prerequisite for the successful implementation of these programmes. In the case of GFHI, the evidence suggests the existence of both type one (including those who are not valid targets as per the guidelines of the programme, also called false pos-

Table- 4
Incidence of payments on services received during hospitalisations (%)
(beneficiaries and non-beneficiaries)

	Government facilities		Private facilities	
Services	**GFHI**	**Not covered**	**GFHI**	**Not covered**
Type of ward				
Free	97.0	93.4	13.9	2.6
Paying general	2.6	5.8	69.7	75.8
Paying special	0.4	0.8	16.4	21.5
Surgery				
Free	88.0	80.5	15.4	1.5
Partly free	4.9	7.6	3.7	1.2
On payment	7.0	11.9	80.8	97.3
Medicine				
Free	55.6	45.8	7.3	0.7
Partly free	37.4	42.7	6.4	1.3
On payment	7.0	11.5	86.3	98.1
X-ray/ECG/EEG/Scan				
Free	72.7	62.9	10.0	1.0
Partly free	16.2	21.5	4.3	1.0
On payment	11.1	15.6	85.8	98.0
Other Diagnostic Test				
Free	73.1	63.9	8.9	1.0
Partly free	16.9	22.0	4.3	0.9
On payment	10.0	14.1	86.7	98.1

Source: Authors' calculation using unit records of NSS Social Consumption Health -80th round

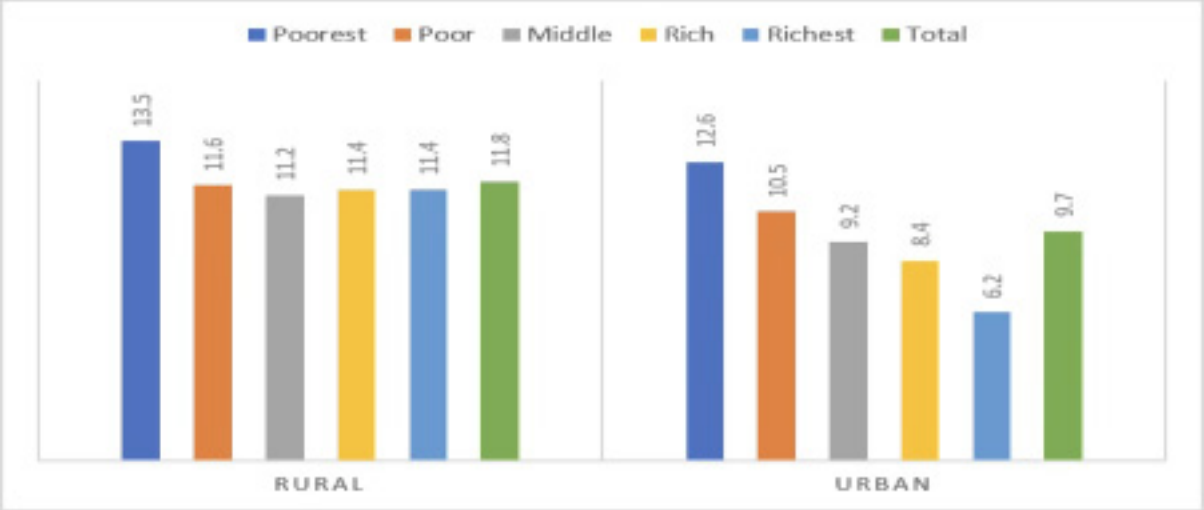

Figure- 1
Share of hospitalisation episodes supported by GFHI cards (%) by quintile groups: 2023-24

Source: Authors' calculation using unit records of NSS Social Consumption Health -80th round

Table -5
CHE-10 among those hospitalised
(benefitting from the GFHI cards vs those who did not)

Quintile Groups	Rural		Urban		R+U	
	Used GFHIs	Did not use GFHI	Used GFHIs	Did not use GFHI	Used GFHIs	Did not use GFHI
Poorest	33.3	36.7	30.1	29.8	32.2	34.3
Poor	41.5	39.8	42.2	35.3	41.7	38.4
Middle	53.3	44.7	54.9	36	53.7	42.1
Rich	56.4	49.7	50.2	43.4	55	47.9
Richest	60.5	58.5	69.7	44.2	61.7	55.4
All	49.6	46.8	45.1	37.3	48.5	44

Source: Authors' calculation using unit records of NSS HCES 23-24

Table- 6
Incidence of CHE-10 by provider type beneficiaries and non-beneficiaries of GFHI cards
(% of hospitalised)

Provider	Rural		Urban	
	Used GFHI card	Did not use	Used GFHI card	Did not use
Public Only	36.4	19.3	29.9	15
Private	66.6	66.6	59.7	48.4
Mixed	68.4	54.3	66.4	38.9
Total	49.6	46.8	45.1	37.3

Source: Authors' calculation using unit records of NSS HCES 23-24

itive) and type two (excluding actual targets, also called false negative) errors – which are essentially the targeting issues. Both databases suggest the inclusion of non-poor households under GFHI. While we argue that all households just above the eligibility criterion may not always be protected by other insurance schemes and may encounter similar challenges due to high OOPE, we would also like to highlight the fact that non-poor income groups have received higher benefits during hospitalisation compared to their poorer counterparts. In addition, the inclusion of comparatively well-off households led to higher utilisation of services, which eventually inflated the cost of care.

It is of utmost importance to note at this juncture that such a high cost of care, coupled with the fiscal constraints of the states, leads to delays in reimbursement to private providers. This entire chain of events sends a signal to the private providers about the inadequacy of fiscal resources; subsequently, the confidence of the private providers in the programme starts deteriorating. After the lower package rates of GFHIs, delays in reimbursement becomes another major source of discontent among private providers who are usually driven by profit-maximising principles. Eventually, all sorts of unethical and inhuman practices, such as cream skimming[1], become increasingly unavoidable (Indranil et al 2026). Most of the time, poor patients end up spending extra.

Another important finding presented in this article is the ineffectiveness of the programme in terms of reducing the financial hardship endured by poor households due to high OOPE on healthcare. With different sets of limitations, none of the databases capture the extent of benefits received by the individuals covered by different GFHIs. In such cases, the most critical indicator is the incidence of CHE -10 to find the impact of OOPE on households' income. Incidence of CHE, in any case, is higher in private care; ironically, it became more so for GFHI beneficiaries when they claimed their entitlement.

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On Ayushman Bharat

Notes from the field

Excerpts from mfc e-forum posts by members, edited for brevity and clarity, and published with author's consent; Compiled by Mithun Som

The main problem is the Ayushman Bharat [AB] scheme itself. First, Contrary to what JSA [Jan Swasthya Abhiyan] has been saying and what the HLEG [High Level Expert Group] report had recommended, the AB scheme is based on policy which travels further in the direction of insurance based (illusory) UHC [Universal Health Coverage] and the privatization that underlies this framework. Secondly, in practice, this supposedly benevolent AB scheme is more of a virtual reality. The budget of Rs. 6400 crores in the first year was not even half of what even the govt was talking about and there was no increase this year! 150,000 Health and Wellness centres were to be functional in 5 years; out of which only 27,000 were reportedly functional in the first three years!

Anant Phadke
22nd December 2020

I don't think PMJAY covers outpatient care at all, which is a major contributor to OOPE [out-of-pocket-expenditure]. It does not cover a wide range of secondary and tertiary care needs. The general medicine packages cover 81 conditions while 97 conditions qualify for urology specialty alone. The General Medicine packages have that rare quality of equality/ samdrishti, where regardless of whether you have malaria/severe malaria/ dengue/dengue shock/pneumonia/respiratory failure/acute bronchitis/endocarditis, the same charges are given! If you have surgical conditions of course the charges are individualised. If you have TB and need hospitalization, please note that you need to have pleural, pericardial or meningeal TB to qualify. Patients with pulmonary TB, please excuse! Diabetes figure only once in the packages under obstetrics. So, all men with diabetes with complications should go elsewhere! Ayushman Bharat is an example of selective care of a selected group of conditions. The packages are often an exercise in dark humor.

Anurag Bhargava
2nd May 2024

We often help patients with Ayushman cards get admitted in government hospitals, only to find that the process for Ayushman activation is quite lengthy. The doctors typically order several thousand rupees worth of tests in the first 24-72 hours, which the patient has to pay out of pocket. For instance, one of our MDR TB patients recently admitted spent Rs 12,000 on blood tests and an albumin injection during her first 3 days in hospital. Ironically, she was discharged shortly after the Ayushman activation process finally concluded, preventing her from taking full benefit! Is there an official rule or guideline on how long Ayushman activation should take?

Yusuf Bhai
29th March 2025

Talking about enrollment [in AB scheme], from my recent experiences in Chhattisgarh. All the human resource people (CHO, ANMs, ASHA, district officials) complained about how so much of their work and focus is taken away by the AB card without much result. Why? Aadhaar generated OTP is the most used/ available option (to cross verify with SECC – Socio-economic caste census— list in the AB-PMJAY portal) which ends up not working due to incorrect mobile numbers being linked or a common mobile number linked for many village people (other verification options, such as facial recognition, fails often and biometric machines for finger print have not been provided). A village worker coordinating the PMJAY card enrolment camps in her village said that even if the people come to the PMJAY card camps, most of them have to return because of technical issues and only a few of them actually get their cards made. One sarpanch and a district official hit the point when they said instead of organising one after the other PMJAY camps in the villages, they should put camps for rectification of Aadhaar card to correct the mobile number linked and other errors. But that facility, on the other hand, is only available all the way up at the district level! However, the larger question remains that even when 100 percent enrollment is done, the foundational issues of denials, copayments, irrational treatments, cost benefit analysis do not go away.

Deepika Joshi
19th September 2023