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Can *Ayushman Bharat* National Health Protection Mission protect health of India's Poor?

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Abstract

The recently introduced *Ayushman Bharat* National Health Protection Mission has been projected as a big public intervention in the health sector for protecting the health of India's poor and vulnerable. The health insurance scheme under *Ayushman Bharat* promises to offer coverage of 5 lakh rupees for meeting hospitalisation or inpatient care expenses for a total of 10.74 crore households in the country with no cap on age or number of household members. Our analysis of the secondary literature and available latest all India level data from National Sample Survey Office raises a number of questions regarding the viability and effectiveness of the scheme. First, the budget allocated for this scheme is grossly inadequate given the large coverage of the scheme in terms of number of households and sum assured. Second, the experience of the previous Rashtriya Swasthya Bima Yojana (RSBY – another government initiated insurance scheme for the poor introduced in 2008) is not very encouraging both in terms of the percentage of targeted households covered and the rate of reimbursement. The states with higher incidence of poverty were found to have lower proportion of its population under the government supported insurance coverage and vice versa. Moreover, the low reimbursement of expenditure coupled with

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higher utilisation of private facilities led to selling of assets and borrowing for many poor households with government provided insurance. Third, a significant limitation of *Ayushman Bharat* as well as the previous RSBY is that they do not offer any coverage for outpatient care. The cumulative annual value of expenses on outpatient care can be high for households with elderly and chronically ill members and may go beyond the capacity to pay for the poor and vulnerable households. Finally, the experience of countries like United States of America, China, Thailand and Mexico suggests that solely relying on the insurance route for providing universal health coverage may not be enough unless complemented by other public interventions on health infrastructure, manpower and preventive care. Neither the policy document on *Ayushman Bharat* nor the central budget allocated for it gives any clear impression that the government is serious about the scheme as it does not address the issue of supply side inadequacy and presence of a credible regulatory mechanism to deal with the private health care providers. One may reasonably doubt if a new intervention which blows up the scale of a previously unsuccessful or partially successful intervention without addressing its limitations can achieve any meaningful purpose. This forces us to argue that instead of spending crores of rupees on insurance schemes for the poor, the government may directly invest in the health sector, thereby increase the supply of publicly provided health care of acceptable quality at an affordable cost for the poor population.

Keywords: Ayushman Bharat, NHPM, PMJAY, RSBY, Health Insurance, NSSO, India

1. Introduction

In his budget speech for the year 2018-19, the Finance Minister of India announced,

> *"a flagship National Health Protection Scheme to cover over 10 crore poor and vulnerable families (approximately 50 crore beneficiaries) providing coverage up to 5 lakh rupees per family per year for secondary and tertiary care hospitalization. This will be the world's largest government funded health care programme."*[3]

Additionally, it was also announced in the budget that 1.5 lakh Health and Wellness Centres will be created across India, for which a budget of Rs 1200 crore was allocated. Subsequently, on 23rd September 2018, the Prime Minister formally inaugurated the *Ayushman Bharat - Pradhan Mantri Jan ArogyaYojana* at Ranchi, Jharkhand. In his speech delivered on the occasion of the launch of this health scheme, the Prime Minister argued that "this launch has been done with a vision to provide the poorest of the poor, and the underprivileged sections of society, with better healthcare and treatment. This scheme, which envisions health assurance of 5 lakh rupees per family per year, will benefit over 50 crore people, and is the world's biggest health assurance scheme."[4]

As per the data published on the website of *Ayushman Bharat*, the scheme will provide financial protection to 10.74 crore families who are poor rural families and identified occupational categories of urban workers' families as per the latest Socio-Economic Caste Census (SECC) data (approx. 50 crore beneficiaries).[5] Budgetary allocation for this scheme was announced as Rs 2000 crore for

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3. Budget Speech, 2018-19. Available at https://www.indiabudget.gov.in/ub2018-19/bs/bs.pdf

4. Press Information Bureau, Government of India, Prime Minister's Office (23rd September, 2018). Available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=183635

5. Official website of the Ayushman Bharat – National Health Protection Mission (https://www.abnhpm.gov.in/about-abnhpm)

the financial year 2018-19, with the Finance Minister emphasizing that adequate funds will be provided for its successful implementation. The cost of the scheme will be jointly borne by the central and state governments in 60:40 ratio.

The official website of *Ayushman Bharat* further states that the introduction of the scheme for the poor and vulnerable sections in the country is aimed at ensuring that the population has universal access to good quality health care services without anyone having to face financial hardship as a consequence. In other words, the objective of the scheme is to improve access to health care and medication, particularly satisfying the unmet needs of the population which remained hidden due to lack of financial resources. This will therefore lead to timely treatment and improvement in health outcomes thereby improving productivity and efficiency. The union budget also claimed that the scheme would lead to significant job creation in the health sector, particularly for women.[6]

Ever since the launch of this scheme, there have been several criticisms of it made by economists and public health scholars. Many of these criticisms and analyses of the scheme's prospects have been published in leading newspapers and online news portals. The main line of criticism has been in terms of the fund allocated for the scheme. For example, Dreze (2018) argues that if the beneficiaries spend just 1 per cent of their Rs 5 lakh maximum entitlement for a year on average, then the annual expenditure will come to Rs 50,000 crore, whereas the budgetary allocation is only for Rs 2000 crore. Even if one goes by the argument put forward by some that the allotment will be increased to Rs 10000 crore in the subsequent years, still the amount per family will come to around Rs 1000 only per year. It is obvious that such a paltry sum of money will not be able to cater to the health needs of the people. On a similar note, Azad and Chowdhury (2018) argue that while the scheme is being compared to Obamacare in the USA, the allocations fall far short of what exists in the USA for a scheme which covers fewer households. On the

6. Budget Speech, 2018-19 (available at https://www.indiabudget.gov.in/ub2018-19/bs/bs.pdf)

basis of the coverage of the Rashtriya Swasthya Beema Yojana (RSBY) and funds allocated for it, Azad and Chowdhury (2018) estimate the funds required for covering 10.74 crore households to be around Rs 26000 crore, far less than what is envisaged by the government. Apart from fund allocation, there are other issues which need close examination. For example, what was India's experience with the previous publicly funded insurance scheme for the poor such as RSBY, Rajiv Aarogyasri Scheme in Andhra Pradesh (and Telengana), Vajpayee Arogyashree Scheme in Karnataka, Comprehensive Health Insurance Scheme in Kerala? To what extent different Indian states achieved their respective targets set for publicly funded insurance schemes for the poor? If not what were the reasons? Has the country learned some lessons from its previous publicly funded insurance programmes, and if yes, how have those lessons been factored in the design of Ayushman Bharat?

Since Ayushman Bharat has begun its journey as a public intervention to improve access of the poor to quality inpatient care as well as financially protect them from high out-of-pocket expenses, we propose to analyze the effectivity of the scheme by reviewing the experience of various publicly funded existing health insurance schemes from secondary literature and by exploring the available relevant data. In particular, the paper has the following objectives:

(i) To provide an extensive review of evidence on the existing publicly funded insurance schemes for the poor based on secondary literature.

(ii) To explore the latest available and relevant data to analyse the past experience and future challenges.

In addition to answering some of the questions using existing literature, the empirical analysis of the paper intends to take up the following questions: Has the coverage of publicly funded health insurance done justice to the equity principle? How does the rate of hospitalisation vary depending upon the type of insurance coverage and no coverage in different Indian states? How does the choice of institutions (public or private hospitals) vary depending upon the type of health insurance coverage in different Indian

states? How do the medical costs of inpatient care and reimbursement vary by the type of insurance coverage? Does health insurance coverage reduce the probability of resorting to distress means to finance hospitalization expenses? All these questions are addressed with a focus on inter-state variations.

The remaining paper is arranged as follows. Section 2 briefly describes the data and methods used in the paper. Section 3 provides a review of the literature on publicly provided health insurance schemes in India primarily focusing on RSBY. Section 4 analyses the inter-state variations of insurance coverage in India. Section 5 takes up the issues related to hospitalisation, costs and reimbursement. Section 6 analyses financing of inpatient care expenses under different types of coverage and offers some insights from a multivariate analysis. Section 7 discusses the empirical evidence of the preceding sections and compares the *Ayushman Bharat* scheme with other such schemes at the international level. Section 8 summarizes the main observations and makes some concluding remarks.

2. Data and Methods

The paper uses evidence found in the secondary literature as well as secondary data. The secondary literature is identified using Google Scholar and PubMed search engine. The major secondary data used for the analysis is unit record data from the recent National Sample Survey (i.e. NSS 71st Round, Schedule 25.0).

The 71st round of the National Sample Survey was conducted during January – June 2014. The survey covers 335,104 individuals living in 65,932 households. In addition, some information about 2395 individuals who died within one year preceding the survey was also collected. Therefore, taken together the survey covers 335499 individuals (335104 + 2395). The survey collected detailed information about 57456 hospitalisation cases (55026 + 2430) reported by all sample individuals (alive and dead) which took place in one year preceding the survey. Out of all hospitalisation cases reported, 14,570 were related to child birth. This means that little less than one-third (precisely 31.49 per cent) of the hospitalization cases are related to child birth. The 2430 cases, where death happened during hospitalization,also include 17

cases where death happened due to child birth related reasons.

3. Review of Literature on Publicly Funded Insurance Schemes for the Poor

The implementation of the RSBY and other health insurance schemes in India has generated a huge literature. Though there are studies showing the positive impact of RSBY in improving the poor's access to inpatient care and protecting them from financial catastrophe, a large number of studies have shown the scheme's negative side. With the problem of financial viability and apathy of the government towards spending higher amounts of money for health, Narayana (2010) did not observe any trend that RSBY would be adequately covering the poor. Starting in 2008, RSBY has so far been able to bring only 66 per cent of target BPL population under its coverage (as per latest official data for 15 states) (Mukherjee and Chowdhury, 2018). Ghosh and Dutta Gupta (2017) find that about 11 per cent of the households were enrolled under RSBY among which almost one half actually belonged to the non-poor category. They also note that RSBY hardly affected financial protection of the patients. Karan *et al* (2017) argue that RSBY did not affect the likelihood of inpatient out-of-pocket spending, level of inpatient out-of-pocket spending or catastrophic inpatient spending. They also did not find any statistically significant effect of RSBY on the level of outpatient out-of-pocket expenditure and probability of incurring outpatient expenditure. In fact their results suggest that the likelihood of incurring any out-of-pocket spending (inpatient and outpatient) rose by 30 per cent due to RSBY and was statistically significant.

Gupta *et al* (2016) find that RSBY has improved health seeking behavior, decreased the extent of out-of-pocket expenditure among the beneficiaries but OOP expenditure is mainly due to drugs and diagnostics bought outside the facility.Nandi *et al* (2017) found that despite RSBY coverage, a majority of the households incurred out-of-pocket expenses in Chhattisgarh. However, the public sector was nevertheless less expensive and catered to the more vulnerable groups. Thakur (2016) found that RSBY met with limited success in Maharashtra in terms of people's awareness about the scheme, their enrolment and more importantly actual utilisation. In

an earlier study in the context of Gujarat Devadasan*et al* (2013) found that though RSBY managed to include the poor under its umbrella it could provide only partial coverage. The study found that 44 per cent of the patients who had enrolled in RSBY and had used the RSBY card still faced OOP payments for hospitalisation mostly for purchasing medicines and diagnostic tests which were actually included in the benefits package. The median OOP payment was similar in both government and private hospitals. Like the *Ayushman Bharat*, RSBY too suffered from inadequacy of funds. Even after two years of its inception in 2008, Dror and Vellakkal (2012) found the allocation for financial year 2010-11 was only about 0.037 per cent of the total union budget which was sufficient to pay premiums of only 34 per cent of the BPL households enrolled up to March 31, 2011.

In spite of having a similar programme design, there is a significant state-to-state variation in the implementation of RSBY as observed by Maurya and Ramesh (2018). Using a comparative case study approach they find difference in governance of implementation as the main reason for the inter-state variation. The role of political and institutional factors as the strongest determinants explaining the variation in participation and enrolment in RSBY is also observed by Nandi *et al* (2013). They find that districts in states with a lower quality of governance, pre-existing state level health insurance scheme have lower enrolment rates and districts with higher share of socio-economically backward castes are less likely to participate and their enrolment rates are also lower. It is also observed that districts with more non-poor households may be more likely to participate although with lower enrolment rates. Almost all the studies assessing the effectiveness of RSBY relied on household data. There should have been assessment of RSBY from a different perspective by using the claim and facility level data. The enrolment, utilisation and claim data from RSBY's side would have allowed the researchers to draw very useful insights (Morton *et al* 2016). Unfortunately such data whenever available suffered from quality issues (Nandi *et al* 2015).

Apart from RSBY, a few state-initiated publicly funded health insurance schemes for the poor also need mention. In the context of Kerala's Comprehensive Health Insurance Scheme Philip *et al*

(2016) found insured households with higher inpatient service utilisation but only 40 per cent of inpatient service utilisation among the insured was covered by insurance. However the mean out-of-pocket expense for inpatient services among the insured was higher than among the uninsured households. The Vajpayee Aarogyashree Scheme which was rolled out in Karntaka as a social health insurance scheme for increasing access to tertiary care for the households below poverty line has been found to reduce mortality substantially for the beneficiary groups due to increased tertiary care utilisation as well as use of better quality facilities and early diagnosis. The scheme was also found to reduce financial burden of receiving tertiary care and achieved these benefits at reasonable costs to society (Sood and Wagner 2018). Rajiv Aarogyashree Scheme which was introduced in undivided Andhra Pradesh in 2012 was found to reduce the inequalities in access to hospital care substantially but not across the education divide (Rao *et al* 2016).

The above review of experience with publicly funded insurance schemes raises a few crucial questions mostly related to the design of the schemes and fundamentals about an insurance based system. The secondary literature provides enough evidence that publicly funded health insurance schemes like the RSBY with targeted health insurance has not been successful in addressing the issues of access and financial risk protection within a healthcare delivery system dominated by “for profit” private providers. Such health insurance schemes possibly displace resources that can be utilised for strengthening a public health system (Ghosh 2018).

This brings us to the issue of insurance based models of health systems versus public provisioning of health care. Dreze and Sen (2013) enumerate a number of problems with private insurance based models of health systems. They argue that a health system based on insurance will disincentivize preventive health care. Additionally, they point towards equity and efficiency issues, and argue that once a private health insurance based model is implemented, vested interests will arise which will stop any progress towards a public delivery model of health care. Azad and Chowdhury (2018) point out that insurance-based schemes have

an inbuilt inflationary bias. They might induce more hospitalisation, which, without a commensurate increase in supply, increases the price of health care, which further increases the insurance premium, and, hence the burden on the government. It has been argued that market failure conditions in the insurance market continues to perpetuate losses for governments and people, which questions the financial viability from the perspective of state exchequer (Bandopadhyay and Sen 2017).

Given the assessment of RSBY and other publicly initiated insurance schemes for the poor being not very effective in decreasing the out-of-pocket expenditure of the concerned patients, the decision of the government to scale it up and go for a much expanded health insurance scheme needs to be analyzed in detail. When the scale is expanded without addressing existing institutional issues and regulatory mechanisms, nobody knows how the balance of power between providers, insurance companies and governments is going to change (Trivedi and Saxena 2013). In this light we analyze the experience of the existing insurance schemes to arrive at an understanding about how far the *Ayushman Bharat* scheme would help the poor and needy sections of society.

4. Insurance Coverage in India: Inter-State Variations

While the *Ayushman Bharat* scheme has been designed for all India, the experience of the various states with regard to insurance coverage varies significantly. The coverage of the population under different types of insurance (including no insurance) is presented in Table 1. The table shows considerable inter-state variations with regard to government insurance coverage. States like Andhra Pradesh have 61.5 per cent of the population covered by the government insurance schemes, where the same for Uttar Pradesh is merely 4.2 per cent. However, at the all India level, only 16.3 per cent of the population are covered by government insurance schemes with more than 80 per cent of the population being out of coverage. Employers provided insurance schemes or insurance products arranged by the households are of negligible importance. A similar picture of inter-state variations with regard to health insurance coverage for households is evident from an

exploration of NFHS-4 unit level data (Table 2) pertaining to the year 2015-16. The table while showing the variation in health insurance coverage by the government, also separately underlines the importance of state government health insurance schemes. The health insurance scheme of the Andhra Pradesh government covers 71.1 per cent of the households, while that of Telengana, Tamil Nadu and Chhattisgarh covers 61.1 per cent, 56.6 per cent and 25.9 per cent of the population, respectively. On the whole however, for India, around 75 per cent of the population are out of any insurance coverage.

The official portal of the *Ayushman Bharat* provides us the figures on the proportion of population for each state that are eligible to be enrolled under the scheme. A comparison of those figures with the figures of existing coverage (from NFHS 4 data) offers us an interesting picture. While it is the case that with the implementation of *Ayushman Bharat*, most of the states will be gaining in terms of proportion of population covered under insurance schemes, there are some states such as Andhra Pradesh, Chattisgarh, Kerala, Tamil Nadu, where the proposed coverage is actually lower than the already existing ones (see Table 3). In such circumstances how the state and the centre will manage the scheme without pushing any household out of insurance coverage remains to be seen.

The inter-state variation of government insurance coverage presented in Table 1 and Table 2 is not unexpected. It can be argued that various states of India have different levels of poverty and per capita income and thereby differ in their socio-economic characteristics. It might be the case that governments in poorer states provide for more insurance coverage as opposed to the governments in the richer states, such that the poor people are not left out of accessing health care at a reasonable cost. It can therefore be expected that the proportion of population covered under government insurance will vary positively with the poverty rate in the state. This is however not the case. As evident from Figure 1 and Figure 2, there is no relationship between the insurance coverage and urban or rural poverty rates across states (the correlation coefficient values are -0.2634 [Significance value 0.2487] and -0.3702 [significance value 0.0986] for the rural and

urban areas respectively). It is seen from the figures that states like UP, Bihar, Jammu & Kashmir, or Madhya Pradesh have a high poverty rate both in the urban and rural areas, but they have abysmally low coverage under government insurance schemes. On the other hand, states like Andhra Pradesh, Telangana, Kerala or Tamil Nadu have very high insurance coverage in spite of the fact that the poverty rates are quite low in these states. This shows that government insurance coverage across states gets shaped not merely by necessity of the poor but also by political, social or institutional factors. This has been pointed out by Nandi *et al* (2013) and Maurya and Ramesh (2018). Therefore, institutional factors essential for improving the coverage of poor under government targeted programmes need to be improved in these states. How much positive changes in this direction will be undertaken by the respective state governments while implementing the *Ayushman Bharat* scheme remains to be seen.

It must, however, be noted that the *Ayushman Bharat* National Health Protection Scheme is not designed for the entire population but for 10.74 crore families or roughly 50 crore population belonging to the poor and vulnerable sections, to be selected based on the criteria derived from the latest Socio-Economic Caste Census. The 10.74 crore families comprise roughly around 40 per cent of the Indian population. Given that the government wants to protect the “poor and vulnerable” sections of the population, for the sake of analysis we can treat the bottom 40 per cent of the population in terms of monthly per capita consumption expenditure (which is a well-accepted measure of economic status or standard of living) of the NSS sample as a representative government’s possible target for *Ayushman Bharat*. Table 4 shows the insurance coverage scenario of the bottom 40 per cent of the population based on NSS data. The table clearly shows that currently the government insurance coverage of the bottom 40 per cent of the population is worse than the population as a whole. For example, in India, 16.3 per cent of the population are covered under government insurance schemes, while for the bottom 40 per cent the number is 12.8 per cent. This implies that the upper 60 per cent of the population have better insurance coverage as compared with the bottom 40 per cent. There exists significant

inter-state variation with regard to coverage for the bottom 40 per cent of the population with states like Andhra Pradesh, Telangana, Kerala covering significant proportion of the bottom 40 per cent, while other states like UP, Bihar, Assam are clearly lagging behind.

5. Hospitalization and Reimbursement from Insurance

The important benefit of having an insurance coverage is that the hospitalization expenses will be reimbursed by the insurance company. The probability of hospitalization because of ailments requiring hospitalisation is expected to vary within the population depending upon various factors. However, some people might remain out of hospital even when there is a need for hospitalized care, because of their inability to finance the required expenses. But the promise of insurance coverage reduces this financial risk and therefore it is expected that with an increasing insurance coverage, the rate of hospitalization (i.e. number of hospitalisation episodes per 1000 population) within the population might increase. The question is whether the insurance companies, particularly in case of government sponsored insurance, reimburse the required amount of money or not. The estimates obtained from NSS data are presented in Table 5. The table points towards three important characteristics regarding health insurance in India.

First, the rate of hospitalisation for those who are covered under some kind of health expenditure support is higher than those who do not have any cover, both for the bottom 40 per cent as well as for the entire population. Thus, if the new health scheme indeed brings more people under insurance, then rate of hospitalisation is expected to show significant increase. Therefore, over and above the money needed for insurance premium, sufficient medical infrastructure needs to be created for the scheme to work, for which little allocation has been made in the budget. Currently, only Rs1200 crore has been allotted for 1.5 lakh health and wellness centres, which comes to a paltry amount of around Rs80,000 per such centre. Moreover, it is not clear yet what the additional contribution of the health and wellness centre in providing hospitalized care would be. In the absence of such allocation, private health care demand will rise, which might lead to increase in the cost of private health care. Our analysis suggests that with increase in health

insurance coverage, the rate of hospitalization in private facilities increases. This is shown in Figure 3 and Figure 4. The higher coverage of population by insurance is associated with a higher rate of private hospitalisation in the rural areas (correlation coefficient value is 0.4490 with significance level 0.0412) as well as in the urban areas (coefficient correlation value is 0.5474 with significance level 0.0102). But the positive connection is stronger in the urban areas with higher correlation values and lower level of significance. This clearly indicates that if the physical access to hospitalized care is not improved, higher coverage by insurance may not lead to higher utilisation. Health insurance creates a larger market for the private players in the health sector. A sudden expansion of the government funded insurance market may aggravate the problem of hospital induced demand for medical care in the form of unnecessary hospital stay, diagnostic tests and surgeries, unless supply side conditions are improved and the whole health sector is brought under strict regulation.

Second, the reimbursement as a percentage of medical cost of hospitalization (excluding child birth) in the government schemes is abysmally low, particularly for the bottom 40 per cent of the population. Only 13.3 per cent of total hospitalisation expenses are reimbursed to the bottom 40 per cent and 17.1 per cent for the entire population. This raises serious questions about the efficacy of the government schemes. Even with a meagre Rs 30,000 coverage (RSBY), the proportion of hospitalisation cost reimbursed is rather low. There is no guarantee that simply increasing the coverage will improve this. One can argue that since RSBY is supposed to be a cashless model, zero reimbursement figures for RSBY beneficiaries may not indicate no reimbursement, rather it could also be result of beneficiary's lack of knowledge about the admissible amount of reimbursement. Even if one accepts such possibility, it does not explain why a large percentage of RSBY cases report significant out-of-pocket expenses, that is, total hospitalisation expenditure net of reimbursement amount.

Third, it is observed that the proportion of hospitalisation cost reimbursed is much higher for insurance schemes directly bought by the households than the government ones. Thus in case of insurance being paid by the government, insurance companies are mostly unwilling to pay the reimbursement, as compared to when

the household pays. This might be a result of low premiums paid by the government or a general apathy towards honouring the insurer's commitment when the payers are not the actual patient but the government.

In the absence of proper regulation of the private health sector, adequate reimbursement and complementary supply enhancement, health insurance schemes might have a paradoxical effect of increasing out-of-pocket expenditure, which has been found to have happened for RSBY as discussed above. In the next section we analyze the impact of government health insurance schemes on distress financing of health expenditure.

6. Insurance Schemes and Financing of Health Expenditure

In the event of hospitalization, financing the expenses by the households is a major concern. Having a health insurance is expected to protect an individual by taking care of its health expenses, thereby reducing the probability of catastrophe due to high expenses. There is a huge literature on catastrophic health expenditure incurred by households following the publication of Wagstaff and van Doorslaer (2003). A household is considered to have incurred catastrophic health expenses if its out-of-pocket health expenditure exceeds a certain percentage of its capacity to pay (proxied by household's total consumption expenditure or household's non-food expenditure). Most of the empirical studies have taken 10 per cent of household consumption expenditure or 40 per cent of household non-food expenditure as the threshold percentage. Here we take a different method of identifying household's vulnerability by focusing on its sources of financing out-of-pocket hospitalisation expenditure. We categorize the financing of hospitalization expenses into two: Distress financing – when the household funds its out-of-pocket expenses by selling assets, borrowing and taking help from friends and relatives. Non-distress financing – when the household funds its out-of-pocket expenses from its income or savings. We argue that the first category of financing is less desirable than the second category of financing for a household. Our outcome/dependent variable, therefore, is a binary one which takes on value 1 when household resorts to distress financing and takes on value 0 when household

does not resort to distress financing.

We model the outcome/dependent variable by a number of independent variables by using logistic regression. The set of independent variables include various individual, utilisation, household and contextual level factors. The individual-level independent variables that have been considered are sex, age group, presence of any chronic illness and type of insurance coverage, The utilisation-level independent variables are choice of institution (public or private hospital) and total medical expenditure. The household level independent variables are per capita consumption expenditure, occupational type of the household, caste and religion. The other factors which can broadly be considered as contextual variables are place of residence (rural / urban) and country- region. The results of the logistic regression are shown in Table 6. The most striking finding from the regression result is that the likelihood of distress financing is higher in a situation where the utilizer of the hospitalized care is covered by government insurance in comparison to non-coverage situation. This result is not paradoxical given our earlier discussion about very low reimbursement rates and increase in private health care access with insurance coverage. It is also the case that distress financing increases with total cost of hospitalization and number of hospitalization in the family.

The fact that the likelihood of distress financing is higher with government insurance coverage points towards serious problems with implementation of such schemes. Essentially, two kinds of problems exist, which have already been alluded to. First, there is reluctance on the part of the insurance companies to finance the full hospitalization expenses. In fact the rate of reimbursement is abysmally low. Thus people go for hospitalization thinking that the insurance will cover the expenses but with low reimbursement rate, they end up financing the expenses through borrowing or selling assets. Second, the lack of adequate government health infrastructure and near absent regulation for the private health sector results in an increase in demand for the latter. With such increase in demand and lack of regulation the private players can increase the price of health care resulting in an increase in expenditure for the patients.

The *Ayushman Bhara*t scheme only increases the scale of insurance both in terms of bringing in more sections of the population and the sum insured for each family. It is clear that with the existing government insurance schemes the problem of financing hospitalization remains a big issue because of the above mentioned reasons. Without addressing those, simply increasing the insurance coverage will not solve the problems of the poor who are desperately in need of health care of acceptable quality at affordable cost.

7. Some International Comparisons

Ever since the *Ayushman Bharat* scheme was announced in Budget 2018-19, the media and spokespersons of the government have been comparing the scheme with Obamacare of the USA and some even named the scheme as Modicare rhyming the health scheme in the USA. The Indian Prime Minister has also announced it as the world's largest health insurance scheme. Given these broad assertions on the part of the media and our findings regarding the performance of already existing government health insurance schemes in India, it is worthwhile to compare the salient features of *Ayushman Bharat* scheme with health insurance or similar schemes existing in other countries such as the United States, China, Mexico and Thailand. The health systems of these countries have often found place in discourse on health systems and health protection for the poor.

7.1 Obama Care or the Affordable Care Act[7]

The USA, in spite of being the richest country in the world and a pioneer in bio-medical research and technology, is an under-performer when it comes to health care. It is the only country in the advanced capitalist world, which does not have universal health coverage. Unlike the publicly funded universal health care programs prevalent in United Kingdom or other European countries, the USA health system is primarily an insurance driven model. The Affordable Care Act or Obamacare passed in 2010 is

7. See Gaffney and McCornick (2017) for a good review of the Patient Protection and Affordable Care Act of the United States.

not an Act passed with the intent of universal health coverage, but an expansion of the already existing insurance based financing system. Therefore, when the current government in India is publicly proclaiming that it is emulating Obamacare in the USA, the meaning of this assertion should not be lost. It essentially means that India would also be moving towards an insurance based health system like the USA scuttling all efforts towards universal publicly funded health system.

Notwithstanding such a policy, there exists glaring difference between Obamacare and *Ayushman Bharat*. First, as Azad and Chowdhury (2018) have already pointed out the amount allocated for *Ayushman Bharat* pales in comparison to the fund allocated for Obamacare, even after taking into account the difference in health care costs between India and the USA. Second, the structure of Obamacare is quite different from *Ayushman Bharat*. *Ayushman Bharat* till now talks only about providing coverage up to Rs500,000 for 10.74 crore families. Obamacare has a four pronged strategy—coverage expansion, health insurance market reforms, cost and affordability reforms and delivery system reforms. The government has a multi-pronged strategy towards expanding coverage through a change in the Medicaid (insurance for the poor) criteria, pushing the employers towards providing insurance, subsidizing premiums for those who cannot afford insurance and forcing the insurance companies to devise newer products to be sold on online market places covering ten essential health benefits. Second, financial rewards and penalties for hospitals have been devised based on quality to incentivize the service providers in maintaining quality standards.

USA however is a land where the expansion of the role of the government is not welcome by the government, even in health care. Therefore, the provision of Obamacare, which in any case is not a universal health coverage program has been severely curtailed with many states opting out of the program. As per estimates around 2.9 crore people in the USA remain uninsured. Studies suggest that the overall impact of the Act was modest in comparison with the gaps before the implementation of Obamacare. Even with spending much more money than India and devising better regulatory structures to control the premiums and

safeguard the interests of the poor, the impact of Obamacare has not been very substantial. In India, in comparison the amount of money allocated is less and there is, till date, no regulation put in place to deal with the expansion of insurance. Given these, the euphoria within the media and spokesperson of the government regarding 'Modi Care' seems to be misplaced.

7.2 Health Scheme in China[8]

While the government and the Prime Minister are claiming that the *Ayushman Bharat* National Health Protection Scheme is the largest health insurance scheme in the world, they are short on facts. China has a three tier health insurance scheme - two for urban areas and one for rural areas. As per figures pertaining to year 2011, 130.5 crore people are getting the benefits of one of these three schemes. The total coverage envisaged by the government of India under *Ayushman Bharat* is only 50 crore. Thus, the claim that the *Ayushman Bharat* is the largest health insurance scheme in the world is also not true.

The Chinese health sector reforms are not merely limited to providing insurance coverage to the population. It has also entailed the setting up of a strong delivery system based on primary health care in community health centres. The Chinese government has also developed an essential medicines program to reduce irrational drug use and improve access to essential medicines. The government agency related to drugs imposes price ceilings for essential drugs. Unlike India, public hospitals in China are the backbone of health care delivery. More than 90 per cent of the country's in-patient and out-patient services are provided by public hospitals. These hospitals absorb 2.9 per cent of GDP of China, whereas in India, the total public expenditure on health is a meagre 1 per cent of GDP.

It is not the case that the Chinese health system is perfect. The three insurance schemes differ in premiums as well as sum insured. Migrant workers are practically left out of the schemes. A part of the premium is paid by the population while the majority

8. See Yu (2015) and Yip *et al* (2012) for more details about the health care system in China.

is paid by the government. Even with these problems the scale of the Chinese health care reforms has been staggering. The reimbursements of those insured under the three insurance schemes vary between 44 per cent and 68 per cent which is much higher than that of India. As a result of these efforts, the out-of-pocket expenditure has reduced from 60 percent of health expenditure to 35 per cent in 2011.

7.3 Health Reforms in Mexico[9]

In 2003, Mexico legislated the System of Social Protection in Health (SSPH). As early as 1983, the constitution of Mexico guaranteed the right to health protection. But only after 2003 legislation of SSPH, this became a reality. SSPH's most important component is the public insurance scheme offering universal access to a comprehensive package of health services, named *Seguro Popular*. By 2012, 5.26 crore uninsured population in Mexico were brought under SSPH. This flagship scheme does not only have insurance coverage as its main component, it is also based on a three pronged approach towards universal health. First, it provides protection against health risk through epidemiological surveillance, health protection and disease prevention. Publicly funded community health centers cater to this aspect. Second, the scheme provides patient protection through quality of care assurance monitored by National Crusade for Health Quality. Third, it provides financial protection through comprehensive health insurance through *Seguro Popular*. To provide for these, the health expenditure as a share of GDP increased from 5.1 per cent in 2000 to 6.3 per cent in 2010, with the share of out-of-pocket expenditure declining from 50.9 per cent in 2000 to 47.1 per cent in 2010.

The Mexican experience points towards the necessity of a comprehensive health sector reform strategy aimed at not only providing insurance but also preventive health care while assuring quality. Mexico has one of the highest out-of-pocket expenditure ratios within the OECD countries. But it is consistently moving

9. See Knaul *et al* (2012) for details about Mexican health care system.

towards providing universal health coverage. In contrast, the Indian health sector reforms have been piecemeal and the current focus on the insurance aspect only neglects the issues of prevention and quality as well as public provisioning of basic health care.

7.4 Health System in Thailand[10]

Thailand spends 2.89 per cent of GDP as public expenditure on health as compared to 1 per cent in India. With a higher spending on health, Thailand has instituted a tax financed universal health insurance scheme which does not rely on contributions from its members. This insurance coverage is complemented by a public health delivery system comprising health centers and district hospitals for every 3000-5000 population and 30000-50000 population respectively. Out of Thailand's 161,000 hospital beds in 2014, only 19 per cent were in private hospitals, the rest being provided by the public sector. Additionally, the country has developed a trained and committed health workforce who are mandated to serve in the rural areas for at least 3 years.

Again, the contrast with India cannot be overemphasized. India's health insurance scheme is a targeted scheme covering, when fully implemented, only 40 per cent of the population. But the health infrastructure development in Thailand has not been even contemplated in India. The focus is towards providing health insurance, whose reimbursements are abysmally low, and then in the absence of public health infrastructure people will access private facilities and thereby increase the demand of private health care, hence benefitting them. The experience of other countries show that the emphasis has been both on providing insurance and expanding public health infrastructure such that the financial risks of hospitalization are adequately protected.

8. Concluding Remarks

The *Ayushman Bharat* health insurance scheme is being projected as a game changer for the health sector in the country. Our analysis of the existing evidence from secondary literature as well

10. See Tangcharoensathien *et al* (2018) for details about health system development in Thailand.

as data pertaining to the already existing publicly funded health insurance schemes suggests that the government health insurance scheme has many limitations. First, the rate of reimbursement is very low. Second, with increase in insurance coverage and people's increasing preference for private hospitals only,utilisation of private facilities is expected to rise. However, with low reimbursement rate from the insurance companies and an increase in demand for private hospitals, out-of-pocket expenses may rise, leading to the poor resorting to distress financing. This argument is commensurate with the findings of many studies on RSBY. Third, neither RSBY nor the recently introduced *Ayushman Bharat* provides any coverage for outpatient care expenses. The cumulative outpatient care expenses in a year can be very high for households with elderly or chronically ill members and may have impoverishing effect. Finally, the experience of other countries' health systems suggests that solely relying on the insurance route for providing universal health coverage may not be enough unless complemented by other public interventions on health infrastructure, manpower and preventive care.

The discussion on *Ayushman Bharat* till now does not indicate that the government is serious about dealing with supply side bottlenecks pertaining to the public health sector or putting forth a resolute regulatory mechanism to deal with the private health care providers. What the government appears to be doing in future is to enlarge the private health insurance market with little focus on how additional resources in the heath sector will get translated into better infrastructure and higher manpower. The experience of RSBY shows that a government initiated scheme of much lower entitlement and population coverage did not adequately benefit the poor. That makes one doubtful if by simply blowing up in scale the insurance schemes without focusing on other important parameters pertaining to the health sector will achieve any meaningful purpose. Instead of spending crores of rupees on insurance schemes, the government may directly invest in the health sector and thereby increase the supply of publicly provided health care of acceptable quality at an affordable cost for the poor population.

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Table 1: Distribution of population by type of insurance coverage for select states and All India

state	Government Provided Insurance			employer provided	Arranged by households	No insurance
	rural	urban	total			
Andhra Pradesh	64	55.1	61.5	0.4	0.3	37.6
Assam	0.7	5	1.3	1.7	0.2	96.8
Bihar	7.1	2.3	6.6	0.4	0.1	92.4
Chhattisgarh	43.2	38.4	42	0.9	0	57.1
Delhi	16.5	11.8	11.9	8.7	8.6	70.8
Gujarat	8.4	2.6	5.9	0.8	5.7	87.6
Hariyana	1.4	18.5	7.9	0.4	3.8	88
Jharkhand	3.4	4.1	3.6	1.7	0.1	94.6
Jammu & Kashmir	3.8	6.2	4.3	0.8	0.2	94.8
Karnataka	4.8	9.1	6.4	3.4	1.5	87.2
Kerala	41.5	32.4	37.8	3.2	2.2	55.9
Maharashtra	1.8	5.1	3.1	1.9	3	91.9
Madhya Pradesh	1.4	4.4	2.2	0.3	0.2	97.1
Orissa	24.7	9	21.9	1.4	0.9	75.8
Punjab	4.5	5	4.7	1.5	0.6	93.1
Rajasthan	22.6	28.6	24.2	0.4	0.2	75.2
Telengana	63.6	33.8	52.7	3.3	0.1	43.9
Tamil Nadu	20.1	20.7	20.4	2.4	1	76.1
Uttar Pradesh	2.5	8.7	4.2	0.7	0.2	94.8
West Bengal	15.6	12.3	14.6	0.9	1.9	82.4
India	16.37	16.17	16.3	1.48	1.38	80.54

Note: Row-wise figures may not add up to 100 since *other* (a category with insignificant sample size) has been omitted from the table.

Source: Estimated from NSS 71st Round unit level data

Table 2: Distribution of households by insurance coverage (NFHS 4)

state	ESIS	CGHS	State Health Insurance Scheme	RSBY	CHI	Other Health Insurance through employers	Med reimb from employers	Other privately purchased CHI	Other	no insurance
Andhra Pradesh	2.1	0.6	71.1	0.8	0	0.1	0.3	0.4	0.1	25.5
Assam	0.7	1	0.7	5.8	0.2	0.4	0.5	1	0.2	89.6
Bihar	0.3	0.8	1.2	9.4	0.1	0.1	0.1	0.2	0.1	87.7
Chhattisgarh	0.6	0.6	25.9	41.5	0	0.4	0.2	0.6	0.1	31.5
Gujarat	1	1.1	8	9.1	0.2	0.6	1.5	4.1	0.9	76.9
Haryana	2.1	1.9	1.2	2	0.1	0.3	0.7	1.5	2.7	87.8
Jammu and Kashmir	1.1	1.2	1.1	0.1	0	0.1	0.1	0.5	0.1	95.8
Jharkhand	1.1	0.7	0.4	10.1	0.1	0.4	0.3	0.2	0.2	86.7
Karnataka	2.3	0.7	2.8	18.6	0.7	0.5	0.5	0.8	2.2	71.9
Kerala	1.9	1.7	1.1	37.5	0.3	0.6	0.5	5.4	0.3	52.3
Madhya Pradesh	0.9	1.3	10.8	3.2	0.2	0.4	0.2	0.6	0.4	82.3
Maharashtra	0.9	2.1	2.1	2.8	0.2	0.9	0.9	2	3.7	85.1
Delhi	3.3	3.8	1	0.6	0	0.8	1	4.9	0.8	84.3
Odisha	0.6	1	19.3	30.2	0.1	0.3	0	0.5	3.7	52.3
Punjab	2	3.3	13.2	1.3	0.1	0.2	0.2	1.2	0	78.8
Rajasthan	1	1.2	11.1	2.5	0.1	0.2	0.3	0.6	2.2	81.3
Tamil Nadu	3.6	3	56.6	0.1	0.3	1.7	0.6	1.3	0.9	36
Uttar Pradesh	0.6	0.9	0.3	3.3	0.1	0.2	0.3	0.3	0.3	93.9
West Bengal	1.6	1.2	0.5	28	0.2	0.6	0.4	0.9	0.2	66.6
Telengana	3	1	61.1	0.9	0.2	0.4	0.4	0.9	0.3	33.6
India	1.2	1.4	11.0	9.8	0.2	0.4	0.4	1	0.9	74.9

Notes: Figures show household with at least one member having a particular insurance coverage; ESIS: Employment State Insurance Scheme; CGHS: Central Government Health Scheme; RSBY: Rashtriya Swasthya BimaYojana; CHI: Community Health Insurance.

Source: Estimated from NFHS 4 (2015-16) unit-record data

Table 3: Targeted Coverage of Ayushman Bharat vis-a-vis already existing coverage across major Indian states

	Ayushman Bharat (%)	Current Insurance Coverage (NFHS 4: 2015-16)
Andhra Pradesh	45.08	71.9
Assam	42.03	6.5
Bihar	54.27	10.6
Chhattisgarh	65.25	67.4
Gujarat	38.57	9.9
Haryana	33.51	3.2
Jammu & Kashmir	29.3	1.2
Jharkhand	46.44	10.5
Karnataka	31.45	21.4
Kerala	24.14	38.6
Madhya Pradesh	56.93	14
Maharashtra	36.42	4.9
Odisha	61.36	49.5
Punjab	29.73	14.5
Rajasthan	45.45	13.6
Tamil Nadu	44.35	56.7
Telengana	31.67	62
Uttar Pradesh	36.35	3.6
West Bengal	54.94	28.5

Note: Coverage for 2015-16 is calculated by adding the coverage under state based schemes and RSBY

Source: Official website of the Ayushman Bharat and National Family Health Survey 4.

Table 4: Coverage of population (Bottom 40%) by insurance types

state	Govt insurance	Employer supported	Organised by household	Others	No insurance
Andhra Pradesh	57.4	0.1	0	0.4	42.1
Assam	0.8	1.7	0	0	97.6
Bihar	6.1	1.1	0	0	92.8
Chhattisgarh	40.4	0.6	0	0	59.0
Delhi	0.1	0	0.6	0	99.2
Gujarat	10.9	0	1.1	0	88.1
Haryana	0.5	0.6	0	0	98.9
Jharkhand	1.3	0.5	0	0	98.2
Jammu & Kashmir	3.9	4.4	0	0	91.7
Karnataka	4.7	0.5	0.1	0.4	94.3
Kerala	55	2.5	0	0.2	42.3
Maharashtra	0.3	0.4	0	0	99.2
Madhya Pradesh	0.4	0	0	0	99.6
Orissa	23.1	0.6	0.4	0.1	75.9
Punjab	1.5	0.1	0	0	98.4
Rajasthan	32	0	0	0	68
Telengana	61.3	1.1	0	0	37.6
Tamil Nadu	11	0.4	0.2	0.7	87.8
Uttar Pradesh	3.4	0.5	0.1	0	96
West Bengal	15.2	0.3	0	0	84.5
India	12.8	1.2	1.2	0.1	84.8

Source: Estimated from NSS 71st round unit-record data.

Table 5: Non-childbirth related hospitalization and reimbursement of medical expenses under difference insurance coverage

Health expenditure support	Bottom 40% population			Whole Population		
	Population coverage (%)	Hospitalisation[1] cases per 1000 population	Reimbursement as % of medical[2] cost of hospitalisation	Population coverage (%)	Hospitalisation[1] cases per 1000 population	Reimbursement as % of medical [2] cost of hospitalisation
Govt. Funded Insurance (RSBY etc)	10.5	31	13.3	12.8	50	17.1
Employer supported insurance	0.6	29	46.9	1.2	49	3.5
Household arranged insurance	0.1	38	55.7	1.2	48	66.3
Not Covered	88.7	22	NA	84.7	32	NA

Note: [1]exclude child-birth related hospitalization; [2] excludes non-medical expenses; population coverage may not add up to 100 as health expenditure support 'Other' category has been excluded from the table.

Source: Estimated from NSS 71st round unit-record data.

Table 6: Results of logistic regression on distress financing

	Coefficient	Standard Errors	t	P-value	95% Confidence Interval	
Sex (Ref: *Male*)						
Female	0.8	0.019	-9.14	0	0.77	0.84
Age group (Ref: *13-39 years*)						
0-12 years	1.13	0.042	3.15	0.002	1.05	1.21
40-59 years	1.12	0.033	3.94	0	1.06	1.19
60 years & above	0.88	0.031	-3.71	0	0.82	0.94
Chronic illness (Ref: *No chronic illness*)						
Chronic illness	1.37	0.043	10.05	0	1.29	1.46
no information	1.34	0.07	5.57	0	1.21	1.48
Type of health expenditure coverage (Ref: *Not covered*)						
Govt insurance	1.23	0.038	6.78	0	1.16	1.31
Pvt protection	0.81	0.079	-2.12	0.034	0.67	0.98
arranged by household	0.44	0.053	-6.81	0	0.35	0.56
others	1.02	0.201	0.09	0.926	0.69	1.5
log(Tot Med Exp))	1.64	0.016	49.71	0	1.61	1.67
Type of hospital utilised (Ref: *Govt hospital*)						
Private	1.03	0.029	1.05	0.295	0.97	1.09
log(PCCE)	0.53	0.013	-26.69	0	0.51	0.56
Household's occupation (Ref: *regular wage or salaried*)						
self employed	1.09	0.034	2.63	0.008	1.02	1.15
labour	1.87	0.066	17.69	0	1.74	2
others	1.44	0.071	7.44	0	1.31	1.59
Caste (Ref: *Other caste*)						
Scheduled Tribe	1.43	0.068	7.41	0	1.3	1.57
Scheduled Caste	1.72	0.061	15.42	0	1.61	1.85
OBC	1.35	0.038	10.56	0	1.27	1.42
Religion (Ref: *Hindu*)						
Muslim	1.16	0.038	4.48	0	1.09	1.24
Christian	0.91	0.057	-1.58	0.115	0.8	1.02
Sikh	0.85	0.079	-1.73	0.083	0.71	1.02
others	0.82	0.093	-1.79	0.074	0.65	1.02

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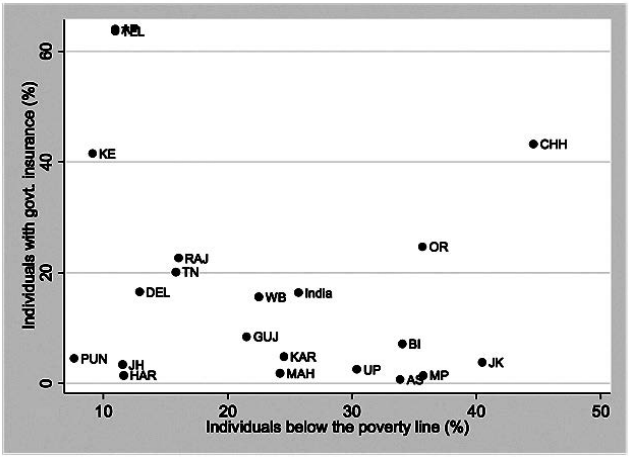
Table 6 (Continued from previous page)

	Coefficient	Standard Errors	t	P-value	95% Confidence Interval	
No of hospitalization in the family (Ref: *1 hospitalization*)						
2 hospitalisation	1.41	0.039	12.57	0	1.34	1.49
>2 hospitalisation	1.91	0.062	19.71	0	1.79	2.03
Sector (Ref: *Urban)*						
Rural	1.26	0.031	9.33	0	1.2	1.32
Region (Ref: *North and Central India*)						
Eastern India	1.7	0.055	16.36	0	1.6	1.81
North-Eastern India	0.36	0.024	-15.6	0	0.32	0.41
Western India	0.92	0.037	-2.02	0.043	0.85	1
South India	3.05	0.094	36.14	0	2.87	3.24

Note: Dependent Variable: Type of health finance = 1 if distress financing (i.e. households resorted to borrowing, selling assets, contribution from friends and relatives etc for meeting hospitalisation expenses); = 0 if non-distress financing (household paid the hospitalisation expenses from income and savings)

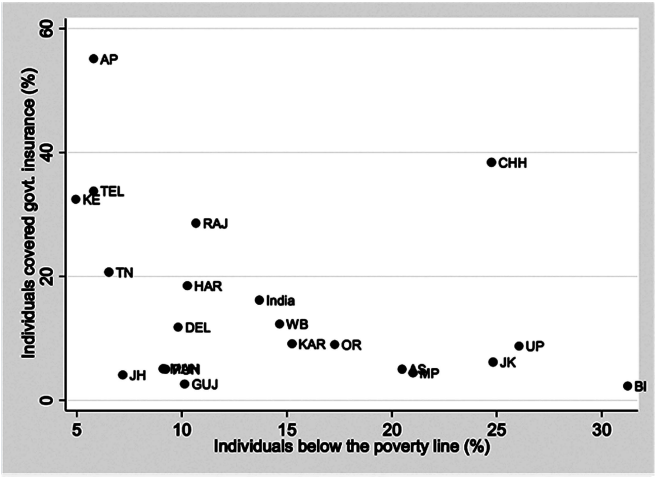
Source: Estimated from NSS 71st round unit-record data.

Figure 1: Incidence of rural poverty and rural individuals covered by govt. supported insurance scheme (major Indian states)



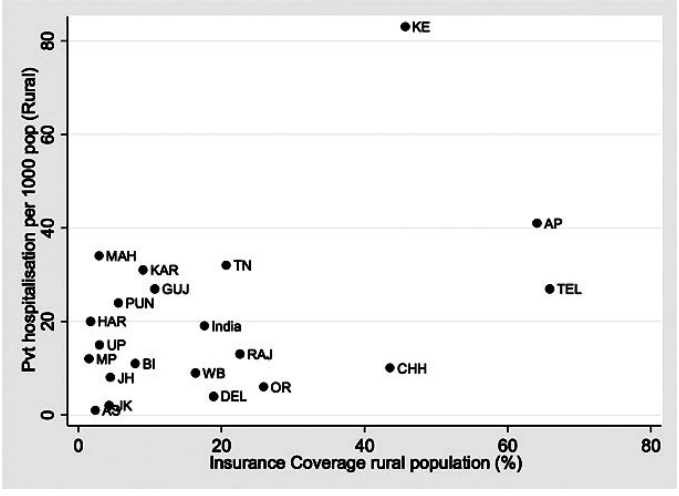
Source: Appendix Table A1

Figure 2: Incidence of urban poverty and urban individuals covered by govt. sponsored insurance schemes (major Indian states)



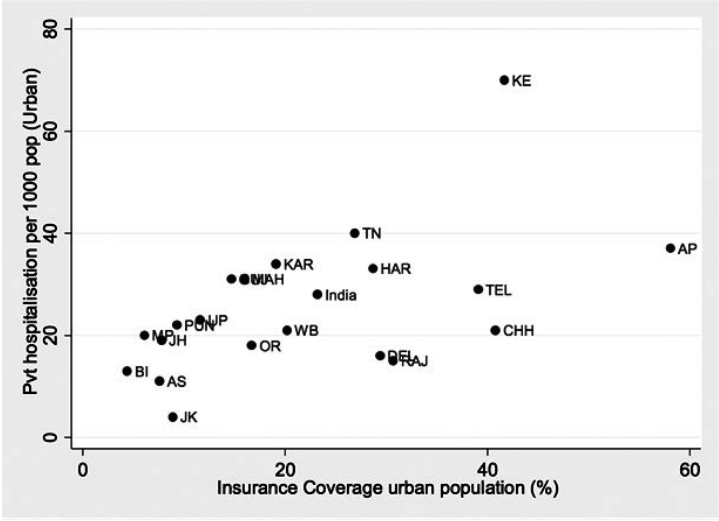
Source: Appendix Table A1

Figure 3: Rate of hospitalisation at private facilities & insurance coverage (rural)



Source: Appendix Table A2

Figure 4: Rate of hospitalisation at private facilities & insurance coverage (urban)



Source: Appendix Table A2

Table A1: Incidence of poverty and population of coverage by government supported insurance across major Indian states.

state	Percentage of population below the poverty line in 2011-12 (Tendulkar Method)		Percentage of population covered by govt. supported insurance in 2014	
	Rural	Urban	Rural	Urban
Andhra Pradesh (AP)	11.0	5.8	64	55.1
Assam (AS)	33.9	20.5	0.7	5.0
Bihar (BI)	34.1	31.2	7.1	2.3
Chhattisgarh (CHH)	44.6	24.8	43.2	38.4
Delhi (DEL)	12.9	9.8	16.5	11.8
Gujarat (GUJ)	21.5	10.1	8.4	2.6
Haryana (HAR)	11.6	10.3	1.4	18.5
Jammu & Kashmir (JK)	40.5	24.8	3.8	6.2
Jharkhand (JH)	11.5	7.2	3.4	4.1
Karnataka (KAR)	24.5	15.3	4.8	9.1
Kerala (KE)	9.1	5.0	41.5	32.4
Maharashtra (MAH)	24.2	9.1	1.8	5.1
Madhya Pradesh (MP)	35.7	21.0	1.4	4.4
Odisha (OR)	35.7	17.3	24.7	9.0
Punjab(PUN)	7.7	9.2	4.5	5.0
Rajasthan (RAJ)	16.1	10.7	22.6	28.6
Telengana (TEL)	11.0	5.8	63.6	33.8
Tamil Nadu (TN)	15.8	6.5	20.1	20.7
Uttar Pradesh (UP)	30.4	26.1	2.5	8.7
West Bengal (WB)	22.5	14.7	15.6	12.3
India	25.7	13.7	16.37	16.2

Note: Since no separate poverty estimates are available for Telengana and Andhra Pradesh they were attributed with same figures.

Source: For poverty figures – Press notes of the erstwhile Planning Commission (available at http://planningcommission.nic.in/news/pre_pov2307.pdf); population insurance coverage figures are estimated using unit-record NSS 71st round data.

Table A2: Coverage of insurance and rate of hospitalisation at private facilities (hospitalisation cases in private facilities per 1000 population) across major Indian states.

States	Coverage of population by insurance (%)		Average number of hospitalisation at private facilities per 1000 population	
	Rural	Urban	Rural	Urban
Andhra Pradesh	64.1	58.1	41	37
Assam	2.4	7.6	1	11
Bihar	8.0	4.4	11	13
Chhattisgarh	43.6	40.8	10	21
Delhi	18.9	29.4	4	16
Gujarat	10.7	14.7	27	31
Haryana	1.7	28.7	20	33
Jammu & Kashmir	4.3	8.9	2	4
Jharkhand	4.5	7.8	8	19
Karnataka	9.1	19.1	31	34
Kerala	45.7	41.7	83	70
Maharashtra	2.9	16.0	34	31
Madhya Pradesh	1.5	6.1	12	20
Odisha	25.9	16.7	6	18
Punjab	5.6	9.3	24	22
Rajasthan	22.6	30.7	13	15
Telengana	65.9	39.1	27	29
Tamil Nadu	20.7	26.9	32	40
Uttar Pradesh	3.0	11.6	15	23
West Bengal	16.4	20.2	9	21
India	17.6	23.2	19	28

Source: Estimated from NSS 71st round unit-record data.

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