Invest More in Public Healthcare Facilities

What Do NSSO 71st and 75th Rounds Say?

V R MURALEEDHARAN, GIRIJA VAIDYANATHAN, SUNDARARAMAN T, UMAKANT DASH, ALOK RANJAN, RAJESH M

Data from National Sample Surveys (71st round, 2014 and 75th round, 2017–18) show that there is a significant increase in the utilisation of public facilities for both outpatient and inpatient services, across empowered action group states and non-EAG states. As a result, there is a dramatic fall in the overall financial burden on patients who would have otherwise used services of private healthcare providers. In light of this evidence, this paper argues that it is prudent to invest more directly to strengthen public healthcare delivery system in India.

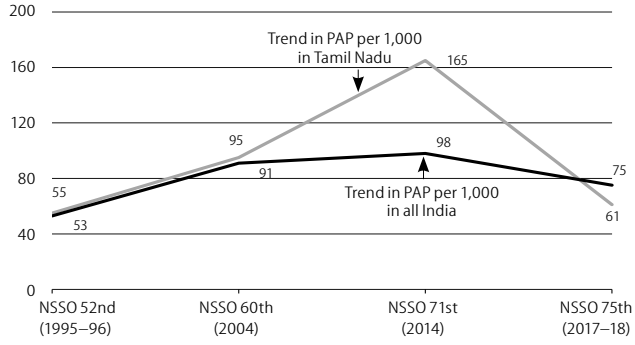
We are grateful to the anonymous reviewer's comments, which strengthened the overall quality and presentation of this paper.

V R Muraleedharan (*vrm@iitm.ac.in*) teaches at the Department of Humanities and Social Sciences, and Centre for Technology and Policy, Indian Institute of Technology (IIT) Madras. Girija Vaidyanathan (*gigiv50@gmail.com*), Sundararaman T (*sundar2016@gmail.com*), and Umakant Dash (*dash@iitm.ac.in*) teach at the Department of Humanities and Social Sciences, IIT Madras. Alok Ranjan (*alokranjancmc@gmail.com*) is a postdoctoral fellow at the Department of Humanities and Social Sciences, IIT Madras. Rajesh M (*rajesh.dahima91@gmail.com*) is a research associate with the Centre for Technology and Policy, IIT Madras.

This paper addresses whether it is worth investing in public healthcare facilities and strengthening the public delivery system. Based on our analysis of the National Sample Survey Office (NSSO 71st round) and for 2017–18 (NSSO 75th round), it is indeed prudent to increase investment to strengthen public healthcare delivery system in India. Our observations are made with respect to less developed and non-less developed states (namely, empowered action group (EAG) and non-EAG states, as per Government of India (GoI) classification).[1] We present two key results of the above-mentioned two surveys in support of our argument—first, there is a significant increase in utilisation, especially by the poorer sections of society, of public facilities for both outpatient (OP) and inpatient (IP) services, across EAG and non-EAG states and at the aggregate level and, second, as a result, there is a consequent fall in the overall financial burden on patients who would have otherwise used services of private healthcare providers. The net impact of this on the share of out-of-pocket expenditure (OOPE) to the gross domestic product (GDP) is considerable. Despite some variations in the methodologies adopted in reporting morbidity status of the population between the two rounds of the national sample surveys, we present ways to make our comparative observations robust under certain assumptions. We discuss the relevance of our findings in the light of the national debate on whether to increase investment to strengthen public facilities to deliver care more directly to the people or purchase such services from private providers, as a policy choice (Sundararaman and Muraleedharan 2015; Jain et al 2015; Sundararaman et al 2016).

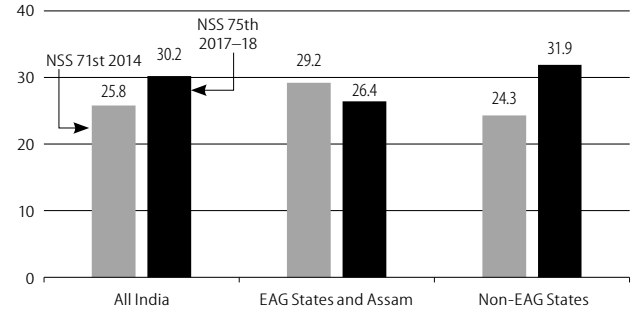
The paper is organised as follows—the following section provides an overview of the sample size and other design elements of the 71st round (for 2014) and 75th round (for 2017–18) of the NSS. In all the later sections, comparisons are made between 2014 and 2017–18, across various states, based on the above two rounds (GoI 2016, 2019). Then, we present the share of public and private facilities in the provision of OP and IP care in rural and urban regions. Following that, we compare financial burden on patients (OOPE) seeking care from private and public facilities and also compare financial burden for maternity services provided by private and public facilities. We conclude that it would be prudent to strengthen public service delivery with greater investments, in the light of the evidence from large surveys carried out across states.

Figure 1: Self-reported Persons Ailing per 1,000 Population



Source: IIT-Madras and PHFI (2016) Report and authors' computation from the unit records of NSSO 71st and 75th rounds.

Figure 2: Share of Public Facilities for Outpatient Care—All India, EAG States and Assam, and Non-EAG States



Source: Authors' computation from unit records of NSSO (71st round 2014 and 75th round 2017–18).

Overall Trends from the NSS

In this section, we present a brief account of the sample size of the two rounds of the NSS and overall trend as reflected by the proportion of ailing persons (per 1,000 population) and their implications for further analysis of the household features.

It is important to note that the total sample size (households and individuals covered) has increased by 73% during the 75th (2017–18) round (Table 1). This is likely to give a better representation of the consumption pattern across states. Yet, a major caveat is necessary before we look at the trends in primary variables of concern of this paper, namely trends in access, share of public and private facilities, OOPE and catastrophic expenses incurred at the household level (Figure 1).

Table 1: Sample Size in 71st Round, 2014 and 75th Round, 2017–18 NSS

	75th Round 2017–18		71st Round (2014)	
	Households	Individuals	Households	Individuals
Total	1,13,823	5,55,115	65,932	3,33,104
Rural	64,552	3,25,883	36,480	1,89,573
Urban	49,271	2,29,232	29,452	1,43,531

Source: (GoI 2016, 2019).

Figure 1 shows the number of persons reporting ailments per 1,000 population (PAP), which is the number of persons reporting chronic and ailments of short duration during the reference period of last 15 days (of the survey day). We notice a drastic fall in the reported morbidity from 98 per 1,000 persons in 2014 to 75 per 1,000 persons in 2017–18, at an all-India level. For comparison, we have also shown the trend for Tamil Nadu, which shows much greater fall from 165 to 61 during this period. What could be the reason(s) for this and what are the implications for trends in access and OOPE?

The fall in self-reported morbidity could be large due to omission of minor ailments, such as skin, body aches, abdominal pains, during the 75th round (2017–18), and the large differences in the sample size between the two rounds. These were included in the 71st round in 2014. It is well known (from several observational surveys confirmed by physicians in public facilities) that a large proportion of daily outpatient department (OPD) consists of persons ailing from such ailments. Based on personal discussion with officials from the Directorate of Public Health and Preventive Medicine (Government of Tamil Nadu), we expect at least about 40% of OPD load to be accounted by body and abdominal pain and skin-related care. We expect a similar pattern for the all-India trend. A direct implication of this "omission" of certain minor ailments is that the field investigator who administered the questionnaire would automatically skip questions related to OOPE that may have been incurred by respective households. Thus, estimates for both access and OOPE get under-reported in the 75th round (2017–18). Furthermore, since this is a survey conducted in a sample of households, the absolute rates of chronic and acute illness would not have much impact on the proportion with respect to the choice of provider.

Public and Private Facilities in OP Care

Here, we provide only the key observations at an all-India level and wherever necessary, some highlights across EAG and non-EAG states are made.

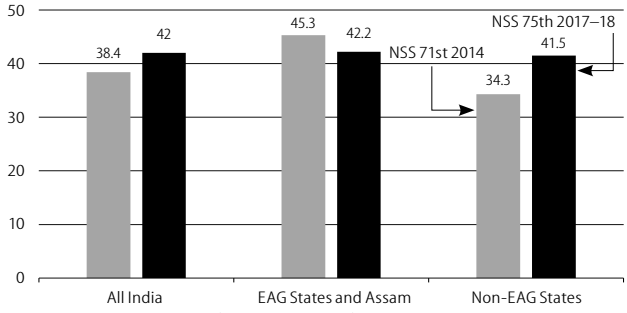
Overall, at an all-India level, the share of public facilities, including health sub-centres (HSCs), primary health centres (PHCs), community health centres (CHCs) and general hospitals (GHs), in the overall utilisation of healthcare services has increased from 25.8% in 2014 (71st round) to 30.2% in 2017–18 (75th round). The share of public facilities in non-EAG states increased from 24.3% to 31.9%, while it declined marginally in EAG states from 29.2% to 26.4% during the same period (Figure 2).

The share of utilisation of public facilities for OP care also is higher in rural regions (32.6%) than in urban regions (26.2%) in 2017–18 (Table 2).

The urban poor have accessed public facilities to a greater extent (37.6%) than the urban rich (16.6%), while in rural areas the dispersion across quintiles is much less (37.3% for the poorest and 32.4% for the richest) (Table 2).

The use of public facilities by persons belonging to Scheduled Tribes (STs) has dropped from 48.6% in 2014 to 41.8% in 2017–18, which is considerably higher than that of other groups—Scheduled Castes (SCs), Other Backward Classes (OBCs) and general population (GEN)—which depend on private providers to a much greater extent (Table 2). It is notable that except for this subgroup, and for the second poorest quintile by economic class, in all other subgroups, be it urban–rural residence, gender, social group and economic class, utilisation of public services for OP care has increased from the 71st to the 75th round. The drop in the share of persons belonging to STs

Figure 3: Share of Public Facilities for Inpatient Care—All India, EAG States and Assam, and Non-EAG States



Source: Authors' computation from unit records of NSSO (71st round 2014 and 75th round 2017–18).

who access public facilities has to be noted with considerable concern with regard to equity in access.

Public and Private Facilities in IP Care

The share of public facilities to the total IP care at the all-India level has also increased from 38.4% in 2014 to 42.0% in 2017–18. Its share in non-EAG states showed a substantial increase from 34.3% in 2014 to 41.5% in 2017–18, while its share in EAG states declined marginally from 45.3% to 42.2% during the same period (Figure 3).

The share of public facilities for rural regions remained at 45.7% in 2017–18, considerably higher than that for the urban regions at 35.3% (Table 3).

Table 2: Share of Public and Private Providers for Outpatient Care (All India)

	All India						
	71st Round, 2014		75th Round, 2017–18				
	Public	Private	Public	Private	Trust/NGO	Informal	Private Total*
Total	25.8	74.2	30.2	65.8	1.1	3.03	69.8
Rural–urban divide							
Rural	28.5	71.5	32.6	62.2	0.9	4.3	67.4
Urban	21.2	78.8	26.2	71.6	1.3	0.9	73.8
Gender							100
Male	24.6	75.4	29.9	66.0	1.0	3.2	70.1
Female	26.8	73.2	30.4	65.6	1.1	2.9	69.6
Social group							
ST	48.6	51.4	41.8	50.3	1.6	6.3	58.2
SC	29.9	70.1	34.4	60.1	0.6	4.9	65.6
OBC	26.0	74.0	32.1	63.8	1.1	3.1	67.9
General	19.3	80.7	23.9	73.4	1.2	1.6	76.1
Economic class Rural							
Poorest	33.8	66.2	37.3	56.3	0.9	5.5	62.7
Poor	32.5	67.5	31.8	64.6	0.7	3.0	68.2
Middle	28.5	71.5	29.7	62.9	1.5	5.9	70.3
Rich	24.5	75.5	33.1	60.5	0.5	5.9	66.9
Richest	26.0	74.0	32.4	64.5	0.9	2.2	67.6
Total	28.5	71.5	32.6	62.2	0.9	4.3	67.4
Urban							
Poorest	28.3	71.7	37.6	60.5	0.6	1.4	62.4
Poor	25.2	74.8	29.5	67.3	1.3	2.0	70.5
Middle	21.2	78.8	25.6	72.5	1.3	0.6	74.4
Rich	18.2	81.8	21.0	77.7	1.0	0.4	79
Richest	13.6	86.4	16.6	80.8	2.3	0.4	83.4
Total	21.2	78.8	26.2	71.6	1.3	0.9	73.8

* Private total includes for profit private provider and trust/NGO.
Source: Authors' computation from unit records of NSSO (71st round 2014 and 75th round 2017–18).

Table 3: Share of Public and Private Providers for Inpatient Care (All India)

	All India					
	71st Round, 2014		75th Round, 2017–18			
	Public	Private	Public	Private	Trust/NGO	Private Total*
Total	38.4	61.6	42.0	55.3	2.7	58
Rural–urban divide						
Rural	41.9	58.1	45.7	51.9	2.4	54.3
Urban	32.0	68.0	35.3	61.4	3.3	64.7
Gender						
Male	37.5	62.5	41.0	56.2	2.8	59
Female	39.3	60.7	43.1	54.3	2.6	56.9
Social group						
ST	59.6	40.4	64.7	33.2	2.1	35.3
SC	49.5	50.5	51.4	46.1	2.5	48.6
OBC	33.4	66.6	38.9	58.5	2.7	61.1
General	34.5	65.5	36.4	60.6	3.0	63.6
Economic class Rural						
Poorest	57.7	42.3	53.5	44.7	1.9	46.5
Poor	52.3	47.7	50.5	47.6	1.9	49.5
Middle	43.6	56.4	48.6	48.8	2.6	51.4
Rich	41.0	59.0	43.7	53.9	2.4	56.3
Richest	27.4	72.6	37.6	59.7	2.8	62.4
Total	41.9	58.1	45.7	51.9	2.4	54.3
Urban						
Poorest	46.0	54.0	48.2	48.9	3.0	51.8
Poor	40.2	59.8	43.0	54.2	2.8	57
Middle	32.4	67.6	34.1	62.1	3.8	65.9
Rich	24.5	75.5	28.3	68.2	3.5	71.7
Richest	15.9	84.1	15.8	80.6	3.6	84.2
Total	32.0	68.0	35.3	61.4	3.3	64.7

* Private total includes for profit private provider and trust/NGO.
Source: Authors' computation from unit records of NSSO (71st round 2014 and 75th round 2017–18).

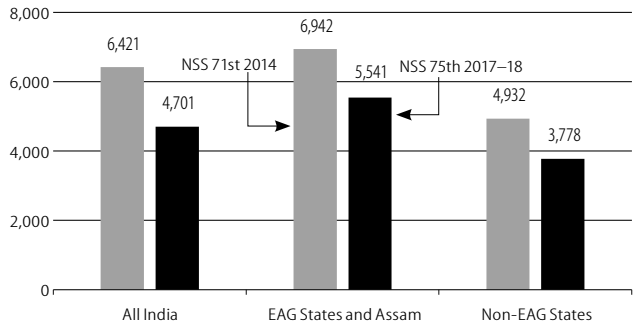
The poorest in urban regions have accessed public facilities to a greater extent (48.2%) than the richest (15.8%) in 2017–18, while their share of the public facilities in rural regions were higher across the quintiles (ranging from 53.5% to 37.6%), and much less dispersed (Table 3).

Among social groups, 64.7% of the ST population relied on public facilities for IP care compared to SCs (51.4%)/OBCs (38.9%)/GEN (36.4%) population (Table 3). Again, except for the poorest two quintiles in rural areas, there has been an increase in utilisation of public facilities for inpatient care in all sub-groups across the last two surveys.

When you look at the trend over a longer period from 1995–96, the share of public facilities for inpatient care fell slowly from 43.6% in 1995–96 to 40.6% in 2004 and to 38.4% in 2014. But the trend has been reversed again and its share has gone up to 42%. This could be more due to increasing share of patients covered under publicly funded health insurance (PFHI) schemes utilising public facilities, in addition to the increasing cost of care provided by private facilities.

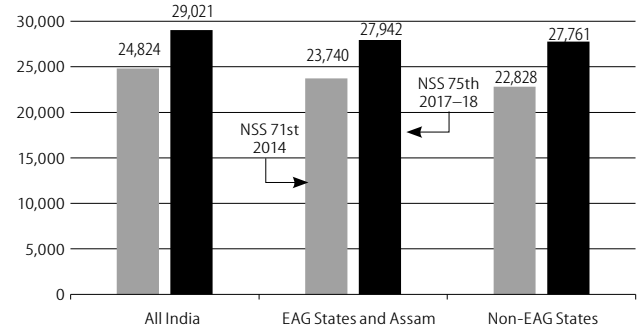
During 2014–18, the share of public facilities with regard to OP and IP care has increased across states by about 5% and this increase is more a feature of non-EAG states. Private providers' share at the all-India level has fallen from about 75% to 70%. Despite the vast presence and expansion of private providers, especially in the non-EAG states, public facilities are able to attract more patients. What are the plausible reasons for this

Figure 4: OOPE during IP Care in Public Healthcare Facilities



Source: Authors' computation from unit records of NSSO (71st round 2014 and 75th round 2017–18).

Figure 4a: OOPE for IP Care in Private Healthcare Facilities



Source: Authors' computation from unit records of NSSO (71st round 2014 and 75th round 2017–18).

and what are the tangible and intangible implications of positives in particular and negative, if any?

OOPE for IP Care: Public vs Private

In this section, we examine the financial burden on patients who sought care from private and public facilities for IP care in 2017–18, compared to 2014.

Overall, at an all-India level, OOPE per hospitalisation episode[2] in public facilities fell from 6,421 in 2014 to 4,701 in 2017–18 (in nominal terms, this would be even lower in 2014 prices); while OOPE in private facilities per hospitalisation episode, went up from 24,824 in 2014 to 29,021 in 2017–18. OOPE in not-for-profit (trust) hospitals was lower at 23,059 compared to other private facilities (Figures 4 and 4a; and Table 4).

Table 4: OOPE for IP Care under Public and Private Providers (All India)

	All India					
	71st Round, 2014		75th Round, 2017–18			
	Public	Private	Public	Private (for Profit)	Trust/ NGO	Private Total*
Total	6,421	24,824	4,701	29,313	23,059	29,021
Rural–urban divide						
Rural	5,936	21,793	4,628	27,070	21,617	26,830
Urban	7,593	29,620	4,874	32,793	24,960	29,020
Gender						
Male	7,929	27,904	5,349	32,804	25,393	32,450
Female	4,971	21,631	4,046	25,482	20,365	25,249
Social group						
ST	3,234	22,799	3,059	28,951	11,596	27,906
SC	5,647	18,728	4,396	27,997	17,403	27,447
OBC	4,868	24,063	4,479	26,145	20,666	25,904
General	10,517	29,174	5,837	34,178	30,486	34,005
Economic class						
Rural						
Poorest	5,707	17,625	4,023	22,918	13,227	22,531
Poor	5,794	16,734	4,818	30,663	18,955	30,205
Middle	5,650	16,641	4,344	22,875	23,411	22,902
Rich	4,647	19,835	3,928	24,989	24,480	24,967
Richest	8,210	28,665	5,948	31,322	22,583	30,932
Total	5,936	21,793	4,628	27,070	21,617	26,830
Urban						
Poorest	4,119	19,587	4,699	26,530	13,346	25,779
Poor	5,974	21,619	3,568	27,529	20,009	27,161
Middle	6,898	26,164	5,208	33,872	16,526	32,871
Rich	14,924	34,085	5,599	34,165	16,972	33,319
Richest	12,868	41,994	7,699	40,530	66,023	41,616
Total	7,593	29,620	4,874	32,793	24,960	32,391

* Private total includes for profit private provider and trust/NGO.
Source: Authors' computation from unit records of NSSO (71st round 2014 and 75th round 2017–18).

OOPE was higher in EAG states than in non-EAG states for public providers but in both these categories, overall, it declined. OOPE per hospitalisation in public facilities fell from 6,942 to 5,541 in EAG states, and 4,932 to 3,778 in non-EAG states, between 2014 and 2017–18 (Figure 4).

In contrast, OOPE for IP care in private healthcare facilities increased sharply, by 16.9% at the all-India level (from 24,824 per hospitalisation episode in 2014 to 29,021 per episode in 2017–18) and by 17.7% in EAG states and 21.6% in non-EAG states (Table 4).

Among patients from across economic quintiles in public facilities, those in richer quintiles in urban regions witnessed a much higher fall in OOPE for IP care; overall, the poorer sections spent less than those in richer sections in public facilities. The pattern remains the same in rural regions as well. In all categories by rural–urban residence, social groups, economic class, there was a decline in OOPE for IP care in public providers and an increase with private providers.

OOPE for ST/SC/OBC/GEN categories fell, across all states. The fall in OOPE for the general category was the highest, across states.

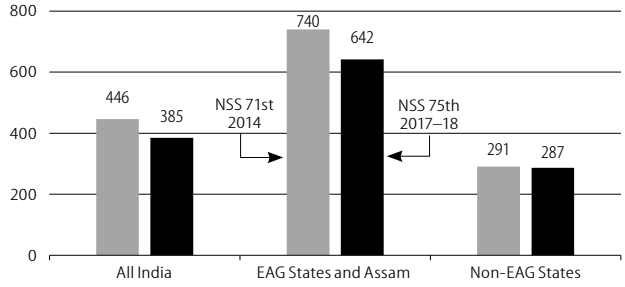
OOPE for OP Care Public vs Private Providers

Overall, at an all-India level, OOPE for OP care in public facilities fell from 446 in 2014 to 385 in 2017–18 (in nominal terms, this would be even lower in 2014 prices), while OOPE in private facilities per OPD went up from 755 in 2014 to 814 in 2017–18. OOPE for OP care provided by not-for-profit (trust) providers was lower at 802 in 2017–18 (Figures 5, 5a and Table 5, p 57).

OOPE was higher in EAG states than in non-EAG states for public providers and in both EAG and non-EAG states, OOPE for OPD in public facilities fell during 2014 and 2017–18, from 740 to 642, and very marginally from 291 to 287, respectively (Figure 5).

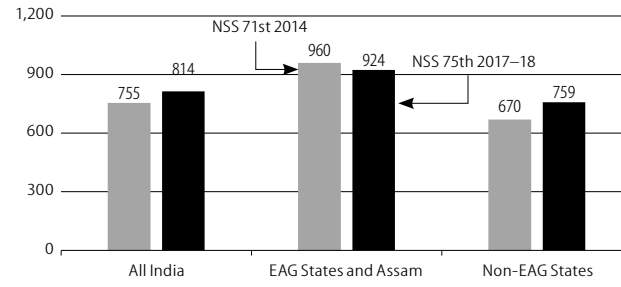
Among patients from across economic quintiles using public facilities, those in the richest quintile in urban regions witnessed a much higher fall in OOPE for OP care (from 938 in 2014 to 370 in 2017–18). The extent of dispersion of OOPE across quintiles (both in urban and rural regions) has narrowed significantly in 2017–18 than in 2014.

Figure 5: OOPE for OP Care in Public Healthcare Facilities



Source: Authors' computation from unit records of NSSO (71st round 2014 and 75th round 2017–18).

Figure 5a: OOPE for OP Care in Private Healthcare Facilities



Source: Authors' computation from unit records of NSSO (71st round 2014 and 75th round 2017–18).

In the private sector, the OOPE per OP episode increased at the all-India level by 7.5%, and this was an aggregate of a decline from 960 to 924 in the EAG states (3.75%) and an increase from 670 to 759 in the non-EAG states (13.3%). The extent of dispersion of OOPE across quintiles has narrowed considerably, which means that poorer sections are paying as much as those in richer quintiles (Table 5).

OOPE for ST/OBC/GEN categories fell across all states. The OOPE for OP care for SCs in public services alone went up to 512 in 2017–18 from 354 in 2014. The OOPE for all social categories using private providers went up, although marginally.

Catastrophic Health Expenditure[3]

Results are presented in terms of percentage of patients experiencing catastrophic health expenditure (CHE) at 10% and 25% levels for those using public and private providers, at all-India level between 2014 and 2017–18.

Table 5: OOPE for OP Care under Public and Private Provider (All India)

	All India						
	71st Round, 2014		75th Round, 2017–18				
	Public	Private	Public	Private	Trust/NGO	Informal	Private Total*
Total	446	755	385	825	804	572	814
Rural–urban divide							
Rural	455	705	385	792	689	505	773
Urban	427	828	384	872	942	1,073	876
Gender							
Male	436	769	385	793	689	766	824
Female	454	742	384	872	942	396	805
Social group							
ST	393	679	346	704	457	1,485	782
SC	354	647	512	807	495	234	760
OBC	486	753	313	848	720	633	836
General	470	815	421	821	1,057	394	815
Economic class							
Rural							
Poorest	510	668	350	762	370	281	714
Poor	634	583	630	830	797	325	808
Middle	370	649	336	811	703	341	769
Rich	337	722	329	708	767	899	725
Richest	435	823	338	826	742	510	815
Total	455	705	385	792	689	505	772
Urban							
Poorest	331	644	408	847	446	250	830
Poor	226	724	424	855	572	339	835
Middle	469	716	334	897	1,779	689	910
Rich	425	966	360	805	721	762	804
Richest	938	1,048	370	948	852	8,964	984
Total	427	828	384	872	942	1,073	876

* Private total includes for profit private provider, trust/NGO and informal provider.
Source: Authors' computation from unit records of NSSO (71st round 2014 and 75th round 2017–18).

CHE-10 under public facilities has fallen from 24% in 2014 to 15.1% in 2017–18. During the same period, CHE-25 level has shrunk from 11% to 6.3%. But, the poorest suffer the most both in rural and urban regions, ranging from 25.9% for the poorest to 13.2% for the richest quintiles (2017–18 figures; Table 6, p 58).

Comparative figures (at CHE-10 level) for those under private facilities show only a marginal fall from 61.6% in 2014 to an almost equally 57.6% in 2017–18. The figures for CHE-10 under private sector in rural regions has remained almost the same, except for the richest that fell from 62.3% in 2014 to 54.6% in 2017–18. The poorest under this category continue to be around 75% (in rural region) and around 67% (in urban region).

It is important to note that the figures for non-governmental organisations (NGOs)/trust providers are not far below from those for-profit private providers. In fact, they have much greater impoverishing effects among the rural population than among the urban population. This is also evident from Tables 4 and 5, which show OOPE among those seeking IP and OP care from NGOs/trust providers.

Financial Protection through PFHIs

It is useful to provide one more positive feature on the performance of public facilities. Table 7 (p 58) shows average OOPE by those covered and not covered by PFHI in public and private facilities.

The average OOPE (in 2017–18) by those with PFHI coverage in public facilities was 3,299, which is 51% for those without PFHI (4,665); whereas, the difference between the average OOPE in private facilities by those with PFHI coverage (21,474) and by those not covered by PFHI (29,558) in private facilities was much smaller (about 38%). This is despite the large amount already paid by PFHI for private facilities—an average OOPE of 22,033 incurred by these patients is indeed a huge and significant (Table 7).

It is important to note that the cost of care (as reflected by the OOPE after PFHI coverage) in trust/NGOs is not as cheap as one would expect. They are quite comparable to the amount paid in private (for-profit) facilities.

How much of this OOPE is due to medical reasons and non-medical reasons (such as expenses due to transport or caretakers) cannot be analysed with the information we have from the 75th round of NSSO data.

The overall performance of public healthcare system has improved in terms of improved access and reduction in OOPE. The share of public facilities in overall OP care has increased from 19.5% (in 1995–96) to 20.9% (in 2004) to 25.8% (in 2014) to the level of 30.3% (2017–18). In contrast, the share of public facilities for IP care fell slowly from 43.6% (in 1995–96) to 40.6% (in 2004) to 38.4% in 2014. But, the trend has been reversed again and its share has gone up to 42% in 2017–18.

Observations and Implications

There are two sets of questions to be addressed here. First, what are the plausible causes for the slow and steady increase in the share of OP care and why is there an upward trend in the use of public healthcare facilities for IP care? Second, what are the financial implications of such recent trends for patients and the government? In the remaining part of this paper, we shall first discuss the financial implications and then offer plausible explanations for the increase in the share of public healthcare system.

Given the huge difference in OOPE for OP and IP care incurred in public facilities compared to the respective figures in private facilities, a 5% diversion of patients from private to public facilities would imply a significant reduction in OOPE as a proportion of GDP. For OP care, OOPE in private facilities is 114% higher than in public facilities; and for IP care, OOPE in private facilities is 524% higher than in public facilities (Tables 4 and 5).

Table 6: CHE-10 and CHE-25 during Hospitalisation in India: Evidence from 71st Round, 2014 and 75th Round, 2017–18

	All India (CHE-10)						All India (CHE-25)					
	71st Round, 2014		75th Round, 2017–18				71st Round, 2014		75th Round, 2017–18			
	Public	Private	Public	Private	Trust/NGO	Private Total*	Public	Private	Public	Private	Trust/NGO	Private Total*
Total	24.0	61.6	15.1	58.1	46.6	57.6	11.0	32.2	6.3	29.7	22.9	29.4
Rural–urban divide												
Rural	25.6	65.4	16.5	62.7	52.6	62.3	11.4	34.5	6.9	33.9	29.6	33.6
Urban	19.8	55.5	11.6	51.0	38.8	50.4	10.1	28.7	4.7	23.4	14.3	22.9
Gender												
Male	26.3	62.4	16.8	60.0	51.0	59.5	12.7	34.2	7.3	31.7	24.5	31.4
Female	21.7	60.7	13.4	56.0	41.4	55.4	9.3	30.2	5.3	27.5	21.0	27.2
Social group												
ST	20.0	59.8	14.0	58.9	32.9	57.4	6.8	30.1	4.0	32.2	19.4	31.5
SC	23.8	64.5	14.5	62.0	41.1	60.9	10.4	32.5	6.5	31.1	16.3	30.3
OBC	21.8	61.9	15.5	58.0	50.2	57.6	9.6	33.1	6.5	30.3	26.5	30.1
General	28.8	60.0	15.5	56.4	47.0	56.0	15.3	31.0	6.6	28.1	22.5	27.8
Economic class												
Rural												
Poorest	33.0	76.0	25.9	75.0	53.9	74.1	14.1	44.8	12.1	47.1	36.0	46.7
Poor	24.5	67.0	16.6	70.4	47.1	69.5	11.1	36.7	5.9	41.5	25.9	40.9
Middle	25.3	65.7	15.2	62.6	63.2	62.7	10.7	31.6	6.6	32.6	42.3	33.1
Rich	19.3	63.4	13.1	60.2	49.6	59.7	7.3	32.1	5.3	28.9	19.8	28.5
Richest	25.7	62.3	13.2	54.9	47.9	54.6	14.1	33.1	5.4	28.3	25.6	28.2
Total	25.6	65.4	16.5	62.7	52.6	62.3	11.4	34.5	6.9	33.9	29.6	33.7
Urban												
Poorest	19.8	65.8	16.0	67.6	48.3	66.5	8.5	38.0	6.8	35.5	14.9	34.4
Poor	18.3	61.8	11.5	53.4	44.8	53.0	9.8	32.7	4.0	22.9	11.5	22.4
Middle	19.6	57.7	9.8	51.3	33.7	50.2	10.0	26.7	4.3	25.0	13.2	24.2
Rich	23.2	52.8	7.1	46.2	29.7	45.5	13.0	27.6	2.6	19.2	10.7	18.8
Richest	19.4	44.4	7.7	38.7	39.0	38.7	11.0	22.8	4.2	15.5	22.0	15.7
Total	19.8	55.5	11.6	51.0	38.9	50.4	10.1	28.7	4.7	23.4	14.3	22.9

* Private total includes for profit private provider and trust/NGO.
Source: Authors' computation from unit records of NSSO (71st round 2014 and 75th round 2017–18).

Table 7: Financial Protection under PFHI and Type of Service Provider

	All India											
	71st Round, 2014				75th Round, 2017–18							
	Private Provider without Any Insurance	Private Provider with PFHI	Public Provider without Any Insurance	Public Provider with PFHI	Private Provider without Any Insurance	Private Provider with PFHI	Public Provider without Any Insurance	Public Provider with PFHI	Trust Hospital without Any Insurance	Trust Hospital with PFHI	Total Private Provider without Any Insurance*	Total Private Provider with PFHI
Mean OOPE per hospitalisation	24,495	18,149	6,373	3,288	29,711	22,033	4,665	3,299	26,422	11,209	29,558	21,474
Median OOPE per hospitalisation	11,200	9,550	1,830	1,000	14,600	11,500	1,500	1,000	10,080	3,600	14,400	11,000
% of hospitalisation episodes with OOPE<500	1.6	7.0	24.6	38.4	0.25	3.9	25.9	36.4	6.8	17.3	0.55	4.6
% of hospitalisation episodes with OOPE<1,000	3.0	10.4	36.7	51.0	0.52	5.6	40.4	508	8.7	26.5	0.90	6.6
% of hospitalisation episodes with OOPE<3,000	12.3	21.1	62.9	74.7	5.7	13.6	69.2	75.6	19.5	40.8	6.29	15.0
% of hospitalisation episodes with OOPE<5,000	23.7	31.2	75.3	84.1	14.7	23.3	80.0	85.2	30.0	59.0	15.44	25.2
Incidence of CHE-10	63.1	58.7	23.9	19.7	60.3	56.1	14.3	14.0	50.5	32.6	59.8	54.9
Incidence of CHE-25	32.7	29.6	10.6	8.3	30.5	28.6	5.9	5.5	25.0	18.4	30.2	28.0

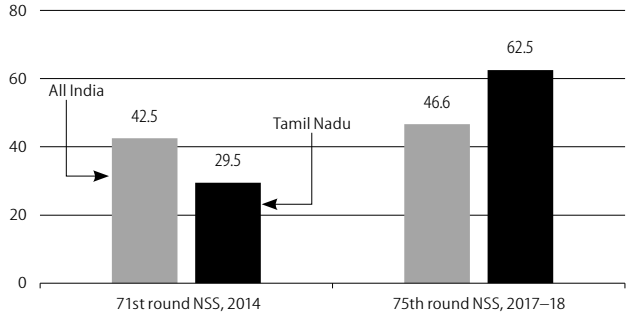
* Private total includes for profit private provider and trust/NGO.
Source: Authors' computation from unit records of NSSO (71st round 2014 and 75th round 2017–18).

Table 8: Total OOPE in Hospitalisation and Outpatient Care as Proportion of India's GDP

	All India (All Numbers Are in Crore)													
	India's Population (A 9)[4]	India's GDP at Current Prices	OOPE during Hospitalisation (in ₹)				OOPE during Outpatient Care (in ₹)					Total OOPE (in ₹)		
			Public	Private	Trust	Total	Public	Private	Trust	Informal	Total	Public	Private	Total
71st round, 2014	129.6	1,12,33,522	11,820 (0.11)	73,304 (0.65)	-	85,124 (0.76)	35,064 (0.31)	1,70,711 (1.52)	-	-	2,05,775 (1.83)	46,884 (0.41)	2,44,014 (2.17)	2,90,898 (2.59)
75th round, 2017–18	135.3	1,70,95,005	7,745 (0.05)	63,586 (0.37)	2,442 (0.01)	73,773 (0.43)	28,308 (0.17)	1,32,168 (0.77)	2,153 (0.01)	4,220 (0.02)	1,66,850 (0.98)	36,053 (0.21)	2,04,569 (1.19)	2,40,622 (1.41)
75th round, 2017–18 if PAP remains the same as 71st round	135.3	1,70,95,005	7,745 (0.05)	63,586 (0.37)	2,442 (0.01)	73,773 (0.43)	36,990 (0.22)	1,72,700 (1.01)	2,814 (0.02)	5,514 (0.03)	2,18,017 (1.27)	44,734 (0.26)	2,47,055 (1.44)	2,91,789 (1.71)

Source: Authors' computation from unit records of NSSO (71st round 2014 and 75th round 2017–18) and RBI (2020), 2014 and 2017 data.

Figure 6: Share of Public Facilities Out of Total PFHI-insured Hospitalisation in India and Tamil Nadu during 2014 and 2017–18



Source: Authors' computation from unit records of NSSO (71st round 2014 and 75th round 2017–18).

OOPE as a percentage of the GDP has fallen from 2.59% in 2014 to 1.41% in 2017–18. That amounts to an enormous savings to society at large (Table 8). Even if we factor the lesser reporting of PAP in the 75th round of NSSO due to the omission of minor ailments (skin, body ache and abdominal) which was accounted for in the 71st round of the NSS, and consider the PAP equivalent to the 71st round (9.8 per 100 population), the OOPE as a part of the GDP was 1.71%. This observation, along with the observation that OOPE in public facilities is far below those in private facilities, indicates the higher effectiveness of public sector measured in terms of the greater share of care with lesser financial resources.

With regard to government health expenditure (GHE), recent estimates of the National Health Authority (NHA) for 2013–14 to 2015–16 show that the GHE has increased by 2.4% in nominal terms, from 1,018 in 2013–14 to 1,261 in 2015–16. Assuming another 5% increase in nominal terms during the next two years (up to 2018), it would push up the GHE by a mere 60 per capita. Therefore, the government's expenditure per capita has hardly increased even in nominal terms, while its share of patients has increased in real (natural) terms, that is, in real terms its output has increased.

Access to IP care in public services is associated with far less financial hardship in terms of OOPE and CHE, even when patients are not covered by PFHI, compared to financial hardship experienced with IP care from private providers care even when covered with PFHI. In the private sector with PFHI, the average OOPE (mean) is 21,474 and average OOPE (median) is 11,000 compared to public sector without insurance where the averages per episode are 4,665 (mean) and 1,500 (median) respectively in public sector, which is 4.6 and 7.3 times higher (Table 7). If we were to compare the public sector with PFHI the difference is 11 times. The differentials for CHE are also similar. If public provisioning of services is also seen as a form of tax-based insurance, it is currently far more effective in terms of financial protection.

Why Increase in the Share of Public Facilities

One plausible reason for the rise of public sector utilisation is the significant rise in the OOPE incurred in private facilities. This is noticeable particularly among those who, despite being covered by PFHI, end up spending a substantial amount out-of-pocket in private facilities. Another reason is the movement away from very selective packages of care in the public sector to a more expanded range of services, with the introduction of some extent of non-communicable diseases (NCD) care in primary level care and the expansion of public medical colleges and district hospitals, all of which is more pronounced in non-EAG states. The reversal of public services for many health conditions for which public services were simply not available within the district due to selective care policies brings back some level of trust with public providers.

Perhaps as a result of the above, those in richer economic quintiles are increasing their share of public facilities over the years both in rural and urban regions; this is very likely to improve footprints in public facilities in absolute numbers.[5] This has gone up from 42.5% in 2014 to 46.6% in 2017–18 (Figure 5). This is likely to increase further (as is evident from the experience in Tamil Nadu, where the share of public sector for hospitalisation among the insured has increased from 29% in

Table 9: Estimates of NHA Provided by the NHSRC (November 2018)

Sl No	Indicator	NHA 2015–16	NHA 2014–15	NHA 2013–14	NHA 2004–05
1	Total health expenditure (THE) as per cent of GDP	3.8	3.9	4.0	4.2
2	THE per capita (₹)*	4,116	3,826	3,638	1,201
3	Current health expenditure (CHE) as per cent of THE	93.7	93.4	93	98.9
4	Government health expenditure (GHE) as per cent of THE	30.6	29	28.6	22.5
5	Out of pocket expenditure as per cent of THE	60.6	62.6	64.2	69.4
6	Social security expenditure on health as per cent of THE	6.3	5.7	6.0	4.2
7	Private health insurance expenditure as per cent of THE	4.2	3.7	3.4	1.6
8	External/donor funding for health as per cent of THE	0.7	0.7	0.3	2.3

* At current prices.
Source: NHSRC (2018).

2014 to 62% in 2017–18 (Figure 6, p 59). Slow and steady influence of the National Health Mission (NHM) since 2005 on the primary care system could be another significant reason for this upward trend in the use of public healthcare system. If these tentative efforts at strengthening primary healthcare continue, the future trend is likely to be even more positive, as we have witnessed in better states such as Tamil Nadu (Muraleedharan et al 2018, 2020).

Conclusions

If GHE and access to government provision of health services increases, there could be a significant shift of patients from private providers to public facilities and a dramatic fall in OOPE and CHE. These could lead to relatively lesser increase in state spending on health, leading to enhancing the overall economic efficiency of the healthcare system of the country and substantial reduction in the impoverishment of people.

Over a short span of time (2014 to 2017–18), the cost of care (particularly for IP care) in private facilities have gone up significantly (by more than 4,000 per hospitalisation in nominal terms), inducing patients (even from higher expenditure groups) to seek care from public institutions. This attraction to seek care from public facilities could have been also due to fall in OOPEs in public facilities (by about 1,500 in nominal terms) for IP services. Enhanced inputs due to Universal Health Coverage coupled with PFHIs is likely to further increase the use of public facilities In light of the evidence from the 75th round (compared to 71st round) of NSSO, it is more prudent to invest further and more directly into public health systems.

NOTES

1 We have followed GoI's classification of states into EAG and non-EAG states, and all-India (merging all states together). While presentation of results state by state will be useful, we feel that such aggregate analysis provides sufficient evidence/basis for the overall argument of this paper.

2 OOPE was calculated by adding total medical expenditure and transportation cost by the family followed by deducting reimbursement amount from insurance companies. So, these figures indicate the amount which family paid from their pocket finally at the end of hospitalisation. It does not include insurance premium, which was directly paid from the government to insurance companies or from the household to private insurance companies. Private insurance coverage was a mere 1.3% of the total population in 2017–18.

3 The proportion of households in a population who face catastrophic health expenditure was computed using the threshold of 10% and 25% of usual annual consumption expenditure.

4 Population figures were taken from the World Bank projection estimates (https://data.worldbank.org/indicator/SP.POP.TOTL?locations=IN). However, we note that projection in the National Health Profile (NHP) shows a lower estimate than the World Bank's estimates. We also calculated according to the NHP population projection and found that the total OOPE as the proportion of GDP comes to 2.51% (public: 0.40%) whereas according to World Bank population projection we calculated it as 2.59% (public: 0.41%) in our article. Similarly, in 2017–18, estimated OOPE comes to 1.35 % (public: 0.20%) of GDP by NHP population estimates whereas by World Bank population projection it comes to 1.41% (public: 0.21%).

5 The immediate impact of this phenomenon would be an obvious fall in the overall "market share" of private providers. Undoubtedly, such a competitive pressure in the Indian context may end up creating more supplier-induced demand instead of containing cost of care provided by private providers. Evidence from the survey results certainly shows that the average OOPE has gone up over the survey years.

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