

# Falling Sick, Paying the Price

## NSS 71st Round on Morbidity and Costs of Healthcare

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The decennial National Sample Survey on health and education provides useful information on the health and education of the population. The summary report on health from the 71st round conducted in 2014 allows us to make an initial assessment of three sets of issues. One, the trends in morbidity rates and patterns of morbidity, two, the effectiveness of the public sector in ensuring access to healthcare, and three, the cost of healthcare across public and private sectors.

The preliminary report of the much awaited 71st round of the National Sample Survey (NSS) titled “Key Indicators of the Social Consumption in India: Health” has just been released. This is in advance of a detailed report, which may take about six months to become available in the public domain. The 71st round report on health and education (January to June 2014) is part of a decennial series that was established in the 1980s. The previous three in the series were the 60th round (January to June 2004), the 52nd round (July 1995 to June 1996), and the 42nd round (July 1986 to June 1987).

The 71st round surveyed a total of 65,932 households with 3,33,104 persons from across the various states and union territories of India. Of these, 36,480 households were from 4,577 rural villages, and 29,542 households were from 3,720 urban blocks.

These NSS surveys on health are perhaps the only reliable source of information we have to address the three vital policy questions:

- (a) What are the changing trends in morbidity rates and patterns of morbidity over the decades?
- (b) How effective is the public sector in ensuring access to healthcare and thereby in reducing financial burden on the people—the poor in particular?
- (c) What is the cost of healthcare across

public and private sectors—for different types of care—ambulatory and hospitalisation and for care in pregnancy, and to what extent do mechanisms of reimbursements provide financial protection against these costs?

In this brief note, we present the key findings of the 71st round at the all-India level, keeping in mind the above three questions, and highlight their policy implications. Eventually, the policy-making process, both at the centre and states should utilise evidence from such large surveys more systematically and to a far greater extent than at present. Needless to say, there are ways to improve the overall quality and utility of future cost of care and morbidity surveys. Even for this survey, this is only the first glimpse and much more information, especially on impoverishment due to healthcare costs, will become available in the full report.

### 1 Morbidity Conditions

The survey captures only self-reported morbidity conditions. Every household sampled is asked two simple questions: (a) Whether they were ill in the last 15 days and if so what were they ill with? (b) Whether they were hospitalised in the last 365 days and if so, why? Their response in terms of the nature of ailment or cause of hospitalisation is then coded using one of 60 codes and this is the basis of defining both morbidity rates and patterns.

There is much literature on the limitations, particularly on the accuracy in disease categorisation of such self-reported morbidity conditions. Self-reported morbidity surveys are known to under-estimate both latent illness and chronic illnesses and the perception of being ill is known to be dependent on cultural factors, health awareness and

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access to care. However, given the lack of any other reliable source of information on morbidity rates or patterns across all states this survey remains unique and invaluable. What does the survey reveal?

(a) Out of every 1,000 persons in rural areas, 89 reported an ailment in the last 15 days. The corresponding figure for urban areas is 118. Over the past two decades, there has been a steady increase in the gap between the proportion of ailing persons (PAPS as it is termed) in urban and rural areas. Whereas both were the same in the 52nd round (1995–96), it widened to 11 in the 60th round (June 2004), and a 29 now (Table 1).

**Table 1: Morbidity and Hospitalisation Rates**

		52nd Round (1986–87)	60th Round (2004–05)	71st Round (2014–15)
Proportion (per 1,000) of ailing persons (PAP) in last 15 days	Rural	55	88	89
	Urban	54	99	118
No of persons hospitalised per 1,000 population (excluding childbirth) in last 365 days	Rural	13	23	35
	Urban	20	31	44

Source: NSSO 52nd round, July 1995–June 1996. 60th round (Jan–June 2004) and 71st round (January–June 2014), New Delhi: NSSO, Ministry of Statistics and Programme Implementation.

(b) Does this mean that the urban population is getting sicker? Not necessarily, because it is well known that the perception of morbidity could change with cultural contexts, health awareness and also with access to care. That this is likely to be due to health awareness rather than actual difference in morbidities is also evidenced by the comparison of rates across states. States with the best maternal and child mortality rates like Kerala, Tamil Nadu, West Bengal and Punjab have PAPS far higher than those with the highest maternal and child mortalities, like Assam, Chhattisgarh, Jharkhand and Madhya Pradesh. This is further supported by the figures that PAP sharply increases with quintile class: PAP in the fifth quintile is about twice the PAP for the first quintile in rural and in urban areas, while what we expect is the reverse, for the simple reason that the poor (under Indian conditions) by definition would have poorer health conditions.

(c) Hospitalisation rates also show a steady increase over the decades. In 2014, 44 per 1,000 of rural population were hospitalised in the preceding year, compared to 49 per 1,000 in urban population. In the 60th round (2004), it was 23 and 31 per 1,000, respectively, in rural and urban

regions, and in the 52nd round (1995–96) it was 13 and 20 per 1,000, respectively.

The interstate comparison shows higher rates of hospitalisation in states doing well in the currently measured health outcomes of infant mortality rates (IMR) and maternal mortality ratio (MMR) and very low rates of hospitalisation in the low performing states. This suggests that issues of access and awareness have a major role. The very high hospitalisation rate in Kerala (117 rural and 99 per 1,000 urban) is almost twice the rates of the next state, Andhra Pradesh (59 rural and 55 urban). Kerala's high hospitalisation rate is an outlier, and could mean an excess of utilisation.

(d) The survey shows the following causes for hospitalisation: 24.95% infections; 5.44% complications in pregnancy and the newborn, and another 6.72% for other genito-urinary and reproductive tract problems; 11.09% due to external injuries and accidents and the remaining 51.8% coming largely but not exclusively from non-communicable diseases.

Of this 51.8%, 10.9% reported as gastrointestinal, 9.09% as cardiovascular, 5.14% as respiratory diseases excluding tuberculosis, 5.97% as mental health or neurological health problems, 5.01% as eye or ear problems and about 2% to 3% each for metabolic and endocrine causes, cancers and blood disease. It is possible to map these disease specific morbidity rates to earlier rounds, though that is yet to be undertaken. It would also be useful to map these categories to the broader International Classification of Disease (ICD) codes, and then to compare them with other sources of information that may become available if the public health systems starts collecting morbidity data from its emerging health information systems.<sup>1</sup>

## 2 Choice of Providers

From whom do people seek care and to what extent do they depend on private and public facilities/providers? Here we present the survey results on these questions:

(a) About 90% in rural areas and 89% in urban areas sought allopathic care, and only 5.3% in rural and 7.3% in urban

areas sought care from other systems of medicine. These figures vary across states. We need to consider these figures with caution since use of home remedies and traditional healers do not get picked up unless specifically probed for.

(b) One interesting difference from earlier rounds is that only 4% of persons with ailments in rural India and 2.5% of those with ailments in urban India sought no care, which is much less than the 18% in the 60th round (1995–96). This could in part be attributable to the clarification given in para 1.3.3 of the report that in earlier NSS health surveys only treatment of ailments administered on medical advice was considered as medical treatment, whereas in this round those who self-medicated were also included. Even then, this would be a significant improvement.

(c) The private sector continues to play a significant role in the provision of ambulatory (outpatient) care, both in urban and rural areas. However, compared to the 60th round where 22% of ailments sought care in the public system, the 71st round reports a small but significant shift in rural areas towards the public provider with 28.3% of care being provided by public sector. Of this 11.5% was at the primary level and 16.8% in the public hospital. In urban areas the increase is much less, rising from 19% in the 60th round to 21.2% in the 71st. Of this 21.2%, a mere 3.9% is at the primary care level and 17.3% is at the public hospital.

This clearly matches what we know of the development of the health systems. The last decade has seen some strengthening of care in rural areas, but almost none in urban areas.

(d) The distribution of site of childbirth shows a similar pattern. Home deliveries account for only 19.9% of all deliveries in rural areas, and 10.5% in urban areas, whereas in the 60th round, the home delivery figures were 65% for rural areas and 26.1% for urban areas. This is a significant improvement.

Of the facility-based deliveries, close to 70% is in the public facility (18% is at the primary level and 52% is in the hospital). In urban areas, 46.7% of all deliveries took place in the public sector. However of this 46.7%, only 3.8% are by a primary care provider and all the rest are in the public

hospital. This again points to the near absence of urban primary level care.<sup>2</sup>

It is interesting to note that there is a clear shift in utilisation from the private to the public facility for facility-based childbirths, implying that the shift from home to facility is driven by delivery services becoming available and affordable in the public healthcare facility.

(e) Hospitalisation for other purposes: Public hospitals provide 41.9% of all hospitalisations for the rural population. This is more or less constant as compared to the 41.7% of the 60th round, slightly less than the 43.8% of the 52nd round, but far less than the 59.7%, in the 42nd round (1986–87).<sup>3</sup> For the urban population, however, there is a steady and sharp decline from 60.3% in 1986, to 43.1% in 1995 and then a slower decline to 38.2% in 2004 and 32% in 2014.

(f) The good news is that the pattern of public hospital use is “pro-poor,” meaning a greater proportion of those in lower quintiles use public hospitals than among the higher quintiles: 57.5% of rural hospitalisations in the first quintiles used the public sector, which declines gradually to 42.5% in the fourth quintile and then sharply to 28.9% in the fifth quintile. In urban areas also the distribution is similar with 48% of all hospitalisations in the first quintile happening in the public hospital and only 18.7% in the fifth quintile.

(g) The bad news is that the cost of care in the public hospital, though only about one-fourth of the average costs care in private hospitals, is “prohibitively” high. The full report is likely to reveal that even this level of expenditure contributes in no small way to the incidence of catastrophic health expenditure and impoverishment due to healthcare costs.

An interesting contrast is with the experience of childbirth. Nearly 70% of rural women who had institutional deliveries chose public hospitals. In urban areas, 46.6% chose a public hospital. Again, the poorer quintiles choose a public facility much more often. In rural areas, however, the difference between quintiles in choice of a public facility for delivery was small (only about 10%), but in urban areas it was almost thrice (53.5% in the first quintile and only 18.9% in the last quintile).

We now turn the final set of questions on costs of care in private and public facilities.

### 3 Cost of Care

(a) The average cost of healthcare has sharply increased between the 60th and the 71st NSSO rounds. Whereas it doubled in between the 52nd and the 60th rounds, it tripled between the 60th and the 71st (Table 2).

**Table 2: Average Cost of Care—Combined Public and Private** (in Rs)

	Care for All Ailments- Last 15 Days		Hospitalisation Per Episode		Cost of Care at Childbirth	
	Rural	Urban	Rural	Urban	Rural	Urban
	52nd round	144	175	3,202	3,921	na
60th round	257	306	5,695	8,851	1,169	2,806
71st round	509	639	16,956	26,455	5,544	11,685

Source: Same as Table 1.

Not surprisingly the Out-of-Pocket Expenditure (OOPE) is much more in the private sector for all types of care. The OOPE for care at childbirth in the private sector is about 9.5 times that at the public, about four times for hospitalisation, and about two to three times more for ambulatory care (Table 3).

**Table 3: Out-of-Pocket Expenditure** (in Rs)

Costs of Care For	Public	Private
For one ailment in last 15 days		
At primary level	Rural: M/F 309/314	560/600
	Urban: M/F 347/386	672/646
At hospital level	Rural: M/F 407/505	773/810
	Urban: M/F 372/411	1,131/785
For childbirth	Rural 1,587	14,778
	Urban 2,117	20,328
For hospitalisation in last 365 days	Rural + Urban 6,120	25,850

Source: Same as Table 1.

The survey also provides average cost of care by disease categories. The highest cost of care for hospitalisation by any disease category is for cancer (Rs 78,050 in private hospitals, and Rs 24,526 in public hospitals), followed by cardiovascular disease (Rs 43,262 in private hospitals and Rs 11,549 in public hospitals). The lowest is for eye care (Rs 13,374 private and Rs 1,778 public) and for obstetric and neonatal (Rs 21,626 private and Rs 2,651 public).

(b) The NSS 71st round did look at insurance coverage and the financial protection it affords in some details. The results are interesting. Private insurance provides coverage for only 0.3% of the rural population and 3.5% of the urban population. The top quintile accounts for almost all of this. The coverage provided

by government-funded insurance schemes has risen substantially to 13.1% of rural India and 12% of urban—but this is still far short of the 25% coverage that the Draft National Health Policy projects as having been achieved. We could live with this, but for two disturbing features. First, subscription to the insurance schemes is remarkably iniquitous. We can understand this for private insurance and even for employer provided insurance, which is concentrated almost exclusively in the fifth quintile of the urban population. But we need to understand why even government-funded insurance schemes, which are avowedly pro-poor show a similar pattern. In urban areas the lowest quintile has only a 7.7% coverage as compared to 15.1% in the fifth quintile. In rural areas it is 10.1% in the lowest quintile and 17% in the fifth quintile.

The second disturbing feature is the gap between notional coverage and effective coverage—the latter being represented by the proportion of hospitalisation cases that receive part or full reimbursement for their expenses. Only 1.2% of the hospitalisation cases of the rural population and 6.2% of the urban population received even part re-imbusement. Even in states (Chhattisgarh, Gujarat and Kerala) known to have good coverage by Rashtriya Swasthya Bima Yojana, the effective coverage in rural areas is less than 2% and in urban areas it is less than 5%.

There is evidence that despite considerable effort in pushing for increasing insurance coverage, the benefits have not reached the poorest, nor is it efficient in financial protection. With all its considerable limitations, the poor seem to turn to subsidised care in public facilities as the only form of financial protection that is available—provided like in the case of childbirth that these services are available there.

### 4 Conclusions

The NSSO surveys on morbidity and costs of care assume special importance since the emergence of Universal Health Coverage (UHC) as the dominant discourse in global public health. The measure of UHC is the proportion of those in need of healthcare who are able to access such care without financial hardship. The NSS

data is the only robust nationwide data set available in India on what people spend out of pocket on healthcare and the financial hardship they face as a consequence. We note, however, that in the smaller states, where sample sizes are typically less than 300 households, or even less than a 100, information becomes unreliable, more so when disaggregated by age, provider or nature of care resorted to. The reliability of disaggregated data would be a problem even in larger states for questions such as on morbidity patterns.

The report notes that as is past practice “a state sample was surveyed by state government officials in addition to the central sample surveyed by nssso,” but this document is based on the estimates obtained from the central sample only. While one is immensely thankful that we have at least some data, even if only as infrequently as once in a decade, it is a

huge wastage of resources and loss of effectiveness to fail to analyse the state samples—a mistake we have done repeatedly in the past. States must be persuaded to put that data too onto the public domain so that at least researchers can work on it. In large states it would allow us to look at district and regional data.

Public expenditure on healthcare has stagnated since 2011 after a brisk increase in the latter part of the previous decade. However, in this same period, the private healthcare industry has witnessed an unprecedented boom, growing at an over 15% compound annual growth rate, more than twice the growth rate for all services. In this context, there is a case for increasing the frequency of this particular survey to once in five years, or better still do a sample of districts every year that can help track the rising costs of healthcare, the relative efficiency of different forms of

financial protection, and the rising levels of impoverishment due to healthcare costs.

#### NOTES

- 1 About 5% to 10% of this 51.8% is likely to be infections localised to one or other organ system—mainly respiratory, genito-urinary or skin, which in the nature of self reported morbidity would not be possible to differentiate from non communicable disease(s) pertaining to that system.
- 2 Another way of looking at this figure is that the site of primary care is a tertiary care facility!
- 3 The mid-1990s witnessed a significant growth of private providers for various reasons, including some of the measures introduced in the health sector. We do not discuss these here.

#### REFERENCES

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