Analysis of Household Expenditure on Health from the Primary Data of 75th and 71st Rounds of Survey by the National Sample Survey Office (NSSO)

WORKING PAPER

INDRANIL MUKHOPADHYAY; MONTU BOSE; VYOM ANIL AND CHANDRAKANT LAHARIYA

Analysis of Household Expenditure on Health from the Primary Data of 75th and 71st Rounds of Survey by the National Sample Survey Office (NSSO)

Indranil Mukhopadhyay[1]

Montu Bose[2]

Vyom Anil[3]

Chandrakant Lahariya[4]

Abstract

The aim of the paper is to study the health seeking behaviour and service utilisation of different types of public and private facilities; estimate the Out-of-pocket expenditure (OOPE) on account of outpatient, inpatient care and its components. It compares the unit level data of NSS 71st round for the year 2014 and NSS 75th round for the year 2017-18 to estimate rates of hospitalization, out of pocket expenditure on in-patient and out-patient care, insurance coverage, share of OOPE to HCE and financial catastrophe caused due to these expenses. Our analysis suggests significant decline in the hospitalization rate in 2017-18 compared to 2014 and utilisation of public facilities have increased considerably for both hospitalisation care and out-patient care in both rural and urban areas. When compared to 2014 figures, OOPE has increased across all income classes in the rural areas except for the richest income quintile.

[1] OP Jindal University, Sonipat, Haryana
[2]TERI Institute of Advanced Studies, New Delhi
[3]Research Scholar, Centre of Social Medicine and Community Health, JNU, New Delhi
[4]WHO, India

Contents

Executive Summary 5
1 Introduction 12
1.1 Objectives 12
2 Materials and Method 13
2.1 Data 13
2.2 Differences between the two NSS rounds 14
2.3 Methods 14
2.4 Method for estimating deflated OOPE 17
3 Results 17
3.1 Ailment Reporting 18
3.2 Hospitalisation 20
3.3 Utilization of health care services 21
3.4 Coverage of Health Protection Schemes 24
3.5 Household Out-of-Pocket Expenditure (OOPE) for Out-patient care 31
3.6 Household Out-of-Pocket Expenditure for Hospitalisation care 32
3.7 Household catastrophic Expenditure 42
4 Discussion 47

Appendices **56**

List of Figures

1 State-level variations in Proportion of Ailing Persons (PAP): 2017-18 20
2 Hospitalisation rate (per 1000 population): 2014 and 2017-18 . . 21
3 Utilisation of non-government facilities per 100 cases for various NSSO rounds (Excluding Child birth) 23
4 Utilisation of various types of facilities for hospitalisation: 2017-18 24
5 Utilisation of government facilities for hospitalisation (excluding Child birth): 2017-18 25
6 State-wise variations in coverage of various kinds of health protection schemes: 2017-18 28
7 Coverage of various health protection schemes: 2014 and 2017-18 29
8 Out-of-pocket Expenditure for Hospitalization (in INR) 34
9 Type of Insurance coverage and Out-of-pocket Expenditure for Hospitalization in the Rural Sector (in INR) 38
10 Type of Insurance Coverage and Out-of-pocket Expenditure for Hospitalization in the Urban Sector (in INR) 39
11 Share of OOP and various components in HCE: 2014 and 2017-18 43
12 Share of OP and Hospitalisation in total OOP: 2017-18 (excluding child birth) 44
13 CHE at 10% and 25% threshold for OOPE and various components: 2014 and 2017-18 47
14 CHE 25% and CHE 10% of OOPE by state: 2014 and 2017-18 . 48

List of Tables

1 Proportion of Persons reporting ailment (PAP) by socio-economic groups: 2017-18 . . . 19
2 State-wise variations in PAP (Summary statistics) . . . 19
3 Various Dimensions of Unmet Demand in India during 2014 and 2017-18 (in %) . . . 20
4 Proportion of Persons reporting ailment (PAP) by socio-economic groups: 2017-18 . . . 22
5 Summary Statistics: state-wise variations in utilization of government facilities in rural and urban areas . . . 25
6 Coverage of various health protection schemes by socio-economics groups: 2017-18 . . . 27
7 Summary Statistics: state-wise variations in utilization of government facilities in rural and urban areas . . . 29
8 Hospitalisation rate (per 100 people) based on insurance status: 2014 and 2017-18 . . . 30
9 PCE Class wise Out-of-pocket Expenditure for Outpatient Visit (in INR) . . . 31
10 Social Group wise Out-of-pocket Expenditure for Out-patient Visit (in INR) . . . 32
11 Components of OOPE on outpatient care (in INR) . . . 33
12 Components of OOPE on outpatient care (in INR) . . . 35
13 Components of OOPE on outpatient care (in INR) . . . 37
14 Variation of OOPE by types of provider and insurance coverage . 41
15 Mean share of health (OOPE) in total HCE (%): 2017-18 . . . 43
16 Mean share of health (OOPE) in total HCE for households with at least one hospital episode present (%): 2017-18 . . . 45
17 Households facing catastrophic expenditure: 10 & 25% of HCE (2017-18) . . . 46
18 Summary Statistics: State wise variations in CHE related to OOPE 47
A1 State wise sample and population, 2017-18 . . . 57
A2 State and Sector wise PAP of Indian States during 2017-18 . . . 58
A3 Utilization of facility, in-patient, state wise, all India 2017-18 . . 59
A4 Utilization of facility, out-patient, state wise, all India 2017-18 . . 60
A5 Cost of care, in-patient and out-patient, rural, 2017-18 . . . 61
A6 Cost of care, in-patient and out-patient, urban, 2017-18 . . . 62

A7 Composition of cost, out-patient, urban, 2017-18 63
A8 Composition of cost, in-patient, urban, 2017-18 64
A9 Composition of cost, out-patient, rural, 2017-18 65
A10 Composition of cost, in-patient, urban, 2017-18 66

Executive Summary

- The 75^{th} round of National Sample Survey on Household Social Consumption: Health comes at a crucial policy juncture and is significant on quite a few counts.

- This round is also unique in more than one way. For the first time, the survey has been conducted within a span of four years. The last health round was conducted in 2014 and all the previous rounds were conducted with a gap of more than a decade.

- The Union Government has launched Ayushman Bharat (AB) Program which aims to implement the activities targeted to achieve Universal Health Coverage (UHC) in the country. One of the two pillars under the AB program is the Pradhan Mantri Jan Aarogya Yojana (PMJAY) which aims to provide financial protection from secondary and tertiary level hospitalization related expenditures by the people. The scheme is aimed at reducing out of pocket expenditures by bottom two quintiles of population on hospitalization related expenditures. The timing of the 75th round has been scheduled in such a way that it serves as a baseline for PMJAY.

- The previous two health rounds- 60^{th} (2004) and 71^{st} (2014) rounds were half rounds- conducted during the period from January to June. The 75^{th} round is a complete round comprising all the four sub-rounds. This should give us seasonal variation in disease patterns, a larger sample size, and better representation of various sub-categories.

- The objectives of the report are to study the morbidity patterns, health seeking behaviour and service utilisation of different types of public and private facilities; estimate the Out-of-pocket expenditure (OOPE) on account of outpatient, inpatient care (including and excluding childbirth) and its components, with special focus on equity; and the consequences in terms of CHE and impoverishment.

- The report compares the unit level data of NSS 71^{st} round for the year 2014 and NSS 75^{th} round for the year 2017-18 to estimate the proportion of ailing population, rates of hospitalization, out of pocket expenditure on in-patient and out-patient care, insurance coverage, share of OOPE to HCE and financial catastrophe caused due to these expenses

- There were certain limitations in comparing the two rounds. Indicators like PAP, OOPE in outpatient care and insurance coverage were difficult to compare. OOPE for OP in the previous survey was recorded per person, but in the 75^{th} round, per visit was taken into account. Since the 71^{st} round of the survey spans over six months (January to June 2014) whereas the 75^{th} round spans over 365 days (July 2017 to June 2018), the PAP reported in the two rounds were not strictly comparable due to seasonal variations.

- As per our estimates, 7.5% reported ailment (PAP) during the last 15 days for the year 2017-18. In the urban areas PAP is 9.1% and in rural areas 6.8%, 33% less than the urban areas.

- As we move up the quintile groups, PAP increases. The least short-term ailment is reported from the poorest quintile of rural areas (5.75%). Most of the short term ailment is reported from the richest quintile of the urban areas (11.24%).

- According to the caste categories, STs from rural areas and other caste groups from the urban areas report lowest (4.9%) and highest (10.5%) short term ailments, respectively.

- We observe significant state level variations in the reporting of PAP, with higher reporting in Non-High Focus States compared to High Focus ones. Kerala reports the highest PAP (24.5%), followed by Andhra Pradesh (14.25%) and West Bengal (13.8%). Among the major states, Assam has the lowest PAP (2.48%) followed by Bihar (2.5%) and Uttarakhand (3.5%). North-Eastern states have lower PAP when compared to the rest of the country.

- In order to make PAP comparable between the two rounds, we have compared July-December sub-samples between 2014 and 2017. PAP in rural areas in 2017 was 7.62% while the same for 2014 is 8.94%. PAP for Urban areas is 10.04% for 2017, which is again a considerable decline from 11.79% in 2014.

- Hospitalization rate was 28 out of every 1000 people in the year 2017-18. Hospitalization rate for the rural areas was 26 and for the urban areas 33.8 per 1000 people. The rate is particularly lower among STs (17 per 1000) and poorest quintile groups (21 per 1000) in the rural areas.

- There is a significant decline in the hospitalization rate in 2017-18 compared to 2014. The decline is steeper for urban areas- from 43.4 in 2014 to 33.8 in 2017-18. In rural areas, the hospitalisation rate declined by 8.5 percentage points.

- As we delve into the types of health providers, we observe that the categories of public providers have been merged into a single category in the 75th round. This is definitely going to compromise the kind of analysis possible using NSSO data.

- It was found that 67 out of every 100 outpatient visits in the rural areas took place in non-government facilities in 2017-18. For every 100 hospitalization cases, 54 from rural and 65 from urban areas are treated in non-government facilities in 2017-18. For every 100 hospitalization cases, 46 from rural areas and 32 from urban areas went to government facilities.

- In the bottom-income quintile of the rural areas, more than half of the population went to government facilities, whereas in the urban areas more than half of the hospitalization cases are treated in private facilities.

- Compared to 2014, utilisation of public facilities have increased considerably for both hospitalisation care and out-patient care in both rural and urban areas.

- Overall, the health insurance scheme is higher in urban areas. 19% of people are covered under some form of health insurance scheme in urban areas, whereas in rural areas the coverage is only 14%.

- Publicly-funded health insurance schemes (PFHI) covers 13% of the people in rural areas and 9% of the people in urban areas. In the poorest income quintile, only 11% of the people from urban areas and 12% of the people from rural areas are covered by PFHI.

- The employer-supported and household-arranged schemes support 6.2% and 4% of the people in urban areas respectively. However, in rural areas both the schemes combined covers only 1.2% of the people.

- Employer-supported (15%) or Private Voluntary Health Insurance (13%) schemes are mostly concentrated among rich quintiles in the urban areas. However, these schemes are limited in the rural areas even among the affluent income classes.

- Huge variation among the states exists in coverage of PFHI. Andhra Pradesh (70%), Chhattisgarh (63%), Telangana (55%), and Mizoram (62%) have a majority of people covered under PFHI. Whereas UP, Bihar, MP, Delhi, and Uttarakhand have less than 1% of the people registered under this scheme. 22 out of 36 states and UTs have less than 5% people covered under PFHI schemes.

- Mean OOPE on out-patient (OP) care is INR 632 in rural areas and INR 701 in urban areas. Mean OOPE per hospitalization case is INR 16128 in rural areas and INR 20,814 in urban areas. In public hospitals, the OOPE is INR 5053 in rural areas and INR 5108 in urban areas. However, OOPE in private hospitals is much higher— INR 25618 in rural areas and INR 29683 in urban areas. All the figures are deflated for 2014 prices.

- When compared to 2014 figures, OOPE has increased across all income classes in the rural areas across the income quintiles except for the richest income quintile. It was also found that OOPE for hospitalization care has decreased marginally in the urban areas and has risen in the rural areas since 2014.

- However, the ratio of OOPE for private and public hospitals for the year 2014 has increased over time, indicating that private sector care is becoming costlier for people. In the urban and the rural areas, the ratio

of OOPE in private and public hospitals were 3.6 and 3.3 respectively in 2014, which has increased to 5.8 and 5 in 2017-18.

- Under various insurance schemes, high OOPE is observed. For the PHFI schemes in government hospitals INR 4343 is spent whereas in private hospitals INR 23793 is spent. For the PVHI schemes, INR 6067 is spent in public hospitals and INR 23348 is spent in private hospitals.

- On an average, 5.5% of household consumer expenditure (HCE) is spent on health (2.9% on OP and 2.7% on IP). In the rural areas, the share is 5.8% (3% on OP and 2.7% on IP). In the urban areas, the share of HCE is 5% (2.6% on OP and 2.5% on IP). Out of the total HCE, 2.4% is spent on medicines.

- Catastrophic Health Expenditure (CHE) is taken at 10% and 25% threshold. Overall 12.4% and 5.3% of households faced CHE at 10% and 25% thresholds, respectively. OP expenditure (7.3%) is the major cause of CHE at 10% threshold followed by medicines (6.1%) and hospitalization (5.5%). At 25% threshold, hospitalization expenditure is the major cause of CHE.

Acknowledgements

We would like to express our gratitude to the World Health Organization (WHO) for financial and technical support for this study. We are thankful to Dr Hilde de Graeve and Mr Fahdi Dkhimi of WHO for providing sparing valuable time for insightful discussions on early draft of this report and for sharing their detailed inputs. The report would not have been in its present form without editorial inputs from Shweta Venkatesh, which is immensely appreciated.

Abbreviations

AB	Aayushman Bharat
ANM	Auxiliary Nurse Midwife
AWW	AnganWadi Worker
CGHS	Central Government Health Scheme
CHC	Community Health Centre
CHE	Catastrophic Health Expenditure
CPIAL	Consumer Price Index Agricultural Labour
CPIIW	Consumer Price Index Industrial Worker
ESIS	Employee State Insurance Scheme
FSU	First Sampling Unit
HCE	Household Consumption Expenditure
HSC	Health Sub-centre
IP	In-patient
MPCE	Monthly Per-capita Consumption Expenditure
NSS	National Sample Survey
OBC	Other Backward Class
OOPE	Out of Pocket Expenditure
OP	Out-patient
PAP	Proportion of Ailing Population
PFHI	Publicly Funded Health Insurance
PHC	Primary Health Centre

PMJAY Pradhan Mantri Jan Aarogya Yojana

PPSWR Probability Proportion to Size with Replacement

PVHI Private Voluntary Health Insurance

RAS Rajiv Aarogyasree Scheme

RSBY Rshtriya Swasthya Bima Yojana

SC Scheduled Caste

SDG Sustainable Development Goals

ST Scheduled Tribe

UFS Urban Frame Survey

UHC Universal Health Coverage

UT Union Territories

WHO World Health Organization

1 Introduction

Universal Health Coverage (UHC) as a fundamental human right, has been on the global health agenda. On September 23rd, 2018, the government of India announced its intention on the Ayushman Bharat-Pradhan Mantri Jan Aarogya Yojna (AB-PMJAY) to implement the activities targeted to achieve UHC in the country. WHO India has been at the forefront of these engagements in India. One of the two pillars under the Ayushman Bharat program is Pradhan Mantri Jan Aarogya Yojana or PMJAY which aims to provide financial protection from secondary and tertiary level hospitalization-related expenditures by the people. The scheme is aimed at reducing out of pocket expenditures (OOPE) by the bottom two quintiles of population on hospitalization-related expenditures.

In this context, we intend to analyse the data from various sources of quintile-wise analysis for out of pocket expenditure as well as catastrophic expenditure on both hospitalization and out-patient health services in India. The financial protection extended by AB will need to be assessed through a comparison of various dimensions of OOPE in the pre- and post- implementation phases of the scheme. For such a comparison, a detailed analysis of OOPE based on the two latest rounds of NSSO survey (the 71^{st} round conducted in 2014 and 75^{th} round conducted during 2017-2018), is necessary to establish a benchmark. This detailed analysis can subsequently be used to assess the effectiveness of AB in the post-implementation phase. Further, as the broad target of the first component of the scheme is the 40 per cent underprivileged population of the country, it is helpful to examine the level of OOPE by expenditure classes.

1.1 Objectives

The objectives of the study are following:

- Morbidity, health-seeking behaviour and service utilisation of different types of public and private facilities
- Out-of-pocket expenditure (OOPE) on account of out-patient, inpatient care (including and excluding childbirth) and its components, with a special focus on equity
- Catastrophic expenditure and impoverishment (based upon international and national poverty line as well as state poverty line, as and where applicable) caused by out-of-pocket spending

The report is structured in accordance with the objectives. In the results section, we start with a discussion on the persons reporting ailments, which gives an estimate of ailment reporting. Here we compare the two rounds and observe the changes in PAP between 2014 and 2017-18. The next section is about the hospitalisation rate. Having discussed the trends and patterns of hospitalisation, we study the provider characteristics. In the next couple of

sections, we deal with OOPE for both OP and hospitalisation care. We also study the burden of OOPE on households. In the entire report we have studied the variations in rural-urban populations, across caste, consumption quintiles, education levels and states.

2 Materials and Method

2.1 Data

The latest two rounds of data from the report Social Consumption in India: Health of the National Sample Survey (NSS) have been used for the study. The data was collected during the January - June 2014 (NSS 71^{st} round) and the July 2017 – June 2018 (NSS 75^{th} round). In both the rounds, the samples were selected from all states and union territories (UTs). The stratified multistage sampling technique was adopted to collect information from the census villages and urban blocks [1] for both the surveys. To form the FSUs from the Census 2011 population, the sample villages were selected by the probability proportion to size with replacement (PPSWR) method in the rural areas. In the urban sector, the urban frame survey (UFS) blocks were used to form the FSUs following the PPSWR method. NSS had collected information from 3,33,104 individuals living in 65,932 households for the 71st round. In the 75th round, it obtained the information of 5,55,352 individuals from 1,13,823 households. In both the rounds, more than 55 per cent of the households were selected from the rural sector.

The NSS data on Social Consumption in India: Health captures information on both the household and individual level characteristics. At the household level, information is available on the size of the household, religion, social group, type of latrine, primary sources of cooking fuel, and monthly consumer expenditure. On the other hand, gender, age, education, marital status, hospitalization and out-patient visit-related information is available at the individual level. The survey has covered information on hospitalization, childbirth and out-patient visit-related details for each individual. In both the surveys, the recall period for hospitalization and childbirth was 365 days and for out-patient visits it was 15 days. Details of hospitalization and childbirth such as type of healthcare facility, ward type, ailment type, admission and discharge details along with details of medical services received have been recorded. Additionally, expenses incurred by the households during hospitalization and childbirth for doctor's fees, medicines, diagnostic tests, bed charges, transportation etc. have been collected. The survey has also attempted to collect information regarding the sources of finance for the out-of-pocket expenses and amount of expenses reimbursed by insurance companies and employers. Similarly, for the out-patient

[1] The census villages in the rural sector and the urban blocks of the urban region were considered as the first stage unit (FSU) in the surveys.

visits, information is available about the nature of the ailment, type of facilities used, reasons for not using healthcare facilities and reasons for non-utilization of public facilities. Detailed information on out-of-pocket expenditure on doctor's fees, medicines, diagnostic tests, transportation etc. is also available for each out-patient visit. Data has been captured on antenatal and postnatal care-related information and on corresponding out-of-pocket expenditure during the last 365 days from the date of survey.

2.2 Differences between the two NSS rounds

If we compare the questionnaires, it is observed that the last two NSS rounds have included similar information with the same definitions for most of the indicators. However, there are a few differences in the questionnaires and response categories and some additional information is also available in the latest NSS round. A special section on the immunization of children (age 0-5 years) and on the total out-of-pocket expenditure for it has been included. This section also includes the sources of immunization and anaganwadi center visit details. In the NSS 71^{st} round (2014), out-of-pocket expenditure for out-patient visits was recorded for each person rather than for each visit. However, the NSS 75^{th} (2017-18) round has included the out-of-pocket expenditure for each visit. Apart from these two major changes, additional information is available in the 2017-18 data. At the household level, information is available on arrangement of garbage disposal, access to and use of latrines. Information is also available on outbreaks of communicable diseases and childbirth expenses for non-household members. These details were not available in the previous round. Similarly, at the individual level, additional information is available on loss of household income due to hospitalization, details of the childbirth (normal/caesarean), and the number of prenatal care visits compared to the last round. There are also a few changes in the coding structure ; e.g., for hospitalization and out-patient visits, facilities were divided into five categories – (i) HSC/ANM/ASHA/AWW, (ii) PHC/dispensary/CHC/MMU, (iii) public hospital, (iv) private doctor/clinic and (v) private hospital – in 2014 data. In 2017-18, the categories were changed to – (i) Govt./public hospital, (ii) charitable/trust/NGO run hospital, (iii) private hospital, (iv) private doctor/hospital and (v) informal care provider.

2.3 Methods

Primarily, exploratory data analysis has been carried out in this study. Additionally, to group the data and form the monthly per capita expenditure (MPCE) classes, we have applied various techniques available from economic literature. To form the MPCE class, we have applied the equivalence technique

proposed by Deaton (2003) [2]. Specifically, household consumption expenditure has been adjusted with the number of adults and children in the family. Here, we have assigned 100 per cent weight for the first adult member of the household and for the rest of the adult members the weight was 70 per cent. The weight for the children was 50 per cent. Following these weighting patterns, we have adjusted the family size of each household and then divided the total usual [3] household expenditure by the family size to get the MPCE. As the cost of living largely varies across states and within the states across regions (rural and urban), quintile groups (Q_1, Q_2, Q_3, Q_4 and Q_5) have been formed for each sector (rural and urban) of the states [4]. Social indicators like education and age have been clubbed to form groups and analyses have been carried out for each social indicator.

MPCE class information: The only information available on household's monthly expenditure is the NSS data on Social Consumption: Health. We have used this information as a proxy of the incomes of the households and calculated the MPCE class. NSS has collected information on usual household expenditure and has adopted a certain method to get the 'usual household expenditure'. The details of the data collection methodology used by NSS for usual household expenditure have been discussed in the footnote.

Justification of equivalence scale:The equivalence scale has been used to adjust the family size of a household. It is argued in the literature that the expenditure for two persons is not exactly double of the amount spent by a single individual. It is due to the fact that some of the resources are jointly consumed by the household members. However, we are equally concerned about the determination of the threshold age limit to classify individuals into required age groups. In this context, we followed the methodology of Deaton (2003) and some literature where authors have used the same data source to calculate the MPCE class (Pandey et al., 2018; Bose & Banerjee, 2019). It has to be specified here that the equivalence scale has been applied to normalize the household size only. There is no link between this normalization and the international or cross-country comparisons. Additionally, as the data used for the report is a sample survey data, the use of weight is extremely important. Otherwise, the estimates that we would get from the analysis would be wrong and misleading.

NSS has reported the out-of-pocket expenditure under various headings like doctor's fee, medicine, diagnostic tests etc. However, the total reimbursement has been recorded for an episode of ailment/hospitalization. The share of each component in the total out-of-pocket expenditure has been used as the distri-

[2] Deaton A. Household surveys, consumption, and the measurement of poverty. Econ Syst Res. 2003;15(2):135–59.

[3] Usual monthly consumer expenditure includes – (a) usual expenditure in a month for household purposes, (b) per month expenditure of the household durables purchased during the last one year (converted into monthly expenditure by dividing it by 12) and (c) any other consumption from wages in kind, home -grown stock, free collection (approximate monthly value).

[4] As the sample sizes for the north-eastern states and the union territories (UTs) are very small, we have clubbed all the samples of the north-eastern states except Assam and similar exercise has been followed to club the observations of the UTs.

bution key to calculate the net out-of-pocket expenditure for each component. Specifically, the total reimbursement amount has been deducted from each component according to its share in the total out-of-pocket expenditure to get the component-wise net out-of-pocket expenditure.

We first estimate the proportion of households that face catastrophic spending in the population. This dimension broadly corresponds to the Catastrophic payment headcount (H_{cat}) defined by Wagstaff and Doorslaer (2003) which has been widely used by various scholars to measure CHE. It indicates the fraction of households whose health expenditure as a proportion of total household consumption expenditure exceeds a threshold Z_{cat}. Algebraically, if X_i = Total consumption expenditure of the i^{th} household, T_i = Total health expenditure of the i^{th} household, $Z_i = T_i/X_i$, and Z_{cat} = pre-defined threshold, then, the i^{th} household is considered to be facing catastrophic health expenditure if $Z_i > Z_{cat}$. Further, if O_i is the extent of catastrophic overshoot i.e

$$O_i = Z_i - Z_{cat}$$

and

$$E_i = 1$$

if

$$O_i > 1$$

and

$$E_i = 0$$

otherwise, then

$$H_{cat} = 1/N \sum_{i=1}^{n} E_i \tag{1}$$

where N is the total number of households.

We measure (H_{cat}) in two ways. First, we estimate the share of households facing catastrophic health expenditure among all households. Second, we estimate the share of households facing catastrophic health expenditure among only those households that incurred some health expenditure. The first measure is widely used, and provides an idea of the share of households in the entire population that face CHE (irrespective of whether or not they fell sick). However, at any point of time, only a certain fraction of the population falls sick (or accesses health care) and incurs health expenditure. We therefore use a second measure that takes into account this aspect, and examine the headcount of households facing CHE only among those households which had to access at least some out-patient care, inpatient care or both. As earlier, we call these affected households. In other words, the second measure answers the question: of the households that accessed healthcare, what proportion of households faced catastrophic health payments? Algebraically, in equation 1 the difference between the first and the second measure lies in what constitutes N. In the first measure, N is taken as all households (irrespective of whether or

not they accessed health care), while in the second measure N is taken as only those households which had accessed some healthcare.

2.4 Method for estimating deflated OOPE

The OOPE figures for 2017-18 are deflated in order to be compared with the OOPE estimates of 2014. The Consumer Price Index for Agricultural Labourers (CPI-AL) is used for deflating rural OOPE and the Consumer Price Index for Industrial Workers (CPI-IW) is used for deflating urban OOPE. The comparison is made between net hospitalization expenditure adjusted for net reimbursement from health insurance. The state-wise weighted CPI-IW of base year 2001 was calculated for each month, from July 2017 to June 2018 for the year 2017-18. The mean of monthly CPI-IW was taken to estimate the figures for the given period. For 2014, weighted state-wise estimates are taken. However, for Manipur, Meghalaya, Mizoram, Nagaland and all the Union Territories except for Pondicherry, CPI-IW was not available for either year; thus real values are used for these states. Similarly for CPI-AL of base year 1987, monthly state-wise estimates are taken from July 2017 to June 2018 for the year 2017-18. The mean of monthly estimates is taken to estimate the yearly figures for the given period. For 2014, state-wise estimates are taken. However the CPI-AL for Chhattisgarh, Delhi, Goa, Jharkhand, Mizoram, Nagaland, Sikkim, Telangana, Uttarakhand and all the Union Territories was not given for either year; thus real values are used for these states. To deflate the figures of OOPE for the urban areas, the ratio of CPI-IW for 2014 and 2017-18 is multiplied by the given figures of OOPE of net hospital expenditure, adjusted for reimbursement from the 75th round of NSS. Similarly for the rural areas, the ratio of CPI-AL for 2014 and 2017-18 is multiplied with given figures of OOPE of net hospital expenditure.

3 Results

As stated in the earlier section, the objectives of the study include examining the patterns of morbidity reporting, health-seeking behavior and service utilization as per different types of public and private facilities. We also intend to estimate OOPE on health for in-patient and out-patient care. Arising out of OOPE in health, the study attempts to estimate both the catastrophic expenditure and the impoverishment ratio to measure the financial burden on households. Special focus is given to the social group, and income and state wise categorization to put the estimates in an equity perspective.

The unit level analysis of NSSO 75th round yields some significant findings related to accessibility, utilization and costs of health care services in public/private and rural/urban areas. The section begins with the estimates on

proportion of ailing persons (PAP) followed by the rate of hospitalization and utilization of facilities. The later sections deal with coverage of health protection schemes, out of pocket expenditure on out-patient and in-patient care. The last section brings out the catastrophic expenditure on health especially for the poorer income groups and various components of household consumption expenditure.

3.1 Ailment Reporting

Following the first objective, this section presents the estimates of proportion of ailing population across various socio-economic classes and states of the region and analyzes the extent of unmet need and informal care provider for OP visits.

Proportion of ailing persons (PAP) is a key variable which helps us assess the need for health care in a given setting. Since reporting of ailments is based on recall, it depends not only on health status but also on peoples' perception about disease and morbidity- which is shaped by various factors including their socio-economic status as well as access to knowledge and information.Around 7.5% people reported ailment (PAP) during the last 15 days as per the 75^{th} round of NSSO (Table 1). This is much lower compared to the PAP reported during the 71^{st} round (9.8%). However, it has to be noted that the PAP of 2014 and 2005 may not be comparable with the PAP reported during the 75^{th} round as both the previous rounds were half rounds (survey period January to June), while the 75^{th} round is full annual round (survey period spanning between July 2017 to June 2018).

There are considerable variations in PAP between rural and urban areas as well as various socio-economic groups. In urban areas PAP is 9.1% in 2017-18, while in rural areas 6.8% PAP was noted -more than 33% lower compared to their urban counterparts. There is around a 23% decline in PAP reporting for both urban and rural areas compared to 2014. Around 5.8% of the population belonging to the poorest quintile have reported ailment compared to 8.5% richest in the rural area and 11.24% in urban areas. Among various caste groups, STs belonging to rural areas reported lowest PAP (4.9%).

An attempt has been made to compare both the rounds -2014 and 2017-18. NSS 75th round data has been collected from July 2017 – June 2018 in four sub rounds. We have clubbed the first two sub rounds to get the PAP estimates for the period July-December 2017 and the last two sub rounds have been clubbed to estimate the PAP for January-June 2018 (refer to Annex table).

There are considerable variations in the state-wise reporting of PAP (Figure 1, Table 2). For instance, in Kerala 24.5% people reported PAP while the same is 2.9% in Bihar and around 3% or less in all the North-east states. In general, rural areas report lower PAP compared to their urban counterparts in most of the states, with the exception of Kerala, Tamil Nadu, Punjab and Goa. Table 3 presents the distribution of unmet needs by various causes. As we observe here, a large section of the population is seeking care in medicine shops.

Table 1: Proportion of Persons reporting ailment (PAP) by socio-economic groups: 2017-18

	Rural	Urban	Total
Quintile			
Quintile 1	5.7	7.59	6.34
Quintile 2	6.32	8.54	6.99
Quintile 3	6.60	9.54	7.45
Caste			
ST	4.9	6.1	5.1
SC	6.5	8.5	7.0
OBC	6.6	8.2	7.1
Others	8.6	10.5	9.4
Gender			
Male	6.07	8.19	6.70
Female	7.61	10.04	8.32
Total	6.82	9.08	7.48

Source: Unit records of NSS 75^{th} round

Table 2: State-wise variations in PAP (Summary statistics)

Variable	Mean	Std. Dev	Max	25 Percentile	Median	75 Percentile
Rural	6.0	4.9	25.5	2.6	5.3	7.1
Urban	7.6	4.9	23.4	4.3	6.3	9.2
Total	6.4	4.8	24.5	3.4	5.9	7.5

Source: Calculations based on NSS unit records 75^{th} round.

Figure 1: State-level variations in Proportion of Ailing Persons (PAP): 2017-18

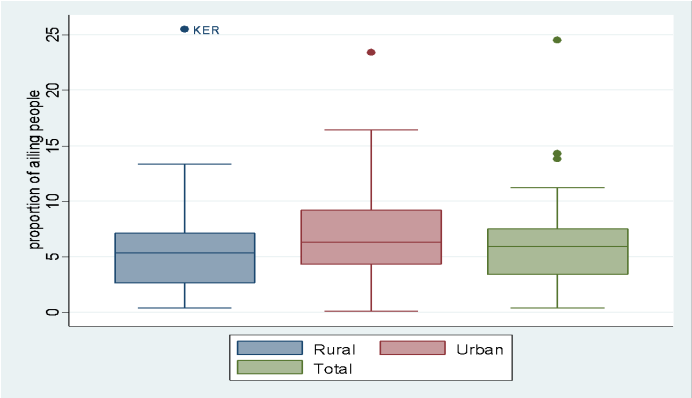


Table 3: Various Dimensions of Unmet Demand in India during 2014 and 2017-18 (in %)

Variables		2014			2017-18		
		Rural	Urban	Total	Rural	Urban	Total
Not taken any medical advice		14.3	8.3	12.1	11.8	7.2	10.1
Reason for not seeking care	Ailment not considered serious	57.4	68.3	60.2	70.7	81.4	73.5
	Others	42.6	31.7	39.8	29.3	18.6	26.5
Whom consulted for relief	Self/friend/ other household member	22.8	29.4	24.5	29.8	29.8	29.8
	Medicne shop	53.0	56.4	53.9	56.1	62.2	57.7
	Others	24.2	14.3	21.7	14.1	7.8	12.5

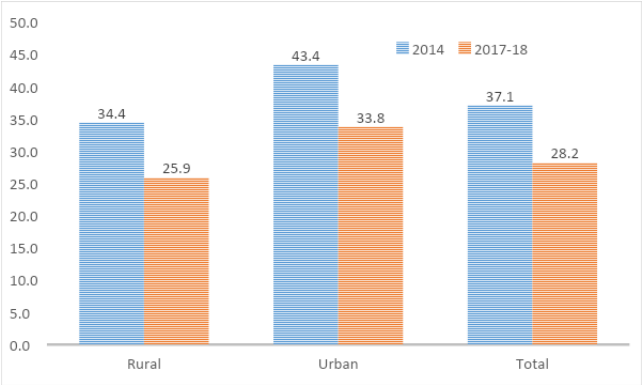
Source: Authors' estimation based on NSS unit level data.

3.2 Hospitalisation

To study the utilization pattern across various socio-economic classes and across regions, the rate of hospitalization must be estimated. The estimates on the hospitalization rate show that it has declined substantially in 2017-18 compared to 2014. In the urban areas, hospitalization cases are more than the rural. The rate of hospitalization varies regressively across income groups, highest among the rich MPCE class and lowest among the poorer classes. Following this trend, STs are among the lowest in utilizing hospitalization facilities among all social groups; however this rate is higher for females.

A key variable depicting access to health care that NSSO captures is hospitalisation rate. Inadequate access to hospitalisation care because of supply side constraints, costs and lack of financial protection has been a cause of concern for health policy makers. Government-funded health insurance schemes have been

Figure 2: Hospitalisation rate (per 1000 population): 2014 and 2017-18



introduced to essentially do away with financial barriers to access to hospitalisation care. Around 28 hospitalisation cases have been reported per 1000 people in 2017-18. In rural areas the rate is 26, while urban areas it is 33.8. Compared to 2014, there is a considerable decline (31.5) in hospitalisation rate (Fig. 2) despite several policy efforts to augment hospitalisation. Hospitalisation rate is particularly lower among the poorer quintile groups and STs (17) residing in rural areas. The decline in hospitalization is a surprising result, further analysis is needed to understand the pattern of decline, if not the causes.

3.3 Utilization of health care services

This section attempts to study the choice of provider for treatment of hospitalization and non-hospitalization cases across various socio-economic classes and regions of the state and compare it with the previous rounds of NSS. For the 75^{th} round of NSSO, all levels of care (primary, secondary and tertiary) have been clubbed into a single category called public sector. The out-patient visits have increased in rural areas compared to the previous NSS rounds (2014 and 2004). In the urban sector, utilization of non-government facilities have decreased but utilization of in-patient care in government facilities have increased in the rural areas and decreased in the urban sector. The estimates also indicate that poorer sections in the rural areas are depending on public facilities for hospitalization. However, for the lower income groups in urban areas the utilization of private facilities is comparatively higher. Above all, a huge variation in the rate of hospitalization is observed across states.

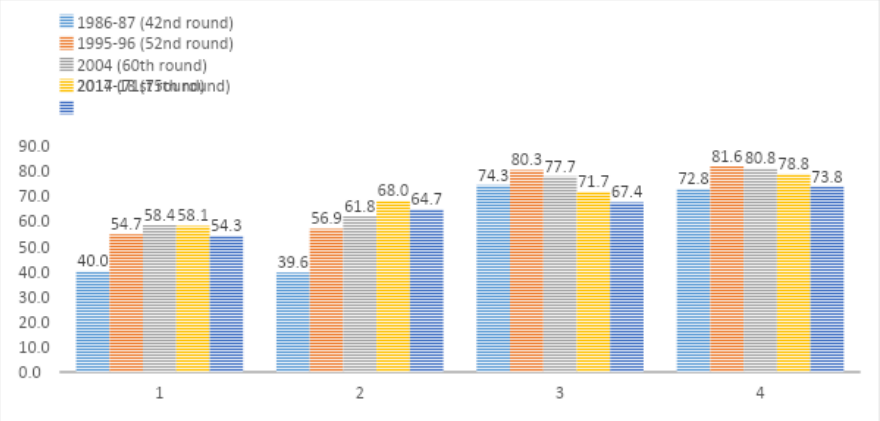
The kinds of healthcare providers that are being chosen by people while seeking health care could have considerable policy implications. In NSSO 75^{th} round, providers have been classified into five broad categories. Unlike various other rounds of NSSO, this time different types of public institutions are not segregated by level of care. Rather, a Sub-Health Centre or a PHC have been

Table 4: Proportion of Persons reporting ailment (PAP) by socio-economic groups: 2017-18

	Rural	Urban	Total
Quintile			
Q_1	21	30	24
Q_2	23	33	26
Q_3	25	33	26
Q_4	26	37	29
Q_5	36	39	37
Caste			
ST	17	30	18
SC	25	34	27
OBC	25	32	27
Others	32	36	34
Gender			
Male	25.8	33.6	28.1
Female	25.9	34.0	28.3
Total	25.9	33.8	28.2

Source: Unit records of NSS 75^{th} round

Figure 3: Utilisation of non-government facilities per 100 cases for various NSSO rounds (Excluding Child birth)



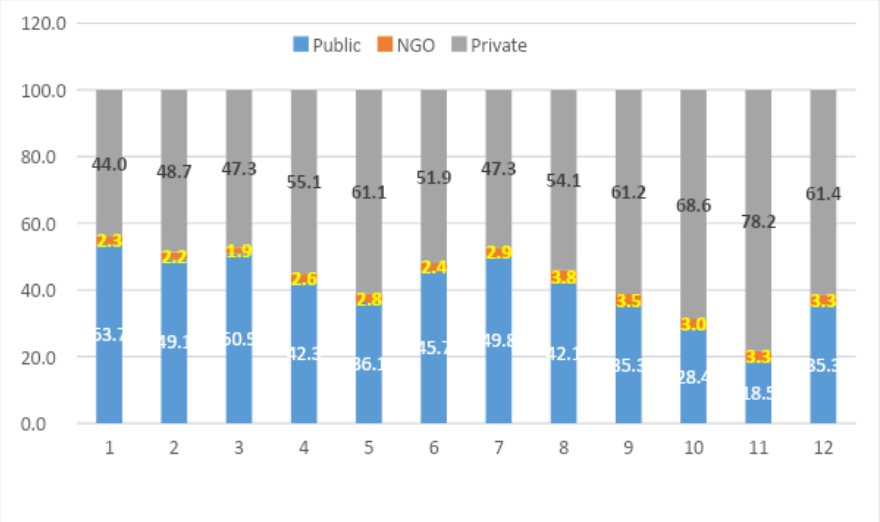
Source: NSSO unit records, various rounds. For 1986-87 estimates are from the report

clubbed with a medical college and put under public hospitals. This might create limitations in understanding which kind of public facilities are being used. Non-government providers have been classified into charitable institutions, private hospitals, private doctors and clinics, and informal providers.

Utilization of both hospitalisation and OP services by various types of providers has changed considerably over the years. Out of every 100 out-patient visits in rural areas, more than 67 took place in various types of non-government facilities. However, this is a decline from 72 in 2014 and from 78 in 2004, meaning that over the years, an increasing proportion of people are depending on government facilities (Figure 3). In urban areas, the overall utilization of non-government facilities is more as compared to rural areas, but there seems to be a gradual decline in the utilization of non-government facilities in urban areas since the last NSSO round.

Use of non-government facilities is lesser for hospitalisation care compared to OP care. Out of every 100 hospitalisation cases, the number of cases treated in non-government hospitals is 54 and 65 in rural areas and urban areas respectively. In rural areas, utilization of government facilities have increased since 2004. In 2014, out every 100 hospitalisation cases, 42 were treated in public hospitals. In the 2017-18 round this has increased to 46. Utilization of government facilities is lesser in urban areas, and it is noted to have declined over the years. However, between 2014 and 2017-18, there seems to be a reversal of the trend. While only 32 cases went to public facilities out of every 100 hospitalisation episodes in 2014, this time round there is some increase and 35 cases went to public facilities per 100 episodes. It would have been interesting to analyse which levels of public facilities are being used more frequently, had these details

Figure 4: Utilisation of various types of facilities for hospitalisation: 2017-18



Source: Calculations based on NSS unit records 75^{th} round

been available.

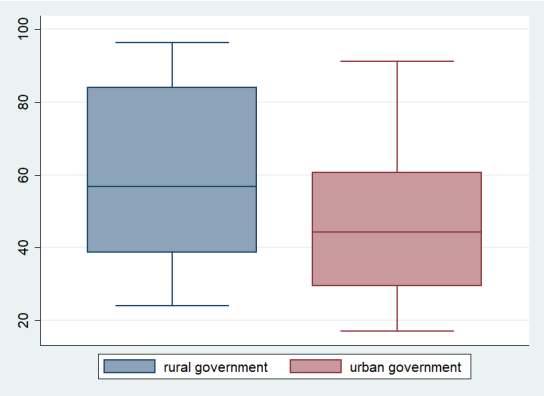
Utilisation of facilities varies considerably by economic class. With increasing well-being (measured in terms of consumption expenditure), people tend to utilize private facilities more and government facilities less frequently. In the bottom three quintiles, half or more than half the people go to public facilities in rural areas (Figure 4). In urban areas even among the poorest groups, more than half of the hospitalisation cases are treated in private facilities.

There are considerable state-wise variations in utilization of facilities (Figure 5). For instance, in states in the North East and states like Jammu and Kashmir, Himachal Pradesh, Odissa and West Bengal, more than 3 out of every 4 hospitalisation cases are treated in government hospitals in rural areas. These are also the states where utilization of government facilities in the urban areas is much more when compared to other states. In states like UP, Punjab, Andhra Pradesh, Maharashtra, and Telangana, less than 3 out of every 10 hospitalization cases are treated in government facilities in rural areas. In the majority of states,more than half of people in the rural areas make use of public facilities (median 56) (Table 5), whereas in the urban areas this is higher than 4 out of every 10 (median 44).

3.4 Coverage of Health Protection Schemes

One of the objectives of this report is to examine the extent to which financial protection schemes are availed of by the people. The number of people covered

Figure 5: Utilisation of government facilities for hospitalisation (excluding Child birth): 2017-18



Source: Calculations based on NSS unit records 75^{th} round

Table 5: Summary Statistics: state-wise variations in utilization of government facilities in rural and urban areas

Variable	Mean	Std. Dev	Max	P_{25}	Median	P_{75}
Rural	59.96	24.95	96.4	38.52	56.88	83.99
Urban	46.43	21.47	91.23	29.34	44.23	60.73
Total	6.4	4.8	24.5	3.4	5.9	7.5

Source: Calculations based on NSS unit records 75^{th} round.

under PFHI is 13% in the rural areas and 9% in the urban areas. However, the trend reverses when it comes to employer-supported insurance schemes (6.2%) and household-arranged insurance schemes (4%) in the urban areas-it is 1.2% higher than the rural areas. Overall, there is 19% coverage of some form of insurance in urban areas and 14% in rural areas. However in the poorest income groups, 11% in the urban areas and 12% in the rural areas are covered by PFHI which is much lower than the affluent groups in urban areas where 33% of the population is covered. Andhra Pradesh (70%), Chhattisgarh (63%), Telangana (62%), and Mizoram (62%) have the highest percentage of population covered. But in UP, Bihar, MP, Delhi and Uttarakhand, less than 1% of the population is covered. 22 out of 36 states have less than 5% of the population covered.

Apart from the general government-revenue funded public system of delivery of health facilities which provide substantial financial protection, there are a few other financial protection mechanisms available in the country. One of these oldest measures is the Employee State Insurance Scheme, a traditional social health insurance model established in 1952 to provide health care and social protection to organized sector workers and their dependents (covered under the scheme) through mandatory contribution. The Central Government also provides for its employees in the form of the Central Government Health Scheme (CGHS)- another social health insurance scheme. State governments also provide insurance coverage for their employees as a measure of financial protection against hospitalisation costs.

Since the last decade, India has experimented with a new form of financing mechanism in which insurance agencies and government trusts have been used to purchase health care, and resources are mobilized through general tax revenue. These schemes, popularly known as Public Funded Health Insurance Schemes (PFHIs) mainly cater to the poor or vulnerable sections of the society who are largely working in the unorganized sector 1 . The Prime Minister's Jan Arogya Yojana (PMJAY) has been launched by the Union Government in 2018 which aims to merge all the existing schemes and provide coverage up to 5 lakh rupees for hospitalization. The 2017-18 round of survey would serve as an approximate baseline for the assessment of financial protection under the PMJAY.

Barring these publicly funded financial protection measures, there are Private Voluntary Health Insurance Schemes (PVHI) which are bought against premiums paid either by individual families or by private sector employers for their employees who are not covered by ESIS or other social protection schemes.

In the 2017-18 data on insurance coverage there are four broad types of insurance coverage mentioned: PFHIs; government as an employer (such as CGHS/ PSUs/state governments); employer-supported health protection schemes like ESIS; PVHIs arranged by households and other kinds of insurance. There remains an ambiguity regarding the PVHIs provided by employers- whether this is merged with ESIS types of schemes or forms a part of other insurance coverage schemes as well is not clear. However, the classifications provided in the earlier round (2014) placed all the various government-supported insurance schemes in a single category including PFHIs, CGHS and ESIS; PVHI arranged by households was a separate category and employer-supported insurance was kept as

a separate category. The difficulty arises when we attempt to compare the efficacy(?) of PFHIs between the two rounds. Even if we add PFHIs and various employer-provided schemes together, it will not be strictly comparable with 2014 because in the category of employer-supported health protection schemes, we have employer supported PVHIs. The only possible way to make the two rounds comparable is to club all the various types of insurance/ social protection schemes together, have household-arranged PVHI as a separate category and then compare these two with . But this would not be helpful in separating the effectiveness of PFHIs- which is a key policy question being debated within the country. Thus for the present, we compare the PFHIs of 2017-18 with the government-sponsored insurance category for 2014 with the understanding that these may not be strictly comparable.

Coverage of PFHIs is higher in rural areas as compared to urban areas- around 13% and 9% people are covered respectively (Table 6). However in urban areas, coverage of employer-supported (6.2%) or household-arranged (4%) schemes have a considerably higher coverage as compared to rural areas (1.2% together). Thus around 19% of the people or almost 1 in every 5 persons in urban areas have coverage under some form of health protection scheme. In rural areas, despite higher coverage of government-supported health protection schemes, overall only 14% of the people (meaning 1 in every 7 persons) have some form of social protection.

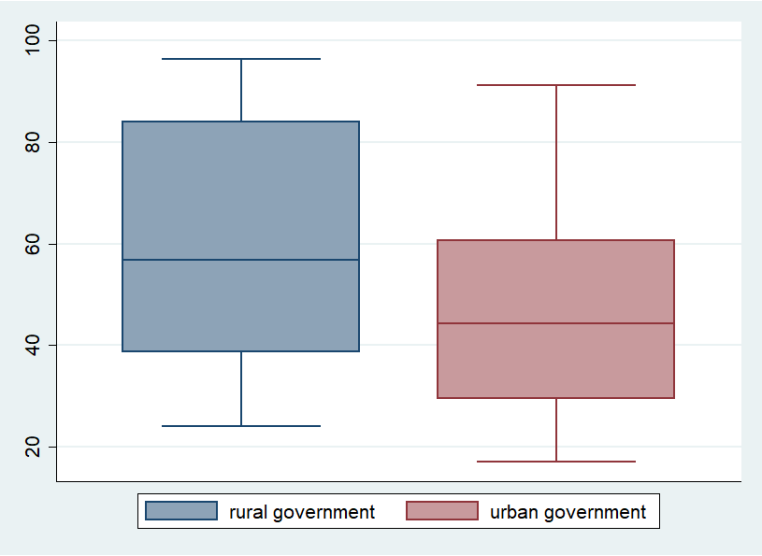
Table 6: Coverage of various health protection schemes by socio-economics groups: 2017-18

		Rural				Urban			
		PFHI	Emp*	VHI	N.C**	PFHI	Emp*	VHI	N.C**
Quintile	Q_1	11.8	0.4	0.1	87.8	10.7	2.1	0.9	86.4
	Q_2	14.1	0.5	0.3	85.2	10.2	3.4	1.0	85.5
	Q_3	13.7	0.6	0.2	85.5	10.1	5.2	2.3	82.4
	Q_4	13.0	1.0	0.5	85.5	6.8	8.5	5.8	78.9
	Q_5	11.7	1.8	0.8	85.7	5.1	14.8	12.8	67.4
Caste	ST	20.1	0.9	0.5	78.6	14.2	5.8	4.2	75.8
	SC	11.3	0.7	0.1	87.9	9.9	5.7	1.2	83.3
	OBC	13.5	0.7	0.3	85.5	11.4	5.2	1.9	81.5
	Others	9.2	1.2	0.7	88.9	5.2	7.6	7.4	79.8
	Total	12.9	0.8	0.4	85.9	8.9	6.2	4.0	80.9

*Employer **No Coverage
Source: NSS unit records 75^{th} round.

The PFHIs are meant to provide coverage for the poor and vulnerable sections of the population who are supposed to be present in the bottom three quintiles in the NSSO data. Ideally, all the people in the bottom two quintiles and a significant part of the middle quintile at least should be covered under these schemes. Only 11% of the people belonging to the poorest quintile in ur-

Figure 6: State-wise variations in coverage of various kinds of health protection schemes: 2017-18



Source: Calculations based on NSS unit records 75^{th} round
Note: Here PFHIs, SHI, PVHIs and employer-provided schemes have been added.

ban areas and 12% in rural areas are covered by the PFHIs. Coverage increases marginally for people belonging to quintiles 2 & 3 in rural areas to 14%, but in urban areas there is further decline. Coverage of PVHIs and employer-supported schemes are largely limited to people belonging to the top two quintiles in urban areas. Almost 15% and 13% of the people in urban areas belonging to the top quintile are covered by employer-supported schemes or PVHIs respectively. As a result, almost 1 in every 3 persons (33%) in the affluent quintiles have some kind of health protection in urban areas. But in rural areas, coverage by these schemes is limited even among the most affluent sections. Among the various social groups, coverage by PFHIs is highest among the STs. Almost 88% of the SCs in rural areas do not have any kind of health protection. Thus, despite almost ten years since the introduction of RSBY and other PFHIs across states, a vast majority of people in rural and urban areas alike do not have any coverage under health protection schemes. Penetration of employer-supported or household-provided insurance remains limited only to the most affluent sections.

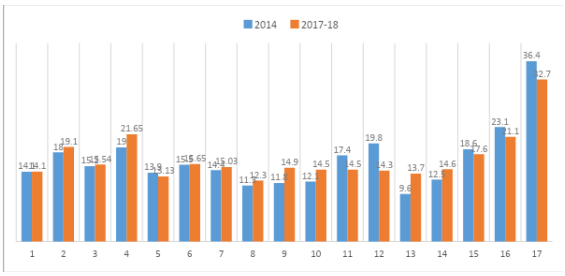
If we wish to compare coverage of various health protection schemes between 2014 and 2017-18, we need to club various schemes together as the categories have been mixed between the two rounds. We observe that there is marginal increase in coverage at the national level from 15.2% in 2014 to 15.5% in 2017-18 (Fig. 7). However in rural areas, coverage remains the same over time. Among

Table 7: Summary Statistics: state-wise variations in utilization of government facilities in rural and urban areas

Variable	Mean	Std. Dev	Max	P_{25}	Median	P_{75}
Rural	19.9	25.8	80.8	2.2	7.6	27.8
Urban	21.1	18.9	75.7	6.7	15.0	29.5
Total	21.1	22.9	78.6	5.4	12.3	33.9

Source: Calculations based on NSS unit records 75^{th} round.

Figure 7: Coverage of various health protection schemes: 2014 and 2017-18



Source: Calculations based on NSS unit records 75^{th} & 71^{st}round.

the various social groups, coverage of STs has increased but for SCs there is a considerable decline. Similarly, coverage has declined in the top two quintiles in both urban and rural areas, while in the bottom two quintiles, there is some increase in coverage. Ideally we would have liked to do this analysis for PFHIs, but it is not possible for the 71^{st} round because of the reasons discussed above.

The above analysis suggests that a vast majority of people are not covered under any health protection measures; hence they pay from their pocket to finance their health care needs or depend on publicly-subsidized government health care infrastructure. Results indicate that despite the existence of some PFHI, coverage does not seem to have evolved much overall. Coverage has evolved in different ways: Improved for SCs, and also for 2^{nd} lower quintiles, while it has decreased for STs, and for the higher economic quintiles. A key policy question related to the PFHIs is whether they are able to meet some of the unmet demands related to hospitalisation care and hence, increase hospitalisation rates. As depicted in Table 8, we observe that the hospitalisation rate is higher among those who are covered by PFHIs compared to those who are not. For the year 2017-18 , the hospitalisation rate per 100 people is 2.7 for the total population; it is 3.6 for those who are covered and 2.4 for those who are not covered.

It can be argued that those who are not covered might be a different set of people compared to those who are covered, and hence that it may not be wise to compare the two groups. In order to make the comparison more meaningful,

Table 8: Hospitalisation rate (per 100 people) based on insurance status: 2014 and 2017-18

	Strata	PFHI		N.C		Total	
		2014	2017-18	2014	2017-18	2014	2017-18
Location	Rural	5.1	4.7	4.1	2.3	4.3	2.5
	Urban	6.1	3.9	4.5	2.9	4.7	3.2
Caste	ST	4.3	2.3	3.5	1.6	3.6	1.8
	SC	5.7	3.6	4.3	2.5	4.5	2.6
	OBC	5.4	4.0	4.2	2.4	4.4	2.6
	Others	5.8	5.1	4.4	2.9	4.6	3.2
Rural	Q_1	3.7	3.6	3.1	1.8	3.2	2.0
	Q_2	4.6	3.0	3.6	2.0	3.7	2.2
	Q_3	5.4	3.3	3.9	2.2	4.1	2.4
	Q_4	4.5	3.6	4.8	2.3	4.8	2.6
	Q_5	7.6	5.1	6.0	3.2	6.3	3.5
Urban	Q_1	5.0	5.0	3.8	2.6	4.0	2.9
	Q_2	6.6	4.4	4.6	2.9	4.8	3.2
	Q_3	6.9	4.5	4.9	2.8	5.2	3.1
	Q_4	5.7	4.7	4.4	3.4	4.6	3.6
	Q_5	6.2	4.8	5.5	3.3	5.5	3.6
	Total	5.4	3.6	4.2	2.5	4.4	2.7

Source: NSS unit records 71^{st} & 75^{th} round.

we have estimated hospitalisation rates for various socio-economics groups and locations. It is noteworthy that the hospitalisation rate is higher across all socio-ecocnomic groups for those who are covered by PFHIs compared to those who are not. This was also the case for the 2014 round. However, it is to be noted that the hospitalisation rate has gone down significantly between the two rounds across all groups. Overall, the hospitalisation rate was 4.4% in the previous round, which has come down to 2.7%. For those covered under PFHIs, it has gone down from 5.4 to 3.6. The only exception to this is the section of people covered under PFHIs who are in the poorest quintile (Q_1). On the one hand, coverage has stagnated, but on the other hand, hospitalization rates have gone down, even among the covered population. Of course, the hospitalization rate is still higher among those covered, nonetheless, it decreased.

It is important to analyse the implications of the above-discussed trends and patterns of health-seeking behavior on the household OOPE.

Table 9: PCE Class wise Out-of-pocket Expenditure for Outpatient Visit (in INR)

MPCE Class	Rural		Urban	
	2014	2017-18	2014	2017-18
Q_1	498	519	476	546
Q_2	500	680	528	685
Q_3	584	602	706	696
Q_4	525	612	872	737
Q_5	820	716	989	827
All	590	632	712	701

Note: 2017-18 estimates are deflated at 2014 prices
Source: NSS unit records 71^{st} & 75^{th} round.

3.5 Household Out-of-Pocket Expenditure (OOPE) for Outpatient care

In this section we would like to capture the pattern of OOPE for out-patient care. To check the recent picture of the OOPE for OP visits in India, we have analyzed both the NSS rounds – 71^{st} round (2014) and 75^{th} round (2017-18). However, as discussed in the method section, the last two rounds are not directly comparable for OOPE estimates of out-patient care for each dimension. For example, we could not compare the OOPE for out-patient visits in the public and private facilities. In the 2014 data, the expenditure has been reported for each person and not for each visit. Therefore, if a person has visited more than once, and has visited two different facilities (say, one in public and another in private), we would only get the OOPE for both the visits together. However, in the recent round, the OOPE for each visit has been recorded. Given this data issue, we have tried to make a comparison based on various indicators like MPCE class, state etc. where OOPE for each visit or each person has no direct impact.

It has been observed that the OOPE for out-patient visit has been increased in the rural and it has decreased slightly in the urban sector (Table 9). Analyzing the OOPE across various MPCE quintiles, we could see that except for the richest MPCE class (Q_5), OOPE has increased significantly among all MPCE classes in the rural sector. Surprisingly, in the urban sector, the lowest two MPCE classes, Q_1 & Q_2, have experienced a sharp increase in OOPE for out-patient visits, whereas the OOPE has decreased in the richest three MPCE groups in the region.

Social group wise out-of-pocket expenditure has been estimated and reported in Table 10. It is revealed from the table that the out-of-pocket expenditure has increased substantially for the ST and SCs in the rural sector compared to 2014. However, for the other two classes – OBC and 'others' – the out-of-pocket expenditures are almost the same as the previous round in the region. In 2017-18, the out-of-pocket expenditure is the minimum for the STs in the

Table 10: Social Group wise Out-of-pocket Expenditure for Out-patient Visit (in INR)

Social Groups	Rural			Urban		
	2014	2017-18	Change(%)	2014	2017-18	Change(%)
ST	505	582	15.2	676	754	11.5
SC	519	656	26.4	507	622	22.7
OBC	609	623	2.3	706	706	0.0
Others	642	641	-0.2	789	717	-9.1
All	590	632	7.1	712	701	-1.5

Note: 2017-18 estimates are deflated at 2014 prices
Source: NSS unit records 71^{st} & 75^{th} round.

rural sector followed by the OBCs. Whereas, the SCs are recording the maximum out-of-pocket payment in the region. In the urban sector on the other hand, the out-of-pocket expenditure for the STs and SCs has increased substantially when compared to 2014. 'Others' social group of the urban sector are experiencing a decrease in the out-of-pocket payment during their out-patient visits. Surprisingly, the STs of the urban region are paying the maximum during their out-patient visits during 2017-18. The minimum out-of-pocket payment is recorded by the SCs of the region.

In the urban areas there is a decline in net medicine expenditure for the period 2014 and 2017-18. However, net diagnostic expenditure has increased overall except for the fourth income quintile. Net medical expenditure has increased more for the lower income quintiles than the higher income quintiles. Overall, a slight increase is observed in net medical expenditure. Similar trends can be observed for the net expenditure for lower income quintiles where it has increased, but has declined in higher income quintiles. More tables for the out-patient visits and corresponding out-of-pocket expenditure have been reported in the appendix section of the report.

3.6 Household Out-of-Pocket Expenditure for Hospitalisation care

For estimating the risks of financial burden, hospitalization expenses had to be taken into account with special focus on social groups, income groups and regions. The highest concentration of OOPE for hospitalization is among private health facilities in the urban areas followed by the rural areas. Comparing this with the public health facilities, people in urban areas are paying 5.8 times more in the private hospitals and in the rural areas the cost is 5 times higher.

Comparing the figures from the 71^{st} round of the survey, it was found that OOPE for hospitalization care has slightly gone down in the urban areas and has risen in the rural areas. However, the ratio of OOPE for private and public

Table 11: Components of OOPE on outpatient care (in INR)

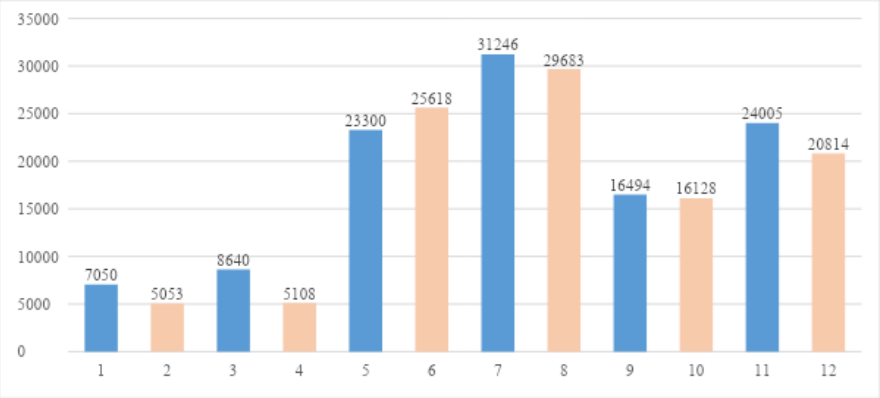
	MPCE	2014 Net Medicine	2014 Net Diagnostics	2014 Net Medical	2014 Net Expenditure	2017-18 Net Medicine	2017-18 Net Diagnostics	2017-18 Net Medical	2017-18 Net Expenditure
Rural	Q_1	276	45	424	498	296	49	432	519
	Q_2	285	43	420	501	388	102	589	680
	Q_3	363	56	512	584	346	57	522	602
	Q_4	310	51	457	525	334	61	523	612
	Q_5	479	76	706	820	444	61	620	716
	Total	346	55	508	590	366	66	543	632
Urban	Q_1	258	46	412	476	311	56	476	546
	Q_2	296	55	476	528	349	90	613	685
	Q_3	406	77	633	706	394	93	641	696
	Q_4	474	106	768	872	426	75	665	737
	Q_5	594	94	890	989	443	116	762	827
	Total	404	75	634	712	386	87	635	701

Note: 2017-18 estimates are deflated at 2014 prices
Source: NSS unit records 71^{st} & 75^{th} round.

hospitals for the year 2014 has increased over time. In the urban and the rural areas, the ratio of private and public OOPE was 3.6 and 3.3, respectively, which has increased to 5.8 and 5 in 2017-18. Out-of-pocket expenditure (OOPE) for hospitalization during 2014 and 2017-18 has been reported in Figure-8. It can be observed that OOPE has decreased during the time period in both the regions in India. If we compare the OOPE amount across facilities, we can see that OOPE has decreased sharply in the urban sector for both public and private hospitals. A similar trend is also found in the case of hospitalization in public facilities in the rural regions. However, the OOPE for hospitalization has increased in the private facilities of the rural sector.

Now the question arises- for whom has the OOPE decreased? Here we have studied the OOPE pattern across the MPCE class and reported in Table-12 Surprisingly, except for the richest class (Q_5), the overall OOPE has increased in the rural region for all other classes. In the urban region, on the other hand, the overall OOPE has increased for the poorest class (Q_1) and middle class (Q_3). OOPE for hospitalization in public facilities has decreased in both the rural and urban sectors for every MPCE class.

Figure 8: Out-of-pocket Expenditure for Hospitalization (in INR)



Source: NSS unit records 71^{st} & 75^{th} round.

Table 12: Components of OOPE on outpatient care (in INR)

	Public				Private				Total			
MPCE	Rural		Urban		Rural		Urban		Rural		Urban	
Class	2014	2017-18	2014	2017-18	2014	2017-18	2014	2017-18	2014	2017-18	2014	2017-18
Q_1	6763	4308	4292	4158	17112	25049	20763	24729	11577	13732	13044	14173
Q_2	5740	4677	5386	4153	18151	22975	22381	22864	11823	13814	15872	14623
Q_3	6624	4723	9463	5961	18579	22839	24234	31082	13430	13536	19363	21754
Q_4	6538	5469	9610	5875	20858	24058	37615	31939	15419	16283	30280	24129
Q_5	9497	6189	25175	7559	32188	30338	44070	35253	25027	21486	40956	30934
Total	7050	5053	8640	5108	23300	25618	31246	29683	16494	16128	24005	20814

Note: 2017-18 estimates are deflated at 2014 prices
Source: NSS unit records 71^{st} & 75^{th} round.

Surprisingly however, the sharpest decline in OOPE is observed for the richest class of both the regions. On the other hand, if we compare the OOPE across MPCE classes during private sector hospitalization, we can observe that the OOPE has increased among all the MPCE classes of the rural sector except the richest class. Similarly in the urban sector, the highest two MPCE classes have recorded a decrease in OOPE whereas OOPE has increased for all other MPCE groups.

Table 13 is reporting the OOPE for hospitalization across social groups. Comparing the overall OOPE during 2014 and 2017-18, we can see that the OOPE has increased for the ST and SCs in the rural regions. However, the OOPE for the OBCs and 'other' castes has decreased during the period. Interestingly, in the urban sector the overall OOPE has decreased for all social groups except the SCs. Bifurcating the overall OOPE across facilities, we can see some mixed results. In the rural sector, the OOPE for hospitalization among all castes who are using public facilities has decreased. A similar pattern is also observed in the urban sector. Exactly the opposite pattern is observed for hospitalization in private facilities in the rural sector. The OOPE has substantially increased for all social groups. In the urban sector on the other hand, the OOPE for hospitalization in private facilities has decreased for the two groups at the bottom – ST and 'others'. For the other two social categories, SC and OBCs, the OOPE has increased during private sector hospitalization.

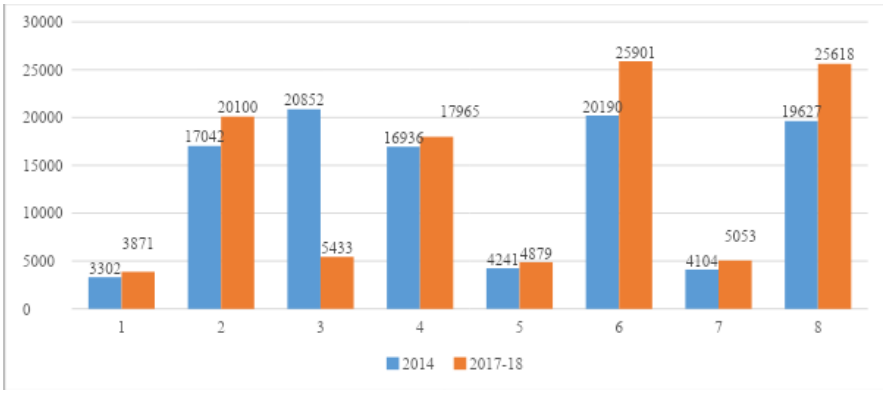
Prepayment for healthcare services is very important to reduce the out-of-pocket expenditure of the households and to avoid its adverse consequences. Access to insurance services is one of the most important prepayment mechanisms. In India, there are various types of insurance facilities available – government-funded health insurance schemes, employer-provided insurances, private voluntary health insurance schemes, and the like. However it has to be noted here that as of yet, more than 84 per cent of the population is not covered under any health insurance scheme in India.

Table 13: Components of OOPE on outpatient care (in INR)

	Public				Private				Total			
Social	Rural		Urban		Rural		Urban		Rural		Urban	
Group	2014	2017-18	2014	2017-18	2014	2017-18	2014	2017-18	2014	2017-18	2014	2017-18
ST	4014	3551	5139	3452	18681	29095	45634	24391	9479	11810	28956	12421
SC	6802	4960	6149	4312	19555	25689	21195	27548	13022	14331	14441	16815
OBC	6293	5028	5549	4730	23045	23182	30004	26306	17216	15775	22434	18417
Others	10005	5901	14608	6171	27187	29117	34771	33761	20346	19444	29173	25252
Total	7050	5053	8640	5108	23300	25618	31246	29683	16494	16128	24005	20814

Note: 2017-18 estimates are deflated at 2014 prices
Source: NSS unit records 71^{st} & 75^{th} round.

Figure 9: Type of Insurance coverage and Out-of-pocket Expenditure for Hospitalization in the Rural Sector (in INR)



Note: 2017-18 estimates are deflated at 2014 prices; PVHI: Private voluntary health insurance
Source: Estimated from NSS 71st round and 75th round unit level data.

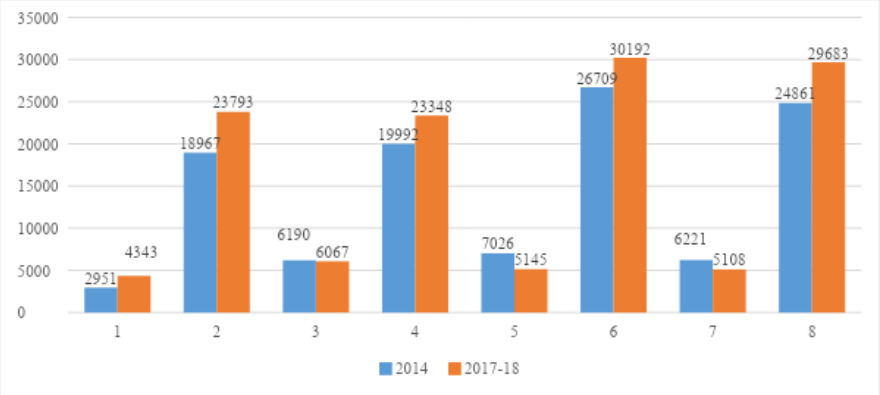
In this report, an attempt has been made to study the changes[5] in OOPE during hospitalization under various insurance categories in India[6].Figure 9 reports the extent of out-of-pocket expenditure for hospitalization in the rural sector. It is observed from the figure that the overall OOPE has increased for both public and private facilities in the region.

However in both the rounds, NSS records that the overall OOPE in the private sector hospitals is five times higher compared to the public facilities. The out-of-pocket expenditure is the maximum for the private sector hospitalization of the non-insured patients in the region. This expenditure has also increased

[5]However, given the coding structure in both the NSS rounds, it is difficult to club the insurance categories and make them comparable to each other.

[6]Justification for reimbursement: NSS reports the OOPE for inpatient and outpatient care under various heads like doctor's fee, medicine, diagnostic tests, transportation etc. However, only the total amount reimbursed for each case of hospitalization or outpatient visit has been recorded. Therefore, no specific information is available on the exact head for which the reimbursement has been received. To estimate the extent of OOPE for inpatient and outpatient visits and the share of each component, we followed the methodology available from National Health Accounts of India 2013-14 (NHSRC 2016), Tamil Nadu State Health Accounts (2017), Kerala State Health Accounts (2016). The specific assumption in this method is that higher the OOPE for a component, more would be the reimbursement for it. It might be criticized on the grounds that the OOPE could be higher as no reimbursement has been received for it. However, given the information available, it could be one of the best methods to distribute the reimbursement amount. Another method could be to distribute the reimbursement amount equally for each of the components used during utilization of healthcare facilities. However, one potential problem could be that for many of the cases the net OOPE would be negative (reimbursement amount is higher than the gross OOPE) for various components. Given this data and methodological issues, we would consider it as the limitation of the study, and the availability of complete information or of a proper distribution key would help us estimate the net OOPE for each component more accurately.

Figure 10: Type of Insurance Coverage and Out-of-pocket Expenditure for Hospitalization in the Urban Sector (in INR)



Note: 2017-18 estimates are deflated at 2014 prices; PVHI: Private voluntary health insurance
Source: Estimated from NSS 71st round and 75th round unit level data.

significantly compared to the previous round. The out-of-pocket expenditure of the non-insured persons has also slightly increased in the public sector hospitalization. A similar trend is also observed for the patients who are covered under publicly-funded health insurance schemes in the region. The out-of-pocket expenditure for these patients has increased for both types of facilities compared to 2014. Additionally, people who have arranged for their own health insurance from the market (PVHI), are also experiencing an increase in out-of-pocket expenditure during private sector hospitalization in the region. On the other hand, out-of-pocket expenditure has dropped substantially for the patients with PVHI during public sector hospitalization.

Figure 10 presents the out-of-pocket expenditure for hospitalization under various insurance schemes in urban India. It is observed that the overall out-of-pocket expenditure has increased in the private sector hospitalization in the region from around 25 thousand to around 30 thousand. Whereas the patients of the public facilities are experiencing a decrease in out-of-pocket expenditure during hospitalization in the region. People who are covered under government-funded health insurance schemes are paying more from their pocket during hospitalization in the urban sector compared to 2014. This pattern is uniformly observed in both public and private sector hospitalization. Interestingly, people with PVHI are experiencing a decrease in out-of-pocket expenditure during public sector hospitalization. A similar result is also found for the patients with no insurance coverage. The out-of-pocket expenditure has decreased for these patients during hospitalization in the public facilities. Surprisingly, the average out-of-pocket expenditure for the non-insured patients is lower than patients who are covered under PVHI for public sector hospitalization in the

region. Whereas in private sector hospitalization, the out-of-pocket expenditure has increased significantly, for both patients with PVHI and without insurance. Estimation of OOPE across states and other socioeconomic indicators have also been done and the tables are reported in the appendix section.

The variation in % of the OOPE by residency and sector is given in the table below (Table 14). As has already been noted OOPE has reduced for only two groups: Rural dwellers covered by PVHI accessing public facilities for hospitalization (-73.9%); Urban dwellers covered by PVHI accessing public facilities for hospitalization (-2%), Urban dwellers not covered by PVHI/insurance schemes accessing public facilities for hospitalization (-26.8%). The offered financial protection comparing OOPE across the three groups, and more specifically Not covered to Govt Funded (which is the most relevant in terms of policy). It seems PVHI have nevertheless managed to negotiate much more effectively with public facilities, but we don't know why nor do we have a sense of how this happened.

Table 14: Variation of OOPE by types of provider and insurance coverage

	Rural						Urban					
	Public			Private			Public			Private		
	2014	2017	%	2014	2017	%	2014	2017	%	2014	2017	%
PFHI	3302	3871	17.2	17042	20100	17.9	2951	4343	47.2	18967	23793	25.4
PVHI	20852	5433	-73.9	16936	17965	6.1	6190	6067	-2.0	19992	23348	16.8
N.C	4241	4879	15.0	20190	25901	28.3	7026	5145	-26.8	26709	30192	13.0
lvs3	-28%	-26%	-18%	-29%	-138%	-18%	-41%	-27%				

Note: 2017-18 estimates are deflated at 2014 prices
Source: NSS unit records 71^{st} & 75^{th} round.

3.7 Household catastrophic Expenditure

A large proportion of household expenditure goes into paying for health care needs. Consumer expenditure surveys are recognized as better sources of information to understand what proportion of household expenditure goes into health and the extent of financial hardship faced by households. These estimations are better conducted with the Consumer Expenditure Survey (CES) whose main purpose is to capture the details of expenditure on various items of consumption. However, the morbidity and health rounds have also provided information on total household expenditure. We use the same information to estimate the share of household consumption expenditure (HCE) going for health care (OOPE), Out-patient care, hospitalisation, total medicine expenditure, and spending on medicines for OP and hospitalisation (Table 15).

On an average (mean), about 5.5% of HCE is spent on health- out of which 2.9% is on OP care and 2.7% in hospitalisation. In rural areas, around 5.8% is spent on health and 3% and 2.7% respectively on OP and hospitalisation care. In urban areas, the share of HCE is 5%- slightly lower than in rural areas. Around 2.6% is spent on OP care and 2.5% on IP care. Thus OP care remains the bigger part of HCE compared to hospitalisation care. Out of the total HCE, around 2.4% is spent only on medicines. In rural areas, the share of medicines is even higher-2.6%.

Among various income quintile groups, share of OOP is higher among the poorer households belonging to the bottom two quintiles compared to the top two quintiles. For instance, the bottom two quintiles spend on average 6% or more household resources on health, while for the top two groups, it is 5% or less. In fact in urban areas, only 3.2% of resources are spent by the top quintiles for health. This really brings out the regressive nature of OOP expenditure. Another important observation to be made is that the share of OP expenditure is more among the rural households and the share of hospitalisation is more among the richer counterparts. For instance, in rural areas, for every quintile group, the share of OP is more than that of hospitalisation. In urban areas, the reverse is true- the share of hospitalization is higher than that of OP for all groups, barring Quintile 2. Higher availability and utilization of private hospitals could be reasons for the higher share of hospitalisation in urban areas.

A comparison of the 2017-18 round with the previous round clearly suggests that the share of OOPE in HCE has gone down considerably. Share of OOP was 8.1% in 2014- this has come down to 5.5% for 2017-18 (Figure 11). The decline is uniform across rural and urban areas, as well as for the various components of OOPE. The decline is more prominent in urban areas and at the same time, for OP care and medicines compared to hospitalisation expenses. Over the last many decades, we have observed that OOP has increased as a share of HCE. The trend depicted here is very much in contrast to what has been documented earlier. Much detailed analysis is required to understand this trend better.

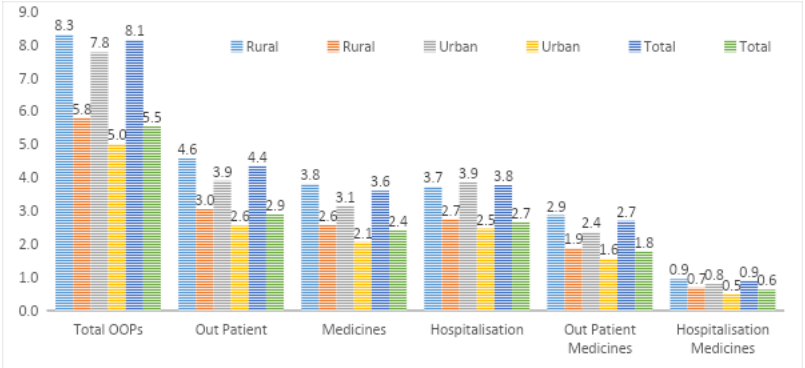
There seems to be a concrete class gradient in the relative share of OP and hospitalisation expenditure. The share of OP is higher among the poorer quintile groups and as we go up the quintile groups, we observe that the share of

Table 15: Mean share of health (OOPE) in total HCE (%): 2017-18

		Q_1	Q_2	Q_3	Q_4	Q_5	Total
Rural	Total Health expenditure (OOPE)	6.2	6.2	5.4	5.0	6.2	5.8
	Out Patient Expenditure	3.4	3.3	2.9	2.4	3.2	3.0
	Medicines	2.9	2.8	2.3	2.1	2.7	2.6
	Hospitalisation expenditure	2.8	2.9	2.5	2.6	3.0	2.7
	Out Patient Medicines	2.1	2.0	1.7	1.5	2.0	1.9
	Hospitalisation Medicines	0.8	0.7	0.6	0.6	0.7	0.7
Urban	Total Health expenditure (OOPE)	6.7	5.9	5.3	3.9	3.2	5.0
	Out Patient Expenditure	3.3	3.4	2.5	2.0	1.5	2.6
	Medicines	2.8	2.6	2.1	1.6	1.1	2.1
	Hospitalisation expenditure	3.4	2.4	2.8	2.0	1.7	2.5
	Out Patient Medicines	2.1	2.0	1.5	1.2	0.9	1.6
	Hospitalisation Medicines	0.8	0.6	0.6	0.3	0.2	0.5
Total	Total Health expenditure (OOPE)	6.4	6.1	5.3	4.7	5.2	5.5
	Out Patient Expenditure	3.4	3.4	2.8	2.3	2.6	2.9
	Medicines	2.9	2.7	2.3	2.0	2.2	2.4
	Hospitalisation expenditure	3.0	2.7	2.6	2.4	2.6	2.7
	Out Patient Medicines	2.1	2.0	1.6	1.4	1.7	1.8
	Hospitalisation Medicines	0.8	0.7	0.6	0.5	0.5	0.6

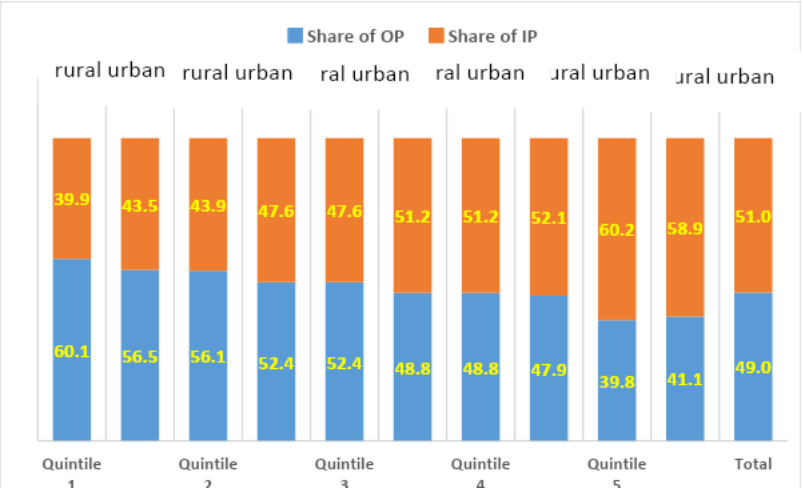
Source: NSS unit records 75^{th} round.

Figure 11: Share of OOP and various components in HCE: 2014 and 2017-18



Source: Estimated from NSS 71^{st} & 75^{th} round unit level data.

Figure 12: Share of OP and Hospitalisation in total OOP: 2017-18 (excluding child birth)



Source: Estimated from NSS 75^{th} round unit level data.

hospitalisation increases. For instance, in rural areas, the poorest quintile group spends more than 60% of total OOP on OP care and the remaining 40% is spent on hospitalisation (Fig. 12). This share completely reverses as we move to the top quintile- less than 40% is spent on OP care and 60% on hospitalisation.

If we take into account only those households which have used hospital care at least once in the last one year, we see a considerable jump in the share of OOPE in HCE. The mean share of OOPE for hospitalised households is 21%- which is more than a fifth of HCE going towards mitigating health expenses (Table 16). It is important to note that for such households, the share of OP expenses is also higher compared to all households. The differences in the patterns of OOPE in HCE, both in rural and urban households, are few. Households belonging to the poorer quintiles have a greater burden compared to their richer counterparts- with the exception that the richest quintile is where a larger share of HCE goes for health. Hospitalisation expenses contribute to almost 17% of the total HCE. For the poorest quintile, this is more than 18%. Thus, there would be significant financial hardship among households who need hospitalisation.

A key indicator of financial hardship is the extent of catastrophic health expenditure (CHE) faced by households. CHE is the percentage of household expenditure being spent on health. There is no agreed threshold of what constitutes catastrophic expenditure, but 10% and 25% of CHE is used most often as key thresholds. In Table 17, we have demonstrated CHE on account of overall OOP— OOP on hospitalisation, on OP and, on medicines for 10 and 25% of HCE for various quintile groups. Overal,l 12.4% and 5.3% of households faced

Table 16: Mean share of health (OOPE) in total HCE for households with at least one hospital episode present (%): 2017-18

		Q_1	Q_2	Q_3	Q_4	Q_5	Total
Rural	Total Health expenditure (OOPE)	22.8	22.4	19.3	19.1	24.0	21.5
	Out Patient Expenditure	4.8	3.7	3.7	3.4	6.0	4.3
	Medicines	8.1	7.0	6.1	5.6	7.8	6.9
	Hospitalisation expenditure	18.0	18.6	15.6	15.7	18.0	17.2
	Out Patient Medicines	3.0	2.3	2.2	2.0	3.6	2.6
	Hospitalisation Medicines	5.2	4.7	3.9	3.6	4.2	4.3
Urban	Total Health expenditure (OOPE)	22.9	18.7	20.6	17.6	17.8	19.9
	Out Patient Expenditure	4.4	4.4	3.2	3.0	2.6	3.7
	Medicines	7.0	5.8	5.7	4.4	4.0	5.6
	Hospitalisation expenditure	18.4	14.3	17.4	14.6	15.2	16.3
	Out Patient Medicines	2.9	2.5	2.0	1.9	1.8	2.3
	Hospitalisation Medicines	4.1	3.2	3.7	2.5	2.2	3.3
Total	Total Health expenditure (OOPE)	22.8	21.2	19.7	18.7	22.5	21.0
	Out Patient Expenditure	4.6	3.9	3.5	3.3	5.2	4.1
	Medicines	7.7	6.6	6.0	5.3	6.9	6.5
	Hospitalisation expenditure	18.2	17.2	16.2	15.4	17.3	16.9
	Out Patient Medicines	2.9	2.4	2.1	1.9	3.2	2.5
	Hospitalisation Medicines	4.8	4.2	3.9	3.3	3.7	4.0

Source: NSS unit records 75^{th} round.

Table 17: Households facing catastrophic expenditure: 10 & 25% of HCE (2017-18)

	OOPE Components	Q_1		Q_2		Q_3		Q_4		Q_5		Total	
		10% HCE	25% HCE	10% HCE	25% HCE	10% HCE	25% HCE	10% HCE	25% HCE	10% HCE	25% HCE	10% HCE	25% HCE
Rural	OOP	12.9	6.2	12	5.4	12.2	5.5	12.2	4.8	13.8	5.9	12.6	5.6
	IP	5.1	2.7	5	2.5	5.2	2.5	6	2.6	6.3	2.9	5.5	2.6
	OP	8.4	3.6	7.6	2.9	7.4	2.8	6.7	2.1	8.2	3	7.7	2.9
	Meds	7.4	2.5	6.3	2.4	6.5	1.8	5.9	1.4	6.8	2.2	6.6	2.0
Urban	OOP	14.9	6.2	13.7	5.8	13	5	10	3.6	7.6	2.5	11.9	4.7
	IP	7	3.2	5.9	2.3	5.9	2.5	4.8	1.6	3.7	1.4	5.5	2.2
	OP	8.4	2.7	8	3.2	7.2	2.3	5.4	1.7	3.9	0.9	6.6	2.2
	Meds	6.7	1.9	6.3	2.2	5.6	0.8	3.5	1	2.7	0.5	5.0	1.3
Total	OOP	13.6	6.2	12.5	5.5	12.5	5.3	11.5	4.4	11.7	4.8	12.4	5.3
	IP	5.8	2.9	5.3	2.4	5.4	2.5	5.6	2.3	5.4	2.4	5.5	2.5
	OP	8.4	3.3	7.7	3	7.3	2.6	6.3	2	6.8	2.3	7.3	2.6
	Meds	7.2	2.3	6.3	2.3	6.2	1.5	5.1	1.3	5.4	1.6	6.1	1.8

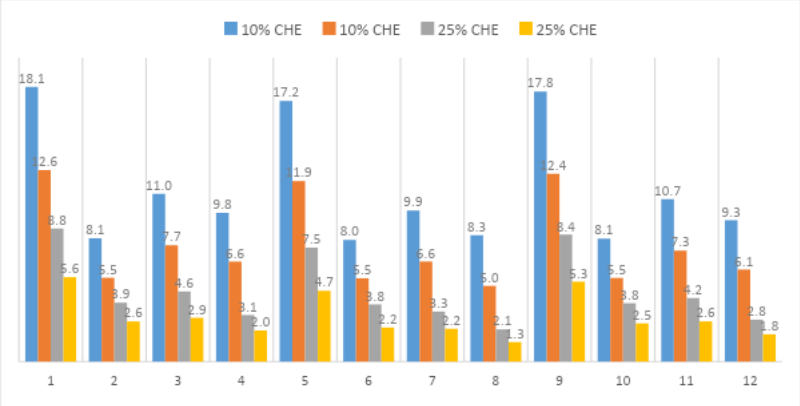
Source: NSS unit records 75^{th} round.

CHE at 10% and 25% threshold respectively. Outpatient expenditure (7.3%) is the major cause of CHE 10% level, followed by medicines (6.1%) and hospitalisation (5.5%). However, at the 25% level, hospitalisation emerges as the main cause of CHE. This implies that a greater percentage of people are affected moderately by OP and medicine-related expenditure, but when it comes to the severe effects, hospitalisation emerges as the main cause. It is interesting to note that in urban areas, households belonging to the poorer quintiles face higher CHE compared to their better-off counterparts. On the other hand, it is the better-off sections in rural areas who face a greater degree of CHE.

The extent of CHE has declined significantly between the two rounds of NSSO. In 2014, almost 18% of households faced CHE at 10% threshold and 8.1% at 25% threshold (Figure 13). As described above, in 2017-18 round the corresponding numbers are much lower- 12.4% and 5.3% respectively. Decline is steeper for 25% threshold level and also for OP care and medicines- 3.1 points or 37% decline. In rural areas, the decline is greater due to OP and medicines, but in urban areas, hospitalisation is the main cause of decline.

There are considerable state level variations in CHE for both 25% and 10% threshold. However, for almost all the states, there seems to be a decline in CHE (Fig. 14). Both mean and median CHEs have declined between the two rounds (Table 18). It needs further analysis to understand this decline in a more thorough manner. Decline in CHE is a good sign overall, however given that there is a decline in health access and utilization, OOPE has also declined, and as a result, the CHE is supposed to go down. Further, it must be noted that the timing during the 75^{th} round of survey is closer to the times of slowdown in the

Figure 13: CHE at 10% and 25% threshold for OOPE and various components: 2014 and 2017-18



Source: Estimated from NSS 71^{st} & 75^{th} round unit level data.

Table 18: Summary Statistics: State wise variations in CHE related to OOPE

		Mean	SD	Varience	P_{25}	Median	P_{75}	Max.	Min.
CHE 25%	2014	6.6	3.5	12.2	4.0	7.6	9.4	12.6	0.3
	2017-18	3.8	2.6	6.7	1.8	3.6	4.9	12.2	0.3
CHE 10%	2014	14.9	7.0	48.7	10.1	15.2	18.9	28.4	4.1
	2017-18	9.4	5.5	30.1	6.4	8.7	12.6	28.0	1.4

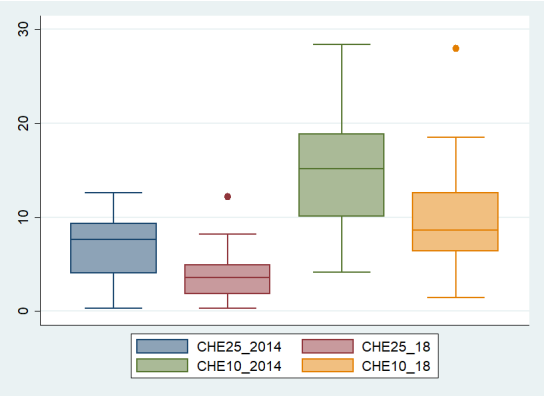
Source: NSS unit records 71^{st} & 75^{th} round.

economy, which might be reflected in the reduced health consumption we see in the 2017-18 round. Whether this decline is caused by the economic-downturn or further contraction in access to healthcare needs further investigation.

4 Discussion

The 75^{th} round of the National Sample Survey on Household Social Consumption: Health comes at a crucial policy juncture and is quite significant on a few counts. This round is also unique in more than one way. For the first time, the survey has been conducted within a span of four years. The previous health round was conducted in 2014 and all the previous rounds were conducted with a gap of more than a decade between them. The Union Government has launched

Figure 14: CHE 25% and CHE 10% of OOPE by state: 2014 and 2017-18



Source: Estimated from NSS 71^{st} & 75^{th} round unit level data.

the Ayushman Bharat (AB) Program which aims to implement the activities targeted to achieve Universal Health Coverage (UHC) in the country. One of the two pillars under the AB program is the Pradhan Mantri Jan Aarogya Yojana (PMJAY), which aims to provide financial protection from secondary and tertiary level hospitalization-related expenditures by the people. The scheme is aimed at reducing out-of-pocket-expenditures by the bottom two quintiles of the population on hospitalization-related expenditures. The timing of the 75^{th} round has been scheduled in such a way that it serves as a baseline for PMJAY.

Our analysis of unit level data of the NSS 71^{st} round for the year 2014 and the NSS 75^{th} round for the year 2017-18 brings out some significant findings on ailment reporting, access to hospitalization services, and insurance coverage. The report also deals in details on OOPE in-patient and out-patient care, and household financial burdens and catastrophes caused due to these expenses.

It is quite surprising to note that PAP has declined between 2014 and 2017-18. In order to make PAP comparable between the two rounds, we have compared the July-December sub-samples between 2014 and 2017. PAP in rural areas in 2017 was 7.62% while the same for 2014 is 8.94%. PAP for urban areas was 10.04% for 2017, which is again a considerable decline from 11.79% in 2014. Ailment reporting varies extensively across states, across levels of education, and across quintile and caste groups. Barring states like Kerala, Andhra Pradesh, West Bengal, Punjab and few smaller states, in most parts of the country, less than 1 in every 10 people have reported ailments in the 2017 sub-round. In most of the states, PAP has declined further. Similarly, there is a significant decline in the hospitalization rate in 2017-18 compared to 2014. The decline is steeper for urban areas- from 43.4 in 2014 to 33.8 in 2017-18. In rural areas, the hospitalisation rate declined by 8.5 percentage points from 34 per thousand people.

The declines in hospitalisation rates and PAP are quite significant- as in

all the previous rounds, both these indicators have increased as expected. We need further analysis to understand this better. It has to be noted that the 2017 survey was conducted within a few months of demonetisation and the informal sector had been affected quite significantly due to adverse consequences of demonetisation including a slump in consumption. Further analysis will tell us whether reduced health care consumption was fuelled by distress in the informal sector.

The country has experienced the introduction of a plethora of government-funded health insurance schemes that had the dual objectives of increasing access to hospitalization care and of reducing the financial burden borne by households. Publicly funded health insurance schemes (PFHI) cover 13% of the people in the rural areas and 9% of the people in the urban areas. In the poorest income quintile, only 11% of the people from urban areas and 12% of the people from rural areas are covered by PFHI. Between 2014 and 2017-18, the coverage of the population under health protection schemes had not increased by much. Andhra Pradesh (70%), Chhattisgarh (63%), Telangana (55%) and Mizoram (62%) have the majority of their people covered under PFHI, whereas UP, Bihar, MP, Delhi and Uttarakhand have less than 1% of their people registered under this scheme. 22 out of 36 states and UTs have less than 5% people covered under PFHI schemes. Since 2014, there have been efforts to replace RSBY with a more elaborate PFHI under the leadership of the NITI Aayog. The period of 2017 is also one where RSBY had been virtually shut and PMJAY was not yet launched, though state government schemes were running. Low PFHI coverage and the lowest-ever hospitalisation rate serve as a baseline for the PMJAY to work on both these aspects.

Though PFHIs are intended to expand the coverage of private sector care, compared to 2014, utilization of the non-government sector has declined, particularly in rural areas and for hospitalisation care. In the bottom-income quintile of the rural areas, more than half of the population went to government facilities, whereas in the urban areas, more than half of the hospitalization cases are treated in private facilities. It is important to understand which types of government hospitals have been accessed by people more frequently during this period. Unfortunately, the categories of public providers have been merged into a single category in the 75^{th} round. This is certainly going to compromise on the kind of analysis possible using NSSO data, particularly for National Health Account work, which generates provider classification of health spending. Policy makers involved in the design of the NSSO should have been more careful, or at the very least, have provided an explanation before merging the various public providers into one.

The most important objective of the NSSO health rounds is to estimate the OOPE on various types of healthcare, with disaggregation for types of provider, ailments and types of health protection schemes. When compared to the 2014 figures, OOPE across the income quintiles has increased across all income classes in the rural areas, except for the richest quintile. It was also found that OOPE for hospitalization care had gone down slightly in the urban areas and had risen in the rural areas since 2014. However, the ratio of OOPE for private and public

hospitals for the year 2014 has increased over time, indicating that private sector care is becoming costlier for people. In both urban and rural areas, the ratio of OOPE in private and public were 3.6 and 3.3, respectively, which has increased to 5.8 and 5 in 2017-18. The decline in OOPE on hospitalisation in urban areas is contributed to by the significant decline in OOPE in the private sector.

There is an increase in the hospitalisation rate among those who have insurance coverage. However, the PFHIs have not been very successful in providing free hospitalisation care, particularly in private hospitals. Further, between 2014 and 2017-18 hospitalisation costs have increased significantly in the private sector. This is consistent with the existing literature based on the previous rounds of NSSO and other surveys.

On an average, 5.5% of household consumer expenditure (HCE) is spent on health (2.9% on OP and 2.7% on IP). In the rural areas, the share is 5.8% (3% on OP and 2.7% on IP). In the urban areas, the share of HCE is 5% (2.6% on OP and 2.5% on IP) Out of the total HCE, 2.4% is spent on medicines.

Catastrophic Health Expenditure (CHE) is taken at 10% and 25% threshold. Overall, 12.4% and 5.3% of households faced CHE at 10 and 25% thresholds respectively. OP expenditure (7.3%) is the major cause of CHE at 10% threshold, followed by medicines (6.1%) and hospitalization (5.5%). At 25% threshold, hospitalization expenditure is the major cause of CHE. The literature on financial hardship and out-of-pocket health expenditure is quite rich. Here is an attempt to bring out some of the prominent research papers for our discussion. As has been documented, household medical expenses are rising more than ever (Wagstaff & Doorslaer, 2003; Garg, Karan, et al., 2005; Ghosh, 2011). The public expenditure on health is at an all-time low, and the private health sector has grown aggressively during the past few decades (Baru, 2016).

Van Doorslaer et al. (2007) studied data from 14 Asian countries, home to 80% of the population of Asia, to find out how high rates of out-of-pocket expenditure are curtailing living standards. Using secondary sources, the study found that in at least 10% of the households in Bangladesh, Nepal, India, China and Vietnam, more than 25% of income is spent on healthcare after deducting food expenses. However, families in high-income countries are spending less from their pockets than families in low-income countries. And in low-income countries, rich people are spending more because the public health services are in a dismal state.

Recent international findings identify the cause of catastrophic spending on healthcare for households to be the high share of total household resources that OOP expenditure represents (Xu et al., 2003; O'Donnell et al., 2005). The literature also shows that a large proportion of households in India make catastrophic payments, and a substantial proportion of those households which incur catastrophic payments belong to the well-off categories (O'Donnell et al., 2005; Garg, Karan, et al., 2005; Roy & Howard, 2007). This may reflect on the capacity of better-off households to respond to medical needs by diverting resources from expendable consumption while poor households are constrained with regards to the extent to which they can divert resources away from food and shelter (O'Donnell et al., 2005; Roy & Howard, 2007). Evidence shows that

large proportions of people in poor households forego formal treatments owing to their constrained family budgets (Yip & Mahal, 2008).

The unpredictable and catastrophic nature of illness can throw households into the vortex of poverty. A high OOP burden among households could result in liquidation of assets, heavy borrowing, and low reserves of savings, to name a few . Emerging international evidence suggests that high household OOP expenditure pulls down a vast chunk of the population below the poverty line (Berki, 1986; Peters, 2002; Wagstaff & Doorslaer, 2003; Van Doorslaer et al., 2007). A cross-country analysis of household consumption expenditure data spanning eleven South Asian countries including India, suggests that using 1 US dollar as the norm for poverty[7], over 37 million people in India were pulled down below the poverty line due to high OOP payments during 1999/2000 (Van Doorslaer et al., 2007). Using Indian official poverty lines, Garg et al. (2005) estimate the number in the same year to have been 32.5 million.

Wagstaff et al. (2018) analyze 553 household surveys with quality checks from 133 countries for catastrophic health spending between 1984 and 2015. It was found that the global incidence of catastrophic spending at 10% threshold was 9.7% in 2000, 11.4% in 2005 and 11.7% in 2010. In absolute figures, 808 million people incurred catastrophic health payment in 2010. The incidence of catastrophic payments was positively correlated with per-capita GDP. However, spending and share of GDP spent on health negatively correlated to total health spending channeled through social security funds and other government agencies. Our findings are consistent with previous national studies and also with the global evidence. It is however important that we delve deeper into the issue of declining OOPE and utilization patterns in our future work on the data and also that we try to conduct impact analyses of the PFHI scheme.

Limitations- The current report has the following limitations, some due to the NSSO survey itself and others due to limitations in the estimation methods:

- The data of the NSS 75^{th} round was collected during July 2017 – June 2018. Therefore, we could get all the seasonal variations in prevalence in morbidity from this round. However, the NSS 71^{st} round data was collected during January – June 2014. Naturally, from the NSS 71^{st} round data, it is not possible to estimate the seasonal variation in morbidity pattern.

- In the 75^{th} round, NSS has reported the out-of-pocket expenditure for each out-patient visit. This information is helpful in estimating the OOPE for each type of disease or facility separately. However, in the NSS 71st round, the out-of-pocket expenditure is recorded for each person, i.e., the total out-of-pocket expenditure for all the out-patient visits are recorded for

[7]Two absolute poverty lines developed and used by the World Bank – (international) are $1.08 and $2.15 per capita per day at 1993 purchasing power parities (Ravallion, 1998; Chien & Ravallion, 2001). The lower of these is the median of the 10 lowest poverty lines operational in a sample of low-income countries (Ravallion, Datt, & Van de Walle, 1991). It represents a very low living standard that is often referred to as "extreme poverty" (Chen & Ravallion, 2004).

each individual. Given this data limitation, it was difficult to estimate the OOPE for each out-patient visit separately for the 71^{st} round.

- The coding pattern of the level of healthcare facilities has changed in the recent round. Specifically, NSS has clubbed various types of public healthcare providers and records information under the broad head 'public hospitals'. On the other hand, data shows that the utilization of public facilities has increased for out-patient care. Therefore, it would have been better if the level of care was segregated as it had been in the 71^{st} round in order to be able to address the policy question – usage of which sector of public facilities increased – primary, secondary or tertiary sector of public facilities?

- Like most of the household surveys, the NSS has also reported the monthly expenditure of the households and not their income. We have used this information as a proxy of income in our analysis. However, to classify households under various economic groups, proper information on the income of the households is necessary as it provides more certainty.

- The NSS 75^{th} round data on health records the usual monthly expenditure of the household. However, there is no specific information available for expenditure on food and noon-food items of the households. Therefore, we have used the total household expenditure to estimate the catastrophic health spending. If separate information on food and non-food expenditure of the households was available in the data, the estimates could have been more accurate.

- In the NSS data, the sample sizes for the North-eastern states and union territories are very small. However for various indicators, we have further categorized the data into rural-urban, Scheduled Castes, Scheduled Tribes etc. Grouping of the data for these North-eastern states and UTs would make the samples very thin and any estimate derived from the sample would not be reliable enough. Therefore, we have clubbed the data for all North-eastern states (except Assam) and all the UTs. However, if the state samples (apart from this central sample) of these states and UTs were available, we could have estimated various indicators separately for each state and UT.

- NSS has recorded the out-of-pocket expenditure separately for each service used during hospitalization (including childbirth) and out-patient visit. However, the amount received as reimbursement has been reported as a single component and there is no information available to estimate the reimbursement separately for each component of hospitalization (including childbirth) and out-patient care. Therefore, we have used the share of each component in the total OOPE as a distribution key to estimate the net OOPE for each component.

- The morbidity data collected by the NSS is based on the respondents' perception about their health during the reference period. However, the response could vary from person to person based on their perception. Therefore, it is not possible to estimate the actual morbidity prevalence from this data.

- To compare the hospitalization expenditure adjusted for net reimbursement from health insurance with the 71st round of NSS, the figures from the 75th rounds were deflated using CPI-AL and CPI-IW for rural and urban areas respectively. The base year of CPI-AL was 1987 and that of CPI-IW was 2001 due to the non-availability of the latest figures from the Labour Bureau.

- Also, for the states- Chhattisgarh, Delhi, Goa, Jharkhand, Mizoram, Nagaland, Sikkim, Telangana, Uttarakhand and all the Union Territories, the figures for CPI-AL were not given due to which absolute figures from the NSS 75^{th} round were used. Similarly, for CPI-IW the figures for the states Manipur, Meghalaya Mizoram, Nagaland and all the Union Territories except for Pondicherry were not available, instead absolute figures from the NSS 75^{th} round were used.

References

Baru, R. (2016). Commercialization and Poverty of Public Health Services in India. In S. Hodges & M. Rao (Eds.), *Public Health and Private Wealth* (pp. 121–138). Oxford University Press.

Berki, S. (1986). A look at catastrophic medical expenses and the poor. *Health affairs*, *5*(4), 138–145.

Bose, M., & Banerjee, S. (2019). Equity in distribution of public subsidy for noncommunicable diseases among the elderly in india: an application of benefit incidence analysis. *BMC public health*, *19*(1), 1–12.

Chen, S., & Ravallion, M. (2004). How have the world's poorest fared since the early 1980s? *The World Bank Research Observer*, *19*(2), 141–169.

Chien, S., & Ravallion, M. (2001). How did the world's poorest fare in the 1990s? *Review of Income and wealth*, *47*(3), 283–300.

Deaton, A. (2003). Household surveys, consumption, and the measurement of poverty. *Economic Systems Research*, *15*(2), 135–159.

Garg, C. C., Karan, A. K., et al. (2005). *Health and millennium development goal 1: Reducing out-of-pocket expenditures to reduce income poverty: Evidence from india*. Equity in Asia-Pacific Health Systems.

Ghosh, S. (2011). Catastrophic payments and impoverishment due to out-of-pocket health spending. *Economic and Political Weekly*, 63–70.

O'Donnell, O., van Doorslaer, E., Rannan-Eliya, R. P., Somanathan, A., Garg, C. C., Hanvoravongchai, P., ... others (2005). Explaining the incidence of catastrophic expenditures on health care: Comparative evidence from asia. *EQUITAP (5)*.

Pandey, A., Ploubidis, G. B., Clarke, L., & Dandona, L. (2018). Trends in catastrophic health expenditure in india: 1993 to 2014. *Bulletin of the World Health Organization*, *96*(1), 18.

Peters, D. H. (2002). *Better health systems for india's poor: findings, analysis, and options*. World Bank Publications.

Ravallion, M. (1998). *Poverty lines in theory and practice* (Vol. 133). World Bank Publications.

Ravallion, M., Datt, G., & Van de Walle, D. (1991). Quantifying absolute poverty in the developing world. *Review of Income and wealth*, *37*(4), 345–361.

Roy, K., & Howard, D. H. (2007). Equity in out-of-pocket payments for hospital care: evidence from india. *Health policy*, *80*(2), 297–307.

Van Doorslaer, E., O'Donnell, O., Rannan-Eliya, R. P., Somanathan, A., Adhikari, S. R., Garg, C. C., ... others (2007). Catastrophic payments for health care in asia. *Health economics*, *16*(11), 1159–1184.

Wagstaff, A., & Doorslaer, E. v. (2003). Catastrophe and impoverishment in paying for health care: with applications to vietnam 1993–1998. *Health economics*, *12*(11), 921–933.

Wagstaff, A., Flores, G., Hsu, J., Smitz, M.-F., Chepynoga, K., Buisman, L. R., ... Eozenou, P. (2018). Progress on catastrophic health spending in 133 countries: a retrospective observational study. *The Lancet Global Health*, *6*(2), e169–e179.

Xu, K., Evans, D. B., Kawabata, K., Zeramdini, R., Klavus, J., & Murray, C. J. (2003). Household catastrophic health expenditure: a multicountry analysis. *The lancet*, *362*(9378), 111–117.

Yip, W., & Mahal, A. (2008). The health care systems of china and india: performance and future challenges. *Health Affairs*, *27*(4), 921–932.

Appendices

Table A1: State wise sample and population, 2017-18

State	Sample	Population
Andhra Pradesh	17142	49138731
Arunachal	9027	1203925
Assam	18463	30535827
Bihar	28115	94006006
Chhattisgarh	14919	25064805
Delhi	6432	15803496
Goa	2036	1331965
Gujarat	21639	53328268
Haryana	16271	26414891
Himachal Pradesh	10067	6733304
Jammu & Kashmir	17144	10095128
Jharkhand	16114	30121470
Karnataka	22492	55819435
Kerala	19801	30257513
Madhya Pradesh	29991	69444160
Maharashtra	43576	104277548
Manipur	13036	2831451
Meghalaya	6670	2950084
Mizoram	7365	906601
Nagaland	5830	1545352
Odisha	19078	39374793
Punjab	17170	25758473
Rajasthan	28006	66643607
Sikkim	3516	537995
Tamil Nadu	27833	69496024
Telangana	14442	35322788
Tripura	8417	3533977
Uttar Pradesh	8577	189752924
Uttarakhand	61904	8427404
West Bengal	31027	86522586
A & N Islands	2360	352617
Chandigarh	1565	960652
Dadra & N.	928	204824
Daman & Diu	592	326216
Lakshadweep	1077	54256
Puducherry	2493	1109163
India	555115	1140188259

Table A2: State and Sector wise PAP of Indian States during 2017-18

Categories	State	Jul-Dec 2017		Jan-June 2018	
		Rural	Urban	Rural	Urban
High focus Non-NE States	Bihar	2.58	3.37	2.33	2.54
	Chhattisgarh	5.22	7.47	3.76	6.28
	Himachal Pradesh	12	14.75	7.06	13.83
	Jammu & Kashmir	6.27	8.92	6.82	9.42
	Jharkhand	7.54	8.85	5.27	7.31
	Madhya Pradesh	4.27	6.06	2.67	4.76
	Odisha	10.47	12.77	7.03	10.67
	Rajasthan	5.39	7.13	3.91	4.22
	Uttar Pradesh	8.31	10.3	5.92	6.97
	Uttarakhand	2.34	6.6	2.17	7.74
Non-high focus large states	Andhra Pradesh	14.68	18.8	12.04	13.79
	Goa	8.66	7	4.21	3.91
	Gujarat	7.26	10.75	4.16	5.89
	Haryana	6.52	8.03	3.88	6.04
	Karnataka	4.51	5.72	3.35	4.05
	Kerala	24.84	25.05	26.09	21.72
	Maharashtra	7.18	11.86	7.32	9.67
	Punjab	11.28	9.23	12.61	10.58
	Tamil Nadu	6.41	5.48	6.63	5.51
	Telangana	5.27	6.69	5.58	4.98
	West Bengal	14.46	15.66	10.89	17.12
High focus NE states	Arunachal Pradesh	2.68	3.74	2.97	3.51
	Assam	3.43	5.02	0.96	3.38
	Manipur	2.24	3.14	1.38	0.89
	Meghalaya	0.61	0.15	0.2	0.1
	Mizoram	3.87	3.1	2.92	3.88
	Nagaland	1	2.3	0.08	0.81
	Sikkim	2.64	9.23	2.53	3.07
	Tripura	4.09	4.46	1.9	2.91
	A & N Islands	5.53	9.16	12.87	5.89
Non high focus small states and UT	Chandigarh	0.18	11.15	7.91	8.39
	Dadra & N.	11.13	6.12	0.45	7.53
	Daman & Diu	0.73	0.24	0.06	8.87
	Delhi	6.46	7.36	0.5	4.88
	Lakshadweep	13.28	15.57	6.65	7.36
	Puducherry	2.43	1.97	2.27	2.36
	India	7.62	10.04	6.01	8.13

Table A3: Utilization of facility, in-patient, state wise, all India 2017-18

Categories	State	Rural			Urban		
		Public	NGO	Private	Public	NGO	Private
High focus Non-NE States	Bihar	38.52	1.86	59.62	32.43	2.5	65.08
	Chhattisgarh	59.65	4.3	36.05	37.56	1.56	60.88
	Himachal Pradesh	77.59	1.32	21.09	73.65	4.05	22.3
	Jammu & Kashmir	95.89	0.5	3.61	77.87	1	21.12
	Jharkhand	43.22	7.36	49.42	36.78	3.51	59.71
	Madhya Pradesh	48.35	3.73	47.93	46.81	2.73	50.46
	Odisha	75.11	1.05	23.85	55.55	0.31	44.14
	Rajasthan	50.78	1.26	47.97	49.69	1.82	48.49
	Uttar Pradesh	28.38	2.47	69.14	24.07	2.28	73.65
	Uttarakhand	42.38	1.43	56.18	23.65	0.56	75.79
Non-high focus large states	Andhra Pradesh	25.78	2.47	71.75	31.68	4.01	64.31
	Goa	84.94	0	15.06	58.58	0	41.42
	Gujarat	40.08	6.33	53.6	21.32	8.39	70.29
	Haryana	37.06	0.69	62.24	20.27	3.15	76.59
	Karnataka	32.3	2.14	65.56	17.09	2.07	80.84
	Kerala	39.97	3.1	56.93	35.76	4.85	59.39
	Maharashtra	25.66	3.25	71.09	17.88	5.22	76.9
	Punjab	29.42	5.95	64.62	29.34	2.74	67.92
	Tamil Nadu	56.88	1.2	41.93	42.23	2.89	54.88
	Telangana	24.04	0.91	75.05	17.29	1	81.7
	West Bengal	74.09	1.16	24.75	58.86	2.06	39.08
High focus NE states	Arunachal Pradesh	91.72	1.61	6.67	91.23	2.11	6.65
	Assam	76.66	1.8	21.54	47.75	4	48.25
	Manipur	83.99	1	15.01	72.17	0.08	27.75
	Meghalaya	92.94	0.15	6.91	44.23	2.44	53.33
	Mizoram	89.71	1.67	8.63	69.42	7.59	22.99
	Nagaland	83.54	0.24	16.22	52.04	0	47.96
	Sikkim	82.13	0	17.87	70.41	0	29.59
	Tripura	96.4	0.77	2.83	87.73	2.4	9.87
Non high focus small states and UT	A & N Islands	93.49	0.19	6.33	66.61	0.29	33.09
	Chandigarh	90.45	0.45	9.09	66.39	0.78	32.83
	Dadra & N.	94.79	0	5.21	44.91	0	55.09
	Daman & Diu	38.78	0	61.22	13.77	0	86.23
	Delhi	86.04	0	13.96	60.73	1.41	37.85
	Lakshadweep	73.48	12.44	14.08	68.97	0	31.03
	Puducherry	80.98	0	19.02	61.06	0.37	38.57
	India	45.68	2.38	51.93	35.29	3.32	61.39

Table A4: Utilization of facility, out-patient, state wise, all India 2017-18

Categories	State	Rural				Urban			
		Public	NGO	Private	Informal	Public	NGO	Private	Informal
High focus Non-NE States	Bihar	17.85	0.19	70.26	11.71	22.49	0.08	71.94	5.49
	Chhattisgarh	48.37	2.18	48.31	1.14	24.78	0.38	68.73	6.11
	Himachal Pradesh	66.72	0.39	32	0.89	73.43	4.41	20.37	1.79
	Jammu & Kashmir	77.03	0.05	20.97	1.95	50.51	1.69	47.49	0.31
	Jharkhand	30.61	0.69	59.55	9.16	14.8	0.02	81.23	3.95
	Madhya Pradesh	33.82	3.03	59.34	3.82	26.33	1.25	69.76	2.65
	Odisha	55.26	0.18	38.53	6.03	62.23	0	37.6	0.17
	Rajasthan	42.85	0.22	46.9	10.02	32.32	0.43	66.41	0.83
	Uttar Pradesh	14.2	0.25	79.15	6.41	14.02	0.7	82.98	2.31
	Uttarakhand	52.14	12.52	33.84	1.5	21.69	9.6	65.21	3.49
	Andhra Pradesh	19.15	1.64	73.15	6.06	26.76	0.86	69.96	2.42
Non-high focus large states	Andhra Pradesh	19.15	1.64	73.15	6.06	26.76	0.86	69.96	2.42
	Goa	56.34	0	43.66	0	60.99	0.1	38.9	0
	Gujarat	32.63	0.56	66.74	0.07	17.05	2.45	80.45	0.06
	Haryana	25.29	0.05	74.41	0.25	9.59	0.56	88.87	0.98
	Karnataka	29.04	0.25	70.7	0.02	14.05	2.01	83.94	0
	Kerala	51.75	1.52	46.7	0.03	41.71	1.33	56.52	0.43
	Maharashtra	29.09	1.93	68.76	0.22	22.1	1.91	75.67	0.32
	Punjab	13.23	2.43	81.18	3.15	16.94	1.67	80.25	1.15
	Tamil Nadu	63.31	0.11	35.88	0.7	40.55	1.51	57.84	0.09
	Telangana	24.1	0.01	75.89	0	16.43	0.03	83.34	0.21
	West Bengal	33.05	0.52	60.22	6.21	21.33	1.01	77.29	0.37
High focus NE states	Arunachal	91.82	1.63	3.03	3.52	87.23	1.47	8.54	2.77
	Assam	50.61	2.81	32.58	13.99	22.59	0.13	77.08	0.2
	Manipur	82.33	0	16.83	0.85	82.99	0	17.01	0
	Meghalaya	54.78	0	14.76	30.46	19.57	0	80.43	0
	Mizoram	85.67	10.2	4.12	0	52.99	0.39	46.62	0
	Nagaland	84.99	14.54	0.47	0	25.38	0	74.62	0
	Sikkim	55.61	0	44.39	0	45.05	0	53.84	1.12
	Tripura	34.75	0.54	64.7	0	18.45	0	81.55	0
Non high focus small states and UT	A & N Islands	99.01	0	0.99	0	72.45	0	20.55	7
	Chandigarh	88.35	0	11.65	0	47.71	0	52.02	0.28
	Dadra & N.	41.75	0	58.25	0	26.05	0	70.33	3.62
	Daman & Diu	0.39	0	99.61	0	28.21	0	71.79	0
	Delhi	89.24	0	10.76	0	43.67	0.95	55.36	0.02
	Lakshadweep	97.13	0	2.87	0	77.25	0	22.75	0
	Puducherry	87.57	0	9.04	3.4	51.05	0.49	48.46	0
	India	32.55	0.92	62.22	4.3	26.23	1.26	71.56	0.94

Table A5: Cost of care, in-patient and out-patient, rural, 2017-18

Categories	State	per Hospitalization				per Ailing Person			
		Public	NGO	Private	Total	Public	NGO	Private	Total
High focus Non-NE States	Bihar	5320	12089	18135	13086	414	445	1183	951
	Chhattisgarh	3950	13048	61890	25266	244	1263	472	382
	Himachal Pradesh	13027	170295	32120	19136	1046	284	638	900
	Jammu & Kashmir	5751	7823	49808	7351	411	.	604	450
	Jharkhand	5661	24744	29319	18756	425	2274	1128	852
	Madhya Pradesh	2987	36863	25199	14917	482	676	1107	849
	Odisha	6080	19512	29175	11733	580	2050	655	595
	Rajasthan	8475	13482	24576	16262	501	859	1373	894
	Uttar Pradesh	8085	25725	30295	23904	1059	409	810	818
	Uttarakhand	3888	30128	25259	16315	324	95	831	475
Non-high focus large states	Andhra Pradesh	3027	7430	19023	14615	212	123	527	467
	Goa	2637	0	33062	7219	309	.	586	432
	Gujarat	1869	15114	22901	14020	228	380	485	402
	Haryana	8070	12344	23581	17754	500	625	720	663
	Karnataka	3785	16440	14471	11062	420	548	588	542
	Kerala	4816	14255	21716	14746	208	966	689	458
	Maharashtra	5939	29175	22127	18202	193	1252	674	557
	Punjab	11353	22896	40722	31066	846	374	648	661
	Tamil Nadu	2101	12308	24124	11461	134	248	923	562
	Telangana	2333	6301	26118	20219	306	275	613	543
	West Bengal	3442	19842	44041	13716	354	354	766	598
High focus NE states	Arunachal Pradesh	5141	7243	15408	5875	1846	101	3527	1878
	Assam	5409	7640	28647	10441	1253	2600	1306	1119
	Manipur	7493	16847	58907	15303	1761	.	1147	1653
	Meghalaya	1953	1552	14087	2792	952	.	574	628
	Mizoram	4850	11310	11578	5538	689	898	701	710
	Nagaland	6082	7542	15149	7556	2028	564	0	1581
	Sikkim	5202	0	23422	8458	594	0	765	671
	Tripura	3809	21461	59294	5515	485	2487	1968	1434
Non high focus small states and UT	A & N Islands	5295	2767	94823	11689	89	.	817	97
	Chandigarh	10214	13772	124661	20634	2398	.	802	2211
	Dadra & N.	712	.	7365	1059	60	.	745	163
	Daman & Diu	2028	.	40568	25624	18	.	236	742
	Delhi	4928	.	21111	7187	372	.	2193	552
	Lakshadweep	1612	16723	38978	9507	98	.	524	155
	Puducherry	1252	.	22650	5321	125	.	1081	218
	India	5053	20995	25618	16128	417	730	746	632

Table A6: Cost of care, in-patient and out-patient, urban, 2017-18

Categories	State	per Hospitalization				per Ailing Person			
		Public	NGO	Private	Total	Public	NGO	Private	Total
High focus Non-NE States	Bihar	4341	9385	22277	16139	809	416	1235	1076
	Chhattisgarh	3569	50882	23743	16585	285	4897	658	542
	Himachal Pradesh	10816	5320	31684	15070	501	164	406	462
	Jammu & Kashmir	9259	14570	35914	14943	324	258	374	346
	Jharkhand	14501	17823	27747	22532	681	.	1180	1077
	Madhya Pradesh	2115	22028	24130	13846	317	609	1091	878
	Odisha	7048	28297	29355	16984	431	.	679	523
	Rajasthan	6914	20848	27306	17092	380	1157	1043	842
	Uttar Pradesh	9542	34519	33232	27573	1091	788	994	990
	Uttarakhand	5397	31646	26904	21845	371	261	898	707
Non-high focus large states	Andhra Pradesh	1927	23853	27284	19169	608	1137	694	666
	Goa	4803	.	25994	13581	385	551	506	434
	Gujarat	3899	9543	20006	15696	196	513	640	565
	Haryana	7511	23453	23643	20362	718	340	851	830
	Karnataka	4730	20543	23998	20634	391	600	710	670
	Kerala	4401	18349	25804	17789	305	499	621	544
	Maharashtra	7338	40004	31985	27999	287	1735	710	649
	Punjab	9584	26654	28933	23203	262	1461	682	633
	Tamil Nadu	2047	9795	32760	19142	254	385	958	703
	Telangana	7348	13983	29696	25674	301	989	759	693
	West Bengal	4256	19652	36884	17355	356	347	673	605
High focus NE states	Arunachal Pradesh	5427	9643	25210	6833	2524	0	2276	2485
	Assam	8825	18484	58112	32928	1145	1086	871	933
	Manipur	11362	7037	43005	20151	1665	.	1309	1601
	Meghalaya	6948	12458	25612	17036	.	.	1923	1923
	Mizoram	4616	5491	13529	6734	866	1839	1175	1017
	Nagaland	6547	37663	20813	13389	688	.	1239	1099
	Sikkim	3534	.	18549	7977	279	.	1215	783
	Tripura	6032	57293	49765	11577	391	.	2882	2422
Non high focus small states and UT	A & N Islands	1490	354545	111073	38793	173	.	2844	744
	Chandigarh	18358	4565	70011	35209	751	.	1939	1369
	Dadra & N.	725	.	14384	8250	99	.	694	538
	Daman & Diu	972	.	18188	15817	150	.	739	578
	Delhi	2873	17921	38411	16593	521	821	1038	824
	Lakshadweep	1044	.	42778	14367	352	.	905	527
	Puducherry	3556	27909	62699	26554	772	3310	1095	992
	India	5108	23159	29683	20814	418	897	785	701

Table A7: Composition of cost, out-patient, urban, 2017-18

Categories	State	Public				NGO				Private				Total				
		Net Medicines	Net Diagnostics	Net Medical	Total	Net Medicines	Net Diagnostics	Net Medical	Total	Net Medicines	Net Diagnostics	Net Medical	Total	Net Medicines	Net Diagnostics	Net Medical	Total	
High focus Non-NE States	Bihar	494	167	742	809	416	0	416	416	477	152	1164	1235	464	147	1008	1076	
	Chhattisgarh	216	22	253	285	1332	1628	3259	4897	343	49	628	658	297	43	509	542	
	Himachal Pradesh	376	70	461	501	31	4	158	164	293	7	382	406	342	52	428	462	
	Jammu & Kashmir	221	13	272	324	183	1	233	258	240	28	339	374	229	20	304	346	
	Jharkhand	423	81	566	681	.	.	.	.	651	131	976	1180	600	119	891	1077	
	Madhya Pradesh	143	2	185	317	150	147	579	609	468	159	999	1091	375	115	774	878	
	Odisha	295	44	360	431	0	0	0	0	423	39	616	679	342	42	456	523	
	Rajasthan	253	6	305	380	428	77	966	1157	605	76	926	1043	493	54	738	842	
	Uttar Pradesh	659	179	996	1091	524	7	613	788	606	105	914	994	603	113	908	990	
	Uttarakhand	201	20	312	371	5	11	214	261	423	110	781	898	331	77	613	707	
Non-high focus large states	Andhra Pradesh	381	41	514	608	919	147	1103	1137	425	99	639	694	413	84	604	666	
	Goa	220	28	252	385	509	0	509	551	382	27	470	506	286	28	340	434	
	Gujarat	101	8	122	196	217	66	423	513	370	58	578	640	323	50	500	565	
	Haryana	504	52	573	718	120	0	284	340	510	121	782	851	503	112	754	830	
	Karnataka	189	60	321	391	48	0	527	600	365	69	653	710	337	66	611	670	
	Kerala	181	36	258	305	233	61	453	499	325	65	566	621	267	54	493	544	
	Maharashtra	199	21	249	287	400	932	1553	1735	383	113	667	710	348	111	605	649	
	Punjab	140	30	227	262	587	752	1384	1461	406	124	639	682	366	119	590	633	
	Tamil Nadu	74	20	113	254	168	5	247	385	545	116	872	958	374	81	597	703	
	Telangana	55	5	76	301	519	251	901	989	353	87	693	759	310	75	605	693	
	West Bengal	253	36	310	356	206	30	299	347	422	85	646	673	385	75	574	605	
High focus NE states	Arunachal Pradesh	994	464	1914	2524	.	.	.	.	843	421	1812	2276	973	454	1885	2485	
	Assam	703	193	975	1145	739	0	739	1086	468	176	763	871	522	180	811	933	
	Manipur	868	154	1387	1665	.	.	.	.	687	130	1126	1309	836	150	1340	1601	
	Meghalaya	.	.	.	.	.	0	1437	.	1310	127	1691	1923	1310	127	1691	1923	
	Mizoram	506	78	730	866	280	1000	.	1839	502	221	949	1175	503	149	837	1017	
	Nagaland	429	143	616	688	.	.	.	.	646	306	1164	1239	591	264	1025	1099	
	Sikkim	174	5	183	279	.	.	.	.	643	220	1046	1215	427	121	649	783	
	Tripura	319	3	322	391	.	.	.	.	615	372	1240	2882	561	304	1071	2422	
Non high focus small states and UT	A & N Islands	79	0	79	173	.	.	.	.	416	59	2731	2844	149	13	650	744	
	Chandigarh	507	103	632	751	.	.	.	.	391	181	1669	1939	445	144	1172	1369	
	Dadra & N.	28	0	37	99	.	.	.	.	271	166	612	694	212	118	461	538	
	Daman & Diu	0	0	64	150	.	.	.	.	635	9	684	739	462	7	515	578	
	Delhi	146	107	329	521	220	497	742	821	259	164	964	1038	212	144	701	824	
	Lakshadweep	81	1	124	352	.	.	.	.	323	59	445	905	157	19	226	527	
	Puducherry	336	89	555	772	838	503	2640	3310	575	98	1010	1095	490	98	856	992	
	India	244	46	337	418	320	311	796	897	435	98	723	785	386	87	635	701	

Table A8: Composition of cost, in-patient, urban, 2017-18

Categories	State	Public				NGO				Private				Total			
		Net Medicines	Net Diagnostics	Net Medical	Total	Net Medicines	Net Diagnostics	Net Medical	Total	Net Medicines	Net Diagnostics	Net Medical	Total	Net Medicines	Net Diagnostics	Net Medical	Total
High focus Non-NE States	Bihar	1607	564	664	3331	1676	733	4614	8445	4311	1818	9130	20478	3368	1384	6272	14617
	Chhattisgarh	1176	318	781	2889	3935	1081	39959	48517	4339	2269	8982	21814	3144	1517	6384	15119
	Himachal Pradesh	4906	1752	1031	9212	1071	551	1294	4666	4365	1617	17995	29557	4630	1673	4685	13393
	Jammu & Kashmir	2964	1239	0	7500	339	219	8386	9753	5406	2290	18817	31951	3454	1451	4059	12688
	Jharkhand	5598	1212	2087	12376	4001	2778	1378	13370	4416	1785	11678	25041	4835	1609	7792	19978
	Madhya Pradesh	742	216	103	1482	6724	3152	2318	19878	5207	2687	5807	22158	3175	1552	3061	12490
	Odisha	2409	911	1498	5454	12978	153	0	13012	6596	2512	7404	26182	4289	1615	4100	14626
	Rajasthan	2190	763	1524	5576	8362	3293	1292	19056	5959	2554	9603	25038	4137	1680	5451	15294
	Uttar Pradesh	3265	1334	1307	8219	6198	3166	15673	32287	8277	2744	11279	31367	7026	2415	8985	25830
	Uttarakhand	2786	551	1	4246	7566	2544	0	28465	5543	3712	6540	24621	4902	2958	4957	19824
Non-high focus large states	Andhra Pradesh	578	256	.	1072	14839	2822	382	21126	5660	3517	5723	25588	4431	2463	3708	17696
	Goa	1679	122	520	2936	.	.	.	.	1745	741	17152	24394	1706	379	7410	11825
	Gujarat	1392	259	735	2978	2183	1015	1122	8854	3789	2004	5413	18915	3143	1549	4056	14674
	Haryana	2139	811	1359	6015	1891	3432	14805	22124	4033	2158	6497	21983	3583	1924	5709	18746
	Karnataka	1799	700	307	3551	6535	1742	2280	17663	5478	2412	5465	22250	4871	2105	4518	18960
	Kerala	1256	795	71	2911	3032	1742	5854	16417	5980	3017	3917	24180	4148	2160	2636	16198
	Maharashtra	2208	674	2110	6127	5843	2187	20754	37498	5635	2979	8600	30596	5034	2527	8070	26583
	Punjab	2333	1236	3335	8509	2848	1665	16632	24837	5040	2254	11870	27479	4187	1940	9501	21851
	Tamil Nadu	85	136	.	358	1534	368	3518	7586	4909	1869	14119	30118	2777	1095	7857	16914
	Telangana	5348	343	8	6049	3108	1447	0	11594	3827	2325	10386	27246	4083	1973	8487	23424
	West Bengal	1547	702	324	3319	2741	1520	8608	17104	2824	2186	22971	34926	2072	1300	9366	15985
High focus NE states	Arunachal Pradesh	2362	682	32	3916	2469	792	0	5368	6771	2857	57	19477	2657	829	33	4982
	Assam	2594	1336	879	6235	2300	1268	6571	13304	7858	4250	24526	51263	5115	2735	12485	28184
	Manipur	5893	1459	88	8325	0	0	3753	3753	4132	973	25270	36671	5399	1323	7088	16198
	Meghalaya	3278	683	1280	5941	1510	816	1634	10339	2758	1237	15061	23771	2957	982	8638	15557
	Mizoram	2273	514	286	3498	1068	334	170	5045	2943	633	5197	12221	2336	528	1408	5623
	Nagaland	1860	546	860	4480	13400	0	.	0	2964	1280	7408	16665	2389	898	4000	10323
	Sikkim	1702	256	48	2315	0	0	.	0	1760	1451	3960	14168	1719	609	1206	5822
	Tripura	2702	941	600	4809	23930	12891	.	47798	6862	3999	20047	44688	3622	1529	2504	9775
Non high focus small states and UT	A & N Islands	32	13	.	199	.	12955	.	32345	23733	6691	32751	82737	4693	2261	10838	28463
	Chandigarh	6219	3383	.	16868	.	1061	.	3557	11084	6050	30557	67271	7778	4241	10032	33312
	Dadra & N.	17	46	.	364	.	.	.	.	3356	880	2598	13402	958	505	1431	7546
	Daman & Diu	.	0	.	28	.	.	.	.	1719	2790	0	17170	2883	2406	.	14810
	Delhi	486	187	835	1790	2104	1566	8084	16130	871	904	32434	36946	655	479	12947	15354
	Lakshadweep	107	12	.	152	.	.	.	.	5405	3294	8144	32294	1798	1060	2600	10412
	Puducherry	1490	43	44	2223	.	8049	.	23677	10427	2769	14155	59744	4993	1128	5510	24582
	India	1645	637	679	3847	4744	1923	8671	21004	5386	2559	10207	27817	4048	1861	6801	19151

Table A9: Composition of cost, out-patient, rural, 2017-18

Categories	State	Public				NGO				Private				Total				
		Net Medicines	Net Diagnostics	Net Medical	Total	Net Medicines	Net Diagnostics	Net Medical	Total	Net Medicines	Net Diagnostics	Net Medical	Total	Net Medicines	Net Diagnostics	Net Medical	Total	
High focus Non-NE States	Bihar	117	18	294	414	437	0	438	445	535	159	999	1183	415	115	797	951	
	Chhattisgarh	144	18	176	244	408	448	989	1263	329	28	431	472	243	33	323	382	
	Himachal Pradesh	806	60	905	1046	164	0	221	284	451	22	550	638	680	47	778	900	
	Jammu & Kashmir	272	15	312	411	.	.	.	.	310	33	444	604	278	18	339	450	
	Jharkhand	231	22	292	425	1407	61	1786	2274	664	108	973	1128	505	72	715	852	
	Madhya Pradesh	216	48	345	482	462	32	571	676	641	129	959	1107	472	94	711	849	
	Odisha	383	60	464	580	502	95	1515	2050	408	56	573	655	381	58	498	595	
	Rajasthan	296	19	381	501	324	70	450	859	678	181	1193	1373	472	94	756	894	
	Uttar Pradesh	826	14	904	1059	327	18	355	409	482	68	722	810	507	58	726	818	
	Uttarakhand	114	6	144	324	0	0	0	95	386	50	634	831	199	20	303	475	
Non-high focus large states	Andhra Pradesh	126	3	136	212	106	1	114	123	354	50	472	527	306	47	412	467	
	Goa	147	2	159	309	0	0	0	0	539	14	571	586	321	7	342	432	
	Gujarat	102	9	141	228	149	37	299	380	241	42	397	485	196	31	314	402	
	Haryana	320	73	408	500	201	297	583	625	396	93	650	720	376	88	587	663	
	Karnataka	174	43	306	420	164	80	455	548	275	40	498	588	247	41	445	542	
	Kerala	117	20	154	208	383	33	868	966	403	69	609	689	263	45	391	458	
	Maharashtra	99	7	127	193	681	397	1144	1252	368	73	583	674	300	62	471	557	
	Punjab	483	88	690	846	288	13	319	374	393	67	577	648	398	68	580	661	
	Tamil Nadu	16	2	26	134	72	62	169	248	450	132	767	923	258	56	430	562	
	Telangana	89	19	140	306	214	.	214	275	431	48	568	613	353	41	470	543	
	West Bengal	242	23	276	354	246	7	256	354	444	158	714	766	361	105	541	598	
High focus NE states	Arunachal Pradesh	527	321	1126	1846	0	.	92	101	1180	671	2813	3527	539	315	1155	1878	
	Assam	572	443	1068	1253	536	533	2104	2600	711	105	1062	1306	545	269	935	1119	
	Manipur	555	155	920	1761	.	.	.	.	561	294	1023	1147	562	177	940	1653	
	Meghalaya	727	100	827	952	.	.	.	.	296	0	542	574	463	55	555	628	
	Mizoram	467	34	512	689	394	.	394	898	436	23	551	701	459	30	502	710	
	Nagaland	478	105	1002	2028	.	.	379	564	.	.	.	.	332	73	812	1581	
	Sikkim	305	55	393	594	.	.	.	0	357	59	639	765	329	56	504	671	
	Tripura	296	41	401	485	2004	.	2241	2487	488	276	1196	1968	427	189	914	1434	
Non high focus small states and UT	A & N Islands	1	.	1	89	.	.	.	.	817	0	817	817	10	0	10	97	
	Chandigarh	1397	646	2055	2398	.	.	.	.	567	4	683	802	1300	571	1895	2211	
	Dadra & N.	3	.	5	60	.	.	.	.	119	4	168	745	71	2	100	163	
	Daman & Diu	.	.	.	18	.	.	.	.	611	0	677	236	609	.	675	742	
	Delhi	.	.	.	372	.	.	.	.	436	689	2181	2193	43	68	215	552	
	Lakshadweep	52	.	55	98	.	.	.	.	49	.	266	524	52	.	84	155	
	Puducherry	0	.	3	125	.	.	.	.	223	64	868	1081	20	6	84	218	
	India	253	29	315	417	381	106	623	730	428	86	658	746	366	66	543	632	

Table A10: Composition of cost, in-patient, urban, 2017-18

Categories	State	Public				NGO				Private				Total			
		Net Medicines	Net Diagnostics	Net Medical	Total	Net Medicines	Net Diagnostics	Net Medical	Total	Net Medicines	Net Diagnostics	Net Medical	Total	Net Medicines	Net Diagnostics	Net Medical	Total
High focus Non-NE States	Bihar	1904	643	852	4008	2001	866	4119	10854	3786	1542	5436	16260	3028	1183	3646	11439
	Chhattisgarh	972	224	732	2653	2428	907	4335	11082	17403	4044	10838	57531	6968	1633	4537	22834
	Himachal Pradesh	5031	1812	1458	10731	4684	2344	11381	0	15981	9041	3134	8268	27902	5873	2098	4380	16327
	Jammu & Kashmir	2437	877	37	4202	2134	355	3301	6857	3372	2609	28497	44539	2469	937	1080	5671
	Jharkhand	2304	469	431	3912	4566	2174	2040	21769	6710	1809	4595	26417	4648	1257	2607	16347
	Madhya Pradesh	1199	276	145	1923	5482	2049	2147	31722	5494	2613	5092	22451	3421	1464	2595	12892
	Odisha	2957	815	98	4347	5251	2471	3207	15342	5729	2241	9013	25182	3642	1173	2258	9435
	Rajasthan	3923	915	1092	6400	4510	2426	400	10648	5515	2809	7106	21846	4694	1843	3968	13862
	Uttar Pradesh	3333	1009	765	6591	10257	6821	448	22943	8652	3038	5348	27744	7189	2558	3932	21646
	Uttarakhand	1376	558	.	2364	3633	3442	0	26985	4625	2708	6548	22115	3240	1811	3692	13854
Non-high focus large states	Andhra Pradesh	582	195	33	1073	1878	1449	340	6205	4755	2666	1528	17125	3609	1999	1113	12719
	Goa	1161	140	.	1578	.	.	.	.	6139	2790	5878	30915	1911	539	885	5995
	Gujarat	574	207	.	1032	3158	1186	4419	13882	4462	1688	6340	21087	2829	1066	3690	12633
	Haryana	3086	853	587	6302	3435	2237	0	9982	5462	2458	4906	21682	4567	1861	3271	15900
	Karnataka	1354	508	58	2763	4329	2402	1257	14584	3622	1469	1391	12812	2905	1179	958	9605
	Kerala	1434	815	92	3245	3149	1727	84	12419	5183	2302	3450	19825	3625	1691	2007	12985
	Maharashtra	1958	1053	340	4725	6605	1823	10672	27189	5780	1942	3153	20191	4827	1710	2671	16449
	Punjab	3706	1912	1646	9978	2357	1149	13699	21423	8531	3610	11268	38234	6751	2966	8598	28965
	Tamil Nadu	108	130	7	406	3026	1574	2300	10109	4584	1886	4522	21694	2020	884	1929	9452
	Telangana	583	222	4	1095	1660	390	.	4887	4758	2654	2189	21395	3726	2049	1644	16365
	West Bengal	1340	569	80	2446	2680	2786	3849	11604	4749	2737	19212	39483	2202	1133	4876	11751
High focus NE states	Arunachal Pradesh	1918	684	169	3564	1454	1408	930	5318	2902	1809	2164	12057	1978	773	318	4172
	Assam	1807	911	416	4103	2316	540	2004	6785	5398	2236	9080	25061	2588	1189	2306	8653
	Manipur	3595	1014	99	5212	1405	999	2956	10780	2728	1716	45023	52133	3443	1119	6870	12311
	Meghalaya	568	95	85	923	266	.	.	949	1567	894	4448	11102	637	150	387	1627
	Mizoram	1462	326	1070	3165	2501	296	3829	9062	1898	504	4676	9046	1517	340	1427	3771
	Nagaland	1357	451	924	3963	2019	1161	259	4930	2495	1345	2946	11469	1544	598	1250	5183
	Sikkim	1481	507	236	2928	.	.	.	.	2124	1089	7970	18403	1596	611	1618	5693
	Tripura	2070	666	3	2884	5062	1656	9985	17931	5799	3307	36298	50773	2199	748	1107	4355
Non high focus small states and UT	A & N Islands	16	.	15	32	.	.	234208	234208	8675	4642	52527	75092	584	304	3910	5406
	Chandigarh	3799	2098	.	8185	.	.	.	114521	0111	17159	0	119772	1365	3463	0	18344
	Dadra & N.	213	12	.	90	.	.	.	.	1564	900	0	6440	3246	2581	0	421
	Daman & Diu	6	.	.	245	.	.	.	.	5167	4216	1517	38085	87	59	929	23412
	Delhi	1981	98	617	2851	.	.	.	.	4347	413	13897	19818	2311	142	2471	5220
	Lakshadweep	177	216	.	483	.	.	12071	12071	2988	1213	16287	30408	590	341	4195	6735
	Puducherry	34	5	.	168	.	.	.	.	1968	840	14666	21272	402	164	2789	4181
	India	1906	669	329	3624	4675	2445	4280	18350	5879	2413	5389	23140	4039	1618	3055	14125