

## Original Research Article

# Assessment of health problems and healthcare expenditure, utilization of healthcare schemes and insurances among residents of Dhanas UT Chandigarh

Kanchan Thakur, Raveen, Sita, Suresh Kumar, Vineeta Sharma, Shankar Prinja, Sushma Kumari Saini\*

Department of National Institute of Nursing Education, PGIMER, Chandigarh, India

**Received:** 08 February 2021

**Revised:** 19 March 2021

**Accepted:** 20 March 2021

**\*Correspondence:**

Dr. Sushma K. Saini,

E-mail: [sushmadrainsaini@gmail.com](mailto:sushmadrainsaini@gmail.com)

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

### ABSTRACT

**Background:** Non-communicable diseases account for high burden of morbidity and mortality all over the world. Increased burden and need of long-lasting medical care pose adverse financial implications on poor households. It becomes even more difficult in the absence of any financial risk protection (FRP). In that case the families are forced to manage health care expenditures from the money needed for their routine daily expenses thus increasing Out of pocket expenditures. Objective of the study was to assess the morbidity burden, and out of pocket (OOP) expenditure on healthcare; assess the utilization of health care insurance schemes.

**Methods:** A cross-sectional study was conducted among the residents of Dhanas Village Chandigarh using systematic random sampling technique. Data was collected by interviewing the participants as per interview schedule on disease patterns, OOP expenditures, and coping methods used for incurring health care expenses. From total 419 selected families, one adult member from each family was interviewed at their own house setting.

**Results:** A low insurance coverage (20.5%) was reported and among insured 66.2% had availed benefits. The illness rate was found to be 14.2% and hospitalization rate was 3.7%. The endocrinal disorders were most prevalent among the residents. One third (36.5%) of households had faced catastrophic expenditure for outpatient and 10% for the inpatient care. The salary was leading source of expenditure.

**Conclusions:** There is low insurance coverage and high catastrophic expenditure among the households.

**Keywords:** Non-communicable diseases, Morbidity, Insurance, Out-of-pocket expenditure, Financial risk protection, Catastrophic health expenditure

### INTRODUCTION

In country like India, where most of the population belongs to the lower income group and can't afford general medical care. For the long-term diseases the most important barriers to access is the frequent need for households to pay out of pocket for healthcare. These payments not only deter the use of needed services but also impoverish families. As the public funding of healthcare is low, forcing most households to pay essential healthcare bills out of their

own pockets. These payments hit the poor hard. Each year around 7% of Indians are pushed below poverty line due to high out of pocket expenditure on healthcare among households.<sup>1</sup> As per WHO, the low- and middle-income countries like India where people have to pay through their pocket suffer catastrophic costs while others die in absence of access or inability to afford care or end up paying through debts and selling property and other valuables. In India public sector only contributes to 30% which is low as compared to other countries i.e. UK (83%), China

(56%), USA (48%), Brazil (46%), Indonesia (39%).<sup>1</sup> WHO recommends 5% of GDP to be spent on health but India is spending only 1.3%, however it aspires to achieve 2.5% of GDP by 2025 as per national health policy 2017.<sup>1</sup>

Worldwide more than 60% of the total health burden constituted by the non-communicable diseases (NCDs) as per 2016, where 28% from communicable, maternal, neonatal and nutritional diseases, and 10% from injuries.<sup>2</sup> This represents a notable shift since 1990, where communicable diseases held the highest share of more than 4%.<sup>2</sup> In high-income countries, NCDs account for more than 80% of overall disease burden. In contrast, communicable diseases to be low, at less than 5%. The opposite is true in low-and middle-income countries; however, communicable disease still accounts for more than 60 percent across many countries.<sup>2</sup>

Further low public spending as one of the major reasons for debilitating public healthcare system of the country has been observed and most people seek care in the private facilities. Over reliance on the private healthcare sector results in increased out-of-pocket (OOP) expenditure and catastrophic healthcare expenditure among the poor household. Financially protecting households from high OOP expenditures can be achieved either by funding health services through taxes or risk pooling through an insurance mechanism. In India, there are various government and private health insurance schemes which provide low-cost preventive and curative health services. The social health insurance schemes like central government health schemes (CGHS), employee state insurance schemes (ESIS), ex-serviceman contributory health scheme (ECHS), contributory health service schemes (CHSS), retired employees liberalized health scheme (RELHS) are financed by contribution of employees and employers, union and state government. grant commissions, these accounts for 2.7% for health expenditure. Government based voluntary health insurances implemented by union and state government include RSBY and other state specific insurance schemes account for 1%. Government of India had recently launched Ayushman Bharat Scheme which provides a coverage of 5 lakh per BPL family. The scheme aims to provide insurance cover to economically backward people in rural and urban areas. Other private individual health insurances and community-based health insurances account for 1% and 0.02%.<sup>3</sup> All the above-mentioned health insurance schemes promise financial risk protection to low income groups. Although in India, there is not much evidence is available on actual enrolment and utilization of the health insurance schemes. So, there is a need to study the how much these health insurance schemes actually reach to the people and their utilization even if the community people are aware of these schemes or not is important to know.

Hence, present study was conducted to fulfil the following objectives among the families residing in Dhanas. To assess the morbidity burden, and out of pocket (OOP)

expenditure on healthcare among residents of Dhanas. To assess the utilization of health care insurance schemes by residents of Dhanas.

## METHODS

The study was conducted in Dhanas Village which is a rural locality in Chandigarh and located at a distance of 3.6 km from PGIMER, Chandigarh and 8.6 km from ISBT Chandigarh. The study was conducted from September 2018 to August 2019. There were 481 houses in Dhanas Village. Two to three families were residing in each household. The village has migrants from different states like Punjab, Himachal Pradesh and Uttar Pradesh etc. Their socioeconomic status ranged from lower to upper class. Most of them belong to labor class and depend on daily wages for their living and have low socioeconomic status. Thus, are more vulnerable to financial catastrophe. Research approach was quantitative in nature and research design was descriptive cross-sectional design. To get this sample out of 481 houses 240 houses were selected by systematic random sampling technique i.e., every odd house starting from house number one was selected. In case a house was found locked, vacant, or family refused, the next house or family was included in study. All families living in the selected house were included in the study. The adult member available in the house was interviewed.

Inclusion criteria was adult member in the family available during data collection and willing to participate. The households found locked after three visits and the household with no adult members after three visits were excluded. Total 419 adults from selected families were interviewed for study using a validated tool. Data was collected by using interview schedule comprising of sociodemographic profile, insurance utilization, household consumption expenditure, Morbidity prevalence, care seeking, out-of-pocket expenditure. Tool was validated by experts in the field of Nursing and School of public health. Ethical clearance was taken from ethics committee of NINE, PGIMER, Chandigarh.

A Pilot testing was conducted in Dadu Majra Colony UT in 24 houses which showed that study is practicable and one have to go through the market prices of different household food and nonfood items to get relevant data on household expenditure. Hence market survey was done for the prices. Data was collected from 10<sup>th</sup> to 25<sup>th</sup> April 2019. During the data collection the investigators introduced themselves to the family members, explained purpose of the study and written informed consent was taken from the participants. A total of 419 families were approached from each family one adult person was interviewed. Face to face Interview was conducted with the respondent in the house as per interview schedule. Comfort and confidentiality of the participant was maintained. The data was analyzed by using descriptive inferential statistics. Analysis was carried out with the help of Microsoft excel and statistical package for social science (SPSS-16.0) software.

## RESULTS

### *Socio-demographic characteristics of the study population*

Total 419 families were interviewed. Table 1 depicts the Socio-demographic characteristics of the study population. The average family size was 4.4 among the sample households. More than half of sample population (57.0%) had 3-4 family members. Nearly one third of head of families (32.0%) were having secondary education, more than one fourth (26%) were having senior secondary education. Regarding occupation of head of family majority (83.1%) were private employed, very few (4.3%) government employed. Majority (84.7%) of families were nuclear and only few (15.3%) were living joint families. Majority of the surveyed families (74.5) had one earning person in their family with an average of 1.36 earning persons. Around 55.4% of the surveyed families were having 3 to 4 dependents in their family.

**Table 1: Socio-demographic characteristics of the study population.**

Socio demographic variables	N (%)
<b>Total family members</b>	
1-2	21 (5.0)
3-4	239 (57.0)
5-6	131 (31.3)
7 or above	28 (6.7)
Mean $\pm$ SD	4.4 $\pm$ 1.5
<b>Education of the head of the household</b>	
Primary	58 (13.8)
Upper primary	48 (1.5)
Secondary	134 (32.0)
Senior secondary	109 (26)
Higher education	29 (6.9)
Illiterate	41 (9.8)
<b>Occupation of the head of the household</b>	
Government	18 (4.3)
Private	348 (83.1)
Retired	10 (2.4)
Widow pensioner	3 (0.7)
Unemployed	40 (9.5)
<b>Type of family</b>	
Nuclear	355 (84.7)
Joint	64 (15.3)
<b>Number of earning family members</b>	
1	312 (74.5)
2	72 (17.2)
3	26 (6.2)
4 or more	9 (2.1)
Mean $\pm$ SD	1.36 $\pm$ 0.6

Mean  $\pm$  SD (range) Total family members 4.4  $\pm$ 1.5, Number of earning family members 1.36 $\pm$ 0.6, Number of dependents 3.0 $\pm$ 1.3.

**Table 2: Household Expenditure pattern.**

Variables	N(SE)
<b>Average Households Income</b>	21162.15 $\pm$ 760.8
<b>Consumption expenditure heads</b>	
Ration (Cereals, Pulses, Edible Oil, and Bread etc.)	657.6 $\pm$ 20.8
Fruits (Fresh & Dry) and Vegetables	270 $\pm$ 5.1
Milk, Milk Products, Beverages	363.9 $\pm$ 12.4
Pan, Tobacco, Alcohol or Any Other Intoxicants	39 $\pm$ 6.7
Bills (Electricity, Telephone)	1072.76 $\pm$ 64.2
Conveyance, fuel	1047.6 $\pm$ 59.1
Rents	2374.7 $\pm$ 144.0
Medical (Non-institutional)	14.3 $\pm$ 4.3
Entertainment (Cable, Cinema, Sports, Recreation & Hobbies)	272 $\pm$ 14.3
Consumer Services (Domestic Help, Cook, Sweeper, Barber, Tailor, Priest, Beautician)	180 $\pm$ 29.7
Clothing, Footwear, Bedding, Curtains	6707.9 $\pm$ 356.8
Education (Books, Newspaper, Fees)	21148.3 $\pm$ 2809.2
Medical (Institutional)	7795.6 $\pm$ 982.7
Personal effects (Watch, Mobile Phone, Spectacles, Toiletries, Jewellery)	4268.7 $\pm$ 600.2
Other household durable goods	1809.8 $\pm$ 597.9
<b>Annual overall consumption expenditure per family</b>	157227.2 $\pm$ 4409.7
<b>Annual food expenditure per family</b>	63908.8 $\pm$ 1477.2
<b>Annual non-food expenditure per family</b>	93318.4 $\pm$ 3820.1
<b>Average income per capita</b>	5175.4 $\pm$ 207.5
<b>Mean per capita consumption expenditure (MPCE)</b>	3230.6 $\pm$ 2137.6
<b>Average food expenditure per capita</b>	15783.1 $\pm$ 450
<b>Average non-food expenditure per capita</b>	22984.8 $\pm$ 1034.1

### Household expenditure pattern

Average household income per month was Rs. 21162.1±760.8. The annual household consumption expenditure is divided into food and non-food expenditure. The reference period for these items was 7 days, 30 days and 365 days. Average for Ration (cereals, pulses, edible oil, and bread etc.) was Rs. 657.6±20.8, milk, milk products, beverages were Rs. 363.9±12.4. Pan, tobacco, alcohol or any other intoxicants was Rs. 39±6.7, mean for fruits (fresh and dry) and vegetables was Rs. 270±5.1 and annual food expenditure per family was Rs 63908.8±1477.2. Average for bills (electricity, telephone) was Rs. 1072.76±64, conveyance, fuel was Rs. 1047.6±59.1, Rents was Rs. 2374.7±144.0, entertainment (cable, cinema, sports, recreation and hobbies) was Rs. 272.6±14.3 and for Consumer Services (Domestic Help, Cook, Sweeper, Barber, Tailor, Priest, Beautician) was Rs 180±29.7. Annual non-food expenditure per family was Rs. 93318.4±3820.1. Annual overall consumption expenditure per family was Rs. 157227.2±4409.7. Average income per capita was Rs. 5175.4±207.5, Mean Per capita consumption expenditure (MPCE) was Rs. 3230.6±2137.6. Average food expenditure per capita was Rs. 15783.1±450 and average non-food expenditure per capita was Rs. 22984.8±1034.1.

**Table 3: Health insurance utilization.**

Variables	N (%)	
<b>Insurance status</b>	Insured	86 (20.5)
	Non-insured	333 (79.5)
<b>Type of insurance</b>	ESI	49 (56.9)
	CGHS	16 (18.6)
	Government employees	12 (13.9)
	Employer based insurance other than government	4 (4.6)
	Private insurance	3 (3.4)
	RSBY	1 (1.1)
	Pradhan Mantri Jan Arogya Yojna	1 (1.1)
	<b>Availed health benefits through insurance</b>	Yes
	No	29 (33.7)
<b>Premium Paid for the insurance (INR)</b>	No premium	2 (2.3)
	1-800	65 (75.5)
	801-1600	8 (9.3)
	1601 or above	11 (12.7)
<b>Average Premium Paid (Mean±SE)</b>	859.4±133.1	

### Health insurance utilization

The health insurances utilizations among the families. Majority (79.5%) of families were not having any kind of insurance and only 20.5 percent had enrolled in any of the insurance scheme. Out of the insured families more than half (56.9%) were enrolled under ESI insured, 18.6 percent in CGHS and only 1.1 % under Pradhan Mantri Jan Arogya Yojna (as the data collection period was from 10 April, 19-25 April 2019, till that time very few had their PMJAY cards being issued). Around 66.2% had availed benefits through the any of the health insurance schemes. Among insured families majority of families were paying an premium between of Rs. 1-800 for the insurance.

### Healthcare access and utilization

#### Outpatient care

Illnesses in last 15 days among residents of Dhanas village. Illness rate was 14.2%. Majority of them (71.7%) took treatment from public sector facilities compared to private health facilities. Around 66.8% of those who reported illness in last 15 days were females. Mean age group affected was 36.7 and majority (42.7%) of the respondents were in the age group of 21-40 years. Most common illness reported were endocrinal disorders (17.9%) followed by the infections (12.9%) and cardiovascular diseases (12.5%). Adequate infrastructure (24.4%) of the facilities was the most common reason for seeking treatment (Table 4).

#### Inpatient care

Hospitalization rate was 3.7% among the surveyed population. Majority of the respondents (65.7%) preferred treatment in public sector facilities compared to private sector facilities. More than half (64.3%) of the hospitalization episodes were reported by the females. Mean age for hospitalization was 43.4 and majority of the hospitalizations (42.8%) were reported among the 21-40 years of age group. Endocrine disorders (27.1%) were the most commonly reported ailments for hospitalizations followed by the Obstetrics (14.3%) and gastrointestinal disorders (14.3%). Most commonly reported reason for seeking treatment from the preferred facility was stated as 'good facility' (28.6%) (Table 5).

#### Out-of-pocket expenditures on OPD and IPD

Mean for OOP on OPD was Rs 10420±1346.5 and for IPD was Rs. 16915.5±4930.5. More than one third (36.5%) had a household consumption threshold more than 40% for OPD and 10% had household consumption. Threshold more than 40% for IPD. More than half (64.5%) of the surveyed population reported using their salaries as the coping mechanism for incurring OOP (Table 6).

**Table 4: Illness rate and treatment seeking behaviour of the community.**

Variables	N (%)	
<b>Place of treatment</b>	Illness rate*	14.2
	Public	188 (71.7)
	Private	74 (28.3)
<b>Gender</b>	Male	87 (33.2)
	Female	175 (66.8)
<b>Age (in years)</b>	1-20	46 (17.5)
	21-40	112 (42.7)
	41-60	81 (30.9)
	61 or above	23 (8.7)
	Mean± SD	36.7±18.7
<b>Morbidity pattern</b>	Endocrine disorders	47 (17.9)
	Infection	34 (12.9)
	Cardiovascular disorders	33 (12.5)
	Obstetrics	31 (11.8)
	Gastrointestinal disorder	26 (9.9)
	Musculoskeletal disorder	22 (8.4)
	Psychiatric and neurological disorders	13 (4.9)
	Injuries	11 (4.2)
	Genitourinary disorders	11 (4.2)
	Skin disorders	11 (4.2)
	Respiratory disorders	10 (3.8)
	Ear disorders	4 (1.5)
	Eye disorders	4 (1.5)
	Blood disorders	3 (1.1)
	Cancer	2 (0.7)
<b>Reasons for seeking treatment from preferred facility</b>	Adequate infrastructure	64 (24.4)
	Good quality care	62 (23.6)
	Good facilities	49 (18.7)
	Proximity to home	21 (8.0)
	Trust in facility	16 (6.1)
	Waiting time is short	15 (5.7)
	Doctors available	12 (4.6)
	Facility time convenient	8 (3.0)
	Cheaper than other facility	8 (3.0)
	Referral from other services	4 (1.5)
	Health personnel other than doctors available	3 (1.1)

\*(illness in last 15 days/N)\*100

**Table 5: Hospitalization rate and preferred facility for treatment.**

Variables	N (%)	
<b>Place of treatment</b>	Hospitalization Rate	3.7
	Public	46 (65.7)
	Private	23 (32.8)
<b>Gender</b>	Male	25 (35.7)
	Female	45 (64.3)
<b>Age (in years)</b>	1-20	3 (4.3)
	21-40	29 (41.4)
	41-60	30 (42.8)
	61 or above	8 (11.4)
	Mean± SD	43.4±14.9
	Endocrine disorders	19 (27.1)

Continued.

Variables	N (%)	
<b>Morbidity pattern</b>	Obstetrics	10 (14.3)
	Gastrointestinal	10 (14.3)
	Cardiovascular disorders	9 (12.8)
	Genitourinary disorders	6 (8.6)
	Musculoskeletal disorder	6 (8.6)
	Psychiatric and neurological disorders	4 (5.7)
	Blood disorder	2 (2.8)
	Ear disorder	1 (1.4)
	Eye disorder	1 (1.4)
	Skin disorder	1 (1.4)
	Infection	1 (1.4)
<b>Reasons for seeking treatment from preferred facility</b>	Good facility	20 (28.6)
	Good quality care	16 (22.8)
	Adequate infrastructure doctors available	49 (18.7)
	Trust in facility	6 (8.6)
	Doctors available	4 (5.7)
	Facility timing is convenient	4 (5.7)
	Referral from other facility	4 (5.7)
	Health personnel other than doctors available	3 (4.3)
	Waiting time short	3 (4.3)
	Proximity to home	1 (1.4)

**Table 6: Out of pocket expenditure and catastrophic health expenditure on OPD and IPD.**

Variables	OPD	IPD
<b>Out of pocket payment (INR) Mean±SE (INR)</b>	10420±1346.5	16915.5±4930.5
<b>Catastrophic health expenditure (≥0.4)</b>	153(36.5)	7(10)
<b>Coping mechanism utilized by households (INR)</b>	Salary	214(64.5)
	Borrowing	43(12.9)
	Household savings	40(12.0)
	Contribution through friends and Relatives	20(6.1)
	Insurance cover	15(4.5)

## DISCUSSION

The sample size was calculated with formula:

$$n = \left( \frac{1-n}{N} \right) t \left( \frac{p \times q}{d^2} \right) = 368$$

In a developing country like India where people who can't even afford the food for their living maintaining a good health status is a challenge. People can't afford even general health care services so it becomes very difficult to afford an illness and its expenditures. It is a huge challenge for the country like India to achieve a universal health coverage which needs to provide the financial risk protection (FRP). As in India 60% of total health expenditures are through OOP payments which shows it

has a huge share in health expenditures on health. As per WHO in India people who are paying through their own pocket suffers through catastrophic expenditure. Catastrophic expenditure is the expenditure that exceeds 40% threshold of total household expenditure excluding food expenditures. The OOP are further incremented due to lack of coping mechanisms. Government is launching various health insurance schemes like recently launched Pradhan mantri jan arogya yojna. But various studies had shown that catastrophic expenditures are still very high which questions the efficacy of these schemes and insurances. Various study being conducted on health problems and their care expenditures had shown that prevalence of catastrophic health expenditures is still increasing. And there is lack of coping mechanisms. The utilization of insurances is still very low. Even among the

insured families the insurance coverage for that hospitalization is still very low. This study was aimed to assess the, burden of health problems among families and OOP payments on that and prevalence of catastrophic health expenditure to know the FRP.

Research setting was Dhanas village as it has migrants from different states like Punjab, Himachal Pradesh, Haryana, Uttar Pradesh etc. Their socioeconomic status ranges from lower to upper class. For most of them daily wages are the means of earning thus most of them belongs to labour class and are among the high risk for financial catastrophe due to low income status. A total of 240 houses were selected by systematic random sampling and total 419 families were interviewed. The study tool was semi structured interview schedule as the population in Dhanas village also includes illiterate or secondary level education and delivering questioners to them was considered inconvenient as they won't be able to understand it by themselves. So, interview schedule was planned in which first part was on household consumption expenditures with reference to different recall periods for each category items. Second part was on morbidity prevalence, OOP payments and coping mechanism utilized. A recall of 365 days was considered for hospitalization and recall of 15 days was considered for OPD all the information was documented in the Performa's. Different recall periods were used for different category items as some items are purchased on weekly basis some on monthly and some on yearly basis. The information from the most recent purchases was taken because it was easy to recall and provides relevant data. These different recall periods were than computed to yearly expenditures.

The socio demographic characteristics of families showed that average family composition was (4.40±1.5) and nearly one third (32.0%) head of family member were educated to senior secondary. Most of them (83.1%) were private employed and majority (84.7%) families were nuclear. Most of the families (74.5%) had 1 earning hand and more than half (55.4%) had 3-4 dependents in family.

As per a study conducted by Shukla, average consumption annually is estimated to be Rs. 48,588. There is a huge difference of earning among rural and urban. Rurals had 85% less income levels than the urbans. Average per capita income as per India Human Development Survey (IHDS) is Rs. 8,413 in rural and Rs 15,915 in urban regions. Average expenditure on food items is less as compared to non-food items with 45.4% on food and remaining on non-food items (5.0% on durable goods, 6.8% on clothing, 8.7% on education, 11.1% on transport, 4.6% on health and 5.9% on housing.<sup>4</sup> In present study the average income per year was Rs. 253945.2±4408.8 and average annual consumption was Rs. 157227.2±4409.7. The per capita income per month was Rs. 5175.4 ±207.5. The average monthly per capita consumption expenditure was Rs. 3230.6±2137.6. The annual food expenditure per family was Rs. 63908.8±1477.2 that accounts 40% of total consumption expenditure and on nonfood it was Rs 93318.4±1477.2 that accounts 59% of total expenditure.

So, the overall expenditure on nonfood items were more than food items. So, it was found that with increase in earnings levels the expenditures have also increased in recent years and expenditure on food was less as compared to nonfood items.

Regarding health insurance utilization study showed that only 20.5% had health insurance among which highest share was of ESI (56.9%). Availing of benefits accounts for 66.2%. This is supported by a study conducted on poor urban of Delhi which showed that health insured household accounts for 18% and overall utilization of these health insurances is 45.0%.<sup>5</sup> This showed that despite of so much emphasis on health insurance by government there is a limited access to them and among all these ESI is better serving the beneficiaries as compared to RSBY and others. The reason behind low insurance enrollment is the poor literacy levels and lack of awareness among the people residing in Dhanas. In most of the families the earnings are through private means like some are daily wage workers, some have shops or some are working in small stalls. They have very poor accessibility to these health insurances as they are not covered under ESI, CGHS and for others they have lack of awareness, although their low-income status makes them most eligible for these health insurance benefits but still enrolment is very low.

Health care access and utilization for outpatient and inpatient care was more through public sector (71.7%) for OPD and (65.7%) for IPD. The illness rate was 14.2%. The highest proportion of ailments were due to endocrinal disorders (17.9%). The hospitalization rate was 3.7% and highest proportion for hospitalization were also due to endocrinal disorders (27.1%). Ailments and hospitalizations were higher among females as compared to males. The ailments were higher among the age group of 21-40 and for hospitalization it was 41-60. NSSO 71<sup>st</sup> round reports illness rate of 12% and hospitalization rate of 4.4% and both are reported higher among females. As per report of NSSO 71<sup>st</sup> round highest proportion of hospitalizations are due to infections and for both ailments and hospitalization place of treatment are more from private sectors than public sectors.<sup>6</sup> This study shows that morbidity prevalence had shifted from communicable to non-communicable diseases. And are higher among the middle age group population. Although utilization of public sector for health have improved but still some are going for private sectors. As the waiting time in private sector is short they are preferring these facilities, as they can't afford wages loss for a whole day due to work place absents, which will affect their earnings per month. They do same for the chronic illnesses, seek care from the private sectors. But they don't know that seeking care from private sectors puts more hardships on financing health expenses as all expenses are incurred though consumers pocket. This further leads to the financial catastrophe to the low income households.

The NSSO 71<sup>st</sup> rounds reports average expenditure on ailments Rs 509 and on hospitalization Rs 18268. Among the coping mechanism utilized to incur these expenses the

majority (74.9%) were through salary, through borrowing (18.2%) and friend's contribution (5.0%).<sup>6</sup> This study shows average out of pocket payments on OPD Rs 10420 annually and for hospitalization Rs 16915.5. Among the coping mechanism utilization highest (64.5%) through salary, borrowing (12.9%) and friends contribution (6.1%). This shows that there are limited sources for incurring these OOP expenditures.

A study conducted in Orissa shows that 40% of households experienced catastrophic expenditure for hospitalization and 25% for OPD.<sup>7</sup> Another study conducted in Haryana showed that prevalence of CHE was 25.2%.<sup>8</sup> In this study The catastrophic health expenditure more than 40% threshold of household nonfood expenditure for OPD was 36.5% and for IPD was 10%.

Thus, it was found that despite of so many financial risk protection initiatives taken by government households are still experiencing CHE (catastrophic health expenditure) and this is due to lack coping mechanism available as people are still going for private facilities to receive care for both OPD and IPD's. Even those who are going for public sectors for seeking treatment are paying high amount of money through their pocket due to non-availability of resources like most importantly drugs and others. This puts lots of financial hardships on their pocket causing household income and borrowings act as a leading source of incurrence. Thus, the more coping mechanisms should be made accessible to the households which is possible if public sector utilization for both OPD and IPD will be increased and these public sectors are made available with the necessary equipment and community would be made aware of various health insurance schemes to provide them with insurance coverage and decrease their financial hardships.

## CONCLUSION

The study concluded that insurance coverage is still very low and out of insured families only few availed benefits. Among the ailments and hospitalization the highest proportion were due to NCDs in middle age group population. The financial risk protection (FRP) is still not up to the marks as catastrophic expenditure account's 36.5% for OPD and 10% for IPD. Treatment seeking from private sectors for IPD's and OPD's. put lots of pressure on the pocket of people thus increases CHE.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

## REFERENCES

1. Rao N. Who Is Paying for India's Healthcare? The Wire, 14 April 2018. Available at: <http://thewire.in/health/who-is-paying-for-indias-healthcare>. Accessed on 27 January 2021.
2. Max R, Ritchie H. Burden of Disease. Our World in Data. January 2016.
3. National Health Systems Resource Centre National Health Accounts Estimates for India, 2018. Available at: <https://mohfw.gov.in/sites/default/files/National%20Health%20Accounts%20Estimates%20Report%202014-15.pdf>. Accessed on 27 January 2021.
4. Mukherjee A, Shukla R. How India Earns, Spends and Saves: Unmasking the Real India, New Delhi: SAGE and NCAER-Centre for Macro Consumer Research. *South Asia Economic J*. 2011;12(1):174-7.
5. Kusuma YS, Pal M, Babu BV. Health Insurance: Awareness, Utilization, and its Determinants among the Urban Poor in Delhi, India. *J Epidemiol Glob Health*. 2018;8(1-2):69-76.
6. Jain N, Kumar A, Nandraj S, Furtado FK. NSSO 71st Round Same Data, Multiple Interpretations. *Economic and Political weekly Review of Women's Studies*. October 31, 2015;46(47):84-7.
7. Binnendijk E, Koren R, Dror DM. Hardship financing of healthcare among rural poor in Orissa, India. *BMC Health Serv Res*. 2012;12:23.
8. Sharma D, Prinja S, Aggarwal AK, Bahuguna P, Sharma A, Rana SK. Out-of-pocket expenditure for hospitalization in Haryana State of India: Extent, determinants & financial risk protection. *Indian J Med Res*. 2017;146(6):759-67.

**Cite this article as:** Thakur K, Raveen, Sita, Kumar S, Sharma V, Prinja S, et al. Assessment of health problems and healthcare expenditure, utilization of healthcare schemes and insurances among residents of Dhanas UT Chandigarh. *Int J Community Med Public Health* 2021;8:2279-86.