

Insights from national survey on household expenditure for primary healthcare services availed through informal healthcare providers

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ABSTRACT

Introduction: Ensuring accessible and affordable primary healthcare services of optimal quality is a core component of universal health coverage (UHC). Though a substantial percentage of population avail healthcare services from informal healthcare providers (IHPs) in rural India, the information regarding the extent of out-of-pocket (OOP) expenditure during such encounters is limited.

Method: The study analyzed publicly available data of 75th National Sample Survey (NSS) to understand the household expenditure pattern on availing service from IHPs. OOP expenditure for services availed from IHPs were extracted from main data sets and analyzed for both out-patient care and hospitalization. The OOP was summarized across the five wealth quintiles based on monthly per capita expenditure (MPCE) and disease groupings derived from the ailments recorded during the survey. **Results:** In total, 721 households accessed IHPs as part of out-patient consultation for infectious disease (67%). Households from rural areas (78%), households belonging to backward groups (75%), households from the poorest quintile and women (52%) access the services of IHPs. The median OOP for all services was INR 240 (IQR 120–600) and more than 90% of total OOP is accounted for medical expenditure.

Conclusion: The programs need to define healthcare packages to engage IHPs to increase the reach and reduce OOP expenditure on households.

Keywords: Household expenditure, informal health care providers, NSSO, primary healthcare

Introduction

Ensuring accessible and affordable primary healthcare (PHC) services of optimal quality is a core component of universal health coverage (UHC). The services of PHC are provided through a

network of community health providers.^[1] Community health providers constitute both qualified and un-qualified providers or informal healthcare providers (IHPs); are estimated to be around 2.5 million.^[2] IHPs provide a wide range of services for both infectious/acute disease and chronic/non-communicable diseases.^[3] It is often believed that the services from IHPs are affordable and acceptable and most poor households in rural and urban areas avail their services.^[4] While the services are availed, households pay out-of-pocket (OOP) to the service provider and it is usually self-financed from household savings.

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The household expenditure incurred while availing the services at IHPs is poorly documented in the literature. The 75th round National Sample Survey (2017-18) report showed that about 3% of all ailments captured in the survey were treated by IHPs.^[5] Furthermore, household incurred an average medical expenditure of Rs 552 per episode of illness while accessing services from IHPs. Given these findings, there is a need to understand the extent of OOP expenditure by poor households while availing the primary healthcare services from IHPs.

Method

The National Sample Survey Office (NSSO) in India, regularly conducts surveys around various thematic areas of national importance under the aegis of Ministry of Statistics and Programme Implementation (MoSPI). Recently, NSSO conducted a nationally representative household survey pertaining to health – “Social Consumption in India – Health: NSS 75th Round, July 2017–June 2018.”^[5] The survey for the first-time collected information on household expenditure on medical care for various ailments while availing these services from IHPs. This information was not documented in previous rounds 71st [titled as “Social Consumption - Health Survey: NSS 71st Round, January - June 2014”] or 60th round [“Survey on Morbidity and Health Care: NSS 60th Round, January 2004 - June 2005] of NSSO. The survey adopted standard methodology for sampling and data collection across the rounds. Using a structured interview tool, the survey interviewed 555,115 individuals from 113,823 households to collect information on household consumption expenditure for out-patient visit (in the last 15 days) and in-patient hospitalization (in last 365 days) for various ailments with details of expenses on drugs, doctor fee, diagnostics, other medical costs and indirect costs.

A subset of the survey data where the households had mentioned to have availed services from IHPs for any ailment was selected for analysis. Further, the ailments were grouped into infectious diseases (IDs) and non-communicable diseases (NCDs). The study population was grouped into five quintiles, poor being first quintile and rich being the fifth quintile based on their monthly per capita expenditure (MPCE). The data on expenditure pertaining to out-patient care had exclusive mentioning about services availed through IHPs. Given that, most of the IHPs may not have in-patient care, the survey data may have also omitted the information in hospitalization records. However, in the hospitalization records, we have analyzed the data for, “history of previous treatment” and compared it with current hospitalization – public or private. This is done to analyse the pattern of referrals from IHPs. The data analysis was done using SPSS17.0 version. This is publicly available data from MoSPI and therefore ethical approval for the study has not been sought.^[6]

Results

A total of 721 households who had reported to have accessed IHPs for out-patient consultation - 67% was for ID and 33%

for NCD. Households from rural areas (78%) accessed providers more than the urban areas (22%) and this proportion was more for ID (71%). Among the IDs, >80% accounted for cough, cold, and fever. Among NCDs, hypertension, diabetes, and musculoskeletal disease constituted about 60%.

Nearly 75% of the population from schedule caste, scheduled tribes, and other backward groups accessed their services. Twice the ratio of households from poorest quintile accessed the services than the richest quintile for ID. While the services were sought nearly 3% of households received the services at “Zero cost”. Overall, 52% of women accessed the services of IHPs mainly for ID (63%) and among the illiterate women – 60% from rural areas and 45% from urban areas accessed the services.

All most all households spent OOP to pay for the services. The median OOP for services was INR 240 (IQR 120–600) and was lowest for first quintile INR 170 (IQR 114–600) and highest for fifth quintile INR 265 (IQR 120-2150) [Table 1]. The non-medical expenditures, such as cost for travel and other related costs, were negligible. Among the OOP expenditures, the consultation fee, and medicines accounted for nearly 80% and expenditure for diagnostic services was low. While households access the services, the expenditure made is through the household savings.

The households accessing hospitalization services from IHPs for any disease were not captured in the survey data. However, the results from hospital data analysis with the previous history of care from IHPs showed majority accessed public hospitals (55%) over private hospitals (43%) [Table 2]. Poor households accessed public hospitals for any disease (72%) and this was more for ID (58%). More than 50% in the richest quintile (fourth and fifth quintiles) accessed private sector for any diseases and this was more evident for NCDs.

Discussion

In a country like India, with low doctor-to-population ratio, ensuring PHC services has always been a challenge. With low investments in the public health sector, private healthcare dominates the market, and a large number of providers in this sector are IHPs (about 57%).^[7] Information about IHPs in terms of the volume of services provided, households OOP expenditure for accessing the services etc., are limited. The current study used NSS data to understand the extent of OOP expenditure by households while availing the services from IHPs.

From the results of this study, it is evident that IHP services are accessed mostly for IDs for cough, cold, fever, etc., by households in rural areas from low socio-economic communities. With increase in socio-economic status (quintiles 1–5), the utilization of services decreases and this was observed for ID. A similar finding was found in another study from central India and this study also highlighted that households from poor socio-economic strata accessed services from IHPs.^[8]

Table 1: Quintile wise comparison of OOP expenditure incurred by households for accessing primary care services through informal providers

Quintile	NCD			ID			Overall		
	NCD ID	Total	households	Exp Med	Exp non-Med	Total Exp	Exp Med	Exp non-Med	Total Exp
First quintile	31	128	159	150 (80-550)	20 (15-150)	170 (100-840)	250 (105-450)	0 (0-60)	260 (125-600)
Second quintile	49	94	143	224 (140-1100)	0 (0-270)	224 (140-1370)	200 (180-300)	20 (0-50)	250 (180-350)
Third quintile	61	97	158	350 (85-450)	20 (0-90)	440 (85-660)	180 (60-200)	0 (0-10)	180 (60-280)
Fourth quintile	53	98	151	250 (135-800)	20 (0-120)	270 (135-820)	175 (125-300)	0 (0-30)	175 (150-310)
Fifth quintile	43	67	110	1900 (1200-1900)	250 (50-250)	2150 (1550-2150)	140 (85-250)	20 (0-20)	140 (105-265)
Overall	237	484	721	350 (100-1200)	20 (0-40)	440 (120-1550)	180 (105-300)	0 (0-40)	200 (120-320)
Equity ratio	1:0.7	1:2	1:1.5	1:0.08	1:0.08	1:0.8	1:1.7	1:1.1	1:1.8

NCD: non-communicable disease, ID: infectious disease

Table 2: Quintile-wise households seeking in-patient care in public and private facilities for Infectious and communicable disease with previous history of care from IHPs

ID	NCD			All disease			Total	Public	Private	Others	Total
	Public	Private	Others	Public	Private	Others					
First quintile	21 (66%)	11 (34%)	0	15 (83%)	3 (17%)	0%	18	36 (72%)	14 (28%)	0	50
Second quintile	16 (64%)	9 (36%)	0	5 (63%)	3 (38%)	0%	8	21 (64%)	12 (36%)	0	33
Third quintile	17 (52%)	15 (45%)	1 (3%)	11 (69%)	5 (31%)	0%	16	28 (57%)	20 (41%)	1	49
Fourth quintile	7 (30%)	16 (70%)	0	6 (46%)	7 (54%)	0%	13	13 (36%)	23 (64%)	0	36
Fifth quintile	7 (50%)	6 (43%)	1 (7%)	3 (23%)	9 (69%)	1 (8%)	13	10 (37%)	15 (56%)	2	27
Total	68 (54%)	57 (45%)	2 (2%)	40 (59%)	27 (40%)	1 (1%)	68	108 (55%)	84 (43%)	3	195

NCD: non-communicable disease, ID: infectious disease, IHP: informal healthcare provider

More women from rural areas accessed the services of IHPs for IDs than their urban counterparts. Visits to IHPs were mainly for fever (42%) followed by acute upper respiratory tract infections (10%). For all gynecological health issues, women visited a private doctor or private hospital (60%) and public hospital (31%). This evidence needs further research to understand the access to gynecological services. However, a recent study from rural north India highlighted that access to services for women was limited and often less than men and they are also *less* likely to consult a qualified doctor.^[9]

We understand that while the fee for services in an informal network have multiple payment mechanism – payment in kind, payment in cash, payment in terms of service provision; it would therefore be difficult to determine the actual cost of care. A similar finding was reported from a study in Bangladesh, where providers accepted fees for services in kind.^[10] In this study, only 3% of households received services at free of cost. In addition, most of IHPs are known to have a standalone clinic as well as a roaming clinic through which they cover the catchment population (villages/communities) within a radius of 10 km.^[11] This would reduce the indirect cost of travel incurred by the households. We, therefore, see almost nil expenditure by households with respect to indirect cost. The other reason is that the IHPs are usually located within the same village or the neighboring village and are easily accessible with zero travel cost. The direct cost is mainly for consultation fees and cost of medicines, which was more than 90% of total expenditure. The direct cost is almost double when the services are availed from qualified private doctors and is even more in public hospitals.^[5]

Many projects and programmes are designed to engage IHPs, and utilize their reach to communities for providing primary healthcare.^[11] Evidence from the literature also suggest that positive approaches like incentives, trainings, and formal recognition as community service providers could bring about behavior change and minimize irrational use of drugs.^[12] It is also known that negative approaches like stringent law enforcements may result in non-availability of services to the poor. However, policy makers need to understand the market dynamics of demand-side and supply-side measures to arrive at financial support mechanisms to ensure quality primary care services to the community. The policies also need to take cognisance of the gross domestic product contribution made as a result of OOP expenditure while accessing services through IHPs, and this has been estimated to be around 0.02% of gross domestic product in 2017-2018.^[13]

The study is a nationally representative sample with more standardized robust methodology for survey design and data collection. The current analysis used all relevant data pertaining to access to primary care services from IHPs. One of limitation is that, this is self-reported information and there could be omissions in the information provided by respondents or expenditure and visits may also be under-reported.

Conclusion

The results show households from poor quintile access primary health care services from IHPs. Households and OOP pay for the services availed. Women access the services more than men due to accessibility, and affordability (~INR 240, i.e., \$ 3). The healthcare programs need to have defined service packages that could be provided by IHPs to increase reach and reduce OOP expenditure on households.

Key Messages

Poor households access informal healthcare providers (IHPs) for primary care services and they pay OOP to meet the expenditure. Many households in rural areas – access services for infectious disease care and women access IHPs more than men. Primary healthcare programs need to incorporate strategies to engage IHPs to maximize reach and minimize household expenditure.

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Conflicts of interest

There are no conflicts of interest.

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