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Health Expenditure and Utilization Survey Thatta District, 2019

Muhammad Ashar Malik, Wajeeha Raza and Riaz Karimi

OCTOBER 1, 2019

RURAL HEALTH PROGRAM, THATTA

DEPARTMENT OF COMMUNITY HEALTH SCIENCES, AGA KHAN UNIVERSITY, KARACHI PAKISTAN

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Preface

Foreword

Sameen Siddiqi

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Acknowledgement

The authors would like to acknowledge the efforts of the data collection team that had wholeheartedly devoted their time and efforts to collect data in the field. Without their efforts this survey would not had been possible Acknowledgement are also due to the staff of the CHS department and RHP Thatta. Particular to name is Sultana Saleem, Abid Muhammad Ali, Asif Tajuddin, Fayyaz Khan and Tahir Faiz. Authors would also like to thank the RHP team for their support in matters pertaining to HEUS namely, Rafiq Tunio, Muhammad Asim, Sohail Bawani, Narjis Rizvi. Thanks are due to Sarah Saleem for facilitating recruitment of local staff and providing facilitates in Thatta districts, Zafar Fatmi for technical inputs on the scope and sample size of the survey and Sameen Siddiqi for overall facilitation and review of this report. Acknowledgment are also due to Mashal Shah in sample selection, translation of questionnaire to Sindhi and data cleaning, Waqas Hameed for determination of sample size of the survey, Syed Iqbal Azam for survey design, analysis and facilitating the training workshops, Kausar S Khan for facilitating training of the data collectors. Last but not the least authors would like to appreciate the World Health Organization, regional office, Eastern Mediation Region for funding Rural Health Program Thatta.

Executive summary

District Thatta is ranked among the lowest performing districts in terms of socio-economic developments. Most the population in the districts inhabits in rural areas. It has five sub-districts (taluka) i.e. Thatta, Mirpur Sakro, Keti Bundar, Ghorabari and Kharo Chann: two being managed jointly. Health seeking in Thatta is mainly through private provides on fee-for-service basis.

Rural Health program has been launched with the objective to support efforts of the government and other stakeholders to improve health of the people of Thatta. Health expenditure and utilization survey is part of the efforts to provide evidence base for effective district level policy formulation in Thatta.

Health expenditure and utilization survey (HEUS) is a cross section survey, designed to provide district representative estimates of out-of-pocket (OOP) health payments of the household and the embedded health seeking patterns. Between the months of January to March 2019 data was collected on demographics, health seeking, health expenditure and copying from each member of the household and household income and expenditures and assets. Final sample of the survey was 1392 households and 7799 individuals.

Out of pocket health payments comprised consultation, medication, diagnosis, others, travel and self-prescription. The impact of OOP health payments on household economics status is reported as financial catastrophe and impoverishment. Economic status of the household was defined on the basis of the total and non-food expenditure of the households. Two thresholds were used, OOP health payments as 10% of total expenditure and OOP health payments as 25% of non-food expenditure. National poverty line of PKR 3994 per capita per month was used while estimating impoverishment impact of OOP health payments.

Around 60% of the respondents were adults (18-60 years). Women were 47% of the sample. Most of the responded (75%) were illiterate while 32% were employed at the time of survey. Around 70% of the adults were married at the time of survey. Disease profile estimated 33% of the respondent to had suffered/suffering from communicable or non-communicable diseases or had some other healthcare needs such as pregnancy or family planning.

Health seeking in Thatta had largely relied on private providers including private clinics (25% for communicable diseases and 15% for non-communicable diseases) and private hospital (45% for communicable diseases and 48% for non-communicable disease). Out of pocket health payments were PKR 28800 per household and its share in household total expenditure was 14% while in non-food expenditure this share is 37%. Medicine expenditure (33%) had constituted largest share in OOP health payments followed by Diagnostics (20%) and Transportation (13%). However in Keti-Bundar and Ghorabari, share of transportation (19% and 17% respectively) in OOP health payments was greater than diagnostics (18% and 17% respectively.

Percentage of household that faced financial catastrophe of OOP health payments was 47% and 60% at the threshold of OOP health payments as 10% of total expenditure and 25% of non-food expenditure respectively. On the average OOP health payments were 8% and 12% higher than the two thresholds

respectively. Taluka Keti Bundar and Ghorabari and rural areas estimates had exceeded the district level estimates of catastrophe headcount and catastrophic overshoot. Overall 10% of the households had been dragged below poverty line due to their OOP health payments and fall short of PKR 2722 below poverty line. The impoverishment impact of OOP was aggravated in Mirpur Sakro and Ghorabari Talukas and rural areas than the respective district level estimates.

With more comprehensive definition of OOP health payments the findings of HEUS depicts an alarming picture of health seeking and extent and intensity of OOP health payments. It calls for intervention that target health seeking that can be rationalized with improved access and quality of care, by targeting the primary healthcare and effective referral system albeit health education can improve rational use of medicine and curb self-prescription that would potentially contain OOP health payments.

Introduction

Thatta is an underdeveloped district in Sindh province, Pakistan. It has been ranked among the lowest in terms of socio-economic developments and inhabits predominantly (88%) rural population (PBS, 2018). Agriculture and fishery are the main source of living in Thatta. Health system of the district comprises public (25%) and private providers (65%) (PBS, 2017). With a weak and relatively less responsive health service, the economic consequences of seeking care are largely borne by the patients and their families. The cost of healthcare further escalates when the patient are referred to health providers in neighboring districts of Karachi and Hyderabad.

Rural health Program has recently been launched in Thatta district by the Community Health Sciences Department, Aga Khan University, Karachi. The objective of the project is to improve health of the population in Thatta district. The project envisaged three component, health system strengthening, disease surveillance and targeted interventions as identified by local stakeholders.

Financial risk protection [FRP] for health seeking is an important aspect of health system strengthening and is one of the agenda item of the Sustainable Development Goals (UN, 2017). District level information on the extent and severity of the financial burden of health seeking in Thatta are lacking. Health expenditure and utilization survey (HEUS) has been designed to provide district representative estimates of health seeking behavior and Out-Of-Pocket (OOP) health payments in the district. This survey is part of the efforts of RHP Thatta to provide evidence to the district level health policy makers and planners.

Methods

Objective:

The objective of the survey is to provide district representative estimates of out-of-pocket health payments of the household and the embedded health seeking patterns. Secondary objective of the survey is to understand the impact of OOP on the household resources.

Sampling and survey strategy:

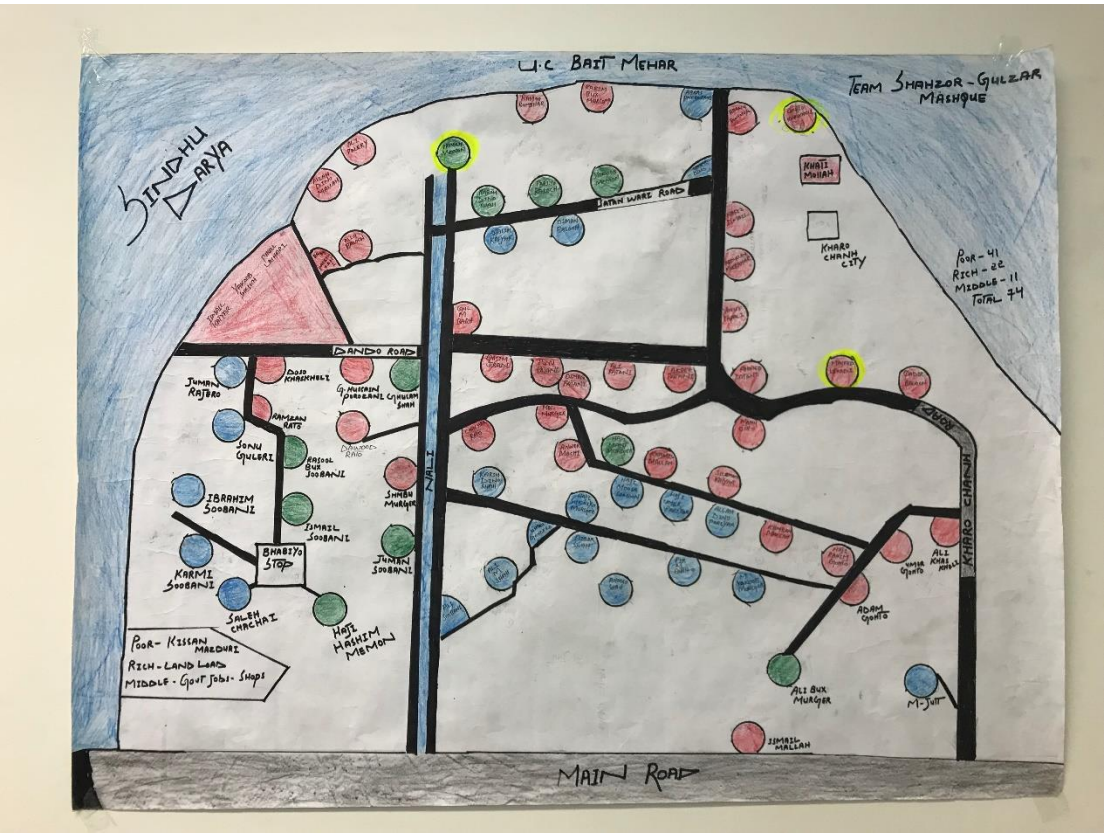
This survey followed a cross sectional design. The sample size was calculated on the basis of estimated OOP health payments in the rural areas of Sindh. This information had been drawn from Household Integrated Economic Survey (HIES) that had been conducted by the Federal Bureau of Statistics for the year 2014-15 (PBS, 2016). Assuming a design effect of 1.5, standard deviation (PKR 15300) of OOP health payments in rural Sindh and margin of error of 1000, the sample size of the survey was determined for 963 households in Thatta district. Assuming a 10% refusal rate/incompleteness, the final sample was approximately 1060 households.

Multistage cluster sampling with stratification strategy was adopted to collect the sample data. Thatta has five sub-districts (Talukas) i.e. Thatta, Mirpur Sakro, Keti Bundar, Ghorabari and Kharo Chann: two being managed jointly. This sample was distributed to the four Talukas (Stratum) of Thatta through sampling proportionate to population. Each sub-district was divided into rural and urban domains. In rural areas the sample pertained to the union council and in the urban areas it was based on urban wards. In each UC/ward, three primary sampling units (Village in Rural areas and Mohallah/street in urban were selected at random. In each primary sampling unit 8-12 households (secondary sampling units) were included in the survey.

Ethical consideration: This survey involved data collection from human subjects so ethical review was carried out by the institutional Ethnical review Committee. The ERC committee approved the HEUS vide letter number 2018-0615-836 on 24 November 2018 [Annex 1].

Survey mapping and data collection tool: The data collection was carried out on Tablets PCs. With online data transfer facility the time and location of data collection had been recorded for each record. The data consist of five sections demographics, health seeking behavior, OOP health payments and coping, household income and expenditures and assets. Except the latter two sections, data was collected from each member of household. The disease prevalence section had two sub-sections namely communicable disease (CD), non-communicable diseases (NCD). Health seeking section was divided into four sub-sections, seeking care for communicable diseases, non-communicable diseases, maternity care and family planning. Section on out-of-pocket health payments contained two sub-sections, OOP payments on CD and NCD and OOP payments on maternity care and family planning. This was followed by coping mechanisms to incur OOP health payments.

A survey mapping exercise had been carried in the covering the entire district in the month of December 2018. The objective of this exercise was firstly to facilitate the data collection and secondary to classify villages (rural areas) and mohallahs (urban areas) as rich, middle income and poor population strata. In each union council and ward three villages and three mohallahs were selected at random respectively by rolling a dice on the map of the UC/ward. In each village/mohallahs, 8-10 household were selected for data collection.



1 A survey map of union council Baet Maher on the bank of river Indus in Thatta

Data collection had been piloted in one of the union council of Thatta taluka for 2 days. On the basis of the findings of the pilot, data collection tool and strategy was finalized and implemented.

The survey team included 16 data collectors and half of them were females. Eight teams of data collectors were formed with equal representation of both genders. Data collectors were provided training on mapping and data collection techniques. Data collection was carried out in the months of January to March 2019.

2 Group photo of the survey team along with facilitators in Workshop on data mapping

Data collection and validation:

The online system of data collection was developed in freely available online data collection tool managed by London School of Hygiene and Tropical medicine namely Epi-collect.[1] To ensure further quality of data two to four respondent were selected at random and were called to confirm whether they were visited by the data collectors in the past week. Final sample of the survey was 1392 households.

[1] https://five.epicollect.net/

3 Survey team collecting data

The actual sample exceeded the calculated sample size due to the data collection plan on the ground arrangements such as formation of teams, transport arrangement, route of visit etc. The refusal rate was 0.3%: four household out of 1392 households. Informed consent was obtained from the respondents who had agreed to participate in the survey. During the course of survey 73 households had contacted the PI on the phone number given in the consent form. They enquired about the background of survey, use, outcomes and executing agency of the survey.

After the completion of data collection data was down loaded and transformed to Excel worksheet. Data was cleaned and cross examined by two faculty/staff members in the department of Community Health Sciences. Missing values or ambiguous values were reconfirmed by a team of two investigator through telephone calls to the concerned household.

To validate the data collection and ensure quality of data weekly random visit were made and data collection was cross checked. In addition at the end of survey a validation exercise was carried out by faculty and staff of CHS department that had not been involved in the survey. The results confirmed that no proxy or fake data had been recorded in the survey.

Analyses Plan: Demographic and socio-economic characteristics are reported in means and proportions. Survey sampling techniques are included in all the estimates. WHO recommended age group classification were used to group the respondent by the age (WHO, 2014).

Economic status of the household was defined on the basis of the total and non-food expenditure of the households. Due to highly skewed distribution, the measures of central tendencies and dispersion of OOP health payments were based on median and interquartile range respectively. In the case of access zeroes in few types of OOP health payments, the sample was restricted to those who reported a positive OOP health payments of the respective category of OOP health payments e.g. OOP payments on self-prescription and others.

The impact of OOP health payments on household economics is reported as financial catastrophe and impoverishment. Catastrophic headcount is the proportion of households whose OOP health payments exceed a certain limit of their total income/expenditure. Catastrophic overshoot is the mean of the proportions by which the OOP health payments exceeds the threshold value. Catastrophic headcount and overshoot were estimated using a threshold of 10% of total expenditure (TE) and 25% of the non-food expenditures (NFE) of the households. Non-food expenditure was relevant to isolate the effects of food poverty.

Equity aspects of OOP health payments was analyzed by first constructing ranking of households by adult equivalent per capita total expenditure of the household. This ranking of household has been used to construct the concentration indices of catastrophic headcount and catastrophic overshoot. Methods explained by O'Donnell et al (2008) were used for equity analysis and estimation of concentration indices (O'Donnell et al, 2008).

The impoverishment impact of OOP health payments was estimated using the inflated value of the official poverty line in 2015-16 of the government of Pakistan to the year 2018-19 and was PKR 3994/capita per month (EAD, 2017).

All analysis were carried out in STATA 15.1 while data cleaning was completed in Microsoft Excel 2013.

Findings

Demographic characteristics:

Data was collected from 7799 members of 1392 households. Females were 47% of the sample. Population aged 18-60 years was 45% while under 18 years old were 38.1% of the total sample respectively.

	Thatta (Taluka)	Mirpur Sakro	Ghorabari	Keti Bundar	Thatta District
Age Categories					
<=2 years	6.45	6.12	6.69	5.82	6.32
>2years & <=6 years	13.50	14.35	13.47	15.48	13.97
>6 years & <=12 years	16.87	18.22	19.75	17.19	17.81
>12 years & <=18 years	12.36	12.86	14.06	13.35	12.89
>18 years & <=30 years	19.89	18.71	16.74	17.33	18.76
>30 years & <=45 years	18.84	17.76	17.07	18.18	18.14
>45 years & <=60 years	7.91	8.00	8.87	9.23	8.21
>60 year2	4.16	3.98	3.35	3.41	3.90
Sample size	3147	2613	1195	704	7659
Gender					

Female	47.03	47.27	46.28	50	47.26
Male	52.97	52.69	53.72	50	52.72
Sample size	3281	2618	1195	704	7798

Table 1 Age and gender profile in Talukas and District Thatta

All estimates are reported as proportions of the total sample. Total sample for each category is provided in the last row of each variable

Majority of the adult population was married (72%) at the time of survey. Majority of the adult population was illiterate (75%) defined as “neither can read nor can write”. The situation of formal education depicted that more than 76.8% of the adults had reported to have never attended any school or had completed less the five years of schooling. More than 2% of the population had attained 14+ years of schooling. Only 32% of the adult population was employed at the time of survey while in women less than 5% were employed at the time of survey. Demographic characteristics of the adult population of survey are provided in Table 2.

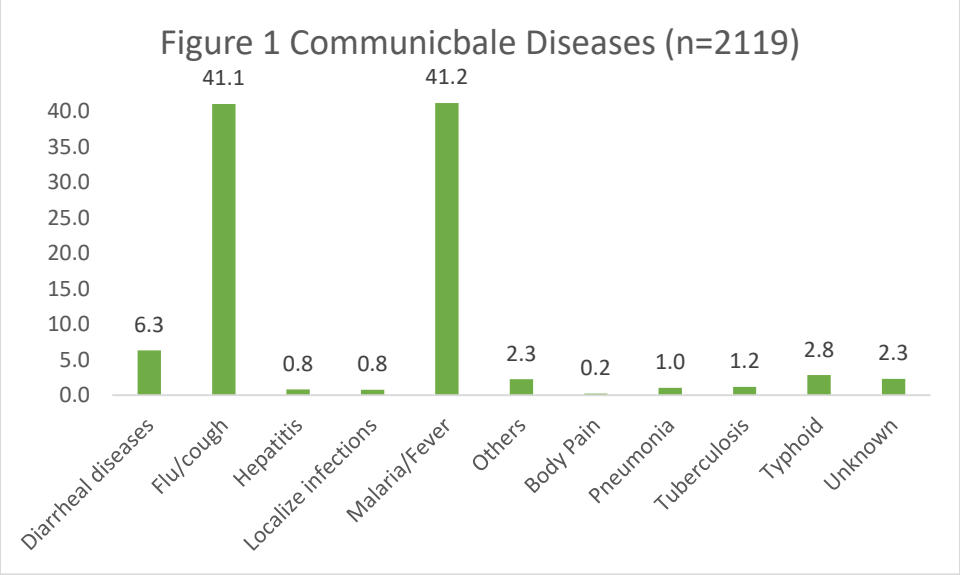
	Both	**Male**	**Female**
Marital Status			
Currently Married	70.1	67.8	72.7
Divorced	0.2	0.0	0.5
Never married	25.1	29.5	20.3
Separated	0.3	0.2	0.4
Widowed	4.3	2.5	6.2
Sample size	4041	2099	1942
Literacy			
Both	23.3	33.3	12.4
Neither	75.0	64.3	86.6
Read only	1.1	1.6	0.5
Write only	0.6	0.7	0.4
Sample size	4044	2100	1944
Education			
No schooling	76.8	65.6	88.8
1-4 grades	2.0	3.0	1.0
5-9 grades	10.8	15.7	5.5
10-13 grades	8.2	11.9	4.1
14 and above	2.3	3.8	0.7
Sample size	4048	2101	1947
Employment			
Currently employed	32.3	58.0	3.0
Neither employed nor seeking work	54.5	20.9	1.1
Not employed but seeking work	13.2	21.1	1.1
Sample size	4032	2093	1939
Profession			
Cool mining/Labor	1.6	2.8	0.4
Cottage work at home	4.4	1.1	8.0

Daily wages	23.2	42.8	2.2
Farming leased land	4.0	7.2	0.5
Farming own land	3.7	7.0	0.1
Fishing	3.9	7.4	0.1
Salaried employment	6.6	12.0	0.9
other (specify)	52.5	19.8	87.8
Sample size	4044	1944	2099

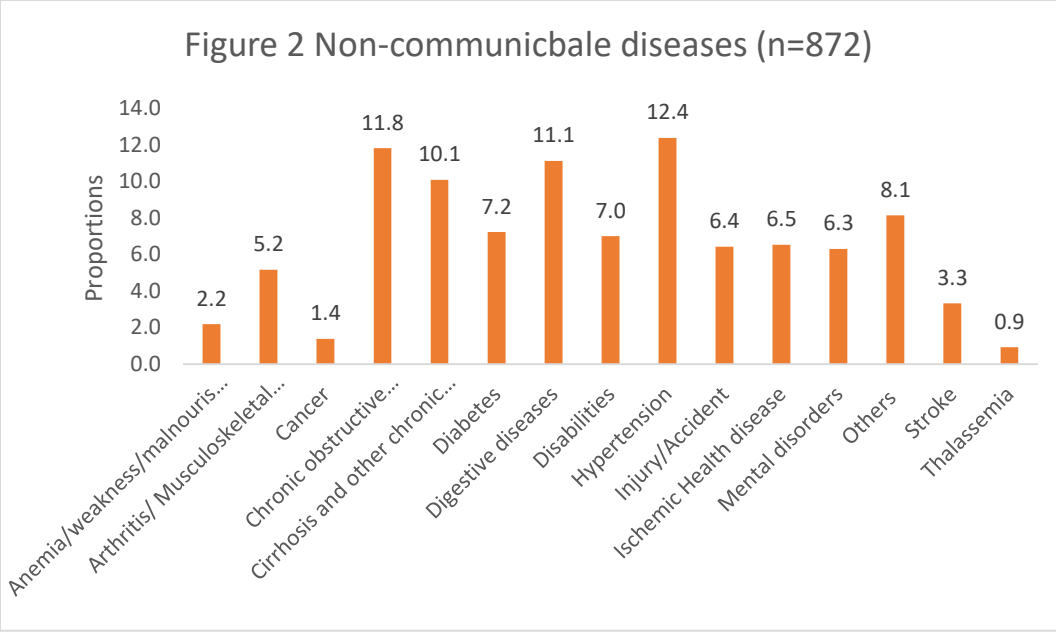
Table 2 Demographic features of adult population in District Thatta

The sample pertains to respondent aged 18 and above. All estimates are reported as proportions of the respective sample size provided at the last row of each category

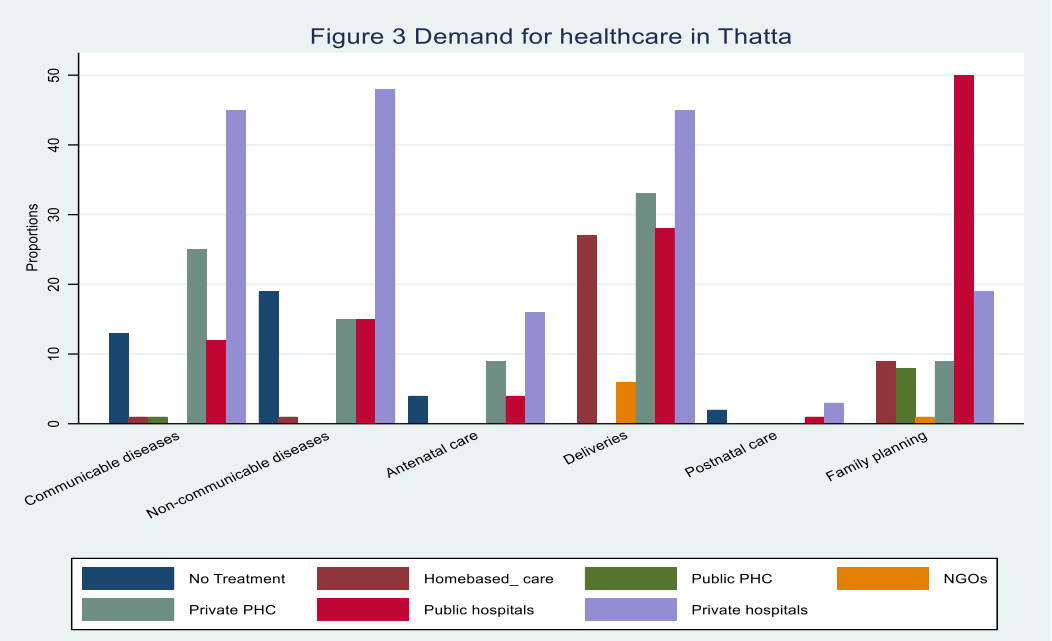
Health seeking and disease patterns: Among the respondent 2540 (33%) reported to had been/had suffering/suffered from Non-communicable diseases (n=701), communicable diseases (n=1454). Women in reproductive age that reported to had been pregnant (n=283) in the year preceding the survey. In the same sample 204 women reported to had been using family planning methods. Of those pregnant, 0.6% reported having an NCD and 1.5% reported to have a CD. Of those who reported suffering from NCDs, 2% also had a concomitant CD during the previous month. Malaria/Fever and Flu constituted largest share (70%) in communicable diseases (Figure 1).



In the case of NCDs the share of Digestive/liver diseases was highest (21%) followed by hypertension (12.4%) Pulmonary diseases (11.8%) and Figure 2.



Majority of the respondent had reported that in the wake of their illnesses/healthcare needs, they had sought care from private hospitals (47.5% for NCDs and 44.8% for CDs), followed by private clinics (15.4% for NCDs and 16.5 for CDs) and government hospitals (15% for NCDs and 14.6% for CDs). In the case of NCDs and CDs, 18.5% and 12.7% respectively reported that they did not seek care in the wake of illnesses. Around one quarter (26.5%) of the pregnant women had delivered at home. Among pregnant women 10.9% did not seek ANC and 60% did not seek PNC.



Affordability had remained the major reason of not seeking care for NCDs (77%) and CDs (60%). Table 3 provides health seeking patterns of the respondents. Among those who did not seek care 76.9% and

59.8% reported affordability as the underlying factor for not seeking care for theirs NCDs and CDs respectively (Table 3).

Table 3 Reasons for not seeking care

	Non-communicable diseases	Communicable diseases
Could not afford	76.9	59.8
Doctor/Staff absent	0.0	4.9
Facility too far	0.0	9.2
Others (specify)	20.8	18.5
Timing does not suit	2.3	7.6
Sample size	130	184

All estimates are reported as proportions of the sample of those respondents who had not reported seeking care in the wake of their illnesses

Out of pocket health payments: Median household OOP health payments in Thatta during 2019 was PKR 28800. More than 84% of the household reported OOP health payments. Out of pocket health payments were 1.4 times higher in urban areas than in rural areas. Median HH OOP health payments were highest in Keti-Bandar (PKR 45600). The share of OOP health payments in TE and NFE was highest in Keti Bundar (19% and 47% respectively) followed by Ghorabari (17% and 45% respectively). Table 4 provides median OOP health payments and its share in TE and NFE.

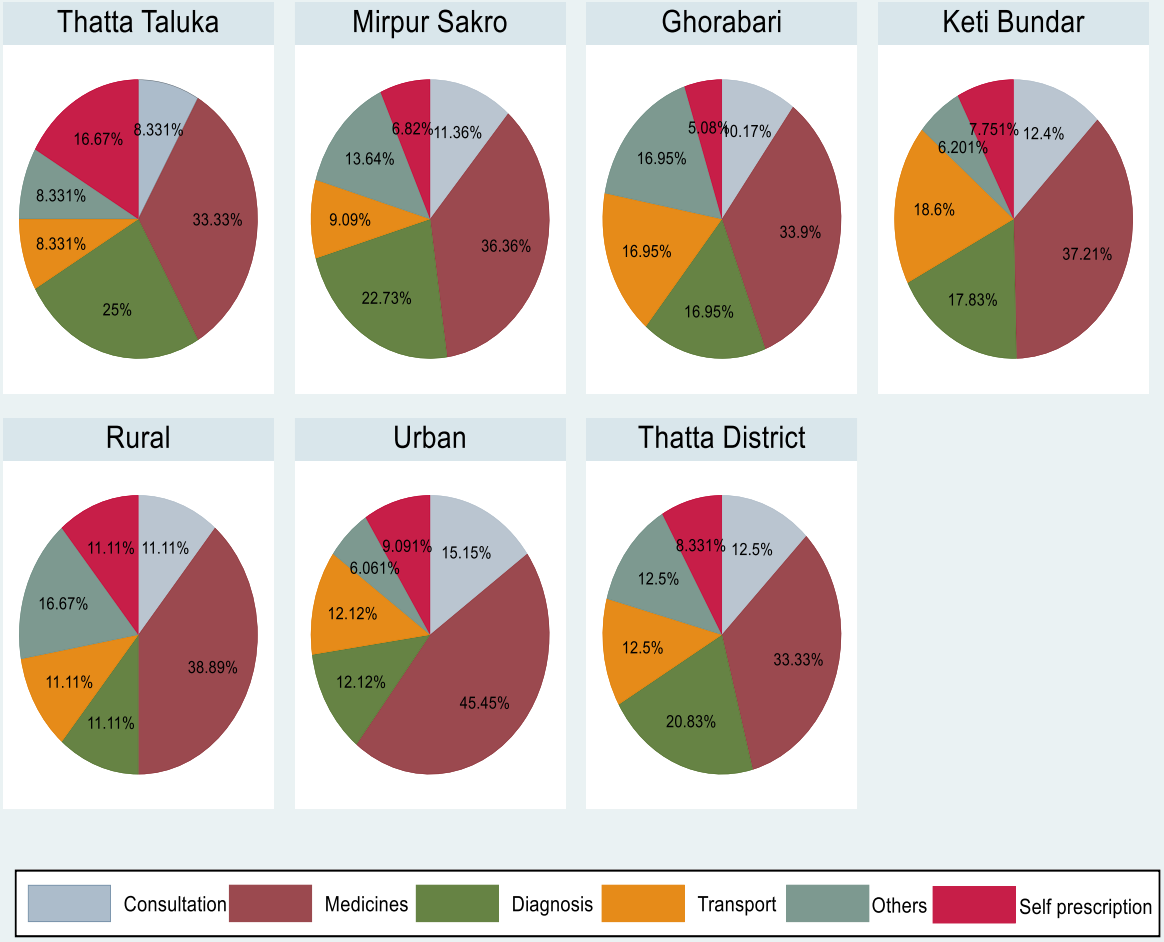
Table 4 Out-of-Pocket health payment & its share in TE & NFE in 2019

	OOP health payments	OOP as % of TE	OOP as % of NFE
Thatta Taluka	30000	13.26%	31.49%
	(63000)	(0.77%)	(1.38%)
Mirpur Sakro	24720	13.20%	36.17%
	(47220)	(0.79%)	(1.53%)
Ghorabari	32700	16.90%	45.48%
	(49920)	(1.35%)	(2.63%)
Keti Bundar	45600	19.08%	47.02%
	(98400)	(2.62%)	(4.04%)
Rural	27000	13.76%	36.08%
	(52800)	(0.60%)	(1.19%)
Urban	38400	16.57%	38.45%
	(73800)	(1.19%)	(2.08%)
Thatta District	28800	14.31%	36.54%
	(58860)	(0.54%)	(1.04%)

Median Out-of-pocket payments (Inter quartile range in Parenthesis) are reported in Pakistan rupees. Interquartile range is provided in parenthesis. In column 3 and 4 share of OOP health payments in total expenditure and non-food expenditure of the household is provided with standard errors in parenthesis.

Generally OOP health payments on medicines and on diagnosis were the major drivers of total OOP health payments with few exceptions. For instance in Keti Bundar OOP health payments on transportation (19%) were second highest after OOP health payments on medicines (37%). Share of household OOP health payments on medicine was highest in urban areas (46%) and share of OOP health payments on transportation in Keti Bandar was 19%, followed by share of OOP health payments on transportation in Ghorabari (17%). Figure 3 provide pie-charts of the components of OOP health payments in rural and urban areas and in the four taluka of Thatta.

Figure 3 Components of out-of-pocket health payments



Catastrophic and Impoverishment analysis: On average 47% of the household had reported financial catastrophe of OOP health payments at the threshold of 10% of TE. It was highest in Keti Bundar (60%) followed by Ghorabari (59%). Percentage of households whose OOP health payments had exceeded 25% of their NFE was 60% in Thatta district. At taluka level 74% of the household had faced financial catastrophe of OOP health payments in Ghorabari followed by Keti Bundar (71%). The overshoot, that is, the intensity of financial catastrophe was 8% in Thatta. Among taluka the intensity of financial catastrophe was highest in Keti Bundar for both threshold 10% of TE and 25% of NFE. In terms of equity in both cases of threshold the concentration indices of headcount and overshoot were concentrated in rich with one exception of concentration index of catastrophic headcount at % of NFE in

urban areas (-0.03). The values of concentration index of catastrophic overshot at the threshold of 10% of TE had proportionality favored rich more than concentration indices of catastrophic headcount at 10% of TE and catastrophic headcount and overshoot at the threshold of 25% of NFE. Table 5 provides catastrophic impact of OOP health payments.

Table 5 Catastrophic impact of out-of-pocket health payments

	OOP as 10% of TE		OOP as 25% of NFE	
	Headcount	Overshoot	Headcount	Overshoot
Thatta Taluka	41.75%	7.28%	51.35%	15.03%
	(0.16)	(0.36)	(0.06)	(0.15)
Mirpur Sakro	43.53%	6.63%	60.56%	17.25%
	(0.13)	(0.33)	(0.04)	(0.13)
Ghorabari	58.69%	9.30%	73.71%	24.72%
	(0.11)	(0.28)	(0.03)	(0.09)
Keti Bundar	59.50%	11.47%	71.07%	26.11%
	(0.18)	(0.32)	(0.05)	(0.16)
Rural	45.24%	7.38%	58.68%	18.11%
	(0.14)	(0.34)	(0.05)	(0.14)
Urban	51.67%	9.23%	63.20%	18.68%
	(0.07)	(0.27)	-(0.03)	(0.05)
Thatta District	46.48%	7.74%	59.55%	18.22%
	(0.13)	(0.33)	(0.04)	(0.12)

TE Total Expenditure, NFE nonfood expenditure. All estimates are at household levels.
Concentration indices are reported in parenthesis.

National poverty line in 2019 was estimated at PKR 3994 per adult equivalent per month. At this poverty line 12% of the household in Thatta were dragged below poverty line due to their OOP health payments. The impoverishment impact was highest in Keti Bundar (17%) followed by Ghorabari (15%). In Thatta district the impact of OOP health payment on the intensity of impoverishment i.e. poverty gap was PKR 2722. This impact was highest in Ghorabari (PKR 4148) followed by Keti Bundar (PKR 3407). Table 6 provide contribution of OOP health payments to the incidence and intensity of poverty in Thatta.

Table 6 Impoverishment due to Out-of-pocket health payments in Thatta

	Poverty headcount			Poverty gap		
	Pre-payment	Post Payment	Difference	Pre-payment	Post Payment	Difference
Thatta Taluka	45.32%	56.05%	10.73%	6706	8877	2171
	(3.13%)	(3.31%)	(1.17%)	(647)	(750)	(222)
Mirpur Sakro	54.96%	65.95%	10.99%	7525	10109	2584
	(2.90%)	(2.94%)	(1.55%)	(590)	(674)	(202)
Ghorabari	59.15%	74.18%	15.02%	8773	12921	4148
	(4.00%)	(2.95%)	(2.58%)	(803)	(881)	(427)
Keti Bandar	44.63%	61.98%	17.36%	5435	8842	3407
	(5.97%)	(6.82%)	(4.38%)	(956)	(1120)	(552)

Rural	55.91%	67.74%	11.83%	8040	10879	2839
	(1.88%)	(1.88%)	(1.05%)	(402)	(458)	(164)
Urban	28.62%	41.64%	13.01%	3651	5885	2234
	(4.11%)	(4.82%)	(1.91%)	(705)	(927)	(365)
Thatta District	50.61%	62.67%	12.06%	7187	9909	2722
	(1.88%)	(1.92%)	(0.92%)	(376)	(436)	(150)

Official poverty line of PKR per person per month in 2015-16 has been inflated with consumer price indices for 2017 and 2018 as PKR 3994/person per month. Standard errors are provided in the parenthesis. Per capita estimates are obtained by using the household size. Poverty headcount is the difference in % points of population living below poverty line before and after OOP health payments. Gap is the amount by which a household is falling short of the poverty line.

Discussion

This study provides robust district level representative estimates of the key aspects of health and health seeking. Overall Thatta district presented an alarming picture of health seeking and extent and intensity of OOP health payments than the national and provincial situation. A substantial proportion of the respondent who reported to have been suffering from illnesses did not seek care and described affordability as a major reason of not seeking care. This is in contrast to health seeking reported in PSLM 2014-15 (PBS, 2016). PSLM 14-15 reported that 99.6% had sought care in those who had fallen sick in the past one month of the survey in Thatta District (PBS, 2016).

Those who sought care had faced financial hardships of the OOP health payments. Talukas Keti Bundar and Ghorabari faced greatest impact of OOP health payments on household resource allocation. Findings in this study needs to be carefully interpreted as the data was collected in the spring season when weather was not very harsh and access to services was relatively easy. Moreover due to emphasis on OOP health payments during the survey, a positive reporting bias in OOP health payment and a negative reporting bias in household total expenditure cannot be ruled out.

By comparison to the most recent (2015-16) estimates of per capita OOP health payments in national health accounts of Pakistan, median per capita OOP health payments in Thatta districts(PKR 4080) are higher than the national per capita OOP health payments (PKR 2802). At national level medicine constitutes the largest share (50%) in OOP health payments while in Thatta districts HEUS OOP on medicine was although highest among all components, its share was 33%. This pattern is similar to the share of medicine in total OOP health payments in Sindh province (34%) reported in NHA 2015-16 (PBS, 2017b).

Household Integrated Economics Survey (HIES) 2015-16 had reported that OOP health payments were 3 % of the total expenditure of the household in the survey year (PBS, 2017). In HEUS, the OOP health payment were 14% of the total expenditure of the household.

The WHO UHC monitor reported catastrophic and impoverishment analysis for Pakistan for the year 2010 (WHO, 2019). Catastrophic headcount at the threshold of 25% of TE was 0.2% while at the threshold of 10% of TE the catastrophic headcount was 1.03%. Similarly impoverishment impact of OOP health payments at the poverty line of $1.9 a day is 1%. The report of Global Network on Health Equity on Universal Health Coverage assessment for Pakistan (GNHE, 2015) had reported catastrophic headcount of nearly 2% at the threshold of 40% of TE. The impoverishment impact in this report was

estimated at 3.7% and 3.6% at the poverty line of $1.08 a day and national poverty line respectively (GNHE, 2015). In the case of Thatta HEUS, estimates of financial catastrophe and impoverishment impact of OOP health payments are on higher side. One possible explanation is that Thatta is ranked at the bottom among the districts of Pakistan as far as its socio-economic indicators are concerned. And this can be applied to situation of OOP and its impact on the household economic situation.

Other explanation of the high extent and impact of OOP health payments in Thatta is the methods and types of recall and types of OOP health payments included in the analysis. In the Household Integrated Economic Survey the OOP health payments are included in the yearly expenditure section. OOP health payments are aggregated at the household level and are without mentioning the diseases. In the case of HEUS Thatta, OOP health payments are recorded for communicable and non-communicable diseases, pregnancy and family planning.

To estimate OOP health payments, the HEUS has gone beyond the traditional approaches of disease specific OOP health payments and included healthcare needs other than diseases i.e. OOP health payments on pregnancy related health needs and availing family planning services. In types of OOP health payments HEUS Thatta has included OOP health payments on transportation, others and self-prescription. Such types of OOP health payments together accounts for 20% of the OOP health payments in Thatta district. These types of OOP health payments were not mentioned in HIES 2015-16 (PBS, 2017). Thus HEUS Thatta provides a large and more comprehensive envelop of OOP payments resulting in greater extent and impact of OOP health payments. Moreover the low economic and social ranking of Thatta district is also an important determinant of aggravated impact of OOP health payments in Thatta.

Limitation

Health expenditure and utilization survey was cross sectional survey conducted in the months of January to March 2019 and seasonal variation in the disease pattern, health seeking and OOP health payments were not captured in the survey. The estimates of impoverishment impact of OOP health payments should not be used for assessment of poverty in Thatta as poverty measurement carries different methodology. Disease patterns reported in HEUS Thatta are based on verbal autopsy, no clinical examination had been carried out to confirm the stated illnesses of the members of households. While the sample in HEUS represents the district for the estimates of OOP, other findings may not concur with findings of national and provincial surveys that are conducted at districts level such as PSLM and MICS due to sampling methodology, recall period and period of data collection.

Recommendation and conclusions

Affordability as a significant and substantial factor for not-seeking-care is one of the key findings. Moreover the catastrophic and impoverishment impact are exorbitantly high in Thatta. While the general direction of these finding is towards financial risk protection yet by looking at health seeking patterns in Thatta it is apparent the demand for healthcare is mainly entertained by the private providers: where services are offered on out-of-pocket payment. In a poverty struck population, lack of quality health services from the public sector is key challenge, affecting health of the population and financial consequences of seeking care. Moreover cost of medicines and travel are substantial while self-prescription also contributes to a significant proportion of OOP health payments. These findings hints at medical mal-practices and lack of trust on the healthcare providers situated with in the district.

The objective of HEUS Thatta was not to test feasibility of financial risk protection, we cannot recommend health insurance in Thatta districts. Other reasons are the low level of literacy and informal sector of employment that may hamper the effectiveness of health insurance. In this situation a few recommendations are made for the policy makers in the district.

- Healthcare delivery at primary healthcare should be strengthened in public and private sectors through intervention on access and quality of care

- Health education program should be implemented for rational use of medicine, and adherence to recommended medical treatment.

- Regulation should be enforced to ensure ethical and cost effective medical practice following recommended standards of care

- An effective referral system should be implemented to promote cost effective primary healthcare. This will save household resources on travel costs, cost on medication and cost on self-prescription by timely management of their healthcare needs.

Health expenditure and utilization survey provides an aid for district level planning and management of health care. The findings strengthens that national and provincial level analysis and policy recommendation may not be useful for districts level planning and management of health services. Extra resources and intervention relevant to ground realities will improve ownerships and accountability of the district level health managers.

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Annexure Final survey sample

Taluka	Households
Ghorabari	121
Keti Bunder	213
Mirpur Sakro	464
Thatta Taluka	594
District Thatta	1392

Annexure Ethical Approval

آغا خان یونیورسٹی

THE AGA KHAN UNIVERSITY

24-Nov-2018

Mr. Muhammad Ashar Malik
Department of Community Health Sciences
Aga Khan University
Karachi

Dear Mr. Muhammad Ashar Malik

2018-0615-836, Mr. Muhammad Ashar Malik: Health Expenditure and Utilization Survey: Rural Health Project.

Thank you for submitting your application for ethical approval regarding the above mentioned study.

Your study was reviewed and discussed in ERC meeting, and your responses to the queries noted. There were no major ethical issues. The study was given an approval for a period of one year with effect from 24-Nov-2018. For further extension a request must be submitted along with the annual report.

Any changes in the protocol or extension in the period of study should be notified to the Committee for prior approval.

All informed consents should be retained for future reference.

Thank you.

Sincerely,

J. Talati.

Dr. Jamsheer Talati

Chairperson
Ethics Review Committee

Annexure Survey Team

Data Collection Supervisor	Mumtaz Ali
Data Collector (Male)	Muhammad Tahir
Data Collector (Male)	Gulzar Khaskheli
Data Collector (Male)	Muhammad Talal
Data Collector (Male)	Nazeer Mohram
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Data Collector (Male)	Mashooq Ali
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Data Collector (Female)	Zameeran gopang
Data Collector (Female)	Nimra Naz
Data Collector (Female)	Abida Dars
Data Collector (Female)	Uroosa Durrani
Data Collector (Female)	Zainab Khushk
Survey supervisor	Riaz Karimi
Co-PI	Wajeeha Raza
Principle Investigator	Muhammad Ashar Malik

Annexure Gant Chart

Health Expenditure and Utilization Survey 2018-19	Rural Health Project, Thatta, Sindh, Pakistan
Executing Agency:	Department of Community Health Sciences, Aga Khan University, Karachi, Pakistan

GANNT Chart of important milestones

Activity		September-18	October-18	November-18	December-18	January-19	February-19	March-19	April-19	May-19	June-19	July-19	August-19	September-19	October-19
Proposal writing and funding approval	Planned														
	Actual	===== ==													
Survey design and sampling methodology	Planned														
	Actual		====												
Ethical Review Board Approval	Planned														
	Actual		====												
Recruitment of data collectors	Planned														
	Actual		====												
Pilot test of data collection instruments	Planned														
	Actual		++++												
Data collectors training	Planned														
	Actual				----										
Data collection, validation and feedback	Planned														
	Actual					----	----	----							
Data compilation and analysis	Planned														
	Actual								----	====	====	====	====		
Dissemination and publication	Planned														
	Actual														----

Legends: Ontrack (=), Lagging (-), Accelerated (+)