




Informal Payments for Outpatient Health Care: Country-Wide Evidence from Iran

Haniye Sadat Sajadi¹, Farkhondeh Alsadat Sajadi², Maryam Yaghoubi^{3*} , Reza Majdzadeh⁴

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Abstract

Background: Reliance heavily on out-of-pocket (OOP) payments, including informal payments (IPs), has undesired effects on financial risk protection and access to care. While a significant share of total health expenditure is spent on outpatient services, there is scant evidence of the patient's amount paid informally in outpatient services. Such evidence is available for inpatient services, showing the high prevalence of informal payments, ranging from 14 to 48% in the whole hospital. This study aimed to investigate the extent of OOP and IPs for outpatient services in Iran.

Methods: A secondary data analysis of the 2015 IR Iran's Utilization of Healthcare Services (IrUHS) survey was conducted. A sample of 11,782 individuals with basic health insurance who were visited at least once by a physician in two private and public health care centers was included in this analysis. The percentage of OOP was determined and compared with the defined copayment (30%). The frequency of IPs was determined regarding the number of individuals who paid more than the defined copayments. The Mann-Whitney test also investigated the relationships between OOP percentage and IPs frequency with demographic variables.

Results: The share that insured patients in Iran pay for a general practitioner (GP) visit was 38% in public versus 61% in the private sector, while for a specialist practitioner visit, the figures were 80% and 96%, respectively, which is higher than defined copayment (30%). This share was significantly higher in females, urban areas, highly educated people, private service providers, and specialist visits. The frequency of IPs, who paid more than the defined copayments, was 73% for a GP in public versus 86% in the private sector, while for a specialist practitioner visit, these were 90% and 93%, respectively.

Conclusion: Informal patient payments for outpatient services are prevalent in Iran. Hence, more interventions are required to eliminate or control the IPs in outpatient services, particularly in the private sector. In this regard, making a well-regulated market, reinforcing the referral system, and developing an equity-oriented essential health services package would be fundamental.

Keywords: Out-of-Pocket Payments, Informal Payments, Insured Patients, Outpatient Visits, Iran

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Introduction

Many countries aim to strengthen their health systems financing to increase financial risk protection (1, 2), which

is often threatened by the high share of patient out-of-pocket (OOP) payments. The high share of OOP pay-

Corresponding author: Dr Maryam Yaghoubi, yaghoobi997@gmail.com

¹ Knowledge Utilization Research Center, University Research and Development Center, Tehran University of Medical Sciences, Tehran, Iran

² Department of Statistics, Faculty of Mathematics and Statistics, University of Isfahan, Isfahan, Iran

³ Health Management Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran

⁴ Community Based Participatory Research Center, Knowledge Utilization Research Center, Tehran University of Medical Sciences, Tehran, Iran

↑What is “already known” in this topic:

While a significant share of total health expenditure is spent on outpatient services, there is scant evidence of the amount paid informally by the patient. On the other hand, such evidence is available for inpatient services, showing a high prevalence of informal payments, ranging from 20-48% in the whole hospital. Therefore, it seems that picturing the prevalence of informal payments in outpatient services is needed.

→What this article adds:

Informal patient payments are more prevalent for outpatient service. More interventions are required to eliminate or control them in outpatient services, particularly in the private sector. Making a well-regulated market, reinforcing the referral system, and developing an equity-oriented essential health services package are examples of these interventions.

ments, in the form of both formal user fees and informal payments (IPs), is itself a severe threat to achieving universal health coverage (UHC) (3-5). In addition, it may disturb the patient-physician relationship (6), decreases the poor households' utilization of health services, and lead to self-medication which has many consequences (7). While many efforts have been made to decrease the share of direct patient payments, health financing is still in part provided by OOP payments, particularly in developing countries (8, 9).

To improve the financial risk protection, the Islamic Republic of Iran launched a Health Transformation Plan (HTP) in May 2014, focusing on implementing actions that reduce OOP payments, particularly in inpatient services. Examples of these actions include insuring people who were not covered by basic health insurance; reducing copayment for inpatient services; controlling the price of medicines and medical equipment; and controlling and eliminating IPs through revising tariff schedules and establishing a new legal mechanism to deal with offenders (10). These actions have reduced the share of OOP payments as total health expenditure (THE) from 47.0 in 2013 to 38.1 in 2015 (11, 12). Furthermore, the IPs for inpatient services significantly decreased and were close to being eliminated, particularly in the public sector (13). However, the OOP payments share continues to remain far from the desired figures, i.e., 20% (14, 15), and the percentage of population affected by catastrophic expenditures remained unchanged (ranging from 2.5-2.4% during 2013-2015) (16). Thus, it is vital to identify major OOP drivers in the health sector and reduce OOP payments.

It seems that one of the OOP payment drivers is related to outpatient expenditure, which has %42 of total health expenditure in 2014 (12). On the one hand, outpatient services, especially outpatient visits (by general practitioners (GPs) and specialists), are more commonly used because they are the starting point of utilizing other health services (the outpatient visits per person per year was 4.9 in comparison with hospital admission that was 0.107 in 2014 (17)). On the other hand, the private sector provides around 80% of outpatient care, significantly more than the public sector (18). However, this sector is largely unregulated and uncontrolled and is prone to more IPs (19). Therefore, to apply any intervention to eliminate or control IPs, it is crucial to determine the payment paid by patients to receive outpatient services.

To our knowledge, extensive literature is available on IPs prevalence in inpatient services due to the well-known methodology of measuring IPs and the feasibility of data gathering in inpatient services (20). Based on this evidence, the high prevalence of IPs, ranging from 7-10% in a hospital department to 14-48% in the whole hospital, is still a significant challenge in the Iranian healthcare system for many years, as well as a common phenomenon in other countries that have an overall level of IPs varying from 2 to 80% (21, 22). However, such evidence is sparse in the outpatient services due to difficulties of methodology and data gathering in the un-regulated outpatient market in Iran. Our interest in conducting this study stemmed from the necessity of picturing the patient payments for

outpatient care. This study aimed to investigate the percentage of OOP payments and the prevalence of IPs in outpatient services based on the national survey of Utilization of Healthcare Services.

Methods

Study design and participants: This is a secondary data analysis of the 2015 IR. Iran's Utilization of Health-care Services (IrUHS) Survey. The IrUHS survey was jointly run by Iran's National Institute for Health Research and Iran's Statistical Research Center in coordination with the relevant departments in the Ministry of Health and Medical Education (MoHME). It was performed from 3 January to 13 January 2015. A three-stage cluster sampling was employed to collect the data of 22,470 resident rural and urban households (households were made up of several people who live together in a fixed residence, have the same expenditure and usually eat together) across the country. Primary sampling units (areas) were systematically selected with the probability of the number of households in each area. Then, one block in each area was selected by systematic sampling. Finally, ten households in each block were randomly selected. All members of the selected households were interviewed. About 77,879,278 individuals responded to IrUHS survey. Two validated questionnaires entitled Household Questionnaire and Individual Questionnaire were used to gather household socio-demographic and health status data and collect full information of household members. The questionnaires were completed through face-to-face interviews. Participants were asked about the need for inpatient services (in the 15-month interval prior to the interview) and outpatient services (2 weeks before the interview).

Among respondents to the survey, all individuals with basic health insurance who were visited at least once by a general practitioner (GP) and specialists in both private and public health care centers (n=11,782) were studied. These individuals answered "yes" to 1) did you feel any need for outpatient care in the two weeks preceding the interview, and 2) did you receive the services (physician visit) that you demanded? The share of OOP payments was captured for different kinds of visits. These OOP payments only represent the cost for a practitioner visit, without including the payments for any other outpatient services, e.g., medical procedures and diagnostic services. Indeed, by adding all types of outpatient services, the OOP payments would be higher. However, it is methodologically impossible to include all these procedures for the OOP payments share. Then, the difference between the defined copayment and the copayment paid was calculated regarding the formally defined copayment. It is worth noting that the formally defined copayment of different insurance schemes varies. However, after consulting with health insurance experts, due to methodological difficulties, it was recommended to consider an average of 30% of medical tariffs for a physician's visit in both the private and public sectors for the defined copayment in 2015. The medical tariffs for GP and specialist visits were USD 9, USD 11, USD 19 and USD 30 in the public and private sector, respectively (23).

Given the definition of IPs in healthcare, a payment made by a patient (or anyone else acting on behalf of this patient) to a provider (person or institution) that is paid in addition and/or in excess to what is officially being determined as a service fee (24), the additional payment endorses the existence of the IPs in outpatient services. Thus, the percentage of those who paid more than defined copayment was considered the prevalence of IPs. The study variables included demographic characteristics of health recipients (sex, place of residence, education), service provider's location (health posts, health center, public hospitals affiliated to a public hospital from Ministry of Health and Medical Education, public hospital not affiliated with MoHME and hospital affiliated with Social Security Organization, physician office, private clinics, charity clinics, outpatient surgery center, home care), service provider (GP and specialist), and visit cost. Descriptive statistics were used to determine the frequency and percentage of OOP payments and IPs, and the Mann-Whitney test was applied to evaluate the relationship between the variables. Weighting procedures were applied to obtain parameters from the dataset resulting from sampling to represent the Iranian population. Given the exchange rate of the USD Dollar in 2015 (=8720) (25), the national currency (Iranian Rial) was converted.

Results

Demographic characteristics

Table 1 presents the demographic characteristics of the participants (Table 1).

Median and percentage of the payments paid by insured people for GP and specialist visits in 2015

Data showed that the highest OOP payments for a GP visit were related to private physician office (USD 13), and the lowest was related to public health centers and posts (USD 3). The highest OOP payments for a specialist visit was related to private physician office (USD 29), and the lowest was related to charity clinics (USD 6). Data analysis showed that the median OOP payments for one GP visit were USD 3 in public and 11 in private. The median OOP payments for one specialist visit were USD 9 in public and 29 in private.

Comparison of median OOP payments, with regards to the defined tariff for GP and specialist visits in 2015 as USD 9 and USD 11 in the public and USD 19 and USD 30 in the private sector respectively, showed that the share that paid by insured people for GP and specialists visits without considering a franchise. The percentage was 38 and 61 for GP visits in the public and private sectors and 80 and 96 for specialist visits in the public and private sectors. Considering the defined copayments (30%) with basic insurance coverage for visit costs (franchise), the real difference between what paid and what should be paid was 8% (USD 1) and 31% (USD 8) for GPs in the public and private sector and 50% (USD 3) and 66% (USD 20) for specialists in the public and private sector, respectively (Table 2).

Table 1. Socioeconomic status of the study population

Variable	No. (%)	Mean
Gender		
Female	11266952 (57.2)	
Male	8445803 (42.8)	
Age		35.98 (22.13)
Education		
University	2458528 (12.5)	
Non-university	15275632 (77.5)	
Unknown	1978584 (10)	
Employment status		
Employed	4373386(28.4)	
Unemployed	8820904 (57.3)	
Have income without work	1540066 (10.0)	
Other	640139 (4.3)	
Place of residence		
Urban	13780658 (69.9)	
Rural	5932097 (30.1)	
Basic health insurance coverage		
Yes	18284397 (92.8)	
No	1428358 (7.2)	
Supplementary health insurance coverage		
Yes	3869578 (19.6)	
No	14100725 (71.5)	
Do not know	420873 (2.1)	

The percentage of IPs paid by insured people for outpatient GP and specialist visit

The highest and lowest IPs for one outpatient GP visit were seen in the public hospitals nonaffiliated with MoHME (95%) and the charity clinics (47%), respectively. The highest and lowest IPs for one outpatient specialist visit were seen in the home visit (100%) and the charity clinics (42%), respectively. In total, the private sector had the highest frequency of IPs for both GP and specialist visits (Table 3).

Determinants of the informal payment

Data showed that the OOP payments were significantly different considering the variables of gender, residency, educational status, and type of providers. The OOP payments were significantly higher in females, urban areas, high educated people, private service providers, and specialist visits. For those who paid more than defined copayments, significant differences were found between IPs with gender, residency, educational status, and type of providers (for a GP visit in public); gender, educational status, and type of providers (for a specialist visit in public and GP visit in private); and gender and type of providers (for a specialist visit in private) (Table 4).

Discussion

Our study sought to provide an overall picture of the current situation of OOP payments and IPs in outpatient services in Iran. Our findings showed that the share paid by insured people for outpatient visit costs, especially for specialist visits, was high, even considering the defined copayment. However, as mentioned earlier, this share was regardless of other outpatient services like diagnostic services or drugs. Our finding was in line with the Household Expenditure and Income Survey results in 2016 that

Table 2. Median and percentage of OOP paid by insured people for an outpatient visit in 2015

Health service provider		Physician office	Private clinic	Charity clinic	Home care	Public health center/post	Public hospitals affiliated with Ministry of Health	Public hospitals nonaffiliated with Ministry of Health	Public hospitals affiliated with Social Security Organization
Median of OOP (\$)	General practitioner	13	11	5	-	3	4	8	8
	Specialist practitioner	29	23	6	-	7	11	11	9
Formal tariff	General practitioner			11				3	
	Specialist practitioner			29				9	
Percentage of OOP regardless defined copayment (=30% tariff)	General practitioner	91.1	77.0	47.2	-	53.1	84.5	95.1	85.9
	Specialist practitioner	93.8	89.4	42.2	100	-	89.5	92.9	92.7
Percentage (median) of OOP regarding defined copayment (=30% tariff)	General practitioner			60.1				37.5	
	Specialist practitioner			96.2				80.0	
Percentage of OOP regarding defined copayment (=30% tariff)	General practitioner	61.1(9)	47 (8)	17.2 (1)	-	23.1 (0)	54.5 (1)	65.1 (5)	55.9 (5)
	Specialist practitioner	63.8 (20)	59.4 (14)	12.2 (0)	70 (48)	-	59.5 (1)	62.9 (6)	62.7 (6)
	General practitioner			30.1 (8)				7.5 (1)	
	Specialist practitioner			66.2 (20)				50 (3)	

Table 3. Frequency of IPs paid by insured people for an outpatient visit (%)

Health service provider		Physician office	Private clinic	Charity clinic	Home care	Public health center/post	Public hospitals affiliated with Ministry of Health	Public hospitals nonaffiliated with Ministry of Health	Public hospitals affiliated with Social Security Organization
Frequency of IP	General practitioner	91.1	77.0	47.2	-	53.1	84.5	95.1	85.9
	Specialist practitioner	93.8	89.4	42.2	100	-	89.5	92.9	92.7
	General practitioner			86.1				72.9	
	Specialist practitioner			93.0				90.2	

showed the higher OOP payments for outpatient versus inpatient services. According to this survey, the OOP payments for outpatient and inpatient services were 18.2 and 13.2, respectively (26). Our finding has three important messages for policymakers. The first is that OOP payments for outpatient services are one of the drivers of high OPP payments. They can affect the ability to pay for poor people and propagate refusal to treatment or other treatment options like self-medication. Therefore, it is suggested that the next steps of health reform include regulatory interventions for oversight and supervision enhancement in the outpatient setting.

Since the OOP payments of outpatient costs are considerable, at the same time, all of them are covered by at least one of the country's basic insurances, the second message to policymakers is that although adequate insurance coverage of the population is a necessary condition for UHC, it is not desired in the country. The global experience shows that an important factor in insurance coverage expansion plans' success is defining the covered services based on evidence (27, 28). Accordingly, special attention

should be paid to health service coverage, particularly to developing the essential and benefits package for outpatient services and other interventions aimed at financial risk protection to move towards UHC. The importance of this issue is underlined when the results of other studies, indicating that utilization of outpatient services does not change with the status of insurance coverage or type of insurance except for the lowest-income households, are taken into account (29). Therefore, organizing insurance coverage status may play an essential role in decreasing poverty and increasing equity.

The third message to policymakers is that specialized services have a higher share of OPP payments in the outpatient setting. The high share of OOP payments for specialized services might be due to incomplete implementation of the referral system leading to unnecessary specialist visits. At the same time, full implementation of the referral system may decrease the rate of unnecessary visits. It leads to more financial protection due to the possibility of more coverage of the costs (30).

Another finding of the present study indicated that in-

Table 4. The determinants of informal payments

Informal payments paid by patients	Variable		Mean Rank	Mann-Whitney U	p
for a GP visit in public	Gender	Male	3179.12	-2.677	0.007*
		Female	3305.39		
	Resident	Urban	3310.25	-3.549	0.0004*
		Rural	3134.17		
	Education	university	2351.64	-4.328	0.000*
		Non-university	2132.84		
	Provider	Private	3925.32	-41.083	0.000*
		Public	1896.82		
Type of provider	General	2254.99	-43.304	0.000*	
	Specialist	4268.04			
for a specialist visit in public	Gender	Male	2531.15	-3.404	0.001*
		Female	2675.04		
	Resident	Urban	2636.83	-1.507	0.132
		Rural	2569.38		
	Education	university	1843.07	-2.623	0.009*
		Non-university	1726.64		
	Provider	Private	2868.26	-22.765	0.000*
		Public	1726.68		
Type of provider	General	1662.17	-41.01	0.000*	
	Specialist	3380.26			
for a GP visit in private	Gender	Male	2687.73	-3.267	0.001*
		Female	2829.92		
	Resident	Urban	2789.86	-1.294	0.196*
		Rural	2730.17		
	Education	university	1954.03	-2.762	0.006*
		Non-university	1827.49		
	Provider	Private	3113.25	-27.746	0.000*
		Public	1737.03		
Type of provider	General	1829.80	-40.211	0.000*	
	Specialist	3560.70			
for a specialist visit in private	Gender	Male	2240.46	-3.028	0.002*
		Female	2360.83		
	Resident	Urban	2316.89	-0.41	0.682
		Rural	2299.58		
	Education	university	1603.06	-1.695	0.090
		Non-university	1533.13		
	Provider	Private	2415.47	-11.765	0.000*
		Public	1802.54		
Type of provider	General	1425.95	-36.617	0.000*	
	Specialist	2890.36			

sured people's OOP payments were higher in the private sector than in the public sector. Previous studies have shown that the public sector of Iran faces problems such as high density of patients, long waiting queues, lack or non-usability of therapeutic or diagnostic devices, low number of medical staff compared to patients, unfavorable morale of the staff, and inappropriate facilities leading to decreased quality of the services (31). These factors increase the patients' interest in private service providers. However, regulating this sector has been a nightmare for health policymakers (19). It seems that regardless of the tariff schedule defined for the private sector, the private sector has its prices in practice, and patients are asked to pay based on these prices. Thus, there might be multi-prices for the same services in the private market, and in some instances, the price list is ten or even a hundred times more expensive than the public price list. The weak governance of the MoHME on private activity is still a major weakness of the country's health system (32). For this reason, despite the opportunity for the activity of the private sector and the possibility to benefit from its capabilities in delivering health services, not only their total capacity has not been used, but also their activity has led

to increased people's share of health costs. Therefore, we recommend that the potential role of the private sector should be used to realize health system objectives through managerial interventions and more regulations on its activity.

Furthermore, increasing access to public outpatient services is suggested. It is worth noting that great efforts have been made to enhance the availability and access to public facilities. For instance, under HTP, many physicians and nurses were recruited to work in public hospitals. Around 24000 new beds have been added or replaced. Around 6500 offices in 250 new clinics were formed in the public sector (19). Nevertheless, there is still a need for further interventions to increase public services and their quality.

Our study's finding displayed the significant prevalence of IPs in the outpatient setting, indicating that these IPs remain common in the outpatients' market in both the public and private sectors. The phenomenon of IPs and their adverse effects on the health system's performance has been investigated in many studies (20). The reported prevalence of IPs in selected articles ranges from 1% to 40% for outpatient services and 2% to 80% for inpatient ser-

vices (20, 22). Additionally, there are generally higher IPs in the inpatient services than in outpatient. Divers finding of IPs prevalence may be prominently influenced by the different methodologies employed to measure the prevalence of IPs. Sampling selection bias, incorrect classification of health care costs, inability to identify IPs, recall period and different data sources are some reasons that account for the diversity of reported IPs (24, 33). The high prevalence of IPs for outpatient services was also reported in upper-middle-income and high income economies such as Greece, Albania, Turkey, Hungary, and Bulgaria (20). The health system of these countries is characterized by the coexistence of a National Health System, compulsory and voluntary insurance, and OOP payments.

It is noteworthy that the IPs are not catastrophic considering their mean Rial value. Nevertheless, this should not be used as an excuse to ignore these payments. There is still a need to eliminate or minimize them in the outpatient setting, mainly to organize and regulate the outpatient services arrangements. In this regard, making a well-regulated market would be fundamental. In such a market, a set of policies and rules prohibiting IPs should be developed by the government and be complied with by both public and private sectors. If these rules are enforced, and there are consequences for noncompliance, it will be expected to deter abuses.

Furthermore, enhancing patient information and establishing more channels for complaints can help to reduce IPs. Making sure that patients know the official medical tariffs, know what staff are paid and recognize the rules against IPs are some examples of this intervention. Finally, in cases where patients continue to pay informally and providers still receive extra payments when it is not necessary, it seems that some behavioral change interventions are required. These interventions should address patients' fears and beliefs about the poor quality of care or be punished by providers if they reject making IPs. Additionally, they should formalize user fees and modify the providers' perspective about their incomes' expected level.

The findings of our study displayed that females, in general, are more likely to pay informally. The same results were reported in previous studies (34). It seems that more female referrals to doctors and their need for more diagnostic and therapeutic services are the reasons for the high prevalence of IPs of females. We also observed that living in the urban area increased the probability of IPs. Living in an urban area is usually expensive, while the salary levels of healthcare providers are low. It may be the reason for the medical staff's request for IPs to compensate for the living costs. However, there is no consensus in the literature about the association of the residential area with IPs. Several studies have demonstrated that people who live in rural areas are more willing to have IPs. In contrast, others stated that living in an urban area increased the probability of paying IPs (22, 34). Similar to residency, different results have been reported for the educational status as the determinant of IPs. Some studies have reported that higher levels of education increase the probability of IPs. In contrast, others have demonstrated that the higher the level of education in patients, the lower

is the incidence of IPs (34). Like previous studies (22), we found that the prevalence of IPs was mainly higher in the private sector. We suggested paying more attention when designing future policy interventions to control IPs in the private sector.

This study was conducted at a national level using the national survey data, helping to provide a picture of the patient payments in the outpatient setting. However, it had some limitations that may influence the findings of the research. First, the study was limited to insured people, and there is no information available on the non-insured population. We also could not analyze the status of complementary insurance coverage due to missing data on insurance types and schemes. It may result in an overestimation of the percent of OOP payments and the prevalence of IPs. However, as previous studies report, being insured could increase the possibility of paying IPs and their amount (22). Second, we focused on GP and specialist visits and did not assess other outpatient services. The payments were also not categorized according to visitors' needs (psychiatric, dentistry, internal medicine, and other services). Third, due to research restrictions, we examined the difference in IPs for outpatient services for limited variables.

Conclusion

It seems that the high OOP payments and IPs for outpatient services are prevalent in the country. Since reducing IPs is crucial to achieving UHC with minimum financial hardship, implementing suitable strategies to address this issue can control the high OOP payments and eliminate the IPs. Some of these strategies that could be considered, particularly in outpatient services, are making a well-regulated market, reinforcing the referral system, and developing equity-oriented essential health services. Moreover, further investigations to measure the extent of OOP payments and IPs, analyze the various determinants of OOP payments and IPs for outpatient services, and examine in detail the process of IPs are needed.

Conflict of Interests

HSS was a faculty member of Iran's National Institute of Health Research until 2019 and RM was its head until May 2018. Other authors declare that they have no competing interests.

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