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How does the introduction of patient co-payments for selected health services affect formal and informal out-of-pocket payments and utilization? Evidence from Armenia

Baktygul Akkazieva and Matthew Jowett

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Baktygul Akkazieva and Matthew Jowett

Abstract

This report presents the findings of an evaluation of the introduction in Armenia of patient co-payments for specific services provided through the publicly financed basic benefits package (BBP) at the inpatient level. A baseline survey was conducted in July/August 2011 and a follow-up survey in December 2011 with data disaggregated in a number of ways to facilitate equity analysis. Overall, out-of-pocket payments fell as a result of the policy, with approximately 6% fewer patients nationally accessing care without making any form of out-of-pocket payment. Furthermore, nationally the number of patients making an unofficial payment fell significantly. However, this picture hides the impact of the policy on different population groups, for different services, and in different parts of the country. One significant finding is that although the number of people making an unofficial payment decreased, the average amount of each payment increased considerably.

Keywords

National Health Policy
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Expenditures, Out of Pocket
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Executive summary

Background

This report sets out the results of an evaluation of a policy change involving the introduction of co-payments for specific services provided through the publicly financed basic benefits package (BBP) in Armenia. The BBP was introduced in 1997 as a publicly funded set of services which eligible individuals could receive free of charge. The decision to introduce these patient charges was taken by the Ministry of Health (MOH) in response to reports of widespread unofficial payments for hospital services, with the health sector being viewed as a major source of corruption in the country. This phenomenon was in turn considered to be the result of hospitals being underpaid by the State Health Agency (SHA) for the services they provided under the BBP. At the same time, there were also concerns that many people were not seeking care when ill in case they had to make substantial informal payments. There were also concerns that many patients faced catastrophic levels of out-of-pocket payments (OOPs) when accessing health care.

The policy intervention

Amendment to Government Decree ROA #318-N (4 March 2004) in February 2011 authorized the introduction of patient co-payments¹ for emergency services and gynaecological services (except maternity services) nationally from March 2011. Although not part of the Government Decree, such user charges were also being considered for oncology services and services provided to 'social beneficiary' patients.

The amount charged to patients was calculated by estimating the difference between the cost of delivering a service (which in turn was based on analysis commissioned by the MOH) and the amount actually being paid to health facilities (based on the prevailing schedule of prices under the BBP). As a result, co-payments varied greatly depending on the specific service and the facility level. The new policy implied that affected BBP services were, officially, no longer provided free of charge to the population. At the same time, the remuneration of medical staff responsible for providing these services was increased, although no details are available.

The legislation itself stated that its objectives were to:

- i. ensure adequate reimbursement for medical care and services;
- ii. make OOPs for BPP services predictable and transparent for the population;
- iii. reduce the gap between service prices set in the Republic of Armenia (ROA) state budget and the actual costs of providing services;
- iv. improve the management of financial flows in health facilities;
- v. increase the remuneration of health care staff;
- vi. improve the quality of health services;
- vii. pool additional financial resources required for reimbursement and technological innovations; and
- viii. reduce unofficial payments at health facilities

Research question

The impact evaluation focused primarily on point (viii) of the legislation, but also addressed point (ii), and articulated the following research questions:

- How has the introduction of co-payments affected the frequency and magnitude of overall OOPs for the health services/beneficiaries affected?
- How has the financial burden associated with hospitalization changed?
- How has the composition of OOPs changed (e.g. payments to health workers, for medicines and other supplies, unofficial payments)?
- How has the relationship changed between treatment and health seeking behaviour (e.g. delays in seeking care), the uncertainty with respect to the payments that those seeking care can expect to pay, and the existence of unofficial exemptions?
- Are patients aware of the co-payment reforms, do they understand the details, and where did they learn about them?

Methods

Two surveys were conducted a baseline survey of patients discharged three months before the introduction of co-payments (i.e. in July/August 2011) with a follow up survey of patients discharged between four and five months following the introduction of user charges (December 2011). A stratified random sample was used comprising the population at the national level, in Yerevan and at regional level, and for each of four categories (two categories subject to the new user charges (users of emergency services and of gynaecology services) and also for oncology and social beneficiary patients).

A structured questionnaire was developed to collect information from interviewed patients in both surveys. Interviews were conducted within six months of patient discharge for both baseline and follow-up surveys to minimize recall errors.

Main findings

The sample design of the survey highlights statistically significant changes between the baseline and the follow-up survey. The main findings are as follows:

Incidence of out-of-pocket payments (either official or unofficial)

- Overall, 5.8% fewer patients made an OOP, either official or unofficial, following the introduction of official co-payments (58.3% in the baseline survey, and 52.5% in the follow-up survey). This finding is driven primarily by fewer people paying for emergency services in

Yerevan, and fewer social beneficiaries making payments in Yerevan. Elsewhere there is no significant change (eg. patients in the regions, or for gynaecology patients).

- Overall, there is a large 8.2% reduction in the number of patients making unofficial payments, equally true both in the capital city of Yerevan and in the regions. Again, this finding is almost entirely driven by fewer unofficial payments being made for emergency services and social beneficiaries categories. Otherwise no significant change was found.

Average amount amongst those making an out-of-pocket payment (either official or unofficial)

- Whilst fewer people are making OOPs overall, the mean amount of those who did make a payment has increased slightly (Armenian Dram (AMD) 233 702 in the baseline survey and AMD 239 910² in the follow-up survey). This is due to the increased OOPs in two categories – emergency and oncology. However, this increase is not statistically significant.
- However, despite a slight increase overall, emergency patients in the regions saw a 50% reduction in average payments, with social beneficiary patients in Yerevan seeing a 33% reduction. For other categories of patients, no statistically significant changes were detected.

Unofficial payments

- Nationally, there was an 8.2% reduction in the number of patients who reported making an unofficial payment, with similar levels of reduction in Yerevan and the regions. However, the average unofficial payment increased amongst those who made such a payment, by 47% in both Yerevan and the Regions. This finding is driven largely by more people making unofficial payments in the oncology and social beneficiaries categories.
- For gynaecology (non-maternity) services, whilst the number of patients who reported making an unofficial payment did not change significantly, the average amount of payment in the regions increased by 198% i.e. trebled from AMD 68,806 to AMD 204,783. In contrast, there was no significant change between the two surveys in Yerevan.
- Finally, while not being subject to official co-payments, 4.5% fewer social beneficiary patients reported making an unofficial payment, although the average amount paid amongst those who did pay increased by 69% on average from AMD 62,405 to AMD 105,183, with patients in Yerevan reporting a greater increase than patients in the regions.

Conclusion

Overall, out-of-pocket payments fell in Armenia as a result of the new policy, with approximately 6% fewer patients nationally accessing care without making any form of out-of-pocket payment. Furthermore, the number of patients making an unofficial payment has also fallen significantly at

2. In 2011, the average exchange rate was 1 USD = 372.46 AMD

the national level. However, the national picture hides some important differences; for example, patients using emergency services saw the greatest benefit with significant improvements in financial access and decreasing unofficial payments. In contrast, however, the average amount paid amongst those who made an unofficial payment has increased significantly. For gynaecology patients there was little change overall in the number of patients making a payment, although in the regions the average amount paid has increased, and most alarmingly the amount of unofficial payments has trebled.

Interestingly, there are several significant findings for social beneficiary patients, despite the fact that they were not subject to new co-payments, suggesting some knock-on effects of the new policy. For example, there were significant improvements for this group, with far fewer patients making OOPs, including unofficial payments, and the average amount decreasing significantly. The only anomaly is that amongst those making unofficial payments, the average amount increased significantly, especially in the regions, where it doubled.

This study has generated valuable evidence on the impact of a major health policy intervention in Armenia and highlighted the varying impact of the policy on different population groups, for different services, in different parts of the country. Such information should be monitored closely to ensure that Armenia continues to make progress towards universal health coverage.

How does the introduction of patient co-payments for selected health services affect formal and informal out-of-pocket payments and utilization? Evidence from Armenia

1. Background

This report summarizes the findings of both a baseline and a follow-up survey conducted to estimate how the introduction of official co-payments for selected health services affected various dimensions of out-of-pocket spending (OOPs) for health services. Formal co-payments are one of several different types of OOPs, including user charges, co-payments, co-insurance and deductibles. Informal, unofficial, envelope or under-the-table payments are also OOPs (Garel, 2015) which are made at the point of service use. The frequency and magnitude of OOPs is estimated, as well as the level of patient financial burden associated with hospitalization. The extent of unofficial payments for health services is also estimated. The surveys were conducted with the technical and financial assistance of the World Health Organization (WHO); the World Bank funded fieldwork for the baseline survey.

Public spending on health as a share of GDP in Armenia remains relatively low compared to other Former Soviet Union (FSU) countries, standing at around 1.5% in 2008 (Jowett and Danielyan 2010). A number of financial reforms have been introduced within the health sector since 1997, with the objective of improving financial management, increasing financial sustainability and enhancing the accountability of health facilities. The emphasis of reforms has been to improve the way in which the state budget is used, in particular to make the use of available resources more efficient. The introduction of the Basic Benefits Package (BBP) and some official patient (user) charges during the late 1990s is one example. The BBP was introduced as a publicly-funded set of services which eligible individuals could access free of charge. Services not listed in the BBP, and outpatient pharmaceuticals, had to be paid out-of-pocket, in full, at the point of use. The BBP has been periodically reviewed, with the range of services and/or user-charge exemptions extended or reduced, depending on the level of funding available.

Despite the above mentioned policies, OOPs (both official and unofficial) continued to be made in health care facilities by everyone, including population groups entitled to free health care who were frequently asked to pay for health care services under the BBP. Unofficial payments were still widespread, particularly for hospital services and many patients faced catastrophic payments in order to access the care that they needed (Hakobyan et al., 2008; DHS, 2005; NHA, 2008). This phenomenon, in turn, was considered to be the result of hospitals being underpaid by the State Health Agency (SHA) for the free services they provided under the BBP.

In addition, many people did not seek care at all when they were ill due to the expected high costs of financial payments. This situation raised concerns about equitable access to health care, with OOPs representing a serious financial barrier for much of the population to access health care. Such practices persist in many other countries of the former Soviet Union.

2. The introduction of new official patient co-payments

In order to bring an end to patients making unofficial payments in hospitals, and to improve equitable access to health care and financial protection for the population, the Ministry of Health (MOH), together with the State Health Agency (SHA) introduced a further set of official co-payments (user charges) on a selection of BBP services in March 2011.³ New co-payments were introduced for various emergency services and gynaecological services (except maternity services) according to a pricelist. At the same time co-payments were also being considered for oncology services and services for socially vulnerable and special groups (referred to as social beneficiaries). However, it was decided to defer the introduction of these co-payments. Even though oncology services were not subject to official co-payments in 2011, they were included in the surveys conducted for this analysis.

The new co-payments were calculated as the difference between the estimated cost of delivering the services, and the amount currently being paid by the government to health facilities (based on the prevailing schedule of prices under the BBP). As a result, there is large variation in the level of co-payments across health facilities.

According to the legislation, the co-payments are intended to:

- i) ensure adequate reimbursement for medical care and services;
- ii) make OOPs for BPP services predictable and transparent for the population;
- iii) reduce the gap between the service prices set in the state budget and the actual costs of providing services;
- iv) improve the management of financial flows in health care facilities;
- v) increase reimbursement of health care staff;
- vi) improve the quality of health services;
- vii) pool additional financial resources required for reimbursement and technological innovations; and
- viii) reduce unofficial payments at health facilities.

The price of medical services i.e. the amount paid to providers by the SHA, and the co-payment amounts for selected outpatient and inpatient services are set by the MOH in consultation with the Ministry of Finance. If a patient needs to make a co-payment, a contract is signed between the health facility and the patient. The reimbursement level, provided by the government, and the co-payment made by the patient are clearly stated in this contract. Under the coverage rules, the MOH identifies a list of services and programs that are completely free of charge based on the type of care and services provided. In addition, social beneficiaries including vulnerable and specific population groups (such as people in households living in poverty and children with disabilities) are exempt from co-payments.

Based on a patient's entitlement to health care services within the framework of the BBP, the co-payment is paid by the patient, his/her family or third-party payers (individual or institutional) in cash directly to the cashier at the health care facility, or transferred to the bank account of the facility.

3. Amendment to Government of Republic of Armenia Decree (ROA) #318-N ,4 March 2004, 2011.

Co-payments can be made as a single payment or by instalments no later than on the day of patient discharge. In some exceptional cases, when a patient or his/her family cannot afford to make the co-payment, a committee established within each health care facility can make a decision to exempt such patients or to reduce the co-payment rate. The total sum of co-payment exemptions and concessions cannot exceed 20% of overall quarterly co-payment revenues.

Additionally, along with the introduction of official co-payments, the remuneration of medical staff at health care facilities providing BBP services has been revised and adjusted. It is important to note that co-payments made within the framework of the BBP are also used by health care facilities to cover direct service costs, including at least 50% of staff salaries.

3. Objectives of the baseline and follow-up surveys

Four objectives were identified for the surveys, each relating to the impact of the introduction of official patient co-payments – and each analysed according to patient socioeconomic group:

- to estimate changes in the frequency and magnitude of OOPs for health services in order to evaluate patients' financial burden associated with hospitalization;
- to estimate changes in disaggregated OOPs for health services and medical personnel, medicines and other supplies, including unofficial payments;
- to understand changes in the relationship between treatment and health-seeking behaviour (e.g. delays in seeking care), uncertainty with respect to the payments that those seeking care can expect to pay, and the existence of unofficial exemptions (from a patient's perspective) after the introduction of co-payment reforms; and
- to understand patient awareness of official co-payment reforms

More specifically, the following detailed research questions were addressed:

- How has the introduction of patient user charges affected the frequency and magnitude of overall OOPs for the health services/beneficiaries affected?
- How has the financial burden associated with hospitalization changed?
- How has the composition of OOPs changed (e.g. payments to health workers, for medicines and other supplies, unofficial payments)?
- How has the relationship changed between treatment and health seeking behaviour (e.g. delays in seeking care), the uncertainty with respect to the payments that those seeking care can expect to pay, and the existence of unofficial exemptions?
- Are patients aware of the co-payment reforms, do they understand the details, and where did they learn about them?

4. Methods

The study adopted the approach used in similar surveys previously conducted by WHO: to interview patients following discharge from hospital after receiving treatment for one of the services for which the new co-payments had been introduced; similar data were also collected for non-affected services for comparison. Names and addresses of individuals were made available by the SHA and a stratified random sample of patients was drawn from this list. Two surveys were conducted – a baseline survey of patients discharged three months before the introduction of the user charges (ie. in July/August 2011) and a second survey of patients discharged between four and five months following the introduction of user charges (December 2011) (See Fig. 1). Annex 1 provides a detailed account of the survey design and data cleaning, and is summarized below:

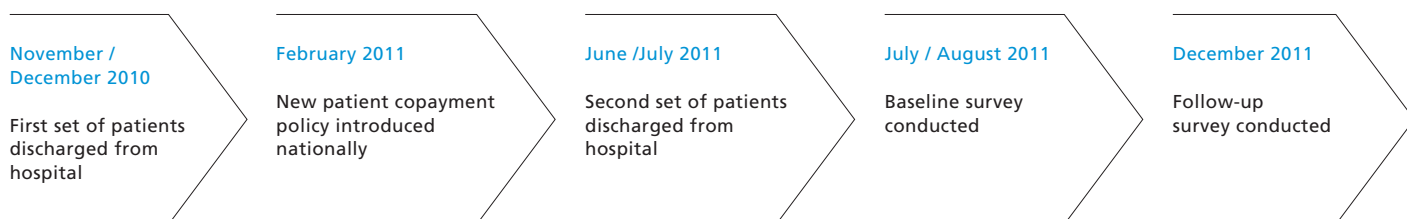
Sampling: A sample was drawn which was representative of the population at the national level, in Yerevan and at regional level (in three representative regions or *marzes* as they are called in Armenian), and for each of four categories (two categories subject to the new user charges, and also for oncology and social beneficiary patients) for comparative purposes and to learn about the wider diffusion of user charges. To achieve this, a stratified random sample approach was used. The sample also needed to be able to detect statistically significant changes between the baseline and post-intervention (follow-up) surveys in order to estimate the impact of the introduction of user charges on a number of indicators of interest. An identical approach to sampling was used for both surveys.

Questionnaire: A structured questionnaire was developed to collect information from interviewed patients. This was identical for both surveys, except for some additional questions in the follow-up survey related to awareness about the new user charges policy. Unofficial payments, a major focus of the study, are defined as out-of-pocket expenditures made by patients without receiving a receipt, receiving only a partial receipt or where uncertainty about the receipt was indicated.

Fieldwork: Largely due to the inaccuracy of much of the information held on the SHA database, the interview success rate was 56% for the baseline and 69% for the follow-up survey (see Tables 1 and 2 for details). Interviews were conducted within six months of patient discharge for both baseline and follow-up surveys to minimize recall errors.

Data validation and analysis: data was validated prior to analysis to ensure internal consistency. There was some concern that respondents may have misunderstood some data definitions, more specifically that a patient may have reported the same payment twice, once as a lump sum and again when questions about additional payments were asked. The data was audited to detect this problem, with cross-checks made with the original completed questionnaire; where double-reporting was clear, the database was corrected accordingly.

Fig. 1. Timeline of sampling and surveys conducted



In terms of interview rates, Tables 1 and 2 summarize the planned sample, interview success rate, and final completed interviews for the various patient categories in both surveys. The interview success rate was slightly higher in the follow-up surveys than in the baseline survey. The main reasons for the non-completion of interviews was the poor quality of data on sampled patients held in the SHA database, in particular regarding addresses; either an address was not found, no-one was living there, the person was not available or the address was incorrect. In addition, the main reason for a lower response rate amongst cancer patients was that many had died prior to the attempted interview.

Table 1. Planned and actual sample size

Note: B = baseline survey, F = follow-up survey

	Planned sample (number)		Actual sample (number)		Proportion of planned sample achieved (%)	
	B	F	B	F	B	F
Emergency medical care services	730	659	668	560	91.5	85.0
Gynaecological medical care services	205	269	155	265	75.6	98.5
Oncological medical care services	385	447	262	475	68.1	106.3
Medical care services for socially vulnerable and special groups	807	855	742	643	91.0	75.2
TOTAL	2127	2230	1827	1943	85.9	87.1

The relatively low interview success rate overall reflects the unique and difficult nature of the survey. In a typical household survey, a figure of around 90% would be expected. In this survey, most of the patients had been seriously ill, and many had died following discharges and prior to the interview.

Table 2. Survey implementation data: attempted and completed interviews

Note: B = baseline survey, F = follow-up survey

	Attempted interviews (number)		Completed interviews (number)		Interview success rate (%)	
	B	F	B	F	B	F
Emergency medical care services users	1186	821	668	560	56.3	68.2
Gynaecological medical care services users	284	374	155	265	54.6	70.9
Oncological medical care services users	528	695	262	475	50.8	68.3
Medical care services for socially vulnerable and special groups	1257	930	742	643	59.0	69.1
TOTAL	3255	2820	1827	1943	56.1	68.9

5. Indicators

The results of the current baseline survey are grouped around the following indicators:

5.1 Patient financial burden at the hospital level

First, as noted in Annex 1, payments need to be separated by wards: intensive care/resuscitation wards and normal wards. Secondly, we group payments into the following categories: emergency, gynaecology, oncology and social beneficiaries and within each of these: (a) payment of a lump sum; (b) payment for ambulance; (c) payment for transportation; (d) payment for admission; (e) payment for medicines; (f) payment for medical supplies; (g) payment for lab tests (simple and complex); (h) payments to medical personnel, differentiated by treating doctors, specialists and nurses; (i) payment for surgery, including anaesthesiology; and (k) other payment categories.

For each payment category mentioned above (i.e. (a) to (i)), type of ward and location (Yerevan and the three Regions) we present the results according the following indicators:

- Share of patients who made payments and the average (mean) amount of the payment (separating out unofficial payments) by category, the three Regions vs. Yerevan and by wards **among all patients surveyed**. This presents the prevalence of payments and changes as an average amount.
- Mean payment (separating out unofficial payments) by category, the three Regions vs. Yerevan and by wards **among those patients who made a payment**, comparing this with the baseline survey results.
- Total volume of payment (separating out unofficial payments) by category, the three Regions vs. Yerevan and by wards **among those patients who made a payment**, comparing with the baseline survey results.

5.2 Patient awareness of payments at hospital level

This indicator reflects if there are any financial barriers to access to health services. To evaluate this, patients were asked whether they were aware of payments that they were obliged to make in hospital and how they paid for their hospitalization (e.g. whether they had to borrow money).

5.3 Responsiveness of the health system to patient expectations

This indicator reflects the level of patient satisfaction with the care they received and the outcome of treatment. Respondents were asked a set of questions regarding issues such as care and respect towards patients, information about diagnosis and treatment and time taken by medical personnel. In addition, respondents were asked about the availability of utility services (such as bathrooms etc) in the hospital which also contribute to patient satisfaction with the medical services provided by hospitals.

5.4 Awareness of co-payment policy

This indicator reflects patient awareness of official co-payment reforms prior to hospitalization. In the follow-up survey, respondents were asked several questions about their knowledge of this new policy.

6. Respondents' (patients') main characteristics

Respondents were largely 45-64 years old (47%) and female (62%) (Table 3). There is evidence from other countries that women are more likely to seek care than men when feeling ill (Falkingham, Akkazieva, Baschieri, 2010). Sample-specific wealth quintiles were calculated for respondents and used to analyse the results by socioeconomic group. It should be noted that these quintiles apply only to those receiving treatment in the survey and not the population of Armenia. In the follow-up survey, about 77% of patients received treatment in Yerevan, the same as in the baseline survey (78%). The results suggest that the proportion receiving care in Yerevan increases with wealth. Unsurprisingly, the proportion of patients that are classified as social beneficiaries declines with wealth. The emergency category is the next highest patient category seeking health care (29%), with a mixed picture observed across quintiles.

Table 3. Survey respondents' main characteristics

Note: The data in this table are from the follow-up survey

	Poorest	2	3	4	Richest	Total
Number	397	390	388	388	380	1943
Age group (%)						
> 24	12	9	10	12	7	10
25-34	10	9	8	10	9	9
35-44	13	10	10	8	10	10
45-54	21	23	20	22	22	22
55-64	26	27	24	24	23	25
65-74	12	14	19	17	21	17
75-84	6	7	9	6	8	
85+	0	2	1	2	1	1
Gender (%)						
Male	40	34	37	43	36	38
Female	60	66	63	57	64	62
Region (%)						
3 Regions	38	31	18	14	13	23
Yerevan	62	69	82	86	87	77
Patient categories (%)						
Emergency	30	32	24	31	27	29
Gynaecology	14	11	12	15	17	14
Oncology	18	22	27	26	29	24
Social beneficiaries	38	36	37	28	27	33

7. Survey results: Patients' financial burden at the hospital level

7.1 Ambulance transportation

At the time of the follow-up survey 24% of surveyed patients were hospitalized following transportation by ambulance, which is less than during the baseline survey (31%); these are mostly emergency category patients (56%) with the proportion being higher in the regions (31%) than in Yerevan (22%). Among all patients hospitalized following transportation by ambulance about 15% paid for the ambulance service to hospital during the follow-up survey, which is less in comparison with the baseline survey (24%). In the follow-up survey the average amount paid for ambulance transportation was approximately AMD 10 371 (baseline survey AMD 12 000), whereas the median amount was AMD 3500 (baseline survey AMD 5 000).

It should be highlighted that there were two cases when patients paid more than AMD 40 000 for their ambulance; these cases were in the regions. After removing these outliers, the average amount paid for an ambulance becomes AMD 5491 (baseline survey AMD 5347) and there is no great difference between the regions and Yerevan – the average amount paid in the three regions was AMD 5650 and in Yerevan it was AMD 5458. The median payment amount in the regions was AMD 3000 and in Yerevan it was AMD 3750. The minimum amount that was paid for an ambulance was AMD 1000 and the maximum was AMD 30 000 (including the two outliers that were replaced with the median value of AMD 3500). Standard deviation (SD) is 30 732 considering outliers; however, if we replace these two outliers with a median value (AMD 3500), the SD decreases by 5694.

7.2 At the point of admission to hospital

The share of patients who reported payments made for admission to hospital during the follow-up survey (10%) was less than during the baseline survey (14%); the share of patients who reported that they paid for hospital admission in Yerevan (12%) was more than in the regions (7%). Of these patients, about 29% made unofficial payments (of which social beneficiaries 53%, gynaecology 49%; emergency 23%, oncology 12%). In contrast, the share of patients who made unofficial payments during the baseline survey was higher (41%).

In the follow-up survey, the average amount paid for hospital admission was AMD 40 813 (baseline survey AMD 18 194) whereas the minimum sum was AMD 500 and the maximum AMD 380 000 in the gynaecology category (baseline survey AMD 250 000). In the regions, the maximum amount paid for admission was AMD 205 000 whereas in Yerevan it was AMD 380 000. The median payment made in the regions was also lower (AMD 10 000) compared to Yerevan (AMD 25 000).

7.3 Lump sum hospital payment

Some patients or their families pay an up-front lump sum payment when they are hospitalized so that they do not need to make further payments during hospitalization. Out of all patients who made a payment, 29% reported making a lump sum payment for their entire treatment in the follow-up survey, up from 23% in the baseline survey.

Out of the 31% in the follow-up survey, about 12% reported that they did not receive a receipt, considering it as an unofficial payment; the incidence of such unofficial payments increased by 3% from the baseline survey. Hence, unofficial payments increased by 7% and amounted to about 38% of all lump sum payments during the follow-up survey (31% in the baseline survey) (Annex 3). The mean lump sum payment was AMD 200 512 per patient (SD 452 729) including AMD 128 037 as the mean unofficial amount (SD 344 512); these amounts were less than in the baseline survey (AMD 305 147 and AMD 226 252 respectively).

The percentage of people reporting a lump sum payment was slightly higher in Yerevan than in the regions (by 3%) but of this, the level of unofficial payments was rather higher in the regions than in Yerevan, 58% and 25% respectively. In addition, the share of patients who reported making an unofficial lump-sum payment was higher in the regions than in Yerevan (51% and 35% respectively) (Annex 3). The same trend is observed in the baseline survey.

Analysing by wards, in normal wards the percentage of all surveyed patients in the follow-up survey who reported making a lump sum payment increased by 27% (18% in the baseline survey) and 10% reported unofficial payments (8% in the baseline survey) (Annex 2b). There is no great difference in reported payments between the regions and Yerevan (28% and 26% respectively) including 14% and 9% respectively in unofficial payments (similar data were observed in the baseline survey). The opposite can be observed in intensive care wards, with 24% making lump sum payments in the regions and 29% in Yerevan; of these unofficial payments were reported as 7% and 41% respectively (Annex 2b). A similar trend can be observed in the baseline survey. However, the percentage of patients who reported making any kind of payment in intensive care wards is quite a bit higher in the follow-up survey than in the baseline survey – 14% and 26% – including unofficial payments 8% and 14% respectively.

Analysing by patient categories, the number of patients who reported making lump sum payments in the emergency and social beneficiaries categories decreased in the follow-up survey compared to the baseline survey (from 200 to 192 and from 118 to 89 respectively). The mean amount paid by patients in the social beneficiaries category was 1.3 times higher in the follow-up survey than in the baseline survey (see Fig. 2 below) possibly indicating a growing financial burden on people in this group. The mean payments reported as unofficial payments decreased in all categories, with the exception of the social beneficiaries category (Annex 4).

7.4 Purchasing medicines during hospital stays

In the follow-up survey approximately 15% of all interviewed patients reported that they bought medicines themselves, which is less than in the baseline survey (25%); this represents 6% of all patients making OOPs, which is higher than in the baseline survey (only 1%). Out of the 15%, about 1% reported that they did not receive a receipt, considering it as an unofficial payment (Annex 3). The volume of payments, including unofficial payments, is higher in the follow-up survey than in the baseline survey; thus, unofficial payments amounted to 4% in the follow-up survey whereas in the baseline survey the level was only 0.3%. This is mostly due to oncology patients who reported making such payments – there was an increase from 23% to 44% in this payment category (see Fig. 2 below). The mean unofficial payment was substantially higher in the follow-up survey and amounted to AMD 90 294 (SD 469 393) compared with AMD 24 667 in the baseline survey. In the regions the mean amount was less than in Yerevan in the follow-up survey; but the reverse is observed in the baseline survey.

Analysing by wards, in normal wards 15% of those surveyed said that they bought medicines themselves while this was the case in 8% of surveyed patients in intensive care wards; these levels were less than in the baseline survey (25% and 14% respectively). The mean unofficial payment in normal wards was significantly higher in the follow-up survey and amounted to AMD 107 286 (AMD 24 667 in the baseline survey) and in intensive care wards the mean amount was AMD 11 000 (no payments were made in the baseline survey) (Annex 2a and 2b). In fact, the share of unofficial payments in intensive care wards reported in the surveys is insignificant due to the fact that in all likelihood if patients needed any medicines they would have bought them in different pharmacies and obtained receipts, thus not considering such payments as unofficial payments. However, further in-depth analysis of medicines purchased during hospital stays is needed.

7.5 Simple and complex tests

During the follow-up survey approximately 15% of all patients reported that they paid for laboratory tests, including simple and complex tests, which is less than in the baseline survey (21%) (Annex 3). In the follow-up survey, about 80% of total payments made for simple tests were unofficial payments while for complex tests, unofficial payments represented about 59% of total payments (85% and 56% respectively in the baseline survey). The share of patients reporting unofficial payments among those who made any payments was not so different than in the baseline survey – 72% for simple tests and 57% for complex tests (70% and 55% respectively in the baseline survey). The average payment among those who paid for simple tests slightly increased in the follow-up survey and amounted to AMD 19 092 (SD 24 087). The opposite is true for complex tests where an average of AMD 40 911 (SD-36 474) was paid. A reduction in the average payment amount can be observed in all categories, with the exception of gynaecology in the follow-up survey. There is not a great difference in payments for simple and complex tests between the regions and Yerevan (Annex 4).

In normal wards, approximately 11% reported paying OOPs for simple tests during the follow-up survey, which was slightly less than during the baseline survey (15%). Around the same percentage reported making such payments for complex tests, and of these about 8% and 2% respectively reported that they did not receive a receipt, considering it an unofficial payment. Hence, unofficial payments made in normal wards amounted to 79% and 57% of all payments respectively for simple and complex tests.

7.6 Medical personnel

The share of all interviewed patients who reported any payment made to medical personnel were less in the follow-up survey than in the baseline survey (6% and 20% respectively) including 8% to treating doctors, 0.3% to specialists and 10% to nurses (11%, 1%, 18% in the baseline survey). These three personnel categories accounted for 5%, 0.2% and 7% respectively of all patients making OOPs (Annex 3). Almost all OOPs were reported as unofficial payments among those who made any payments (93% to treating doctors and 100% to specialists and nurses). The average unofficial amount paid to treating doctors slightly decreased to AMD 58 537 per patient (SD 73 564) and to nurses AMD 18 169 (SD 28 526) during the follow-up survey in comparison to the baseline survey (AMD 60 461 and AMD 17 433 respectively). However, the average amount paid to specialists increased slightly during the follow-up survey (AMD 28 333 (SD 7638) compared to the baseline survey (AMD 35 909) (Annex 3). It is noteworthy that patients interviewed during the follow-up survey mentioned that the average payment made, including unofficial payments, had increased in all patient categories with the exception of the emergency category.

The distribution of payments within wards showed that patients in intensive care paid on average AMD 32 333 unofficially to the treating doctor (SD 836), less than in the baseline survey; however, the amount paid to nurses increased by a multiple of 1.5 (from AMD 9 014 to 13 778 (SD 534)). In normal wards, the average payments were significantly higher in the follow-up survey than the baseline survey, amounting to AMD 62 325 to the treating doctor (SD 2911) and AMD 18 822 to nurses (SD 1282) (Annexes 2a and 2b). Patients in intensive care reported no unofficial payments made to specialists while in normal wards the average unofficial amount was AMD 28 33 (SD 48).

Surprisingly, patients paid a higher amount to treating doctors in the regions than in Yerevan; but the level of payment to nurses was lower in the regions than in Yerevan. In the regions none of the surveyed patients reported any payments made to specialists which is not surprising as people mostly seek specialist consultations in Yerevan. The same trend could be observed in the baseline survey (Annex 3).

7.7 Surgery

In the follow-up survey the share of patients who reported making payments for surgery, including payments to surgeons and anaesthetists, was 14%, representing 53% of all patients making OOPs. Out of this 14%, 7% reported that they did not receive a receipt, considering it an unofficial payment. Hence, unofficial payments amounted to 63% of all payments made for

surgery (Annex 3). The mean unofficial payment was significantly less in the follow-up survey and amounted to AMD 296 482 (SD17 647) compared to AMD 665 000 in the baseline survey.

There is little difference in the average payments made by patients between normal and intensive care wards and between the three regions. A patient hospitalized in an intensive care ward in the regions paid less than in Yerevan (Annex 2a). The average amounts of unofficial payments in normal care wards and in intensive care wards were almost the same, AMD 230 078 and AMD 278 700 respectively (SD-13 336 and 22 825) (Annex 2a and 2b). Due to a small number of patients reporting that they had surgery during the baseline survey, it is not possible to compare between the baseline and the follow-up survey.

7.8 Total payments at the hospital level

Adding together all payment categories, in the follow-up survey the total amount of payments was roughly equal to the total in the baseline survey: AMD 227 194 683 versus AMD 232 767 750. Out of all of the patients interviewed, the percentage who reported making any kind of payment during the follow-up survey decreased by 5.8 percentage points compared to the baseline survey (from 58.3% in the baseline survey to 52.5% in the follow-up survey). In contrast, the share of patients who made unofficial payments, out of the total who made OOPs, increased considerably during the follow-up survey compared to baseline survey (37% and 29.4% respectively).

Among those patients who made any payments, 57.4% reported that they made unofficial payments during the follow-up survey, slightly less than reported during the baseline survey (65.6%). There is no great difference in the incidence of payments between the regions and Yerevan. However, the share of patients who reported making unofficial payments is higher in the regions; conversely though, the average unofficial payment made in Yerevan is almost two times higher than in the baseline survey.

The average payment amount was slightly higher in the follow-up survey than in the baseline survey – AMD 239 910 AMD per patient (SD 805 416) (AMD 233 703 in the baseline survey); including in normal wards AMD 199 042 and in intensive care wards AMD 348 261 (AMD 171 529 and AMD 332 267 in the baseline survey) (Annex 2a and 2b and Annex 3). Among those who made any payments, about 55% of patients in intensive wards reported making unofficial payments and 62% in normal wards, which is less than in the baseline survey (73% and 69% respectively) (Annex 2a and 2b).

The share of patients who reported making OOPs is slightly higher in Yerevan than in the regions (53% and 51% respectively) but the amount is more than double: AMD 262 573 and AMD 105 805. Conversely, the share of patients who made unofficial payments is higher in the regions than in Yerevan (19% and 16% respectively) but the average payment is lower in the regions (AMD 339 337 versus AMD 550 269). These results demonstrate that a patient living in the regions pays less than in Yerevan but the frequency of payments is higher in the regions.

Patients interviewed during the follow-up survey mentioned that the average OOP they made increased in two patient categories, emergency and oncology, and decreased in the gynaecology and social beneficiaries categories; however, average unofficial payments increased in all patient categories (Fig. 2; Table 4). It should be highlighted that for the two patient categories that are subject to official co-payments, emergency and gynaecology, unofficial payments increased moderately in comparison with the other two patient categories. This may suggest a positive trend in the reduction of unofficial payments with the introduction of official co-payments.

Fig. 2. Mean total OOPs (AMD) in baseline and follow-up surveys by patient type, with unofficial payments listed separately as a subcategory

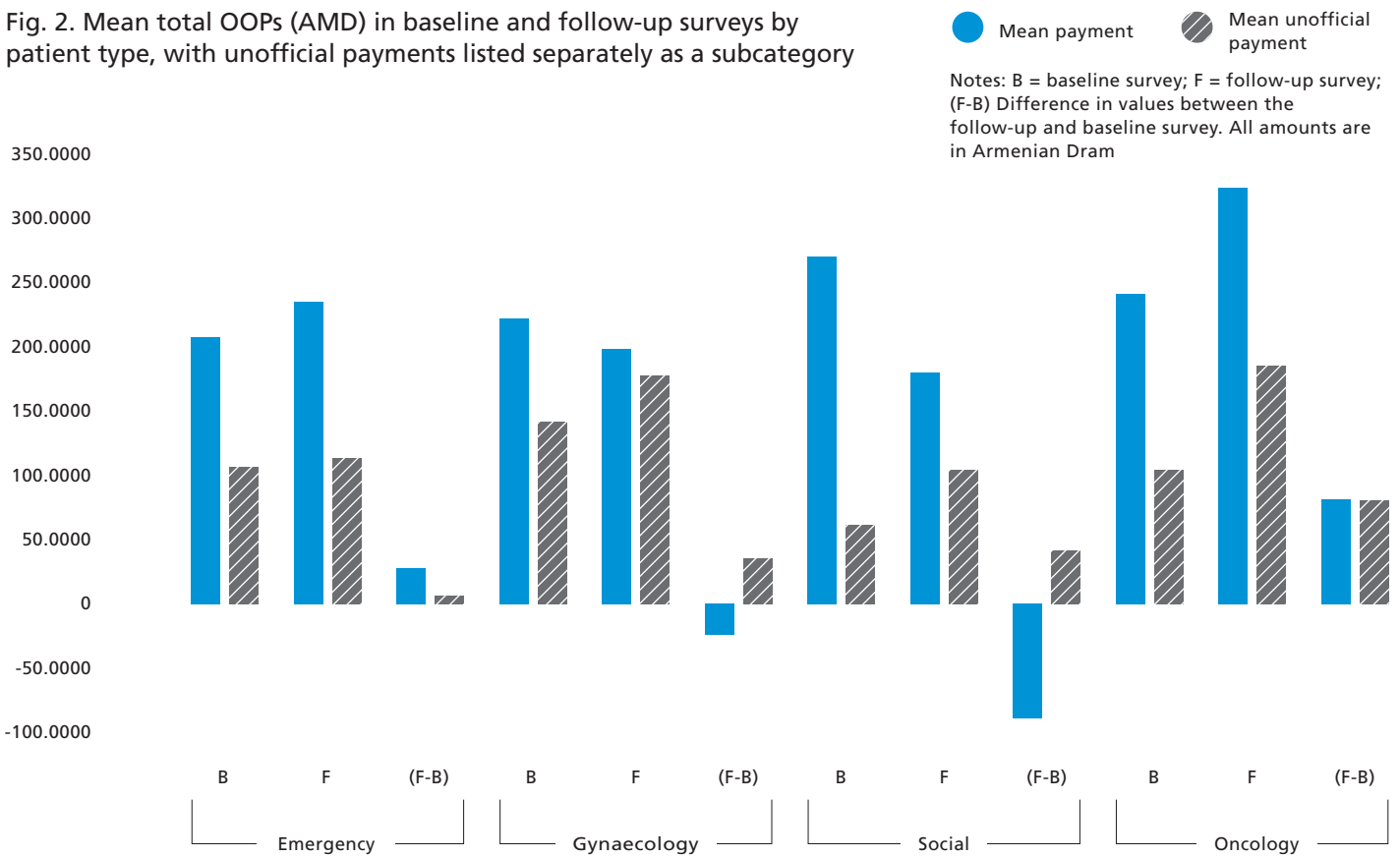


Table 4. OOP payments by type and patient category, baseline and follow-up surveys

Patient category	Emergency		Gynaecology		Oncology		Social beneficiaries		Total	
	B	F	B	F	B	F	B	F	B	F
Total Payment (AMD)	95 784 500	78 491 380	21 710 700	34 210 000	82 238 750	37 637 700	33 033 700	76 855 603	232 767 650	227 194 683
Number of patients in the category	668	560	155	265	742	643	262	475	1827	1943
Number of patients who mentioned making any kind of OOP payment (official and/or unofficial)	460	332	97	172	303	207	136	236	996	947
Percentage of patients, among all surveyed patients, who made a payment (%)	68.9%	59.3%	62.6%	64.9%	40.8%	32.2%	51.9%	49.7%	54.5%	48.7%
Mean payment among those who made a payment (AMD)	208 227	236 420	223 822	199 186	271 415	181 825	242 895	325 447	233 702	239 910
Standard Deviation	447 489	1 029 970	487 076	200 779	692 476	509 856	598 503	920 943	556 923	805 416
Mean payment across the whole survey sample, i.e. all surveyed patients	143 390	140 163	140 069	129 283	110 834	58 535	126 083	161 696	127 404	116 930
Standard Deviation	383 551	801 044	399 624	187 524	461 795	301 064	447 284	669 908	427 271	574 758
Total Unofficial payments (AMD)	35 897 300	19 786 680	9 678 500	20 171 500	11 669 700	13 989 400	11 259 500	30 098 103	68 505 100	84 045 683
Number of patients who mentioned making an unofficial payment	333	173	68	113	187	133	107	161	695	580
Percentage of patients who made unofficial payments among those who made any payment	72.4%	52.1%	70.1%	65.7%	61.7%	64.3%	78.7%	68.2%	69.8%	61.2%
Percentage of patients who made an unofficial payment across the whole survey sample i.e. all surveyed patients	49.9%	30.9%	43.9%	42.6%	25.2%	20.7%	40.8%	33.9%	38.0%	29.9%
Mean unofficial payment among those who made unofficial payments	107 800	114 374	142 331	178 509	62 405	105 183	105 230	186 945	98 568	144 906
Standard Deviation	230 774	163 551	198 831	194 221	96 526	188 187	143 965	267 856	188 525	267 856
Mean unofficial payment across the whole survey sample i.e. all surveyed patients	53 738	35 333	62 442	76 119	15 727	21 756	42 976	63 364	37 496	43 56

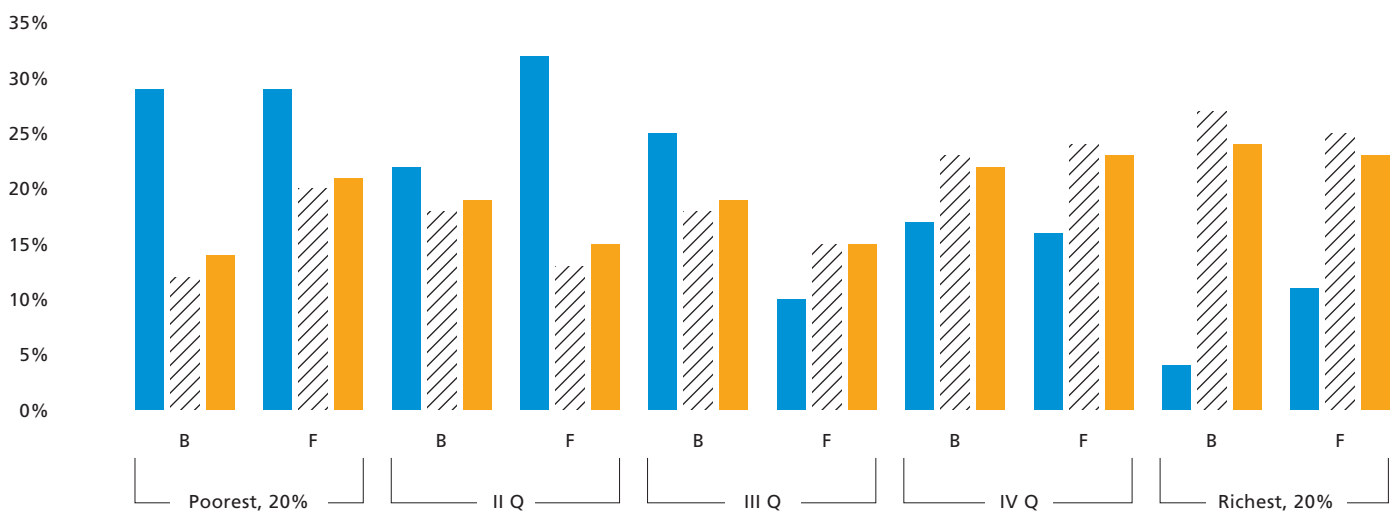
8. Survey results on the socioeconomic status (quintiles) of hospitalized patients

Analysing the OOPs made by discharged patients for hospitalization by their socioeconomic status during the baseline survey shows that in the regions, a larger proportion of patients in the lowest income quintile (Q1) made an OOP compared to the richest quintile (Q5) (29% and 5% respectively); whereas in Yerevan we observe the reverse – 12% in the poorest quintile and 25% in the richest one (Fig. 3). During the follow-up survey the share of patients who made a payment in the poorest quintile in the regions was the same as in the baseline survey; however, the percentage of patients in the poorest quintile who made a payment in Yerevan increased significantly. This picture suggests that the financial burden on patients in the poorest quintile treated in Yerevan is higher than on patients in the richest quintile.

In the second quintile an overall decrease can be observed in the reported OOPs, and specifically in Yerevan; patients in the regions in the fourth quintile also reported slightly decreased OOPs. In the third quintile we can observe a slight reduction in OOPs in the follow-up survey. Such trends show that the financial burden on the poorer segments of the population still exists and further reforms are needed to reduce OOPs, particularly for the poorer categories of patients.

Fig. 3. Share of OOPs (including unofficial payments) by patient economic status among each group of patients, %

● 3 Marzes ▨ Yerevan ● Total



9. Survey results on expenditures by discharged patient categories

In the structure of payments in the baseline survey, a 'lump sum' payment is a widespread type of payment among all patient categories and represents the largest share of all payments; the same trend can be observed in the follow-up survey with the exception of the oncology category where medicine took the largest share (Fig. 4). Comparing the OOPs made in each discharged patient category during the baseline and the follow-up surveys, one can observe a decrease in the follow-up survey with the exception of the emergency category. However, among OOPs made by all discharged patient categories, almost half of the payments in the lump sum' category were unofficial in the baseline survey, whereas in gynaecology it was about 74%.

In contrast, during the follow-up survey, we observe a visible reduction in unofficial payments in all categories with the exception of the social beneficiaries category (Fig. 5). The share of discharged patients who fall into the oncology category and who reported paying for their own medicines increased from 24% (baseline survey) to 45% (follow-up survey) (Fig. 4). In addition, for this item, a reduction can be observed among the emergency and gynaecology patient categories and a slight increase in the social beneficiary category. It should also be noted that an insignificant share of patients reported making unofficial payments to purchase their own medicines (Fig. 5).

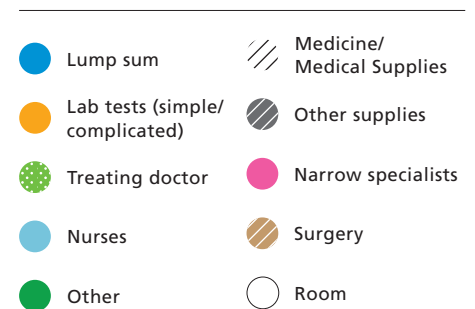
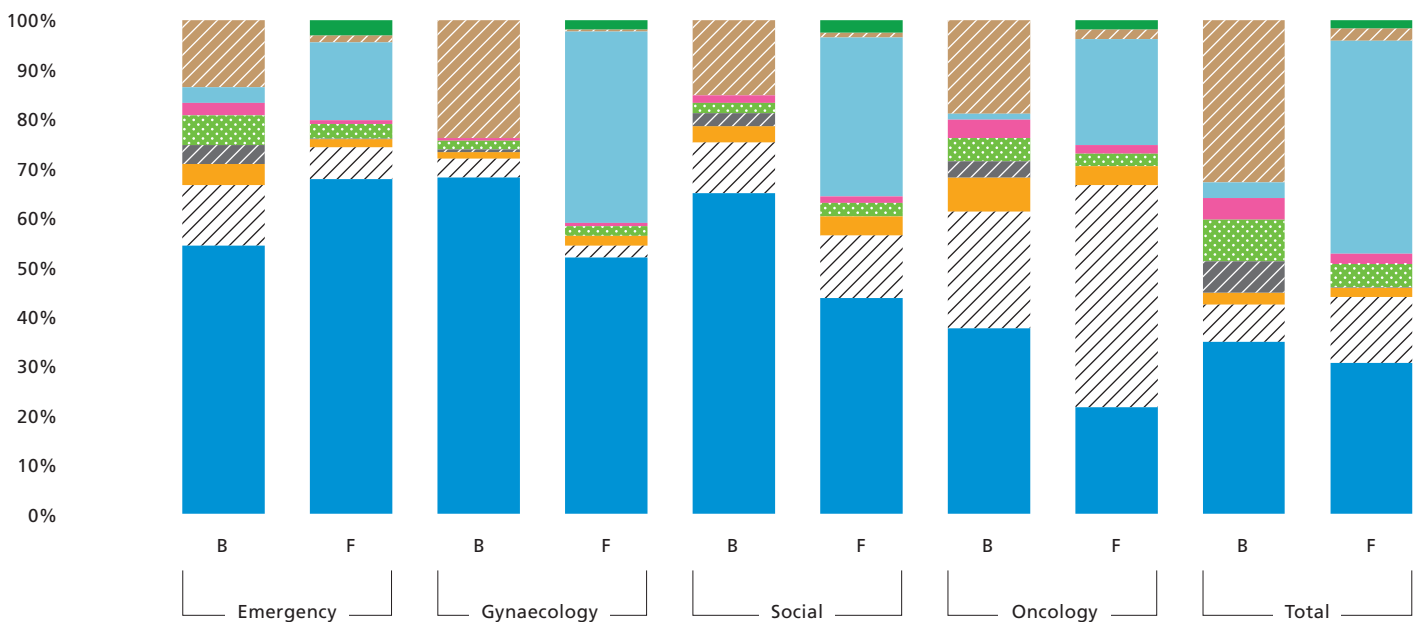


Fig. 4. Structure of all OOPs by patient category in baseline and follow-up surveys

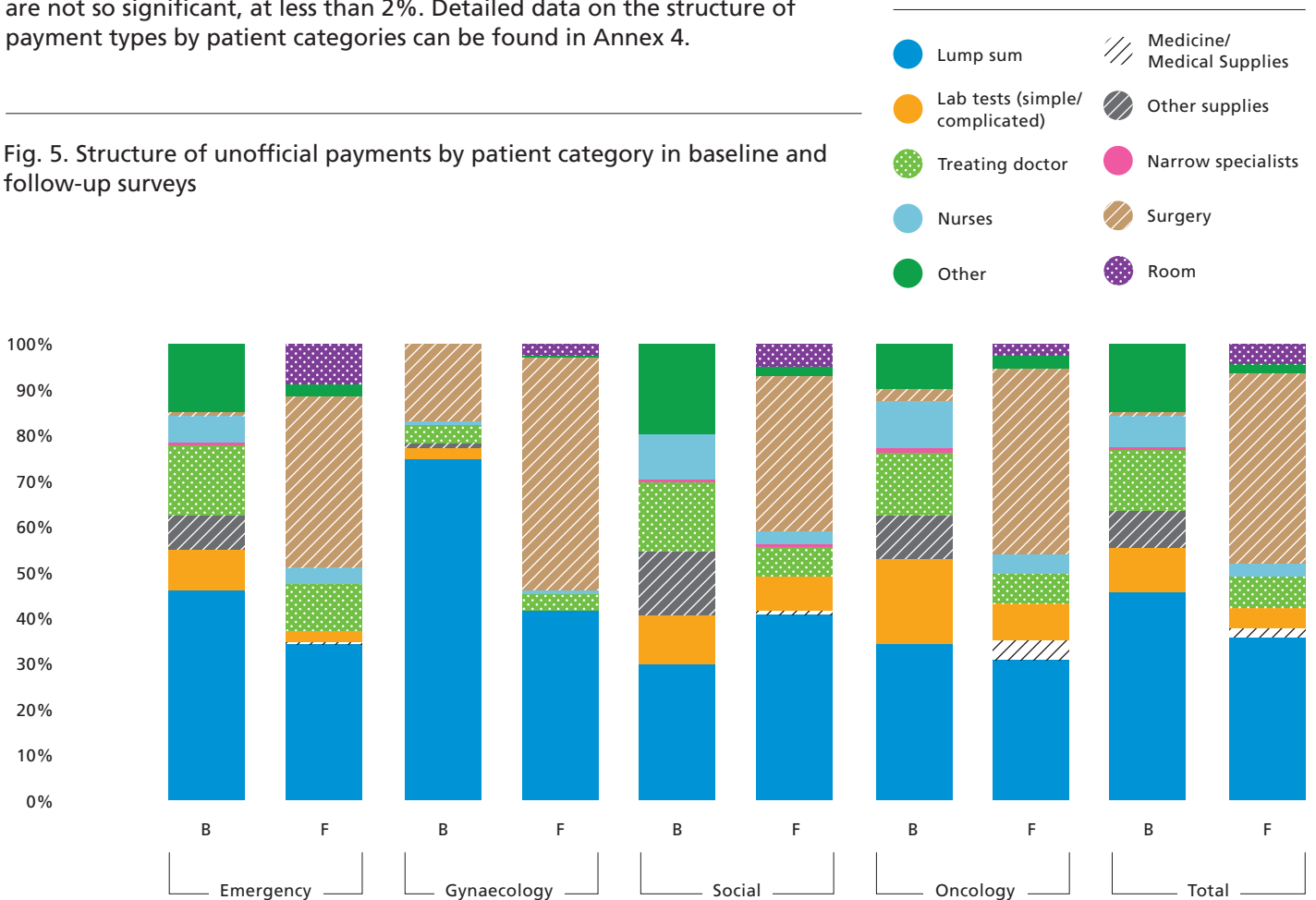


Note: B – Baseline survey, F – Follow-up Survey

In the baseline survey, the next most common type of payment amongst all the patient categories was 'other payments' which also included 'payment for an individual room'. In the follow-up survey, the category 'payment for an individual room' was separated out from 'other payments', and respondents were specifically asked if they paid for individual rooms during hospitalization. Overall, about 2% of discharged patients reported making payments for individual rooms (Fig. 4), of which about 2-3% paid unofficially (Fig. 5).

During the follow-up survey the share of discharged patients who reported making OOPs for surgery increased considerably compared to the baseline survey (which was insignificant). Thus, during the follow-up survey 39% of patients who fall into the gynaecology category reported making this type of payment, of which 50% made it unofficially; social beneficiaries 32%, out of which 34% were paid unofficially; oncology 21%, out of which 41% were paid unofficially; and emergency 16%, out of which 37% were paid unofficially (Figs. 4 and 5). Direct payments, including unofficial payments to medical personnel, including treating doctors, specialists and nurses, decreased in the follow-up survey in all patient categories (Fig. 4 and 5). OOPs made for laboratory tests decreased in all patient categories in the follow-up survey. The other types of payments among all patient categories are not so significant, at less than 2%. Detailed data on the structure of payment types by patient categories can be found in Annex 4.

Fig. 5. Structure of unofficial payments by patient category in baseline and follow-up surveys



Note: B – Baseline survey, F – Follow-up Survey

10. Survey results: statistically significant changes across time

One of the main policy objectives of introducing official co-payments was to reduce the incidence and level of unofficial and total payments for the two main categories of care: emergency and gynaecology. Changes in payment incidence and level were tested for statistical significance (t-tests with unequal variances).

Across the surveyed settings (the regions and Yerevan) and for most types of care, some reduction in the incidence of total payments (official and unofficial) was detected. Statistically significant (95% confidence level) reductions in total payments incidence were detected for emergency care (Yerevan and the regions), social beneficiaries (Yerevan and the Regions) and all care taken together. Negative but insignificant changes in payment incidence were found for emergency, gynaecology and social care in the regions and for oncology care in Yerevan. Small but insignificant positive changes in total payment incidence for gynaecology were detected in both Yerevan and the regions.

A statistically significant reduction in unofficial payments was found for emergency care (all areas) and a smaller but statistically significant reduction in total unofficial payments for social beneficiary patients. The latter was unexpected since the policy did not affect social beneficiary patients who should be exempt from the new official charges. The effect may be attributable to the changing culture in hospitals with the policy on official payments making it less likely for staff to ask for payments from all categories of patients. A reduction in unofficial payments for gynaecology was found but it was not statistically significant.

Average unofficial payments fell for emergency patients (this is only detectable as a significant change when patients in Yerevan and the regions are combined). There is some evidence that the reduction in the incidence of payments has been translated into an increase in payments from some patients still paying unofficially for services. A statistically significant increase in average unofficial payments of 130% for gynaecology patients in the regions is observed; for social beneficiaries there is also an increase, although not statistically significant.

The net effect of the changes (falling unofficial and increasing official payments) is a reduction in average total payments for emergency, gynaecology and social beneficiary patients. This reduction is statistically significant for the regions' emergency and gynaecology patients and for Yerevan's social beneficiary patients.

One of the problems with reporting these changes is that other factors, particularly the characteristics of patients and their diseases, could influence the incidence and size of patient payments. These complex changes could be further disentangled through multivariate analysis to attempt to hold constant other factors influencing payments.

11. Survey results on patient awareness of the level of co-payments in hospitals (financial barriers)

To evaluate financial barriers to accessing health services a number of questions were asked regarding the expectations of individuals/households concerning the resources needed for hospitalization, as well as the coping mechanisms that individuals/households used to find the resources needed.

On average, a large proportion (49%) of respondents did not expect to pay the amount that they had to pay during the follow-up survey. Individual category results were as follows: in oncology it comprised 53% of patients, 52% in emergency, 46% in gynaecology and 43% in the social beneficiaries category (Table 5). It should be highlighted that among the two patient categories subject to new official co-payments (emergency and gynaecology) a significant increase could be observed in the number of *'did not expect to pay the amount I had to pay'* responses during the follow-up survey (after the introduction of co-payments) whereas in the two other patient categories we observe a reduction for this reply. This demonstrates that the population is not aware of the size of payments that they are required to pay and such payments might create a barrier to accessing health care services.

It is not surprising that in Yerevan 53% of patients reported that the amount paid was above their expectations since the prices of health services in the capital are always higher than in the regions. The distribution of responses between Yerevan and the regions, and by categories, is the same as the overall tendency.

Table 5. Expectations concerning the level of payments among patients who made an OOP

Note: B = baseline survey; F = follow-up survey

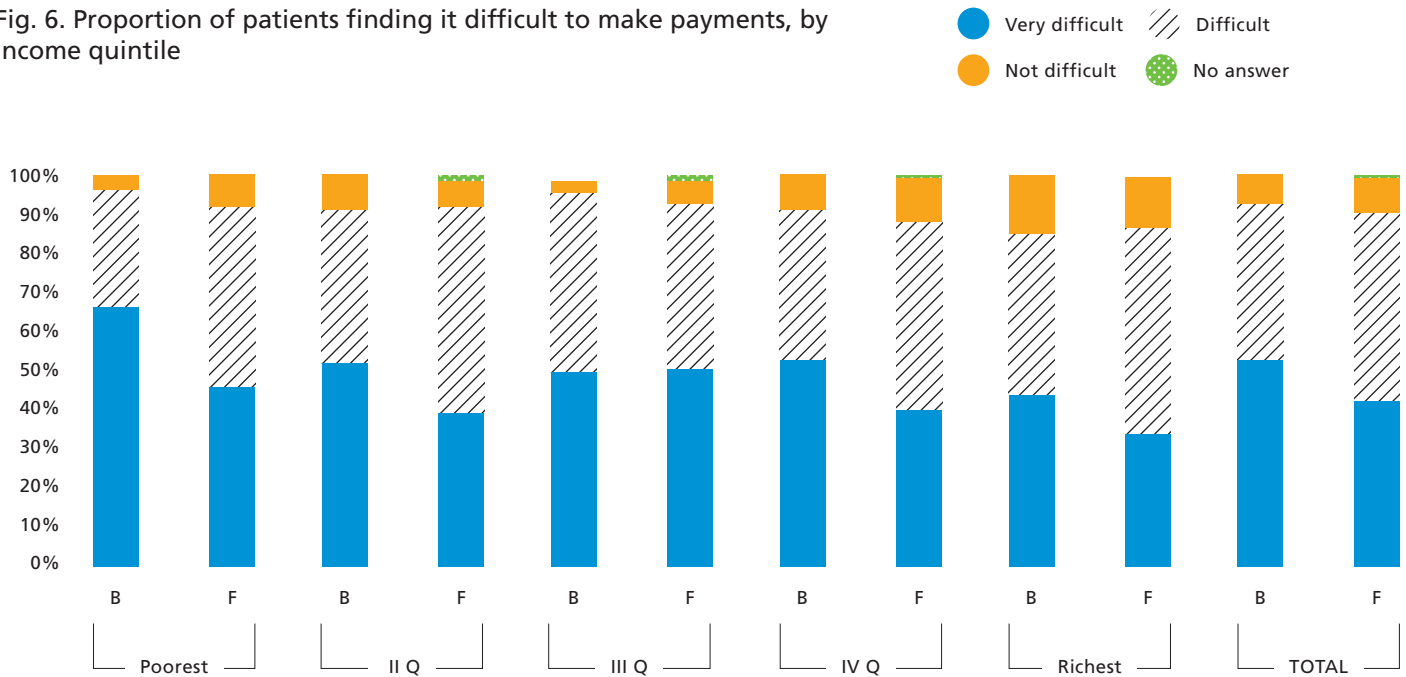
Responses	It was about what I expected to pay (%)		It was more than I expected to pay (%)		It was less than I expected (%)		Difficult to answer (%)		Total
	B	F	B	F	B	F	B	F	
3 Regions	28	33	32	35	22	13	18	19	100
Emergency	25	30	34	33	22	13	19	25	100
Gynaecology	44	28	28	43	12	15	16	15	100
Oncology	–	–	–	–	–	–	–	–	100
Social beneficiaries	30	41	29	36	25	13	16	10	100
Yerevan	32	30	52	53	11	11	5	6	100
Emergency	28	24	52	63	14	8	6	5	100
Gynaecology	46	31	37	47	10	17	7	5	100
Oncology	28	29	61	53	6	10	6	8	100
Social beneficiaries	34	39	52	46	11	10	3	6	100
Total	31	31	48	49	13	11	8	9	100
Emergency	27	26	47	52	16	10	9	12	100
Gynaecology	46	30	35	46	10	16	9	8	100
Oncology	28	29	61	53	5	10	6	8	100
Social beneficiaries	33	40	47	43	14	11	6	7	100

In the follow-up survey, the share of patients who reported that finding money for hospitalization was 'difficult' and 'very difficult' was 42% and 48%, respectively, and only 9% said that it was not difficult (1% did not respond to this question) (see Fig. 6). The share of patients who mentioned that it was 'difficult' increased in the follow-up survey by 9% compared to the baseline survey. For the poorest patients (Q1), whilst there was a fall in the number of patients finding it either 'difficult' or 'very difficult' to find the money to pay for hospitalization in the follow-up survey, the combined proportion of 91% remains very high. For the richest patients (Q5) there was an increase of 1% (from 85% to 86%), which is also a very high overall proportion. These findings show that, notwithstanding the socioeconomic status of an individual, hospitalization represents a significant expense which is problematic financially.

Both indicators (patient expectations and difficulty finding money) reflect problems with access to health services due to financial problems associated with being hospitalized. Such situations might lead to patients foregoing care even if it is needed due to a lack of money to pay for hospitalization costs or having to make significantly large payments if they want to be hospitalized, thus making them even poorer. The introduction of official co-payments in February 2011, with fixed prices and an expanded BBP aimed to improve the situation. The early results of the follow-up survey demonstrate that while the introduction of official co-payments has not created additional

or serious problems in accessing health services due to financial barriers, neither has it improved the situation as yet.

Fig. 6. Proportion of patients finding it difficult to make payments, by income quintile

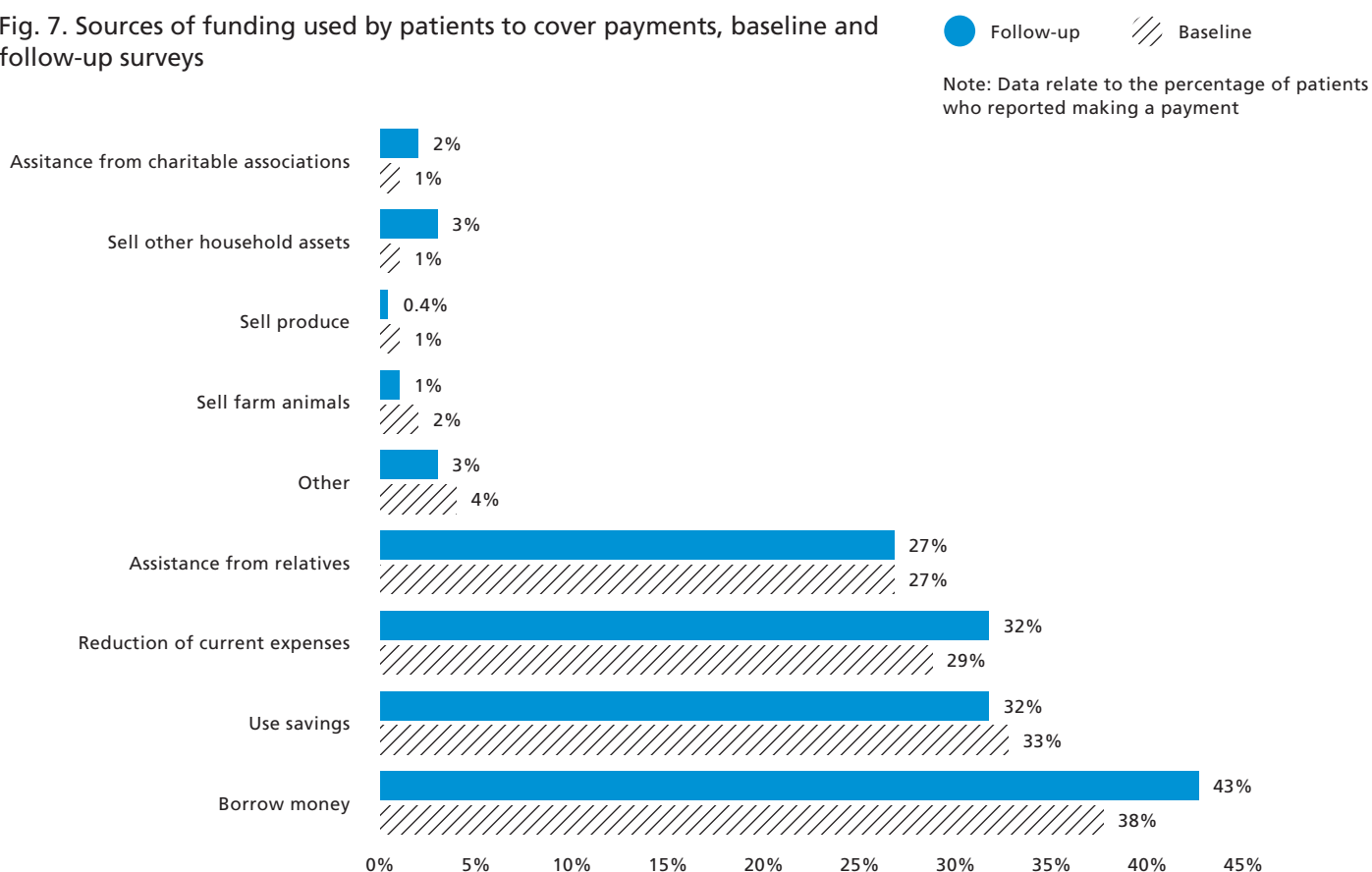


Note: B – Baseline survey, F – Follow-up Survey

Additionally, the survey aims to tease out the coping mechanisms households use to come up with the resources needed for hospitalization. Patients were asked whether they borrowed money, sold produce, animals or assets, used up savings, decreased consumption, or received help from relatives or associations to meet hospital expenditures. Fig. 7 presents detailed results for each of these sources of funding for payments. The emerging trend is that the main coping mechanisms appear to be to borrow money (43%) and also to reduce current expenses (32%). This may demonstrate deteriorating access to health care services, but needs deeper analysis.

The other two coping mechanisms were to use savings (32%) and to seek assistance from relatives (27%); the same share of respondents mentioned these mechanisms in the baseline and follow-up surveys (Fig. 7). The other mechanisms are not very significant, less than 2%. It should also be highlighted that almost all patients (97%) said that they were not denied any medical treatment because they did not have the money to pay for hospitalization, which shows a rather positive picture on access. However, on the other hand, the other aforementioned indicators reflect that financial access to health care is still quite disputable. The analysis shows that the socioeconomic status of patients does not play a significant role for coping mechanisms; the trend is the same for all groups.

Fig. 7. Sources of funding used by patients to cover payments, baseline and follow-up surveys



12. Survey results on responsiveness of the health system to patient expectations

To assess the responsiveness of the health system to patients, a number of questions were asked about patient satisfaction with care and the outcome of treatment. Responsiveness to patient expectations at the hospital level is rather high. Table 6 presents patients' assessment of seven dimensions of hospital care including caring and respect, information about diagnosis and treatment, time spent by medical personnel, and participation in decision-making about care. Each dimension was evaluated either on a four-point scale or a five-point scale with 1 being the worse and 4 or 5 being the best score. Table 6 presents the share of patients scoring each of these dimensions as 3 and 4 or 4 and 5. A composite responsiveness indicator was created as the mean of the six dimension-specific percentages.

Based on these indicators, patients evaluated each of these dimensions of their care quite highly in the baseline survey; however, in the follow-up survey, the

scores of two indicators, 'quality of treatment' and 'cleanliness of the hospital', deteriorated from 95% to 69% and from 90% to 67% respectively. The scores of two other indicators, 'patient involvement in making decisions about their care' and 'outcome of treatment', slightly worsened in the follow-up survey compared to the baseline survey (Table 6). These results raise concern about whether the introduction of official co-payments may have influenced patients' opinions. A deeper analysis is needed.

Patients reported on the availability of utilities and other services in hospitals. Overall, utilities, including electricity and running water, are available in hospitals (97% for both services). Almost the same percentage of patients (93%) in both surveys evaluated the medical personnel who treated them in the hospitals as skilled and knowledgeable. Moreover, according to 90% of respondents, hospitals are equipped quite well. However, hospitals lack medicines; only 60% of patients reported their availability in the follow-up survey compared to 70% in the baseline survey.

Table 6. Patient responsiveness at the hospital level

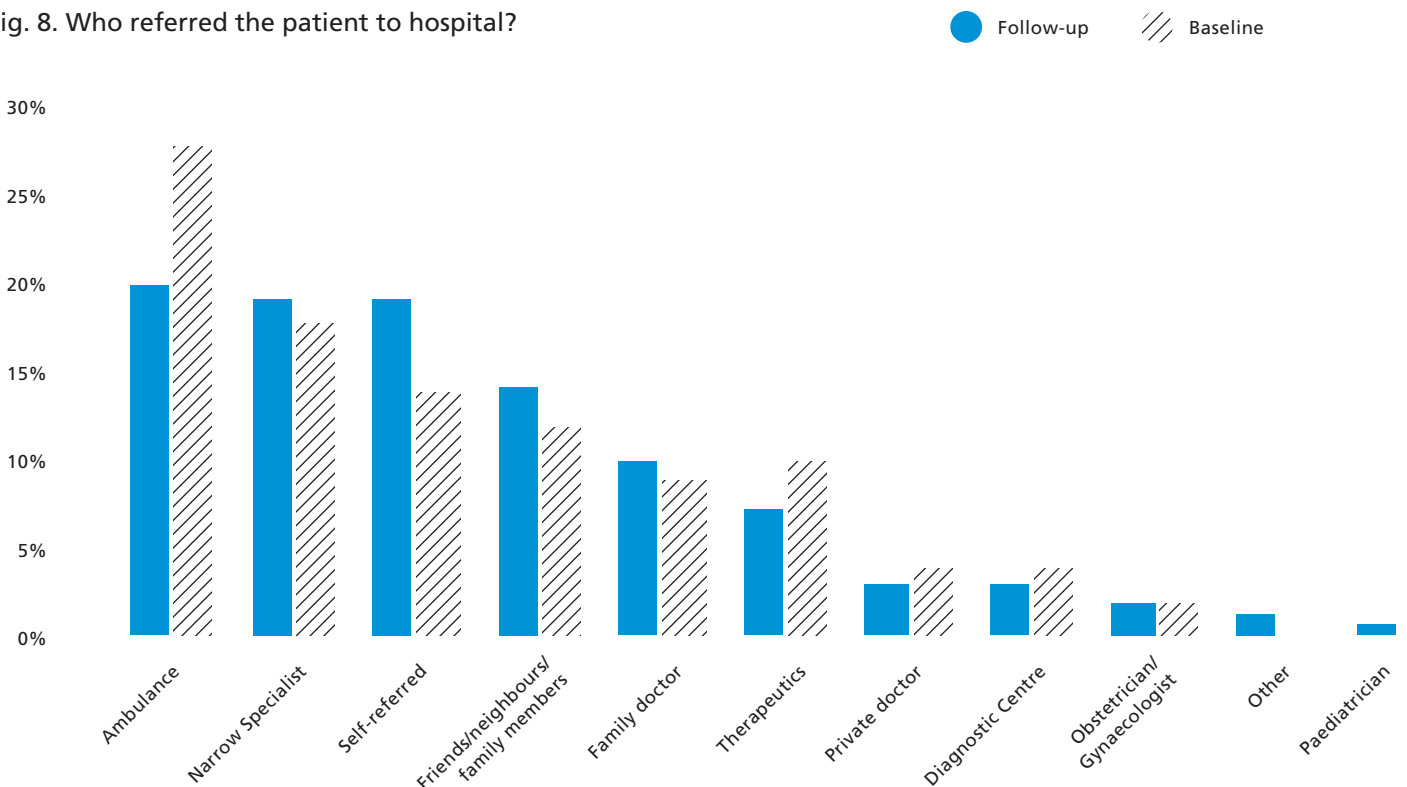
Aspects of responsiveness to patients	Baseline	Follow-up
	% of Always and usually answers	
How often were you treated with care and respect by medical personnel (never, sometimes, usually, always).	96	96
How often did you receive adequate information about your diagnosis, treatment and analysis (never, sometimes, usually, always).	93	93
How often did doctors/nurses make time for your questions about your health (never, sometimes, usually, always).	95	94
How often did you participate in decision-making about your care (never, sometimes, usually, always).	80	79
	% of got better/got well	
How do you evaluate the outcome of your treatment (got worse, stayed the same, got better, got well).	84	84
	% of good/very good	
How do you evaluate the quality of your treatment (very bad, bad, satisfactory, good, very good).	95	69
How do you evaluate the cleanliness of the hospital (very bad, bad, satisfactory, good, very good).	90	67

Note: The table represents the percentage of patients evaluating dimensions of care with a score 3,4 or 5 on a five-point scale; or 3 or 4 on a four-point scale.

13. General issues related to hospitalization and provision of services

Patients were asked to provide information about who recommended them to be hospitalized. This question helps us to understand who influenced patients in terms of seeking hospitalization and in choosing the specific facility for treatment. Twenty-eight percent of patients reported in the follow-up survey that an ambulance made this recommendation. Specialists are the next largest group which made recommendations and referred patients to a certain hospital (18%). Fourteen percent of patients said that they chose the hospital themselves. Friends and relatives also influenced patients' choice (Fig. 8).

Fig. 8. Who referred the patient to hospital?



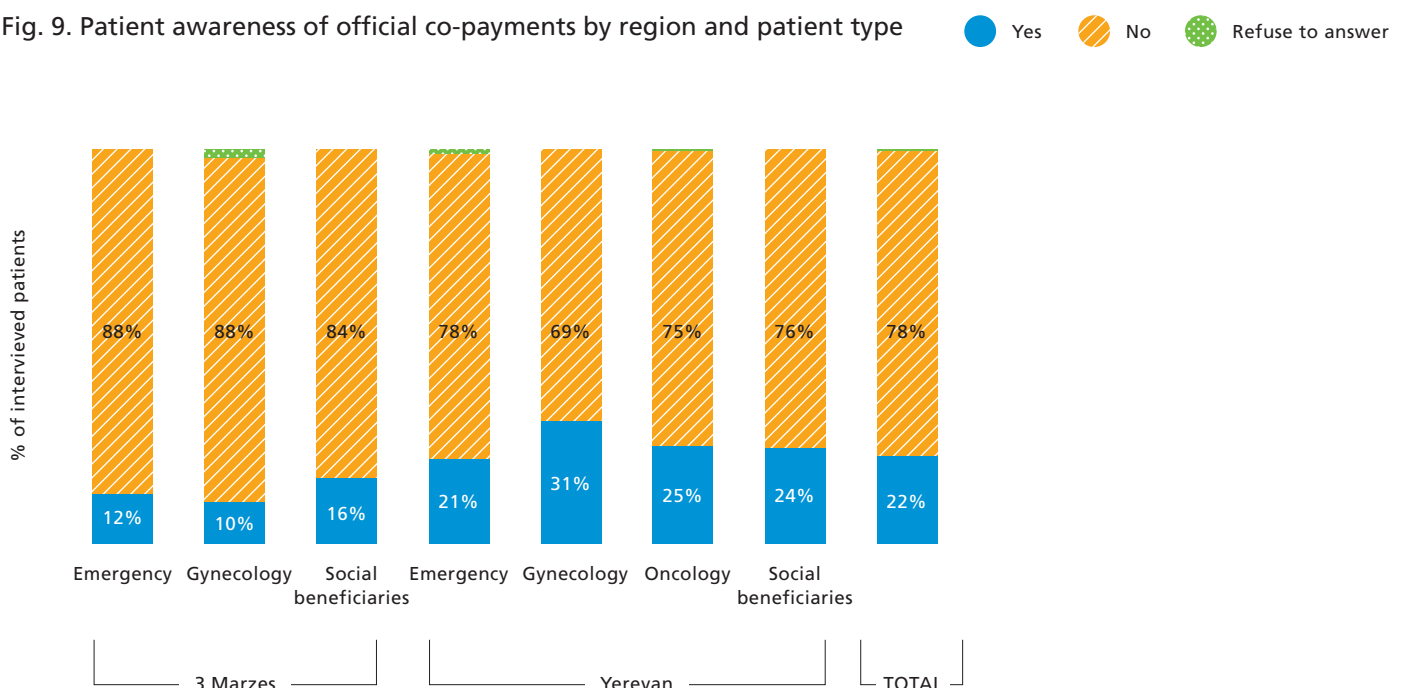
It is generally accepted by patients' family members that they are responsible for covering several expenses during hospital care, such as providing food and linen as well as delivering personal care such as bathing and feeding the patient. Some families assume other responsibilities which usually should be performed by doctors and nurses such as administering drugs and injections.

14. Awareness of co-payment

In February 2011, when official co-payments were introduced with fixed prices and an expanded BBP, an extensive social awareness campaign was launched applying different strategies such as a mass-media campaign and the distribution of leaflets/brochures on official co-payments. Additionally, each hospital that has a contract with SHA was required to exhibit posters and make leaflets/brochures available. To evaluate patient awareness about official co-payments, we asked respondents in the follow-up survey about this aspect. Overall, only 22% of all interviewed patients were aware of the new policy; patients in the emergency and gynaecology categories (subject to official co-payments) and who live in the regions knew less about it than those in the other two categories and who live in Yerevan (Fig. 9). This demonstrates that the awareness campaign has not been very effective in reaching the entire population and a more targeted awareness campaign about the new co-payments reform needs to be implemented.

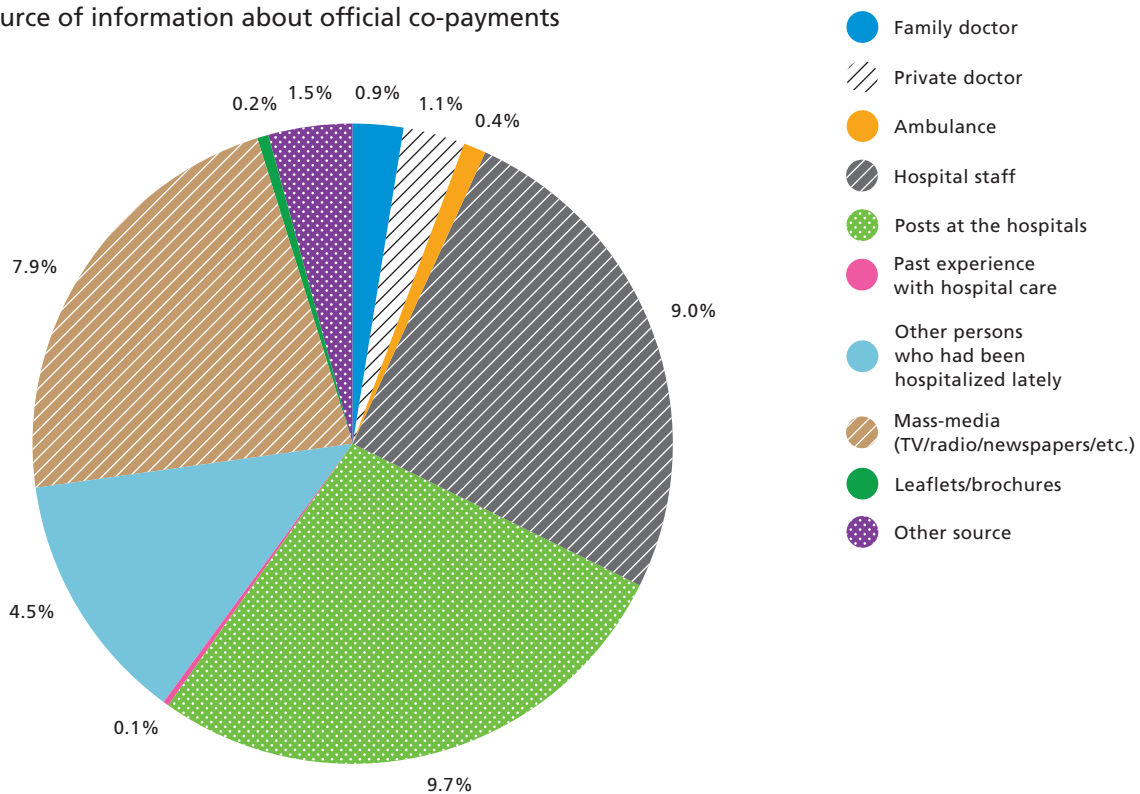
The risk of not raising population awareness of the new policy could lead to it being jeopardized by both providers and users ie. if a patient does not know about the introduction of official co-payments it is possible that a doctor might take the official co-payment as an unofficial payment without providing a receipt or not concluding a contract with the patient. Based on our survey, only 11% of patients signed such a contract and most of these occurred in Yerevan. This is despite the fact that if a patient is required to pay a co-payment, a contract between the health care facility and the patient stating the services that are to provided and paid for needs to be signed.

Fig. 9. Patient awareness of official co-payments by region and patient type



About 10% of respondents indicated 'posters at the hospitals' as the main means through which they learned about the new official co-payments policy, while 9% indicated 'hospital staff' and 8% 'mass media' (Fig. 9). Considering these responses the MOH, together with SHA, could develop a strategy on how to increase population awareness about the introduction of official co-payments.

Fig. 10 Source of information about official co-payments



15. Summary of main findings

This report presents the findings of two surveys that were conducted to estimate the frequency and magnitude of OOPs for health services in Armenia, and to evaluate the impact of introducing official patient co-payments on levels of unofficial payments. The overall financial burden for patients and their families was also investigated. The results show statistically significant changes detected five months following the introduction of patient co-payments. Overall, the findings of the survey are as follows:

Overall financial burden on patients

The analysis of the financial burden on patients shows a *slight decrease in the share of patients who made OOPs: 52.5%* (compared to 58.3% in the baseline survey). This finding is driven largely by fewer people paying for

emergency services in Yerevan, as well as fewer social beneficiaries making payments in Yerevan. Elsewhere, there is no significant change; e.g., for all patients in the regions, or for gynaecology and oncology patients. Among those patients who made any type of payment (official or unofficial), 57.4% reported making unofficial payments, lower than the level reported in the baseline survey (65.6%).

There is no great difference in the incidence of payments between the regions and Yerevan. However, the share of patients who reported making unofficial payments is higher in the regions than in Yerevan; conversely, the mean level of OOPs made in Yerevan during the follow-up survey is almost twice as high as in the baseline survey. This finding is almost entirely driven by fewer unofficial payments for the emergency category. Elsewhere, there is no significant change. Patients interviewed during the follow-up survey demonstrate that the mean OOPs they made increased in two patient categories emergency and oncology. However, it should be noted that this increase is not statistically significant. Despite a slight increase in numbers overall, emergency patients in the regions saw a 50% reduction in average payments, with social beneficiary patients in Yerevan also seeing a 33% reduction. For other categories of patients no statistically significant changes were detected.

Nationally, there was a 8.2% reduction in the number of patients who reported making unofficial payments, with similar falls in Yerevan and the regions; this reduction possibly indicates a positive trend in falling unofficial payments after the introduction of official co-payments. However, where unofficial payments were made, the average amount increased by 47% in both Yerevan and the regions in the follow-up survey; this change is statistically significant. This finding is driven largely by more people making unofficial payment in the oncology and social beneficiaries categories, both of which are not subject to official co-payments; the figures are statistically significant.

Although not subject to official co-payments, 4.5% fewer social beneficiary patients reported making an unofficial payment. Moreover, the amount amongst those who did pay increased by 69% on average from AMD 62 405 to AMD 105 183 with patients in Yerevan reporting a greater increase than patients in the regions.

The structure of OOPs

The structure of OOPs, including unofficial payments, is as follows:

- **Lump sum:** 31% of all hospitalized patients reported that they made lump sum payments; 29% of all patients made such OOPs unofficially, which is higher than in the baseline survey (24% lump sum and 23% unofficial payments). Of the 31%, approximately 12% reported that they did not get a receipt, considering it as an unofficial payment; this constituted a 3% increase from the baseline survey. Hence, unofficial payments increased by 7% and amounted to approximately 38% of all lump sum payments during the follow-up survey (31% of the total OOPs amount in the baseline survey). Analysing by patient categories, the number of patients who reported on lump sum payments in the emergency and social beneficiaries categories decreased in the follow-up survey compared to the baseline survey (from 200 to 192 and from

118 to 89 respectively). The mean amount paid by patients in the social beneficiaries category was 1.3 times higher in the follow-up survey than in the baseline survey, which might provide an indication on the level of financial burden on social beneficiaries patients. The mean level of payments reported as unofficial payments decreased in all categories, with the exception of the social beneficiaries category (Annex 3).

- **Medicines:** 15% out of all interviewed patients reported that they bought medicines themselves, which is less than in the baseline survey (25%). These represent 6% of all patients making OOPs, which is higher than in the baseline survey (only 1%). Out of the 15%, about 1% reported that they did not receive a receipt, considering it as an unofficial payment. The volume of payments, including unofficial payments, is considerably higher in the follow-up survey compared to the baseline survey; thus, unofficial payments amounted to 4% in the follow-up survey whereas in the baseline survey it was only 0.3%. This is mostly due to oncology patients who reported on making such payments; this payment category increased from 23% to 44% in the structure of payments.
- **Simple and complex tests:** 15% of patients reported that they paid for lab tests, including simple and complex tests, which is less than in the baseline survey (21%). In the follow-up survey, unofficial payments made for simple tests represented about 80% of total payments while for complex tests the level was about 59% (compared to 85% and 56% respectively in the baseline survey). The share of patients who reported making an unofficial payment (among those who reported making any kind of payment) was not so different than the share observed in the baseline survey – 72% for simple tests and 57% for complex tests (70% and 55%).
- **Medical personnel:** 6% of follow-up survey respondents reported making a payment to medical personnel, significantly less than in the baseline survey (20%). Of these, almost all payments (98%) were unofficial; including:
 - o to nurses 10% (18% in the baseline survey); all payments were unofficial
 - o to treating doctors 8% (11% in the baseline survey) of which 93% reported these to be unofficial compared with 76% in the baseline survey
 - o to specialists – only 0.3% (1% in the baseline survey) and all payments were unofficial.

The average unofficial amount paid to treating doctors, among those who made any kind of payment slightly decreased and amounted to AMD 58 537 per patient (SD-73 564). The corresponding average paid to nurses was AMD 18 169 (SD 28 526) during the follow-up survey in comparison to the baseline survey (60 461 AMD and 17 433 AMD). However, the average amount paid to specialists increased slightly during the follow-up survey: 28 333 AMD (SD 7638) compared to 35 909 AMD in the baseline survey. Notably, patients interviewed during the follow-up survey demonstrate that the average payment, including unofficial payments, which they made had increased in all patient categories with the exception of the emergency category.

- o **Surgery:** 14% reported that they made payments to surgeons and anaesthetists, representing 53% of all patients making OOPs. Of the 14%, 7% reported that they did not receive a receipt, considering it as an unofficial payment. Hence, unofficial payments amounted to 63% of the total of all payments made for surgery.

Patient awareness of the level of payments in hospitals

This part of the analysis provides an indication of financial barriers to accessing health services. A large proportion (49%) of respondents did not expect to pay the amount that they had to pay during the follow-up survey; within the oncology category they comprised 53% of patients, 52% in the emergency category, 46% in the gynaecology category and 43% in the social beneficiaries category. It should be highlighted that in the two patient categories that are subject to the new official co-payments (emergency and gynaecology), a significant increase could be observed in the '*did not expect to pay the amount to have to pay*' response during the follow-up survey (after the introduction of official co-payments) whereas in the two other patient categories we observe a reduction regarding this reply. This demonstrates that the population is not aware of the size of payments that they are required to pay, and this might create a barrier to accessing health care services.

The share of patients who reported that finding money for hospitalization was '*difficult*' and '*very difficult*' was 42% and 48%, respectively, and only 9% said that it was not difficult. The share of patients mentioning that it was '*difficult*' increased in the follow-up survey by almost 10%. An analysis of the data by socioeconomic status of respondents suggests that, notwithstanding a person's socioeconomic status, hospitalization might pose difficulties regarding finding money for this purpose. The early results of the follow-up survey demonstrate that the introduction of official co-payments has not created serious access difficulties due to financial barriers; however, on the other hand, the results also show that, as yet, the situation has not been improved.

Responsiveness to patients' expectations

The health system's **responsiveness** to patient expectations at the hospital level had deteriorated in the follow-up survey, in particular, with regard to scores for 'quality of treatment' and 'cleanliness of the hospital' (from 95% to 69% and 90% to 67% respectively). These results raise concern about whether the introduction of official co-payments may have influenced patients' opinions. A deeper analysis is needed.

Almost the same percentage of patients in both surveys (93%) evaluated the medical personnel who treated them in the hospital as skilled and knowledgeable. Moreover, according to 90% of respondents, hospitals are equipped quite well. However, hospitals lack medicines: only 60% of patients reported their availability in the follow-up survey compared to 70% in the baseline survey.

Awareness of official co-payment policy

Awareness of official co-payment policy is rather low: only 22% of all interviewed patients were aware of the new policy, in particular among patients in the emergency and gynaecology categories (which are subject to official co-payments) and those who live in the regions. This demonstrates that the awareness campaign has not been very effective in reaching the entire population and a more targeted awareness campaign about the new co-payments reform needs to be implemented using mass media, and by placing posters in hospitals. The risk of not raising population awareness of the new policy could lead to it being jeopardized by both providers and users; i.e. if a patient does not know about the official co-payments it is possible that a doctor might take the official co-payment as an unofficial payment without providing a receipt or not concluding a contract with the patient.

16. Conclusion

Overall, out-of-pocket payments fell in Armenia as a result of the new policy, with approximately 6% fewer patients nationally accessing care without making any form of out-of-pocket payment. Furthermore, the number of patients making an unofficial payment has also fallen significantly at the national level. However, the national picture hides some important differences; for example, patients using emergency services saw the greatest benefit, with significant improvements in financial access and decreasing unofficial payments. In contrast, however, the average amount paid amongst those who made an unofficial payment has increased significantly. For gynaecology patients there was little change overall in the number of patients making a payment, although in the regions the average amount paid has increased and, most alarmingly, the amount of unofficial payments has trebled.

Interestingly, there are several significant findings for social beneficiary patients, despite the fact that they were not subject to new co-payments, suggesting some knock-on effects of the new policy. For example, there were significant improvements for this group, with far fewer patients making OOPs, including unofficial payments, and the average amount paid decreasing significantly. The only anomaly is that amongst those making unofficial payments the average amount increased significantly, especially in the Regions, where it doubled.

This study has generated valuable evidence on the impact of a major health policy intervention in Armenia and highlighted the varying impact of the policy on different population groups, for different services, in different parts of the country. Such information should be monitored closely to ensure that Armenia continues to make progress towards universal health coverage.

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Annex

Annex 1. Survey design and data cleaning

The survey was designed to detect statistically significant changes in relation to the main questions, and to be able to do so nationally, for patients in Yerevan and for patients outside Yerevan (in the regions (*Marzes*)). Additionally, statistically significant changes were detected within the two patient categories subject to official co-payments (emergency and gynaecology). The survey design draws on the experience of previous surveys in the region which addressed a similar policy intervention (Jakub & Kutzin, 2009).

Sampling

The sample framework was drawn from the database of the SHA and was identical for both the baseline and the follow-up surveys. It was designed to measure changes in levels of unofficial payments across time for four categories of patients. For the baseline survey, the sample was drawn from patients discharged from hospital in December 2010. For the follow-up survey, patients discharged from hospital facilities in July 2011 were sampled. An additional sample was drawn from patients discharged in June 2011. Patients who died before discharge, children up to seven years of age, pregnant women and conscripts were excluded. Four categories of patients were included in the survey: (1) emergency; (2) gynaecology (excluding deliveries) as these two categories are subject to a new official co-payment; (3) social beneficiaries to identify the wider diffusion of OOPs; and (4) oncology as a category that was planned to be included in the new co-payment system sometime in the future. Where a patient was, for example, both an emergency and a social beneficiary patient, they were coded as an emergency patient.

The aim was to produce estimates of out-of-pocket payments representative for each of the patient categories at two levels: Yerevan and non-Yerevan (the Regions). The following regions were selected following agreement with the Working Group: Ararat as one of the most agriculturally-rich regions, Gegharkunik as one of the poorest regions, Syunik as one of the richest regions and a great distance from Yerevan. It should be noted that the sampling was based on where patients received the treatment rather than on their place of residence. The sample size is based on 95% confidence and 80%⁴ power using the following formulae:

$$n = \left[2.8 \times 2 \times \frac{\bar{\sigma}}{\Delta \bar{x}} \right]^2 / 2$$
$$\hat{n} = \frac{n}{1 + \frac{n-1}{P}}$$

Where n is the unadjusted sample size for the baseline survey, \hat{n} is the final sample required for the baseline time period adjusted to take account of the population size, Δ is the proportionate size of the change that is required to be detected, \bar{x} is an estimate of the population mean, and $\bar{\sigma}$ is an estimate of the population standard deviation for inpatient care. The standard deviation estimate was obtained from a previous household budget survey on co-payments for health care conducted by the World Bank.

4. In other words, we work on the basis of having an 80% probability of not accepting a wrong null hypothesis. Our null hypothesis is that there is no change in OOPs.

Based on the above-described formula, for the follow-up survey the desired sample size was calculated in order to detect a 23% change in payment; thus, the total required number of completed interviews was 2230 whereas for the baseline survey the figure was 2127. Table A1 shows the distribution of the sample by location – Yerevan and the three regions. Oversampling of about 50% for Yerevan and 20% for the regions was undertaken in order to allow for the normal expected levels of unsuccessful interviews, and hence achieve the desired sample size. From the SHA database for June the required number of respondents was selected applying a random-number generator using the SPSS programme.

Table A1. Desired and actual sample for the follow-up survey (baseline and follow-up surveys)

Regions	Emergency		Gynaecology		Oncology		Social beneficiaries		TOTAL	
	Total	Desired	Total	Desired	Total	Desired	Total	Desired	Total	Desired
Baseline survey, December 2010										
Yerevan	1173	493	190	141	1203	385	2009	623	4575	1642
Total, three regions	319	237	80	64			308	184	707	485
Ararat	155	79	56	31			126	62	337	172
Gegharkunik	84	79	15	18			88	61	187	158
Syunik	80	79	9	15			94	61	183	155
TOTAL	1492	730	270	205	1203	385	2317	807	5282	2127
Follow-up survey, July 2011										
Yerevan	755	424	272	213	826	445	1869	636	3722	1718
Total, three regions	309	235	59	56	2	2	283	219	653	512
Ararat	133	78	33	19			81	73	247	170
Gegharkunik	92	78	10	19			96	73	198	170
Syunik	84	78	16	19	2	2	106	73	208	172
TOTAL	1064	659	331	269	828	447	2152	855	4375	2230

Survey instrument

The survey instrument was identical for both surveys, except for a small number of additional questions in the follow-up survey relating to the population's awareness of the co-payment reforms. The survey instrument was administered at the patient's home; this was due to concerns that if the survey were carried out in the health care facility patients may have been reluctant to report negative aspects of their treatments, including unofficial payments, which would bias the results. Moreover, in order to further minimize any potential bias in terms of inaccurate responses, the questionnaire does not use the words official or unofficial payment.

The questions were formulated in order to trigger a patient’s memory of the details of the payments made, including in-kind payments which were then converted into a monetary value. Table A2 presents the payment categories that allow us to distinguish between official and unofficial payments.

Table A2. Payment categories included in the questionnaire

Payments for services	Payment to medical staff
Admission	Physician treating the patient
Food	Specialists
Medicine	Nurse
Medical supplies (bandages, syringes, x-ray film, lab-test inputs etc.)	Surgeon
Other supplies (linen, clothing)	Anaesthesiologist
	Diagnostics staff (e.g. X-ray technician)
	Physiotherapist
	Other

The payment items in Table A2 were coded ex-post as official or unofficial. Unofficial payments were defined as OOP expenditures made by a patient not receiving a receipt or only receiving a partial receipt; or where there is uncertainty about the receipt (that is, where the interviewee responded don’t know or refused to answer). It is a clear rule in Armenia that if a patient receives a receipt for any payments made for any services whilst in hospital this is considered to be an official payment; otherwise it is assumed to be an unofficial payment (Table A3). Such an approach allows us to minimize reporting bias and facilitates the de-stigmatization of reporting an unofficial practice. Moreover, all in-kind payments are treated as unofficial payments. Official payments are typically payments made at the cash desk (and a receipt is issued), or directly to medical personnel or other staff for which a receipt is received for the full amount.

Table A3. Formulation of questions allowing identification of unofficial payments

Question/Item	Yes/No	In cash or in-kind	Amount or value (AMR)	Receipt Given	Received Receipt for full amount
	1	2	3	4	5
Did you/the patient or somebody else make a payment or give something to do a simple diagnostic test while in hospital (such as blood tests, urine test etc, or x-rays, ultrasound, ECG etc?)	<input type="radio"/> Yes	<input type="radio"/> Cash	_____ AMR	<input type="radio"/> Yes	<input type="radio"/> Yes
	<input type="radio"/> No	<input type="radio"/> In kind	_____ AMR	<input type="radio"/> No	<input type="radio"/> No
Did you/the patient give any money or gifts to your treating doctor while in hospital?	<input type="radio"/> Yes	<input type="radio"/> Cash	_____ AMR	<input type="radio"/> Yes	<input type="radio"/> Yes
	<input type="radio"/> No		_____ AMR	<input type="radio"/> No	<input type="radio"/> No

In order to allow analysis of the results by the socioeconomic status of the patient, the questionnaire includes relevant questions derived from previous surveys conducted in post-Soviet countries.

The questionnaire differentiates between payments made in intensive care and normal care wards. Following the introduction of official co-payments, if patients are hospitalized in an intensive care ward, they should pay nothing officially; however, if they are hospitalized in a normal care ward as an emergency patient, they pay an official co-payment according to a price-list. Therefore, it is crucial to analyse patients by ward to establish whether payments that are made are official or unofficial.

The questionnaire consists of eight sections, including a separate section on payments made in intensive care wards:

- **Section A:** general information about a patient;
- **Section B:** social status of a patient ie whether person has social beneficiary status;
- **Section C:** type of hospitalization and payment for services (cash and in-kind);
- **Section D:** treatment in the intensive care/resuscitation ward and payment for these services;
- **Section E:** treatment in other wards (ie not intensive care/resuscitation ward) and payment for these services;
- **Section F:** patient awareness of payments in hospital, including official co-payment reforms and money collection for hospitalization;
- **Section G:** patient satisfaction with care and outcome of treatment; and
- **Section H:** patients' household socioeconomic status (SES)

Methodological issues

All surveys have limitations in terms of the statistical validity of the results that could be related to sampling and non-sampling errors. The surveys conducted for this analysis are more likely to suffer from non-sampling errors. Indeed, all surveys suffer from potential *recall error*. Respondents may fail to accurately recall when an event occurred, or forget that it had occurred in the period in question, or fail to correctly report the actual amount of expenditure associated with a particular event. In addition, often patients do not pay themselves while hospitalized but relatives pay on their behalf and the patient may not have accurate information on how much was paid. Several approaches were used to reduce such recall errors:

- There was a maximum time period of 6 months between the interview and the hospitalization. With regard to international experience, this is a reasonable time period since hospitalizations are important events that stand out in people's lives and they are likely to remember such incidents well within a year.
- Expenditures were broken down into detailed components to trigger respondents' memory about particular payments they may have otherwise forgotten.
- The expenditure questions were formulated to ask about payments made by patients themselves as well as by others on their behalf.

The *research instrument* includes sensitive questions that may suffer from misreporting because respondents may not want to admit behaviours that they consider to be possibly illegal and/or inappropriate. In order to minimize misreporting related to this perception, the following measures were undertaken: (1) the survey was confidential and anonymous; and respondents were re-assured about this in the introduction of the interview; (2) the questions about detailed payments were formulated to eliminate the word unofficial or even to hint at the unofficial nature of these payments.

Data cleaning and analysis

The database was cleaned before data analysis took place to ensure that the dataset was internally consistent throughout. Inconsistencies were detected as a result of some misunderstanding of data definitions amongst respondents, in particular reporting about the lump sum a patient paid for all services received during his/her hospitalization. Including such a question is a common practice in surveys in Armenia but there was concern that a patient might have become confused, reporting both a lump sum amount, and subsequently reporting further payments when asked about the details, potentially leading to an upward bias on reported payments. Thus, the data was carefully audited to detect anomalies and when duplicate payments were initially identified, they were checked with the primary source (handwritten questionnaire), and if double reporting was confirmed then this was eliminated from the database.

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Annex 2a: Patient payments at the hospital level in intensive care wards, follow-up survey

INTENSIVE CARE WARD	TOTAL PAYMENT						UNOFFICIAL PAYMENT						
	Total Payment (AMD)	Number of patients who mentioned making a payment (N)	% of patients who paid out of all surveyed patients	Mean payment among those who paid (AMD)	One sample mean T statistics 2-Tailed Significance (AMD) (Test value= 77400 AMD, 95% Conf. Interval)		Total Unofficial payments (AMD)	Level of unofficial payment (%)	Number of patients who mentioned making a payment unofficially (N)	% of patients who paid unofficially out of all surveyed patients	Mean unofficial payment among those who paid (AMD)	One sample mean T statistics 2-Tailed Significance among all patients (AMD) (Test value= 77400 AMD, 95% Conf. Interval)	
Lump sum	44 266 000	131	28.2	391 735	0.021	95 401	7 908 000	17.9	48	10.3	164 750	0.0190	17 043
3 Regions	1 430 000	13	23.6	110 000	0.000	26 000	1 125 000	78.7	7	12.7	160 714	0.0000	20 455
Yerevan	42 836 000	118	28.9	428 360	0.063	104 733	6 783 000	15.8	41	10.0	165 439	0.0370	16 584
Difference (Regions -Yerevan)	(41 406 000)	(105)	(5)	(318 360)	(0)	(78 733)	(5 658 000)	63	(34)	3	(4725)	(0)	3870
Medicine	3 396 000	36	7.8	109 548	0.000	7319	33 000	1.0	3	0.6	11 000	0.000	71
3 Regions	653 000	11	20.0	72 556	0.000	11 873	15 000	2.3	1	1.8	15 000	0.000	273
Yerevan	2 743 000	25	6.1	124 682	0.000	6707	18 000	0.7	2	0.5	9000	0.000	44
Difference (Regions-Yerevan)	(2 090 000)	(14)	14	(52 126)	-	5166	(3000)	2	(1)	1	6000	-	229
Medical supplies	130 000	13	2.8	13 000	0.000	280	10 000	7.7	2	0.4	5000	0.000	22
3 Regions	9000	3	5.5	3000	0.000	164	-	0	0	0.0	0	0.000	0
Yerevan	121 000	10	2.4	17 286	0.000	296	10 000	8.3	2	0.5	5000	0.000	24
Difference (Regions-Yerevan)	(112 000)	(7)	3	(14 286)	-	(132)	(10 000)	(8)	(2)	(0)	(5 000)	-	(24)
Simple tests	657 500	38	8.2	18 786	0.000	1417	556 500	84.6	31	6.7	17 952	0.000	1199
3 Regions	55 500	6	10.9	9 250	0.000	1009	40 500	73.0	4	7.3	10 125	0.000	736
Yerevan	602 000	32	7.8	20 759	0.000	1472	516 000	85.7	27	6.6	19 111	0.000	1262
Difference (Regions-Yerevan)	(546 500)	(26)	3	(11 509)	-	(463)	(475 500)	(13)	(23)	1	(8 986)	-	(525)
Complex tests	489 000	14	3.0	37 615	0.000	1054	324 000	66.3	9	1.9	36 000	0.000	698
3 Regions	-	0	-	-	-	-	-	-	0	0.0	-	-	-
Yerevan	489 000	14	3.0	37 615.4	0.000	1053.9	324 000	66.3	9	2.2	36 000	0.000	792
Difference (Regions-Yerevan)	(489 000)	(14)	(3)	(37 615)	-	(1054)	(324 000)	(66)	(9)	(2)	(36 000)	-	(792)
Other supplies and services	11 500	3	0.6	3833	0.000	25	11 500	100.0	3	0.6	3833	0.000	25
3 Regions	-	0	-	-	-	-	-	-	-	-	-	-	-

Notes: (0), (0.0), (0.00) mean no difference; (-) and () mean you cannot compare these figures.

Yerevan	11 500	3	0.7	3833	0.000	28	11 500	100.0	3	0.7	3833	0.000	28
Difference (Regions-Yerevan)	(11 500)	(3)	(1)	(3833)	-	(28)	(11 500)	(100)	(3)	(1)	(3833)	-	(28)
Treating doctor	388 000	19	4.1	32 333	0.000	836	388 000	100.0	12	2.6	32 333	0.000	836
3 Regions	130 000	2	3.6	65 000	0.031	2364	130 000	100.0	2	3.6	65 000	0.005	2364
Yerevan	258 000	17	4.2	25 800	0.000	631	258 000	100.0	10	2.4	25 800	0.000	631
Difference (Regions-Yerevan)	(128 000)	(15)	(1)	39 200	0	1733	(128 000)	-	(8)	1	39 200	0	1733
Narrow specialists	-	1	-	-	-	-	-	-	-	-	-	-	-
3 Regions	-	-	-	-	-	-	-	-	-	-	-	-	-
Yerevan	-	1	-	-	-	-	-	-	-	-	-	-	-
Difference (Regions-Yerevan)	-	(1)	-	-	-	-	-	-	-	-	-	-	-
Nurses	248 000	25	5.4	13 778	0.000	534	248 000	100.0	18	3.9	13 778	0.000	534
3 Regions	130 000	3	5.5	43 333	0.002	2364	130 000	100.0	3	5.5	43 333	0.000	2364
Yerevan	118 000	22	5.4	7867	0.000	289	118 000	100.0	15	3.7	7867	0.000	289
Difference (Regions-Yerevan)	12 000	(19)	0	35 467	0	2075	12 000	-	(12)	2	35 467	-	2075
Surgery	15 655 100	60	12.9	265 341	0.000	33 739	10 590 600	67.6	38	8.2	278 700	0.000	22 825
3 Regions	170 500	3	5.5	85 250	0.060	3 100	170 500	100.0	2	3.6	85 250	0.010	3 100
Yerevan	15 484 600	57	13.9	271 660	0.000	37 860	10 420 100	67.3	36	8.8	289 447	0.000	25 477
Difference (Regions-Yerevan)	(15 314 100)	(54)	(8)	(186 410)	0	(34 760)	(10 249 600)	33	(34)	(5)	(204 197)	0	(22 377)
Other	385 500	10	2.2	38 550	0.000	831	322 000	83.5	4	0.9	80 500	0.000	694
3 Regions	-	0	-	-	-	-	-	-	-	-	-	-	-
Yerevan	385 500	10	2.4	38 550	0.000	943	322 000	83.5	4	1.0	80 500	0.000	787
Difference (Regions-Yerevan)	(385 500)	(10)	(2)	(38 550)	-	(943)	(322 000)	(84)	(4)	(1)	(80 500)	-	(787)
Individual Room in Ward	543 000	17	3.7	36 200	0.000	1170	371 000	68.3	10	2.2	37 100	0.000	800
3 Regions	120 000	3	5.5	40 000	0.001	2 182	80 000	66.7	2	3.6	40 000	0.000	1455
Yerevan	423 000	14	3.4	35 250	0.000	1 034	291 000	68.8	8	2.0	36 375	0.000	711
Difference (Regions-Yerevan)	(303 000)	(11)	2	4 750	0	1 148	(211 000)	(2)	(6)	2	3 625	-	743
TOTAL PAYMENTS	66 169 600	202	43.5	348 261	0.000	142 607	20 762 600	31.4	111	23.9	187 050	0.001	44 747
3 Regions	2 698 000	24	43.6	112 417	0.000	49 055	1 691 000	62.7	14	25.5	120 786	0.000	30 745
Yerevan	63 471 600	178	43.5	382 359	0.001	155 187	19 071 600	30.0	97	23.7	196 614	0.000	46 630
Difference (Regions-Yerevan)	(60 773 600)	(154)	0	(269 942)	(0)	(106 133)	(17 380 600)	33	(83)	2	(75 829)	-	(15 884)

Annex 2b: Patient payments at the hospital level in normal wards, follow-up survey

NORMAL WARD	TOTAL PAYMENT						UNOFFICIAL PAYMENT						
	Total Payment (AMD)	Number of patients who mentioned out of all making a payment (N)	% of patients who paid surveyed	Mean payment among those who paid (AMD)	One sample mean T statistics 2-Tailed Significance (AMD, 77400 AMD, 95% Conf. Interval)	Mean payment among all patients (AMD)	Total Unofficial payments (AMD)	Level of unofficial payment (%)	Number of patients who mentioned making a payment unofficially (N)	% of patients who paid out of all surveyed patients	Mean unofficial payment among those who paid (AMD)	One sample mean T statistics 2-Tailed Significance (AMD, 77400 AMD, 95% Conf. Interval)	
Lump sum	59 799 680	475	26.7	147 290	0.000	33 652	21 796 680	36.4	184	10.4	118 460	0.000	12 266
3 Regions	9 905 000	114	27.7	92 570	0.000	24 100	5 487 000	55.4	58	14.1	94 603	0.000	13 350
Yerevan	49 894 680	361	26.4	166 872	0.000	36 526	16 309 680	32.7	126	9.2	129 442	0.000	11 940
Difference (Regions-Yerevan)	(39 989 680)	(247)	1	(74 302)	-	(12 426)	(10 822 680)	23	(68)	5	(34 838)	-	1411
Medicine	40 683 300	261	14.7	166 735	0.000	22 894	1 502 000	3.7	14	0.8	107 286	0.000	845
3 Regions	1 659 800	66	16.1	25 934	0.000	4 038	96 000	5.8	4	1.0	24 000	0.000	234
Yerevan	39 023 500	195	14.3	216 797	0.000	28 568	1 406 000	3.6	10	0.7	140 600	0.000	1029
Difference (Regions-Yerevan)	(37 363 700)	(129)	2	(190 863)	-	(24 529)	(1 310 000)	2	(6)	0	(116 600)	-	(796)
Medical supplies	976 500	70	3.9	14 575	0.000	550	10 500	1.1	2	0.1	5250	0.000	6
3 Regions	101 000	12	2.9	9 182	0.000	246	10 000	9.9	1	0.2	10 000	0.000	24
Yerevan	875 500	58	4.2	15 634	0.000	641	500	0.1	1	0.1	500	0.000	0
Difference (Regions-Yerevan)	(774 500)	(46)	(1)	(6 452)	-	(395)	9 500	10	-	0	9 500	-	24
Simple tests	3 485 500	200	11.3	19 151	0.000	1961	2 758 500	79.1	141	7.9	19 564	0.000	1552
3 Regions	455 500	48	11.7	9 691	0.000	1 108	286 500	62.9	29	7.1	9 879	0.000	697
Yerevan	3 030 000	152	11.1	22 444	0.000	2 218	2 472 000	81.6	112	8.2	22 071	0.000	1810
Difference (Regions-Yerevan)	(2 574 500)	(104)	1	(12 753)	-	(1 110)	(2 185 500)	(19)	(83)	(1)	(12 192)	-	(1 113)
Complex tests	1 802 003	48	2.7	41 907	0.000	1014	1 018 003	56.5	26	1.5	39 154	0.000	573
3 Regions	65 000	3	0.7	21 667	0.000	158	5 000	7.7	1	0.2	5000	0.000	12
Yerevan	1 737 003	45	3.3	43 425	0.000	1 272	1 013 003	58.3	25	1.8	40 520	0.000	742
Difference (Regions-Yerevan)	(1 672 003)	(42)	(3)	(21 758)	-	(1 113)	(1 008 003)	(51)	(24)	(2)	(35 520)	-	(729)
Other supplies and services	86 800	23	1.3	3774	0.000	49	86 400	99.5	22	1.2	3927	0.000	49
3 Regions	-	0	-	-	-	-	-	0.0	0	0.0	0	-	0

Notes: (0), (0.0), (0.00) mean no difference; (-) and () mean you cannot compare these figures

Yerevan	86 800	23	1.7	3 774	0.000	64	86 400	99.5	22	1.6	3 927	0.000	63
Difference (Regions-Yerevan)	(86 800)	(23)	(2)	(3 774)	-	(64)	(86 400)	(100)	(22)	(2)	(3 927)	-	(63)
Treating doctor	5 603 000	134	7.5	62 256	0.000	3 153	5 173 000	92.3	83	4.7	62 325	0.000	2 911
3 Regions	2 249 000	39	9.5	62 472	0.000	5 472	2 249 000	100.0	36	8.8	62 472	0.000	5 472
Yerevan	3 354 000	95	7.0	62 111	0.000	2 455	3 354 000	100.0	54	4.0	62 111	0.000	2 455
Difference (Regions-Yerevan)	(1 105 000)	(56)	3	361	-	3 017	(1 105 000)	-	(18)	5	361	-	3 017
Narrow specialists	85 000	5	0.3	28 333	0.000	48	85 000	100.0	3	0.2	28 333	0.000	48
3 Regions	-	-	-	-	-	-	-	0.0	-	-	-	-	-
Yerevan	85 000	5	0.4	28 333	0.000	62	85 000	100.0	3	0.2	28 333	0.000	62
Difference (Regions-Yerevan)	(85 000)	(5)	(0)	(28 333)	-	(62)	(85 000)	(100)	(3)	(0)	(28 333)	-	(62)
Nurses	2 277 500	161	9.1	18 822	0.000	1 282	2 277 500	100.0	121	6.8	18 822	0.000	1 282
3 Regions	229 000	21	5.1	11 450	0.000	557	229 000	100.0	20	4.9	11 450	0.000	557
Yerevan	2 048 500	140	10.2	20 282	0.000	1 500	2 048 500	100.0	101	7.4	20 282	0.000	1 500
Difference (Regions-Yerevan)	(1 819 500)	(119)	(5)	(8 832)	-	(942)	(1 819 500)	-	(81)	(3)	(8 832)	-	(942)
Surgery	38 633 000	206	11.6	232 729	0.000	21 741	23 698 000	61.3	103	5.8	230 078	0.000	13 336
3 Regions	5 800 000	42	10.2	152 632	0.000	14 112	4 180 000	72.1	22	5.4	190 000	0.000	10 170
Yerevan	32 833 000	164	12.0	256 508	0.000	24 036	19 518 000	59.4	81	5.9	240 963	0.000	14 288
Difference (Regions-Yerevan)	(27 033 000)	(122)	(2)	(103 876)	-	(9924)	(15 338 000)	13	(59)	(1)	(50 963)	-	(4 118)
Other	2 751 800	73	4.1	43 679	0.000	1 549	1 387 500	50.4	29	1.6	47 845	0.000	781
3 Regions	260 000	5	1.2	65 000	0.000	633	160 000	61.5	2	0.5	80 000	0.000	389
Yerevan	2 491 800	68	5.0	42 234	0.000	1 824	1 227 500	49.3	27	2.0	45 463	0.000	899
Difference (Regions-Yerevan)	(2 231 800)	(63)	(4)	22 766	-	(1 192)	(1 067 500)	12	(25)	(1)	34 537	-	(509)
Individual Room in Ward	4 841 000	125	7.0	41 376	0.000	2 724	3 490 000	72.1	90	5.1	38 778	0.000	1 964
3 Regions	278 000	6	1.5	46 333	0.000	676	198 000	71.2	4	1.0	49 500	0.000	482
Yerevan	4 563 000	119	8.7	41 108	0.000	3 340	3 292 000	72.1	86	6.3	38 279	0.000	2 410
Difference (Regions-Yerevan)	(4 285 000)	(113)	(7)	5 225	-	(2 664)	(3 094 000)	(1)	(82)	(5)	11 221	-	(1 928)
TOTAL PAYMENTS	161 025 083	809	45.5	199 042	0.000	90 616	63 283 083	39.3	498	28.0	127 074	0.000	35 612
3 Regions	21 002 300	200	48.7	105 012	0.000	51 100	12 900 500	61.4	29	7.1	444 845	0.000	31 388
Yerevan	140 022 783	609	44.6	229 922	0.000	102 506	50 812 583	36.3	30	2.2	1 693 753	0.000	37 198
Difference (Regions-Yerevan)	(119 020 483)	(409)	4	(124 911)	-	(51 405)	(37 912 083)	25	(1)	5	(1 248 908)	-	(5810)

		Annex 3. Total payments, including unofficial payments, follow-up survey																
		TOTAL PAYMENT					UNOFFICIAL PAYMENT											
		Mean payment among all patients (AMD)	Standard Deviation (SD)	One sample mean T statistics 2-Tailed Significance (Test value=77400 AMD, 95% Conf. Interval)	Mean payment among those who paid (AMD)	% of patients paid out of all surveyed patients	Number of patients who mentioned making a payment (N)	Total Payment (AMD)	Mean unofficial payment among all patients (AMD)	Standard Deviation	One sample mean T statistics 2-Tailed Significance (Test value=77400 AMD, 95% Conf. Interval)	Mean unofficial payment among those who paid (AMD)	% of patients who paid unofficially out of all those who reported making any payment	Number of patients who mentioned about payment unofficially (N)	Level of unofficial payment (%)	Total Unofficial payments (AMD)		
Lump sum		104 065 680	606	31.2	200 512	0.000	452 729	53 559	29 704 680	28.5	232	232	11.9	38.3	128 037	0.000	344 512	15 288
3 Regions		11 335 000	127	28.7	94 458	0.000	91 541	25 587	6 612 000	58.3	65	65	14.7	51.2	101 723	0.000	98 582	14 926
Yerevan		92 730 680	479	31.9	232 408	0.000	970 597	61 820	23 092 680	24.9	167	167	11.1	34.9	138 280	0.000	577 492	15 395
Difference (Regions-Yerevan)		(81 395 680)	(352)	(3)	(137 949)	-	(879 055)	(36 234)	(16 480 680)	33	(102)	4	16	(478 910)	-	(478 910)	(470)	
Medicine		44 079 300	297	15.3	160 288	0.000	833 258	22 686	1 535 000	3.5	17	17	0.9	5.7	90 294	0.000	469 393	790
3 Regions		2 312 800	77	17.4	31 682	0.000	41 986	5 221	111 000	4.8	5	5	1.1	6.5	22 200	0.000	29 420	251
Yerevan		41 766 500	220	14.7	206 765	0.000	969 551	27 844	1 424 000	3.4	12	12	0.8	5.5	118 667	0.000	556 446	949
Difference (Regions-Yerevan)		(39 453 700)	(143)	3	(175 083)	-	(927 565)	(22 624)	(1 313 000)	1	(7)	0	1	(96 467)	-	(527 026)	(699)	
Medical supplies		1 106 500	83	4.3	14 370	0.000	16 044	569	20 500	1.9	4	4	0.2	4.8	5 125	0.000	5 722	11
3 Regions		110 000	15	3.4	7 857	0.000	7 731	248	10 000	9.1	1	1	0.2	6.7	10 000	0.000	9 840	23
Yerevan		996 500	68	4.5	15 817	0.000	17 034	664	10 500	1.1	3	3	0.2	4.4	3 500	0.000	3 769	7
Difference (Regions-Yerevan)		(886 500)	(53)	(1)	(7 960)	-	(9 303)	(416)	(500)	8	(2)	0	2	6500	-	6070	16	
Simple tests		4 143 000	238	12.2	19 092	0.000	23 861	2 132	3 315 000	80.0	172	172	8.9	72.3	19 273	0.000	24 087	1 706
3 Regions		511 000	54	12.2	9 642	0.000	8 525	1 153	327 000	64.0	33	33	7.4	61.1	9 909	0.000	8 762	738
Yerevan		3 632 000	184	12.3	22 146	0.000	26 296	2 421	2 988 000	82.3	139	139	9.3	75.5	21 496	0.000	25 524	1 992
Difference (Regions-Yerevan)		(3 121 000)	(130)	(0)	(12 505)	-	(17 771)	(1 268)	(2 661 000)	(18)	(106)	(2)	(14)	(11 587)	-	(16 762)	(1 254)	
Complex tests		2 291 003	62	3.2	40 911	0.000	38 916	1 179	1 342 003	58.6	35	35	1.8	56.5	38 343	0.000	36 474	691
3 Regions		65 000	3	0.7	21 667	0.000	20 817	147	5 000	7.7	1	1	0.2	33.3	5 000	0.000	4 804	11
Yerevan		2 226 003	59	3.9	42 000	0.000	39 519	1 484	1 337 003	60.1	34	34	2.3	57.6	39 324	0.000	37 000	891
Difference (Regions-Yerevan)		(2 161 003)	(56)	(3)	(20 333)	-	(18 702)	(1 337)	(1 332 003)	(52)	(33)	(2)	(24)	(34 324)	-	(32 197)	(880)	

Notes: (0), (0.0), (0.00) mean no difference; (-) and () mean you cannot compare these figures

Other supplies and services	98 300	26	1.3	3 781	0.000	5726	51	97 900	99.6	25	1.3	96.2	3916	0.000	5931	50
3 Regions	-	-	-	-	-	-	-	-	0.0	0	0.0	0.0	0	-	0	0
Yerevan	98 300	26	1.7	3781	0.000	5726	66	97 900	99.6	25	1.7	96.2	3916	0.000	5931	65
Difference (Marzes-Yerevan)	(98 300)	(26)	(2)	(3781)	-	(5726)	(66)	(97 900)	(100)	(25)	(2)	(96)	(3916)	-	(5931)	(65)
Treating doctor	5 991 000	153	7.9	58 735	0.000	71 052	3083	5 561 000	92.8	95	4.9	62.1	58 537	0.000	73 564	2862
3 Regions	2 379 000	41	9.3	62 605	0.000	65 033	5370	2 379 000	100.0	38	8.6	92.7	62 605	0.000	65 033	5370
Yerevan	3 612 000	112	7.5	56 438	0.000	74 887	2408	3 612 000	100.0	64	4.3	57.1	56 438	0.000	74 887	2408
Difference (Regions-Yerevan)	(1 233 000)	(71)	2	6168	-	(9854)	2962	(1 233 000)	-	(26)	4	36	6168	-	(9854)	2962
Narrow specialists	85 000	6	0.3	28 333	0.000	7638	44	85 000	100.0	3	0.2	50.0	28 333	0.000	7638	44
3 Regions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yerevan	85 000	6	0.4	28 333	0.000	7638	57	85 000	100.0	3	0.2	50.0	28 333	0.000	7638	57
Difference (Regions-Yerevan)	(85 000)	(6)	(0)	(28 333)	-	(7638)	(57)	(85 000)	(100)	(3)	(0)	(50)	(28 333)	-	(7638)	(57)
Nurses	2 525 500	186	9.6	18 169	0.000	28 526	1300	2 525 500	100.0	139	7.2	74.7	18 169	0.000	28 526	1300
3 Regions	359 000	24	5.4	15 609	0.000	21 388	810	359 000	100.0	23	5.2	95.8	15 609	0.000	21 388	810
Yerevan	2 166 500	162	10.8	18 677	0.000	29 774	1444	2 166 500	100.0	116	7.7	71.6	18 677	0.000	29 774	1444
Difference (Regions-Yerevan)	(1 807 500)	(138)	(5)	(3068)	-	(8385)	(634)	(1 807 500)	-	(93)	(3)	24	(3068)	-	(8385)	(634)
Surgery	54 288 100	266	13.7	241 280	0.000	294 165	27 940	34 288 600	63.2	141	7.3	53.0	243 182	0.000	296 482	17 647
3 Regions	5 970 500	45	10.2	149 263	0.000	86 068	13 477	4 350 500	72.9	24	5.4	53.3	181 271	0.000	104 524	9821
Yerevan	48 317 600	221	14.7	261 176	0.000	318 646	32 212	29 938 100	62.0	117	7.8	52.9	255 881	0.000	312 186	19 959
Difference (Marzes-Yerevan)	(42 347 100)	(176)	(5)	(111 914)	-	(232 579)	(18 734)	(25 587 600)	11	(93)	(2)	0	(74 610)	-	(207 662)	(10 138)
Other	3 137 300	83	4.3	42 977	0.000	76 870	1615	1 709 500	54.5	33	1.7	39.8	51 803	0.000	92 657	880
3 Regions	260 000	5	1.1	65 000	0.000	20 817	587	160 000	61.5	2	0.5	40.0	80 000	0.000	25 621	361
Yerevan	2 877 300	78	5.2	41 700	0.000	78 864	1 918	1 549 500	53.9	31	2.1	39.7	49 984	0.000	94 531	1033
Difference (Regions-Yerevan)	(2 617 300)	(73)	(4)	23 300	-	(58 047)	(1331)	(1 389 500)	8	(29)	(2)	0	30 016	-	(68 910)	(672)
Individual Room in Ward	5 384 000	142	7.3	40 788	0.000	32 820	2771	3 861 000	71.7	100	5.1	70.4	38 610	0.000	31 068	1987
3Regions	398 000	9	2.0	44 222	0.000	34 788	898	278 000	69.8	6	1.4	66.7	46 333	0.000	36 449	628
Yerevan	4 986 000	133	8.9	40 537	0.000	32 808	3324	3 583 000	71.9	94	6.3	70.7	38 117	0.000	30 849	2389
Difference (Regions-Yerevan)	(4 588 000)	(124)	(7)	3686	-	1 980	(2426)	(3 305 000)	(2)	(88)	(5)	(4)	8216	-	5599	(1761)
TOTAL PAYMENTS	227 194 683	1 011	52.0	239 910	0.000	805 416	116 930	84 045 683	37.0	580	29.9	57.4	144 906	0.000	2 152 282	43 256
3 Regions	23 700 300	224	50.6	105 805	0.000	133 045	53 500	14 591 500	61.6	43	9.7	19.2	339 337	0.000	426 702	32 938
Yerevan	203 494 383	787	52.5	262 573	0.000	913 273	135 663	69 884 183	34.3	127	8.5	16.1	550 269	0.000	1 913 925	46 589
Difference (Regions-Yerevan)	(179 794 083)	(563)	(2)	(156 768)	-	(780 227)	(82 163)	(55 292 683)	27	(84)	1	3	(210 932)	-	(1 487 223)	(13 652)

Annex 4. Total payments, including unofficial payments by patient categories, baseline and follow-up survey

Notes: B = baseline survey; F = follow-up survey

	Emergency		Gynaecology		Social		Oncology	
	B	F	B	F	B	F	B	F
Total payments								
N	460	332	97	172	303	207	136	236
Total sum (AMD)	95 784 500	78 491 380	21 710 700	34 260 000	82 238 750	37 637 700	33 033 700	76 855 603
Mean payment (AMD)	208 227	236 420	223 822	199 186	271 415	181 825	242 895	325 659
SD	447 489	1 029 970	487 076	200 779	692 476	509 873	598 503	920 943
Payment structure (%)	100	100	100	100	100	100	100	100
incl. unofficial								
N	333	173	68	113	187	133	107	161
Total sum (AMD)	35 897 300	19 786 680	9 678 500	20 171 500	11 669 700	13 989 400	11 259 600	30 098 103
Mean payment (AMD)	107 800	114 374	142 331	178 509	62 405	103 874	103 874	186 945
SD	230 439	163 551	198 831	194 221	96 526	188 187	143 965	267 856
Payment structure (%)	100	100	100	100	100	100	100	100
Lump sum								
N	200	192	59	119	118	89	40	105
Total sum (AMD)	52 070 500	53 255 180	14 794 000	17 809 000	53 465 500	16 467 000	12 409 000	16 584 500
Mean payment (AMD)	260 353	277 371	250 746	149 655	453 097	185 022	310 225	157 948
SD	580 450	1 341 410	326 258	137 046	843 870	404 099	580 944	209 791
Payment structure (%)	54	68	68	52	65	44	38	22
incl. unofficial								
N	108	63	31	57	42	52	19	53
Total payments (AMD)	16 531 500	6 608 180	7 199 000	8 181 000	3 442 000	5 644 000	3 824 000	9 271 500
Mean payment (AMD)	153 069	104 892	232 226	143 526	81 952	108 538	201 263	174 934
SD	348 725	160 379	229 266	126 615	84 149	189 350	212 011	227 452
Payment structure (%)	46	33	74	41	29	40	34	31
Medicine								
N	202	86	23	20	154	91	62	72
Total payments (AMD)	10 627 500	4 717 200	799 200	803 500	7 703 550	4 413 600	7 496 000	34 145 000
Mean payment (AMD)	52 611	54 851	34 748	40 175	50 023	48 501	120 903	474 236
SD	68 215	59 301	42 681	45 455	58 802	59 231	274 403	1 574 210
Payment structure (%)	11	6	4	2	9	12	23	44
incl. unofficial								
N	2	6	-	-	1	4	-	7
Total payments (AMD)	34 000	121 000			40 000	180 000		1 234 000
Mean payment (AMD)	17 000	20 167			40 000	45 000		176 286
SD	7 071	16 857				34 157		207 076
Payment structure (%)	0	1	-	-	0	1	-	4

Notes: B = baseline survey; F = follow-up survey

	Emergency		Gynaecology		Social		Oncology	
	B	F	B	F	B	F	B	F
Medical Supplies								
N	98	25	8	2	63	23	32	24
Total payments (AMD)	1 111 200	329 000	29 000	8000	714 500	355 000	346 700	414 500
Mean payment (AMD)	11 339	13 160	3625	4000	11 341	15 435	10 834	17 271
SD	16 278	9949	1598	2828	19 806	16 719	12 085	20 646
Payment structure (%)	1	0	0	0	1	1	1	1
incl. unofficial								
N	-	2	-	-	-	1	-	1
Total payments (AMD)		16 000				4000		500
Mean payment (AMD)		8000				4000		500
SD		2828						
Payment structure (%)	-	0	-	-	-	0	-	-
Simple lab tests								
N	141	65	17	27	84	50	64	74
Total payments (AMD)	2 543 000	940 500	281 000	500 000	1 177 000	855 500	1 121 500	1 847 000
Mean payment (AMD)	18 035	14 469	16 529	18 519	14 012	17 110	17 523	24 959
SD	31 714	19 892	17 604	28 682	28 385	19 208	17 232	27 065
Payment structure (%)	3	1	1	1	1	2	3	2
incl. unofficial								
N	126	18	15		69	39	61	65
Total payments (AMD)	2 184 500	369 000	256 000		902 500	653 500	1 014 500	1 648 000
Mean payment (AMD)	17 337	20 500	17 067		13 080	16 756	16 631	25 354
SD	32 774	33 992	18 725		30 130	19 885	16 462	28 225
Payment structure (%)	6	2	3		8	5	9	5
Complex lab tests								
N	30	11	1	5	19	9	21	30
Total payments (AMD)	1 575 000	341 000	12 000	173 000	1 501 000	612 000	1 131 500	1 165 003
Mean payment (AMD)	52 500	31 000	12 000	34 600	79 000	68 000	53 881	38 833
SD	50 626	15 100	0	47 967	78 976	66 468	64 916	30 497
Payment structure (%)	2	0		1	2	2	3	2
incl. unofficial								
N	22	3	-	-	9	7	19	17
Total payments (AMD)	1 033 000	43 000			327 000	342 000	1 015 000	766 003
Mean payment (AMD)	46 955	14 333			36 333	48 857	53 421	45 059
SD	40 629	6028			27 812	62 384	68 373	34 146

Notes: B = baseline survey; F = follow-up survey

	Emergency		Gynaecology		Social		Oncology	
	B	F	B	F	B	F	B	F
Medical Supplies								
N	98	25	8	2	63	23	32	24
Total payments (AMD)	1 111 200	329 000	29 000	8000	714 500	355 000	346 700	414 500
Mean payment (AMD)	11 339	13 160	3625	4000	11 341	15 435	10 834	17 271
SD	16 278	9949	1598	2828	19 806	16 719	12 085	20 646
Payment structure (%)	1	0	0	0	1	1	1	1
incl. unofficial								
N	-	2	-	-	-	1	-	1
Total payments (AMD)		16 000				4000		500
Mean payment (AMD)		8000				4000		500
SD		2828						
Payment structure (%)	-	0	-	-	-	0	-	-
Simple lab tests								
N	141	65	17	27	84	50	64	74
Total payments (AMD)	2 543 000	940 500	281 000	500 000	1 177 000	855 500	1 121 500	1 847 000
Mean payment (AMD)	18 035	14 469	16 529	18 519	14 012	17 110	17 523	24 959
SD	31 714	19 892	17 604	28 682	28 385	19 208	17 232	27 065
Payment structure (%)	3	1	1	1	1	2	3	2
incl. unofficial								
N	126	18	15		69	39	61	65
Total payments (AMD)	2 184 500	369 000	256 000		902 500	653 500	1 014 500	1 648 000
Mean payment (AMD)	17 337	20 500	17 067		13 080	16 756	16 631	25 354
SD	32 774	33 992	18 725		30 130	19 885	16 462	28 225
Payment structure (%)	6	2	3		8	5	9	5
Complex lab tests								
N	30	11	1	5	19	9	21	30
Total payments (AMD)	1 575 000	341 000	12 000	173 000	1 501 000	612 000	1 131 500	1 165 003
Mean payment (AMD)	52 500	31 000	12 000	34 600	79 000	68 000	53 881	38 833
SD	50 626	15 100	0	47 967	78 976	66 468	64 916	30 497
Payment structure (%)	2	0		1	2	2	3	2
incl. unofficial								
N	22	3	-	-	9	7	19	17
Total payments (AMD)	1 033 000	43 000			327 000	342 000	1 015 000	766 003
Mean payment (AMD)	46 955	14 333			36 333	48 857	53 421	45 059
SD	40 629	6028			27 812	62 384	68 373	34 146
Payment structure (%)	3	0	-	-	3	2	9	3

Notes: B = baseline survey; F = follow-up survey

	Emergency		Gynaecology		Social		Oncology	
	B	F	B	F	B	F	B	F
Other supplies/services								
N	80	9	6	1	57	7	33	8
Total payments (AMD)	3 621 300	54 000	130 000	10 000	2 201 200	7300	1 108 000	27 000
Mean payment (AMD)	45 266	6000	21 667	10 000	38 618	1043	33 576	3375
SD	53 319	7726	6831		51 772	894	46 339	4904
Payment structure (%)	4	0	1	0	3	0	3	0
incl. unofficial								
N	68	9	4	1	47	6	32	8
Total payments (AMD)	2 621 300	54 000	85 000	10 000	1 656 200	6900	1 063 000	27 000
Mean payment (AMD)	38 549	6000	21 250	10 000	35 238	1150	33 219	3375
SD	47 661	7726	6292		50 595	929	47 034	4904
Payment structure (%)	7	0	1	-	14	0	10	0
Treating doctor								
N	96	45	10	11	53	23	31	22
Total payments (AMD)	5 858 000	2 377 000	379 000	660 000	1 738 000	1 024 000	1 535 000	1 930 000
Mean payment (AMD)	61 021	52 822	37 900	60 000	32 792	44 522	49 516	87 727
SD	68 614	55 866	52 397	68 957	29 590	31 541	51 203	114 098
Payment structure (%)	6	3	2	2	2	3	5	3
incl. unofficial								
N	92	39	10	11	53	22	31	22
Total payments (AMD)	5 538 000	2 027 000	379 000	660 000	1 738 000	944 000	1 535 000	1 930 000
Mean payment (AMD)	60 196	51 974	37 900	60 000	32 792	42 909	49 516	87 727
SD	69 827	57 350	52 397	68 957	29 590	31 297	51 203	114 098
Payment structure (%)	15	10	4	3	15	7	14	6
Narrow specialists								
N	6	1	1	-	2	1	8	1
Total payments (AMD)	230 000	30 000	5000		70 000	35 000	100 000	20 000
Mean payment (AMD)	38 333	30 000	5000		35 000	35 000	12 500	20 000
SD	55 917				35 355		12 177	
Payment structure (%)	0	0	-	-	0	0	0	0
incl. unofficial								
N	5	1	1		2	1	8	1
Total payments (AMD)	220 000	30 000	5000		70 000	35 000	100 000	20 000
Mean payment (AMD)	44 000	30 000	5000		35 000	35 000	12 500	20 000
SD	60 560				35 355		12 177	
Payment structure (%)	1	0	0		1	0	1	0

Notes: B = baseline survey; F = follow-up survey

	Emergency		Gynaecology		Social		Oncology	
	B	F	B	F	B	F	B	F
Nurses								
N	136	42	18	14	98	26	54	53
Total payments (AMD)	2 152 000	571 000	111 000	240 000	1 143 000	432 500	1 144 000	1 282 000
Mean payment (AMD)	15 824	13 595	6167	17 143	11 663	16 635	21 185	24 189
SD	25 947	11 658	4768	19 607	10 589	25 640	31 335	39 027
Payment structure (%)	2	1	1	1	1	1	3	2
incl. unofficial								
N	136	42	18	14	98	26	54	53
Total payments (AMD)	2 152 000	571 000	111 000	240 000	1 143 000	432 500	1 144 000	1 282 000
Mean payment (AMD)	15 824	13 595	6167	17 143	11 663	16 635	21 185	24 189
SD	25 947	11 658	4768	19 607	10 589	25 640	31 335	39 027
Payment structure (%)	6	3	1	1	10	3	10	4
Surgery								
N	6	59	-	66	1	31	3	69
Total payments (AMD)	3 045 000	12 364 500		13 272 500	35 000	12 133 000	405 000	16 518 100
Mean payment (AMD)	507 500	209 568		201 098	35 000	391 387	135 000	239 393
SD	880 362	150 296		109 065		622 560	108 282	265 904
Payment structure (%)	3	16		39	0	32	1	21
incl. unofficial								
N	3	30	-	45	1	22	2	44
Total payments (AMD)	345 000	7 315 000		10 019 500	35 000	4 715 000	285 000	12 239 100
Mean payment (AMD)	115 000	243 833		222 656	35 000	214 318	142 500	278 161
SD	73 655	144 572		111 939		236 936	152 028	315 581
Payment structure (%)	1	37	-	50	0	34	3	41
Other								
N	130	21	25	8	68	18	37	24
Total payments (AMD)	12 951 000	1 112 000	5 170 500	154 000	12 490 000	375 800	6 237 000	1 495 500
Mean payment (AMD)	99 623	52 952	206 820	19 250	183 676	20 878	168 568	62 313
SD	224 936	71 630	447 905	13 946	494 729	30 791	493 396	108 202
Payment structure (%)	14	1	24	0	15	1	19	2
incl. unofficial								
N	81	7	13	6	36	11	21	9
Total payments (AMD)	5 383 100	476 000	1 643 500	104 000	2 316 000	333 500	1 134 000	796 000
Mean payment (AMD)	66 457	68 000	126 423	17 333	64 333	30 318	54 000	88 444
SD	86 283	87 329	110 787	12 832	85 893	35 419	55 277	156 936
Payment structure (%)	15	2	17	1	20	2	10	3

Notes: B = baseline survey; F = follow-up survey

	Emergency		Gynaecology		Social		Oncology	
	B	F	B	F	B	F	B	F
Room in the ward								
N	-	43	-	19	-	22	-	48
Total payments (AMD)	-	2 400 000	-	630 000	-	927 000	-	1 427 000
Mean payment (AMD)	-	55 814	-	33 158	-	42 136	-	29 729
SD	-	39 092	-	19 791	-	31 543	-	26 196
Payment structure (%)	-	3	-	2	-	2	-	2
incl. unofficial								
N		29		16		18		37
Total payments (AMD)		1 733 000		545 000		699 000		884 000
Mean payment (AMD)		59 759		34 063		38 833		23 892
SD		42 974		21 215		32 491		22 808
Payment structure (%)		9		3		5		3

Annex 5. Sensitivity analysis by patient categories, baseline and follow-up survey

	Emergency			Gynaecology			Social			Oncology			Total		
	Yerevan	Regions	Total	Yerevan	Regions	Total	Yerevan	Regions	Total	Yerevan	Regions	Total	Yerevan	Regions	Total
TOTAL PAYMENTS															
% making payments															
Change	-10.9%	-6.6%	-9.6%	0.3%	13.1%	2.3%	-8.2%	-9.9%	-8.6%	-2.0%		-2.2%	-5.6%	-6.3%	-5.8%
SD	0.03	0.05	0.03	0.06	0.10	0.05	0.03	0.05	0.03	0.04		0.04	0.02	0.03	0.02
t	-3.24	-1.37	-3.49	0.05	1.36	0.47	-2.73	-1.98	-3.33	-0.52		-0.57	-3.04	-1.85	-3.57
Mean payment (those making payment)															
Change in payment	101 516	(96 742)	28 193	(58 243)	76 250	(24 636)	(110 578)	7 920	(89 590)	82 764		82 553	19 013	(35 404)	-
Change in payment (%)	47%	-50%	14%	-23%	63%	-11%	-33%	13%	-33%	34%		34%	7%	-25%	0%
SD	70 559	35 269	46 841	52 701	28 414	41 021	43 208	11 464	32 412	56 155		56 149	28 423	19 633	22 442
t	1.44	-2.74	0.60	-1.11	2.68	-0.60	-2.56	0.69	-2.76	1.47		1.47	0.67	-1.80	0.00
Mean payment (all sample)															
Change in payment	36 790	(70 151)	(3 227)	(34 877)	77 992	(10 786)	(63 525)	(3 695)	(52 299)	36 403		35 613	(5 472)	(26 599)	(10 474)
Change in payment (%)	24%	-55%	-2%	-22%	94%	-8%	-46%	-14%	-47%	29%		28%	-4%	-33%	-8%
SD	55 445	29 461	36 960	43 109	28 711	34 103	27 622	7 421	20 697	41 381		41 333	20 749	15 220	16 430
t	0.66	-2.38	-0.09	-0.81	2.72	-0.32	-2.30	-0.50	-2.53	0.88		0.86	-0.26	-1.75	-0.64
INFORMAL PAYMENTS															
% making payments															
Change	-21.3%	-13.8%	-19.0%	-3.2%	9.8%	-1.2%	-3.1%	-8.3%	-4.5%	-6.8%		-6.9%	-8.0%	-8.8%	-8.2%
SD	0.03	0.05	0.03	0.06	0.11	0.05	0.03	0.04	0.02	0.04		0.04	0.02	0.03	0.02
t	-6.34	-2.87	-6.90	-0.58	0.89	-0.25	-1.17	-1.90	-2.00	-1.82		-1.86	-4.57	-2.74	-5.32
Mean payment (those making payment)															
Change in payment	18 692	(9738)	6574	212	135 978	36 178	44 619	39 009	42 779	81 716		81 715	49 244	35 907	46 338
Change in payment (%)	17%	-10%	6%	0%	198%	25%	64%	99%	69%	78%		78%	47%	47%	47%
SD	14 001	20 377	11 291	24 641	25 974	19 935	10 173	12 808	8224	15 192		15 171	7565	12 414	49 026
t	1.33	-0.48	0.58	0.01	5.24	1.81	4.39	3.05	5.20	5.38		5.39	6.51	2.89	0.95

This report presents the findings of an evaluation of the introduction in Armenia of patient co-payments for specific services provided through the publicly financed basic benefits package (BBP) at the inpatient level. A baseline survey was conducted in July/ August 2011 and a follow-up survey in December 2011 with data disaggregated in a number of ways to facilitate equity analysis. Overall, out-of-pocket payments fell as a result of the policy, with approximately 6% fewer patients nationally accessing care without making any form of out-of-pocket payment. Furthermore, nationally the number of patients making an unofficial payment fell significantly. However, this picture hides the impact of the policy on different population groups, for different services, and in different parts of the country. One significant finding is that although the number of people making an unofficial payment decreased, the average amount of each payment increased considerably.

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