

Long-term trends in the financial burden of health care seeking in Kyrgyzstan, 2000–2014

Baktygul Akkazieva Melitta Jakab Adyl Temirov

Health Financing Policy Papers



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Abstract

Keywords

Kyrgyzstan has committed itself to universal health coverage and has launched comprehensive reforms to improve the health of the Kyrgyz population. In order to document progress in reducing the financial burden of the population, a module on health care utilization and health expenditure was added to the Kyrgyz integrated household budget survey, conducted by the National Statistical Committee. This is a unique, repeated cross-sectional survey to assess financial burden on the population and access to care over a 15-year period. The survey provides evidence of impressive reduction in financial burden associated with health care seeking due to the introduction of comprehensive health reforms during 2000-2009. However, the financial burden for health care services increased again after 2009 considerably, in particular for the two poorest groups of the population and in the two largest cities, Bishkek and Osh. Outpatient medicines drive the increase in OOP expenditures. Financial and geographical barriers to accessing health services improved during the survey period, but almost half the population still finds it difficult to find the money to pay for health care. Thus, the evidence obtained over the past 15 years in Kyrgyzstan indicates that well thought-out health reforms contextualized to the country's needs can reduce financial burden associated with health care seeking but sustaining these gains in the longer term can be a challenge.

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Abbreviations and acronyms

CPI	Consumer price index
FAP	Feldsher midwife points
FGP	Family group practice
FMC	Family medicine centers
GDP	Gross domestic product
KIHBS	Kyrgyz integrated household budget survey
KGS	Kyrgyz som
MHIF	Mandatory health insurance fund
OOP	Out-of-pocket
PHC	Primary health care

SGBP State guaranteed benefit package

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The National Statistics Committee conducted all five surveys over 15 years and prepared technical reports on the fieldwork. The Committee provided a clean database with merged consumption data to the WHO Regional Office for Europe.

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1. Introduction

Many countries are committed to moving to universal health coverage as an integral component of social and economic development (Rodin & de Ferranti, 2012; Kutzin, 2013; WHO&WB, 2015). Kyrgyzstan has been committed to moving towards universal health coverage, and pioneered a comprehensive health system transformation starting in 1996 (Kutzin, 2001; Kutzin et al., 2009; Balabanova et al., 2011; Ibraimova et al., 2011). The country implemented three major health reform programmes after independence in 1991: "Manas" (1996–2006), "Manas Taalimi" (2006–2012) and "Den Sooluk" (2012–2016). These programmes introduced comprehensive financial and structural changes to strengthen the health system at all levels.

In the early 1990s, the level of public spending on health in Kyrgyzstan dropped drastically and out-of-pocket (OOP) expenditure became one of the main sources of health financing (Kutzin, 2004). This became a major barrier for the population to seeking health care. The introduced reforms aimed to reduce OOP expenditures for health services aiming to remove barriers to seeking care. The reform package included the introduction of the single-payer system that involved the introduction of a payroll tax pooled with general tax in a new health purchasing agency, Mandatory Health Insurance Fund (MHIF). The MHIF replaced the previous provider payment mechanisms (historical line-item budget) with capitation and case-based payment mechanisms and these facilitated downsizing of the hospital infrastructure (Jakab & Kutzin, 2009; Kutzin et al., 2010). Additionally, co-payment for hospitalization was introduced in the State Guaranteed Benefit Package (SGBP), which regulates entitlements and obligations for receiving and paying health care services. It was designed to replace informal payments for health care by a transparent, official co-payment system, thereby reducing the financial burden of health care spending (Jakab & Kutzin, 2009).

Health reforms, including in health financing, slowed from 2010, after political turmoil in the country, and the earlier health reforms came under threat (Balabanova et al., 2011; Ibraimova et al., 2011). Attempts to improve the health system, nevertheless, continued, with the introduction of a number of changes. In 2011, the new Government decided to increase the salaries of workers in the social sector, including health, in order to retain these workers (Balabanova et al., 2011; Health Policy Analysis Centre, 2015).

In order to document the impact of reforms trends on financial burden and access to health services, a module on health care use and expenditure was added to the Kyrgyz Integrated Household Budget Survey (KIHBS), which is conducted regularly by the National Statistical Committee to monitor and analyze poverty. Surveys were conducted in 2001, 2004, 2007 and 2010 and in 2015 with technical and financial support from WHO and the United Kingdom Department for International Development (DFID). This approach made it possible to link data on health and health care utilization with detailed information on population income and expenditure in the previous years in order to estimate the burden of health expenditure on the population. Hence, these surveys contributed to strengthening monitoring of health system performance.

2. Objectives and research questions

The aim of this paper is to report the long-term trends in health care utilization and related **OOP expenditure incurred by individuals in 2000–2014**. **OOP expenditure includes both formal and informal payments for health services, including co-payments, fees for services, payments at private health facilities, payments for medicines, laboratory tests, diagnostics and other payments**. In particular, the following questions were addressed:

- What is the trend in utilization of outpatient and inpatient services according to socio-economic status? What are the patterns of unmet need and coping mechanisms used by households to raise funds to cover health care expenditure?
- Did the trend in OOP expenditures change in relation to the introduction of comprehensive reforms? What is the main driver of trends in OOP expenditures?
- What are the trends in financial burden associated with health care seeking and how did this vary across the socio-economic spectrum during the surveyed period? Has the share of health expenditure in the total per capita household budget been progressive or regressive?
- What is the total health expenditure? What are the trends in the growth of public and private expenditures in real and nominal terms?

3. Methods

The National Statistical Committee conducts the KIHBS regularly in order to monitor and analyze poverty. An additional module on health care utilization and health expenditure was embedded in the KIHBS in 2001. This allowed us to link data on health care use and expenditure to detailed information on per capita household income and consumption patterns to assess the financial burden of households across the socio-economic spectrum.

Addition of the periodic health module was necessary even though the KIHBS also collects data on health expenditure, because this is significantly underestimated. For example, in 2014, the total health expenditure was 4.5 times less in the KIHBS than in the health module. The data on OOP expenditure in the health module are obtained by first asking respondents to recall their utilization and then prompting them to recall details of expenditure. This triggers recall of spending and reduces error.

This is a unique survey in post-Soviet countries, with application of a common, systematic method since 2001, allowing comparisons of financial burden on population over a long period.

3.1 Sampling and response rate

The survey module on health care utilization and expenditure is based on the same sampling design and size as the KIHBS¹. The data are representative at the national and oblast levels.

The sampling framework was based on a population census in 1999 and updated at the time of the latest one, in 2009. The smallest area unit used in electronic databases is the portfolio. In 2009, the latest population census data indicated that there were 13 209 portfolios in the country, which are relatively homogeneous in terms of numbers of census forms. This enabled two-stage sampling.

- In the first stage, census portfolios as the primary sampling units and the number of households in each portfolio were used to select 456 primary sampling units with a probability proportional to the portfolio size.
- High intra-cluster correlation of different values was used to determine cluster size in the sample and to ensure efficient use of the time of interviewers by minimizing travel from one populated locality to another. A compromise between accuracy of data and efficiency of time and finances resulted in a cluster size of 11 households. In the second stage, lists of households in selected primary sampling units were used for random sampling of 11 households in each cluster with probability proportional to household size.

As the survey sample is not self-weighting, weighting coefficients were applied to adjust for over-sampling of certain under-populated localities. The analyses provided in this report are based on weighted data.

1. After 2001, the sampling design of the routine KIHBS was revised with technical support from the United Kingdom Department for International Development (DFID).

The sample size over the surveyed period was 2000–3000 households comprising 12 901–20 850 individuals (Table 1). Each household in the survey was successfully interviewed, for a response rate of 100%, although in some subsequent years the rate was 97–99% due to geographical difficulties in interviewing households.

Table 1. Sample sizes in the five surveys

Survey date	Year of data	Sample size (households)	Sample size (population)
March 2001	2000	2000	12 901
March 2004	2003	3000	18 690
March 2007	2006	5005	21 257
March 2010	2009	5001	20 225
April–May 2015	2014	5016	20 850

3.2 Survey instrument

The survey tool was designed to collect detailed records of service utilization and health expenditure per capita at the outpatient and inpatient levels of service delivery. Health expenditure include formal and informal payments made individually at any health care level. The respondents were not asked directly about informal payments but were asked to report any payments they had made while utilizing health services, including in-kind payments, which were converted into monetary values. The words "informal or unofficial" were not used in the survey tool to minimize inaccurate responses.

The tool also elicits information on the health status of each household member over 18 years, blood pressure and risk factors for cardiovascular disease, such as hypertension, overweight and tobacco smoking; the results are not included here because they were not part of the objective of this paper.

The survey instrument was administered to each member of all households during the same month (March) in each wave except the last one, when it was administered in April–May (Table 1). The respondents were asked to recall outpatient visits, hospitalizations and related expenditures as follows:

- outpatients: past 30 days
- outpatient medicine: past 30 days
- inpatients: past 12 months

Data were analyzed for the period before the date of the interview at which data were collected (Table 1).

3.3 Per capita consumption

To construct a measure of per capita socio-economic status, we used the consumption expenditure measure of the KIHBS as a robust continuous variable of household consumption, which allowed us to control for trends in household socio-economic status. The consumption measure includes household expenditure and the imputed value of consumption of home production, including the sales value of durables. This measure is also adjusted for differences in cost of living across the country (Jakab, 2007).

To improve consistency, since 2009, we adjusted the consumption variable we use to calculate consumption. The consumption variable obtained from the KIHBS contains OOP payments for health as measured in the regular survey. This measure of OOP expenditure is significantly lower compared to the detailed health module, most likely due to recall errors. This creates inconsistency when we combine this measure of consumption with a larger OOP expenditure estimate and we overestimate the share of OOP expenditure in household consumption. To improve the consistency of our measure, we subtract the OOP expenditure from the consumption measure recorded in the routine KIHBS and add the one from the health module. We used this modified consumption measure as the denominator for calculating shares of expenditure since the 2009 wave. We were not able to recalculate these values retroactively for previous survey waves, and thus some discrepancy in comparability before and after 2009 is present in the time series presented in this paper.

A further adjustment since the 2009 wave is the forming of quintiles which we form based on non-health consumption. We observed that 40% of people who reported OOP expenditure used their savings and other coping mechanisms such as borrowing, selling assets and asking help from relatives, which are not part of current consumption. Thus, higher OOP expenditure does not necessarily reflect higher current consumption. In order to avoid the implication that sicker people are richer, we formed quintiles of non-health consumption, according to Deaton and Zaidi (2002). As we could not apply this modification retroactively to the 2000, 2003 and 2006 data, there is a discrepancy in the time series.

3.4 Health expenditure categories and estimation

Health expenditure is calculated in one of three categories:

- Outpatient expenditure includes all expenditure and the value of gifts to medical personnel during reported outpatient visits. The cost of one outpatient visit is multiplied by 12 months to estimate annual outpatient expenditure per capita.
- Outpatient medicine expenditure includes both prescribed and nonprescribed drugs; it does not include purchased medicines associated with hospitalization. OOP expenditure on both purchased and nonpurchased drugs is multiplied by 12 months to estimate annual outpatient expenditure on all drugs per capita.

• Inpatient expenditure includes all payments made at the time of hospitalization, including co-payments, direct payments to medical personnel and payment for medicines, medical supplies and equipment, food and other items. Respondents are also asked to estimate the cost of in-kind contributions (gifts to a doctor, food products and drugs brought by family members and friends). All payment categories are summed to estimate annual total inpatient expenditure per capita.

Mean health expenditure is presented below in nominal and/or real terms. The consumer price index (CPI) calculated by the National Statistical Committee was used to calculate real terms in prices of 2000.

3.5 Limitations

The results of this study should be considered in the context of the limitations of survey data. As the KIHBS data are self-reported, they may be subject to recall error. We assume that any such errors are constant over time, and, while they may influence the estimates for a single year, the trends are correct.

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4. Findings

Below, we present the main findings for patterns of utilization and OOP expenditure at the outpatient and inpatient levels and for outpatient medicines.

4.1 Outpatient care

Kyrgyzstan was a pioneer among countries of the former Soviet Union in strengthening primary health care (PHC) by using a family medicine model and replacing the historical input-based payment with capitation in the late 1990s (Ministry of Health, 2014). Regulations for PHC gate-keeping were introduced to manage patient flow in the same period. Below, we present the utilization and expenditure pattern per capita at outpatient level.

4.1.1 Pattern of utilization

Utilization of outpatient services increased throughout the observed period, 2000–2014, from 9% to 13%. Women sought treatment more often than men. In 2014, about 17% of women and 10% of men sought medical assistance (Fig. 1).



Outpatient visits increased particularly in rural settings, by almost 1.6 times in 2014 over the rate in 2009 (Fig. 2). We observed an almost two times increased utilization of feldsher midwife points (FAP) services in 2014 as compared with 2009 (Fig. 3). The increased tendency for utilization of services in rural areas should be studied further. On one hand, increased utilization of FAPs can signal improved availability and quality of services. On the other hand, it can also indicate lack of human resources in family group practices/family medicine centers (FGPs/FMCs) in rural areas. (Murzalieva et al., 2008; Health Policy Analysis Centre, 2015).



Analysis of the outpatient utilization pattern by socio-economic status (income quintile) demonstrates that the gap in between the poorest and the richest quintiles decreased significantly during the period 2000–2014 (Fig. 4). Thus, a large increase in utilization of outpatient services by the poorest population was observed in 2014 as compared with 2000, from 6.3 to 11 visits per person in the poorest quintile and from about 14.3 to 15.8 visits per person in the richest. Thus, the socio-economic gradient in utilization of outpatient services decreased between 2000 and 2014, although it was not disappeared completely.

Fig. 2. Proportion of population using outpatient services by urban or rural residence, 2009–2014

rural

urban



Further analysis of service utilization in rural and urban settings by socio-economic status also shows a positive trend. The increased demand for services in rural areas narrowed the gap between urban and rural areas (Fig. 5). This trend was seen in all income quintiles, and rural utilization rates exceeded urban rates in some quintiles. Investment into PHC in rural areas including training is clearly paying a dividend in terms of increased utilization.



Utilization of services according to self-assessed health status was also analyzed, to understand population health-seeking behavior, i.e. the main health conditions that drive the population to utilize outpatient services. Fig. 6 indicates that outpatient demand grew significantly among people with **limiting chronic and acute conditions**. This might be due to improved capacity of PHC. Thus, people with limiting acute and chronic conditions, who require diagnostics and treatment, often turn to (more expensive) hospitals, where they can receive one-stop service. Increased utilization of outpatient services might indicate that they perceive better value, i.e. better service for less money, than at hospital.



4.1.2 Out-of-pocket expenditure

OOP payments for outpatient care decreased between 2000 and 2014, from 46% of those who reported that they had sought medical assistance in the past 30 days to 23%, although the amount paid for these services was three times higher in 2014 than in 2000, even in real terms (Table 2). Although we observed a reduction in the financial burden in terms of frequency of payments for outpatient services, patients who paid for such services paid the double amount.

Table 2. Frequency and average expenditure at outpatient level during the past 30 days, 2000–2014

Category	200	D	2003	3	2006	5	200	9	2014	1
Those who paid among service users	469	46% 36% 35% 38%		%	23%					
	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real
Mean payment by those who paid, KGS	130.8	130.8	129.7	115.3	228.2	176.9	344.7	182.3	1129.4	402.7
Mean payment by those who sought care, KGS	61.53	61.5	50.9	45.2	79.7	61.8	131.2	69.4	379.7	135.4
Total mean payment, KGS	6.2	6.2	4.5	4.0	7.3	5.7	11.5	6.1	50.0	17.8

Note: Real terms based on CPI in 2000 (=100)

When OOP payments in outpatient facilities are broken down by the nature of the service, payments for consultations with doctors were higher than other categories, 63% of total OOP expenditure in 2014 (Fig. 7). The second highest expenditure category was for diagnostic services (27%), including laboratory tests. Informal payments in the form of gifts made only a minor contribution (4%) and could be considered as a traditional means to express gratitude to a doctor for treatment.



Fig. 7. Distribution of out-of-pocket expenditure at outpatient level, 2014

Analysis of expenditure by outpatients for consultations with different categories of medical personnel shows that most OOP payments are made to dentists, in private health facilities and to traditional healers (Fig. 8). OOP expenditure at public outpatient facilities was relatively low and stable throughout the period. A slight decrease was observed in the frequency of OOP payments to middle-level personnel (e.g. nurses, feldshers), which may be linked to the significant increase in the salaries of medical personnel, including those at middle level, in 2011 (Health Policy Analysis Centre, 2015).



The average annual amount paid and the frequency of payments by people who sought outpatient care are distributed unevenly across oblasts and the two largest cities (Bishkek and Osh). Thus, people receiving outpatient care in Bishkek and Osh city and nearby oblasts (Chui and Osh) pay more frequently and larger amounts on average than those in other oblasts (Fig. 9).





Note: Annualized average amount paid by people who sought outpatient care in the past 30 days

4.2 Medicines

Prescribed and non-prescribed medicines purchased at outpatient level are the main category of OOP expenditure, representing more than 60% of total OOP expenditures. One reason for the increasing OOP expenditure for medicines is the growth in consumption. About 32% of the population purchased at least one drug in 2014, in comparison with 25% in 2009 (Fig.10). Among those only 10% purchased drugs prescribed by doctors, while 25% purchased drugs without a prescription (Fig. 10). A study on use of generic drugs by the Health Policy Analysis Centre in 2009 also found that 25% of people purchased medicines without a prescription (Abdraimova et al., 2009).

One quarter of the Kyrgyz population purchases medicines without a prescription, because there is no legislation to restrict the sale of any medicine except narcotics. Currently, a person can walk into any pharmacy and purchase any type of drug – antibiotic, antiviral, psychotropic, insulin, statin – without presenting a prescription from a doctor. Some pharmacists advise customers about the medicine to be purchased on the basis of the symptoms described or recommend a substitute for a more expensive or branded medicine (Abdraimova et al., 2009).



Fig. 10. Proportion of the population who purchased at least one drug _ 2006 Ø 2009 (prescribed and non-prescribed), 2006–2014

Mean expenditure on drugs (both prescribed and non-prescribed) increased significantly between 2006 and 2014, from KGS 161 to KGS 745 in nominal terms (Fig. 11). The steep increase in expenditure on medicines is due to a sharp growth in prices, the reasons for which may be multiple and we are currently investigating them. As a result, the mean cost for prescribed medicines was three times higher in 2014 than in 2006 (KGS 638 and KGS 228 in nominal terms) and increased by 20% even in real terms (Fig. 11). A similar picture was observed for the mean cost of non-prescribed medicines (Fig. 11), suggesting that doctors prescribe brand and more expensive medicines. The main reason for not purchasing drugs was reported as "too expensive" by 64% in 2014 compared to 40% in 2009.

2014





Note: Monthly average amount paid for drugs among those who sought outpatient care in the past 30 days

In 2014, the average amount paid for prescribed and non-prescribed drugs by outpatients was distributed unevenly among oblasts and the two largest cities. A slightly different, but mixed trend was also observed for people who purchased at least one drug. People paid almost twice less in Batken oblast (KGS 565) than in Bishkek (KGS 960) (Fig. 12), even though the proportions of people were almost the same, 26% and 27%, respectively. More people purchased drugs in Osh oblast and Osh city (44% and 39%, respectively), and the average prices in Osh city were the third highest of all oblasts (KGS 818). The lack of price regulation for drugs in Kyrgyzstan increases OOP spending for medicines considerably, increasing the financial burden on the population.







% paid

Note: Monthly average amount paid for all drugs among those who sought outpatient care in the past 30 days

4.3 Inpatient care

4.3.1 Pattern of utilization

Utilization of inpatient services fluctuated, dropping between 2000 and 2003 and increasing again after 2003. The highest average hospitalization rate during the whole observed period was in 2014, 7.4% of all respondents reported at least one inpatient stay.

A socio-economic gradient in hospitalizations was present in three survey waves in 2000, 2006, and 2014 and was not detected in the other two. It is not clear what causes this pattern although it appears that the gap is driven by utilization choices among the richest quintiles while utilization rates among the bottom four quintiles remain roughly the same throughout the surveyed period. In the most recent survey wave in 2014, people in the richest quintile were hospitalized twice as often as those in the poorest one, 9.5% and 5.6% respectively in 2014 (Fig. 13).



Breaking out the utilization of inpatient services by urban and rural residence demonstrates that the increased utilization among the richest population is driven by the rural richest rather than the urban richest between 2009 and 2014 (Fig. 14). Among the rural poorest population, the utilization of inpatient services was almost the same between 2009 and 2014. In urban areas, the utilization of inpatient services by the poorest population decreased from 8.4% to 5.8% of all respondents reported at least one inpatient stay (2009 and 2014 respectively) (Fig. 14).



Fig. 14. Utilization of inpatient services by income quintile and urban or rural 2009

The distribution of hospitalization by type of health care facility was mixed during surveyed period. More people utilized the territorial and oblast hospitals in their catchment area in 2014 than in 2000 (Fig. 15). Hospitalization in tertiary facilities (Republican level hospitals) decreased from 20% to 9% between 2000 and 2014, while utilization of private inpatient services increased (Fig. 15).



4.3.2 Trends in out-of-pocket expenditure

Hospitalization imposes a heavier financial burden on individuals than outpatient care, with more frequent, higher payments in hospitals. About 96% of hospitalized patients in 2014 and 98% in 2009 reported having made payments for care in hospitals (Table 3). Our analysis of the frequency of payment by inpatients, excluding food, showed a decrease in spending between 2009 and 2014, from 96% to 81%. The average amount paid by

hospital patients in nominal terms was KGS 3879 in 2014, which is almost two times higher than in 2006 (Table 3). The most frequent categories of inpatient expenditure in 2014 were for drugs (73%) and medical personnel (46%) (Table 3), representing increases over the previous period (2009). These findings are confirmed in another paper, which analyses informal payments reported by discharged patients in 2013 (Jakab et al., 2016).

Table 3. Frequency and average expenditure at inpatient level, 2000–2014

Expenditure category	2006	2009	2014					
Frequency of payments among those reporting hospitalization (%)								
Drugs	65	64	73					
Medical supplies	67	52	57					
Health personnel	53	55	46					
Laboratory tests	31	28	31					
Comfortable room	4	4	4					
Co–payment	64	57	57					
Food	65	91	88					
Total (without food)	-	96	81					
Total (with food)	-	98	96					
Average payments among those re	porting hospitalization in n	ominal terms (KGS)						
Drugs	608	1173	2376					
Co–payment	462	550	1654					
Food	601	967	1591					
Personnel	640	1215	1378					
Medical supplies	75	138	324					
Laboratory tests	42	68	257					
Comfortable room	22	81	77					
Total (without food)	1778	3306	4274					
Total (with food)	2079	4273	5881					
Average payments among those re	porting hospitalization in re	eal terms* (KGS)						
Drugs	471	620	847					
Co–payment	358	291	590					
Food	466	511	567					
Personnel	496	643	491					
Medical supplies	58	73	116					
Laboratory tests	33	36	92					
Comfortable room	17	43	27					
Total (without food)	1378	1749	1524					
Total (with food)	1611	2260	2097					

Note: * Data presented in real terms were calculated using the CPI (2000=100)

The average payments for hospitalization show a strong socio-economic gradient with the richest quintile paying KGS 5614 and the poorest KGS 4757 in 2014 (Fig. 14). However, the gradient seems to have become larger over the past few years with a steep rate of growth for the poorest quintile (45%) as opposed to the richest one (17%) in 2006–2014.





Note: Among patients hospitalized during the past 12 months



In 2014, the frequency and average amount paid in inpatient facilities were distributed unevenly among oblast and two largest cities. Patients receiving inpatient services in the capital (Bishkek) and in Chui oblasts paid larger amounts on average than those in other oblasts, KGS 8561 and KGS 7261; but the frequencies of payments were at the same level as the country average (81%), 79% and 81% respectively (Fig. 17).



Fig. 17. Frequency and average payments (without food) for hospitalization by oblast in nominal terms, 2014



% paid

Note: Among patients hospitalized during the past 12 months

4.4 Total out-of-pocket expenditure and pattern of financial burden

In this section, we combine the previously presented components of OOP payments and present the total financial burden for the population associated with health care seeking.

Overall, mean total OOP expenditure increased significantly in both real and nominal terms during the surveyed period, and the growth rate accelerated significantly since 2009 (Fig. 18). Mean OOP expenditure increased from KGS 304 to KGS 1007 in real terms, and rapid growth was observed after 2009. Real annual growth rate between 2009 and 2014 was almost twice as high as in the period 2000–2009 (19% and 10%, respectively) (Fig. 18). The growth rate in this latter period was faster than the average annual growth rate of public expenditure, which was 13% between 2009 and 2014.







Note: Data presented in real terms were calculated using CPI (2000=100)

Total OOP expenditure increased heavily in all quintiles by almost three times for the poorest two quintiles and by two times for the richest quintile between 2009 and 2014 (Fig. 19). Thus, the poorest paid KGS 659 for health services out of their pocket in real terms in 2009 and 5 years later (2014) they paid KGS 1931, whereas the richest group paid KGS 1871 and KGS 4499 in 2009 and 2014 respectively.



In 2014, total OOP expenditure was the highest in Osh and Chui oblasts, KGS 3514 and KGS 3502, closely followed by the two largest cities of Osh city and Bishkek, KGS 3081 and KGS 3064 (Fig. 20). These two oblasts are located close to Bishkek and Osh, and the population can therefore easily travel to these cities for care.







Between 2003 and 2009, the share of total OOP spending on health in the per capita household budgets decreased from 5.3% to 3.5%, leaving the population with more money for other essential goods and services (Fig. 21). This indicates that the growth of OOP expenditure during this period slowed and was below that of the growth rate of per capita household consumption leading to reduce the financial burden associated with health care seeking. This can be attributed to the comprehensive health reforms implemented during this period.

Fig. 21. Total OOP expenditure as a proportion of per capita household consumption, 2003–2014



Note: Among all respondents within the past 12 months

After 2009, however, the rate of growth in OOP spending began to accelerate and increased much faster than the total per capita household budget (Fig. 22.) Thus, the proportion of OOP expenditure in the per capita household budget increased to 5.2% in 2014 from 3.5% in 2009 (Fig. 21). This accelerated increase brought the level of OOP expenditure back to that before the health reforms, undermining earlier improvements in the reduction of financial burden for the population.



The average OOP expenditure of 5.2% of household budget may not seem very high but this figure is estimated among the entire population, healthy and sick alike. Among those who report at least one contact with the health system, the financial burden is staggering. In 2014, people spent on average 22.3% of their per capita household budget on health services if they came into contact with the health system. There was significant variation across the country from 27.4% in Osh city to 16.8% in Batken oblast (Fig. 23).



Fig. 23. Proportion of per capita household budget spent on total OOP expenditure by users of any health services, by oblast, 2014

Between 2003 and 2009, significant progress was made in reducing OOP payments in all quintiles (Fig. 24). Progress was seen in particular for the two poorest population groups, for whom the household budget share spent on health-related OOP expenditure was reduced by almost twice (Fig. 24). This pattern coincided with intensive health system strengthening reforms to improve equity and reduce financial burden on the population associated with health care seeking.

After 2009, the trends reversed and the financial burden of seeking health care services increased considerably for all income quintiles. In particular, the proportion of OOP spending in the poorest two guintiles increased from 4.2%



Out-of-pocket expenditure

Consumption

to 6.0% and from 2.9% to 5.1% between 2009 and 2014 (Fig. 24). A similar pattern was seen in the third quintile. This situation may lead to an increase in catastrophic payments and impoverishment of these population groups. These findings suggest difficulties sustaining the positive results in reduction of financial burden of health care spending achieved before 2009 in Kyrgyzstan.



Low income users of health services face the heaviest financial burden spending about 30% of their budget on health-related OOP expenditures in 2014 if they come into contact with the health system. Thus, in 2014, OOP payments by people who had at least one contact with the health system were reported by about 31% of the poorest quintile, and increase from 24% in 2009 (Fig. 25). In contrast, the richest quintile reported 22% of their per capita household budget spent on health-related OOP expenditures, 1.5 times less. Our analysis shows that the rate of growth in OOP expenditure varied greatly across quintiles while the rate of growth in per capita household consumption varied much less leading to greatly increased financial burden on the poor.

Fig. 25. Total OOP expenditure as a proportion of the per capita household budget by users of health services, by quintile, 2009–2014

of per capita budget

%



2009

4.5 Unmet needs and coping mechanisms

Between 2000 and 2014, the proportion of people who reported that they needed health care services but had not sought them because of distance or affordability decreased from 11% in 2000 to 3.5% in 2014 (Fig. 26). This is good news, indicating that geographical and financial barriers have been brought down in the past 15 years. Beyond geographic and financial barriers, one of the main reasons that people do not seek care is that they believe they can self-medicate themselves; about 40% of those who did not seek care when needed reported this reason in 2014 (Table 4).

Fig. 26. Proportion of people who needed health care but had not consulted during the past 30 days, 2000–2014





Reason given	2006	2009	2014
Used traditional drugs	38	69	22.5
Used available drugs	37	47.5	17
Thought I would get better by myself	17	10.1	5.3
Could not afford to pay	14	12	3
Distrust of doctors	7	2.7	0.8
Poor service	3	3.6	0.4
No residence stamp	0.2	0.3	0.1
Health institution too far away	0.6	0.9	0.01
Other	0.8	0.6	0.5

Although the cost of health services does not deter people from seeking care, the financial burden of health services remains significant. Thus, 46% of people who received health services in 2014 reported that it was "difficult" or "very difficult" to find money to pay for health services, whereas the proportion was only 38% in 2009. These population groups used various mechanisms to overcome this barrier (Fig. 27). Between 2009 and 2014, people began to use their savings, reduce their consumption or sell animals in order to obtain health care services.



4.6 Total health care expenditures

Using these figures, we estimate the total volume of private (OOP) expenditures in the Kyrgyz health system and show them relative to public expenditures in Table 5. The total volume of private (OOP) expenditure increased significantly between 2000 and 2014, at varying rates during different periods, but keeping pace with public expenditure increases in general (Table 5). As a result, private expenditure as a proportion of gross domestic product (GDP) increased steadily from 2.3% in 2000 to 4.2% in 2014, the same as public expenditure (Table 5). The proportion of private expenditure as a share of total health expenditure fluctuated following the ups and downs of OOP expenditure trends presented earlier in this paper.

Table 5. Total health expenditure by indicators, 2000-2014

Note: Public expenditure includes pooled budget support from joint financiers. Real terms based on consumer price index for (2000=100)

	2000	2003	2006	2009	2014
Health spending (in million KGS)					
Public	1353.3	1725.6	3140.5	6 177.5	16 739.8
Private (OOP)	1521.4	2628.2	3921.9	5 356.6	16 647.7
Total	2874.7	4353.8	7062.4	11 534.1	33 387.5
Per capita health spending (in KGS)					
Public	276.5	344.3	605.1	1148.5	2839.6
Private (OOPt)	310.8	524.4	755.7	995.9	2824.0
Total	587.3	868.7	1360.8	2144.4	5663.6
Proportion of total health expenditure					
Public	47.1%	39.6%	44.5%	53.6%	50.1%
Private (OOP)	52.9%	60.4%	55.5%	46.4%	49.9%
Total	100%	100%	100%	100%	100%
Proportion of GDP					
Public	2.1%	2.1%	2.8%	3.1%	4.2%
Private (OOP)	2.3%	3.1%	3.5%	2.7%	4.2%
Total	4.4%	5.2%	6.2%	5.9%	8.4%

Real terms (in 2000 prices)

Nominal terms

Health spending (in million KGS)					
Public	1353.3	1533.5	2434.1	3267.6	5 968.8
Private (OOP)	1521.4	2335.6	3039.7	2833.4	5 935.9
Total	2874.7	3869.1	5473.8	6101.0	11 904.7
Per capita health spending (in KGS)					
Public	276.5	306	469	607.5	1012.5
Private (OOP)	310.8	466	585.7	526.8	1006.9
Total	587.3	771.9	1054.7	1134.3	2019.4

In an attempt to explain the accelerated growth in private OOP expenditure, we looked at the period growth rates of public expenditure. When public expenditure on health dropped, OOP payments grow fast to fill the gap. However, the average annual growth rate of public expenditure on health has been relatively high at 29.9% during 2006–2009 when the growth of OOP expenditure was slow and at 29.4% during 2009–2014 when the growth in OOP expenditure was fast (Fig. 28). Thus, reasons other than cuts in public health expenditure drive the growth in private OOP payments in Kyrgyzstan.



Nominal terms

Fig. 28. Average annual growth rate of public expenditures on health per capita in nominal and real terms, 2006–2014

5. Conclusions

The results of these five surveys provide clear evidence that financial burden of seeking health services in Kyrgyzstan was reduced by introducing comprehensive health reforms. However, they also show that sustaining these improvements over the longer term is a challenge. The main findings are listed below:

- OOP expenditure increased between 2000 and 2014 in both nominal and real terms and, in 2009–2014, grew twice as fast as during 2000–2009. Mean spending for outpatient and inpatient services increased throughout the surveyed period but was lower than that for outpatient medicines.
- Spending on outpatient medicines is the driver of OOP expenditures that increased total OOP expenditure. This is the result of both a quantity and a price effect: people purchase more medicines and medicines cost more money.
- The financial burden on the population increased markedly in the most recent period. OOP expenditures grew faster than the per capita household budgets and public expenditures on health, in particular for the two poorest groups of the population and in the two largest cities, Bishkek and Osh.
- Financial burden is the highest in Bishkek city and Osh (both city and oblast). This could be linked to limited reforms implemented in these areas to increase efficiency in the past few years.
- Financial and geographical barriers to accessing health services improved during the survey period, but almost half the population still finds it difficult to find the money to pay for health care.

Kyrgyzstan was a pioneer in the Region in transforming its health system to move towards universal health coverage and made significant improvements to the health sector in 2000–2009. During the late 1990s, the Kyrgyz health system was characterized by fragmented funding, an excessive physical infrastructure, a weak public health system and poor overall quality of care at all health facilities (Kutzin et al., 2001; McKee & Healy, 2001 Falkingham et al., 2010). The comprehensive health system reforms which sought efficiency gains first, proved to be an effective strategy to reduce the financial burden associated with health care seeking, particularly among the poorest people in Kyrgyzstan (Kutzin, 2004; Jakab, 2007; Kutzin et al., 2010; Balabanova et al., 2011).

Maintaining reduced financial burden, however, has proved to be a challenge over the long term. While the reasons for the accelerated growth rate need to be better understood, it is clearly driven by spending on outpatient medicines. People buy more outpatient medicines and they are more expensive. As a follow-up to this study, we have embarked on an in-depth analysis of potential factors that drive increased consumption and prices of outpatient medicines.

The root causes that were at play in the 1996-2006 reform period, namely inefficiency of service delivery, continue to be a factor, especially in Bishkek and Osh cities, but are no longer the dominant driving forces of OOP **payments.** Even though informal payments associated with hospitalizations remain (Jakab et al., 2016) and are much talked about, their impact is much smaller than the impact of outpatient medicine on the financial burden of families. Thus, doing more of the same types of changes as before will not be sufficiently effective to reduce OOP payments. Better understanding the root causes of fast growth in OOP payments will enable more effective and contextualized policy recommendations.

In addition to medicines, other factors may have also contributed to the increase in OOP payments, although to a lesser extent. Utilization rate of PHC has increased in recent years and high hospitalization rates remain for routine procedures that could be handled at the ambulatory care level (e.g. hypertension diagnosis and management, complications of pregnancy, diabetes, etc.). Even if PHC has been declared as a gate keeper, people continue to prefer to go directly to specialist care/hospitals.

The SGBP provides protection to those with high expected health care costs but is not targeted specifically to the poor (Jamal & Jakab, 2013). It is important to explore whether better targeting of the SGBP could be implemented without great increase in administrative costs.

The evidence we have obtained over the past 15 years in Kyrgyzstan indicates that well thought-out and contextualized health reforms can reduce the financial burden of the population. Further systemic health reforms would include strengthening PHC, transforming the service delivery network, particularly in Bishkek and Osh city, regulating outpatient drug prices, improving procurement of medicines by health facilities, introducing provider performance monitoring, and revising the SGBP. This complex set of measures could reverse current trends and further reduce patient financial burden.

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Long-term trends in the financial burden of health care seeking in Kyrgyzstan, 2000–2014



Kyrgyzstan has committed itself to universal health coverage and has launched comprehensive reforms to improve the health of the Kyrgyz population. In order to document progress in reducing the financial burden of the population, a module on health care utilization and health expenditure was added to the Kyrgyz integrated household budget survey, conducted by the National Statistical Committee. This is a unique, repeated cross-sectional survey to assess financial burden on the population and access to care over a 15-year period. The survey provides evidence of impressive reduction in financial burden associated with health care seeking due to the introduction of comprehensive health reforms during 2000-2009. However, the financial burden for health care services increased again after 2009 considerably, in particular for the two poorest groups of the population and in the two largest cities, Bishkek and Osh. Outpatient medicines drive the increase in OOP expenditures. Financial and geographical barriers to accessing health services improved during the survey period, but almost half the population still finds it difficult to find the money to pay for health care. Thus, the evidence obtained over the past 15 years in Kyrgyzstan indicates that well thought-out health reforms contextualized to the country's needs can reduce financial burden associated with health care seeking but sustaining these gains in the longer term can be a challenge.

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