Policy Research Paper #46

Health, health seeking behaviour and out of pocket expenditures in Kyrgyzstan, 2007

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Key finding #1: Financial barriers to health care services are decreasing: the proportion of the population reporting they needed health care but did not seek due to expenses or distance to facility has fallen from 14.7% in 2001 to 5.7% in 2004 and to 3.6% in 2007.

Access to outpatient care

Key finding #2: The percentage of patients paying to public outpatient providers has fallen from 27% in 2004 to 20% in 2007.

*Key finding #*3: The operation of the system of exemptions at the outpatinet level has improved.

*Key finding #*4: There has been significant improvement in obtaining prescribed drugs: 92% of patients obtained all medicines prescribed by the doctor in 2007 as compared to 77% in 2001.

*Key finding #*5: Although overall access to outpatient care has improved, the burden of health care payments for the poor is still significant because of the increase in expenditures for outpatient drugs.

Access to inpatient care

*Key finding #*6: Hospital utilisation rates have risen from 2004 to 2007, and rates have returned to similar levels as those observed in 2001. The gap in hospitalisation rates between the rich and poor has widened between 2004 and 2007. In the 12 months prior to March 2007, those in the richest households were 50% more likely to have an inpatient stay than those in the poorest households.

*Key finding #*7: The provision of family assistance during an inpatient stay appears to have shifted from being a way to reduce costs to one of increasing patient comfort.

*Key finding #*8: The overall costs of inpatient care have fallen and equity has improved between 2004 and 2007. The proportion of the patients reporting making payments for drugs and medical supplies, laboratory tests and food has fallen but the frequency of payments to medical personnel has risen slightly.

*Key finding #*9: More than half of all inpatients are not making payment in excess of the co-payment rate; however there are still some poor people making significant payments.

1. Background

This report presents the findings of a household survey conducted in Kyrgyzstan in March 2007 on behalf of the Ministry of Health. It was conducted by the National Statistical Committee (NSC) with technical and financial support of WHO and DfID. The survey contributed to ongoing monitoring efforts of health system performance because several Manas Taalimi indicators formed from it.

The survey is organized in the form of an additional module to the Kyrgyz Integrated Household Survey (KIHS) that is carried out by the NSC regularly. By including the health module within the regular KIHS, it links utilization and health expenditure data to detailed information on household consumption over the preceding year. This allowed analysis of the equity and poverty dimensions of Manas Taalimi, calculation of the burden of health care expenditures, and the estimation of the extent of catastrophic health care payments.

This survey was a repeat of the 2001 and 2004 Household Survey with marginal modifications in the questionnaire in order to conduct comparative analyses over time where possible. The survey instrument was composed of five sections covering:

- general demographic information about the household and its members;
- utilization of health care services in the last 30 days and expenditures associated with such health care;
- hospitalization in the last year;
- knowledge of the household head regarding people rights in State Guarantee Benefit Package (SGBP) developed by the Mandatory Health Insurance Fund (MHIF);
- self-reported health status of each household member over 18 years old and whether they were covered by the Mandatory Health Insurance Fund (MHIF). In addition, the questions related to the risk factors of cardio-vascular diseases (CVD), such as hypertension, overweight, smoking habits.

It is necessary to note that the questions related to expenditures at the hospital level were calculated for 2006 and in the previous surveys for 2000 and 2003 respectively.

The KIHS sample design provides nationally representative data and weights are provided to ensure the sample is representative at the oblast level. Total number of households participate in the survey was 5,005 that includes approximately 21,257 individuals. The majority of the analysis in this report is on weighted data. However unweighted data are used for a minority of tables where events are rare and where it may be misleading to give a high weight to any one case.

This report presents results for the five main issues: (a) general health status, (b) utilisation of health care services at primary care level in the last 30 days, (c) hospitalisation in the last year, (d) total health expenditure and (e) access to health care. The main tables for this report are presented in Appendix I.

The following additional detailed analysis are presented in the separate policy research papers: people awareness about the main CVD factor risks, in particular hypertension, knowledge about people rights in SGBP, and the extent of catastrophic health care payments.

2. General health status

Health is a complex and multidimensional concept. The Kyrgyz Household Health Survey (KHHS) collects information on two different indicators of self-reported health status: chronic ill-health, distinguishing between the experience of a limiting and non-limiting chronic illness; and acute ill-health referring to an illness or injury in the last 30 days, again distinguishing between limiting and non-limiting conditions (see Box 1). In 2007, unlike in previous years, the questions on self-reported health status were only asked of household members aged 18 or older. Thus the figures for 2001 and 2004 presented in this section are not directly comparable with those presented in earlier reports as they refer to the adult (18+) population only.

Box 1 Questions on self–reported health within the KHHS

- Chronic ill-health

'Does [NAME] suffer from a chronic illness or disability that has lasted more than 3 months (including severe depression)?'

If yes,

'How many days during the last month has [NAME] been unable to carry out usual activities because of this illness or disability?'

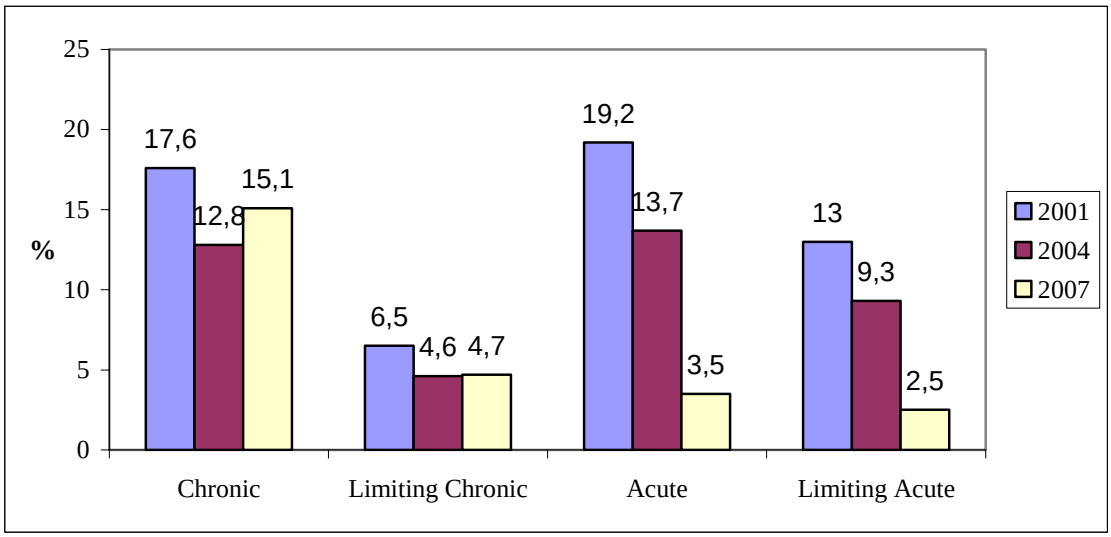
- Acute ill-health

'During the last 30 days has [NAME] had any acute (sudden) illness or injury?

If yes,

'How many days during the last month has [NAME] been unable to carry out usual activities because of this acute (sudden) illness or injury?'

Figure 1: Percent population aged 18 or over reporting ill health, Kyrgyzstan, 2001, 2004, 2007

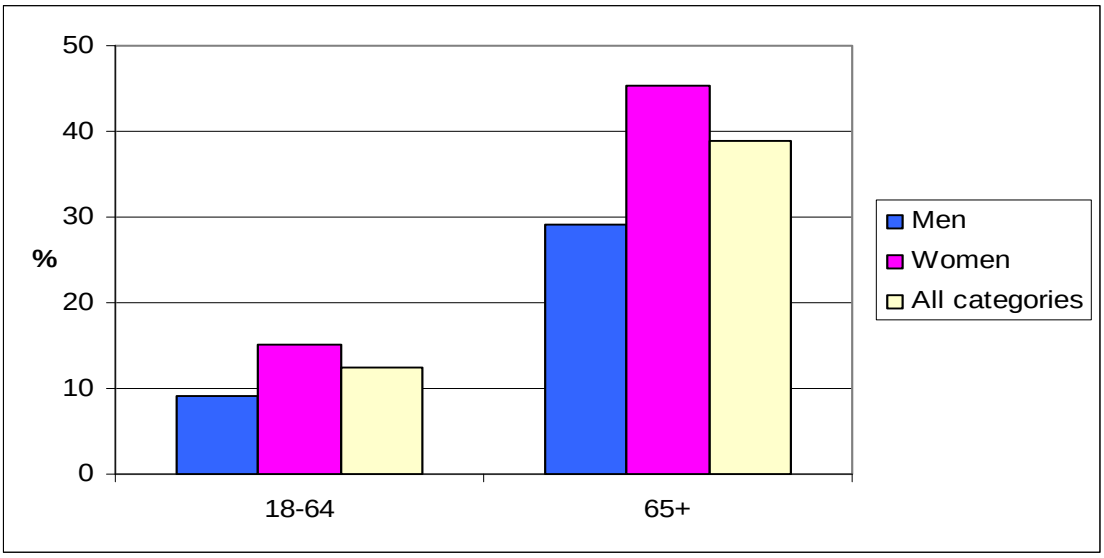


The picture with regard to self reported morbidity in 2007 as compared with earlier years of the KHHS is somewhat mixed. Chronic ill health appears to be somewhat higher in March 2007 than in the same calendar month in 2004, whilst acute ill health is much lower. In March 2007, 15 percent of all Kyrgyz men and women aged 18 and over reported suffering from a chronic illness or disability that had lasted for more than 3 months, whilst only 3.5 percent reported suffering from an acute illness or injury in the last 30 days. This compares with 13 percent and 14 percent respectively in 2004 (Figure 1). When the 'severity' of ill health is taken into account (in terms of whether their chronic or acute ill health limited their daily activities), in 2007 just under 5 percent of people reported a limiting chronic condition, which was similar to the level in 2004. However just 2.5 percent of the population aged 18 and over reported suffering from a limiting acute condition which is significantly lower than was the case in 2004 (9%) or 2001 (13%). Limiting acute health is a very sensitive measure which is affected by seasonal changes and it may be that spring 2007 saw fewer colds and flu than in 2001 or 2004. As a significant proportion of primary health care consultations are the result of acute ill health, we might expect to see the lower prevalence of acute morbidity reflected in consultation rates (a point we will return to below).

2.1 Chronic ill health

The prevalence of chronic ill health varies by age and gender, with older people reporting higher levels of ill health than younger people, and women reporting more ill health than men of the same age. For example, 9 percent of men of working age (18-64) stated that they suffered from a chronic illness compared to 15 percent of women of the same age (Figure 2 and Table A1, Appendix I). Amongst those aged 65 and over, 29% of men reported suffering from a chronic illness compared with 45 percent of women.

Fig 2: Percent of population aged 18 and over reporting chronic ill health by age and gender, 2007



The likelihood of reporting a chronic health problem is positively associated with economic status of the respondent's household i.e. self-reported morbidity is higher amongst the better-off [4]. 20 percent of those adults living in households in the top quintile report a chronic condition compared with just 6 percent in the bottom (Appendix I, Table A2). This inverse relationship between health and economic status was also found in 2001 and 2004 and has been observed in several other countries in the region. It may reflect differences in perceptions of health across socio-economic groups, with poorer people defining ill health more narrowly than people who are better-off. Ill health may be equated

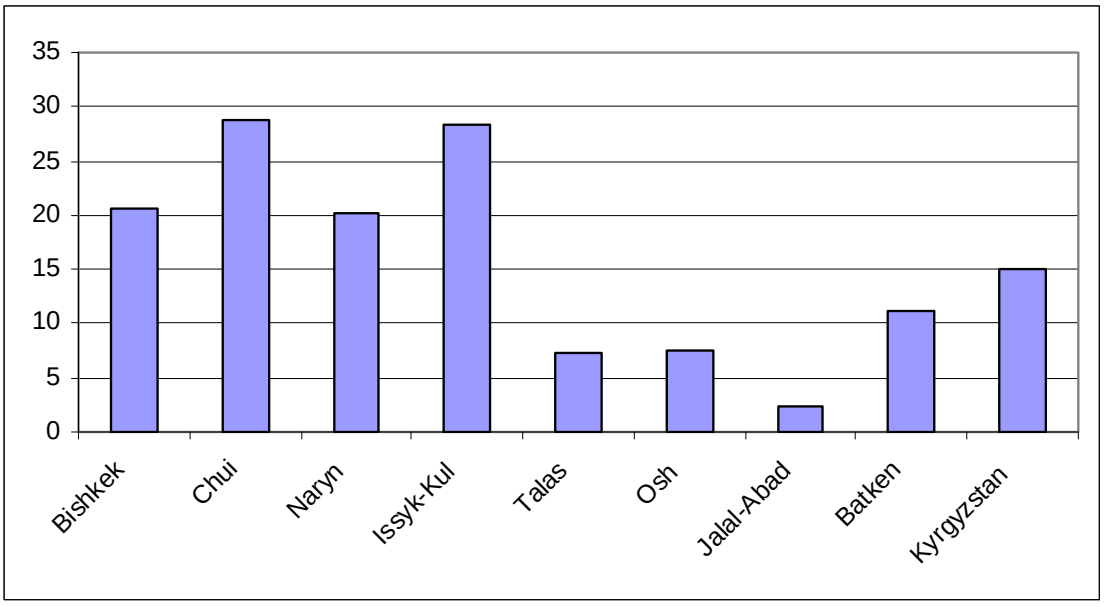
[4] The measure of economic well-being used here is per capita household expenditure (including the imputed value of the consumption of home production) as measured in the Household Budget Survey during the previous year (2006).

with having to do some thing about it and as the less well-off are less able to take time off work or meet the costs of health care they are less willing to define themselves as ill. Detailed qualitative work is required to disentangle this phenomenon further.

It is interesting to note that the gradient of self reported chronic ill-health by socio-economic status amongst people aged 18 and over has stayed virtually unchanged over the last 6 years. In 2007, the ratio between the richest quintile and poorest quintile was 3.2 (i.e. 3.2 times more people in the richest quintile reported chronic ill health than those in the poorest); this compares with 3.0 in 2004 and 3.1 in 2001 (Table A2, Appendix I).

There remain considerable regional variations in the prevalence of chronic ill health, with a clear split between the north and south of the country. The prevalence of chronic ill health is highest in Chui (29%) followed by Issyk-kul (28%) whilst the lowest prevalence is found in Jalal-abad (2%) (Figure 3). These spatial health differentials in part reflect regional differences in age and socio-economic composition, with those oblasts with a lower proportion of the population aged over 65 also enjoying the lowest prevalence of chronic ill health.

Fig 3: Percentage of people 18 and over reporting chronic ill health by oblast, 2007

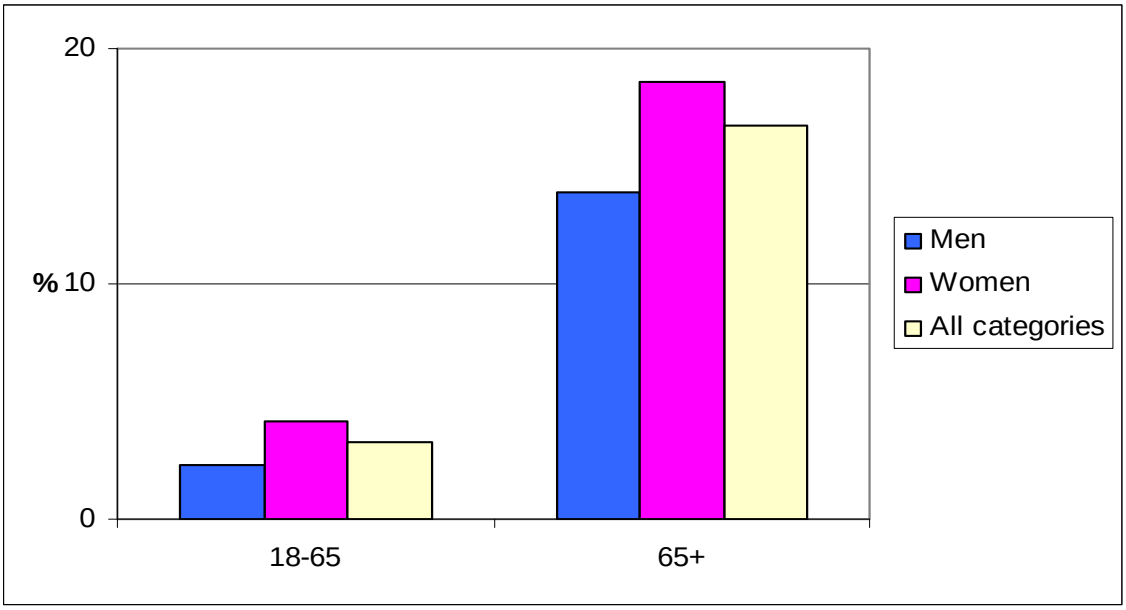


Note: chi-square for differences by region significant at ($p<0.001$)

2.2 Acute ill health

The prevalence of acute illness also varies with age and gender, with women in each age group being more likely to report an episode of ill health than men. For example, amongst those aged 65 and over, 3 percent of men compared with 10 percent of women reported acute ill health in the 30 days prior to the survey (Figure 4). Within each age-gender group there has been a marked fall in the proportion reporting acute ill health in the previous 30 days between 2001 and 2007 (Table A, Appendix I).

Fig 4: Percent reporting limiting chronic ill health by age and gender, 2007

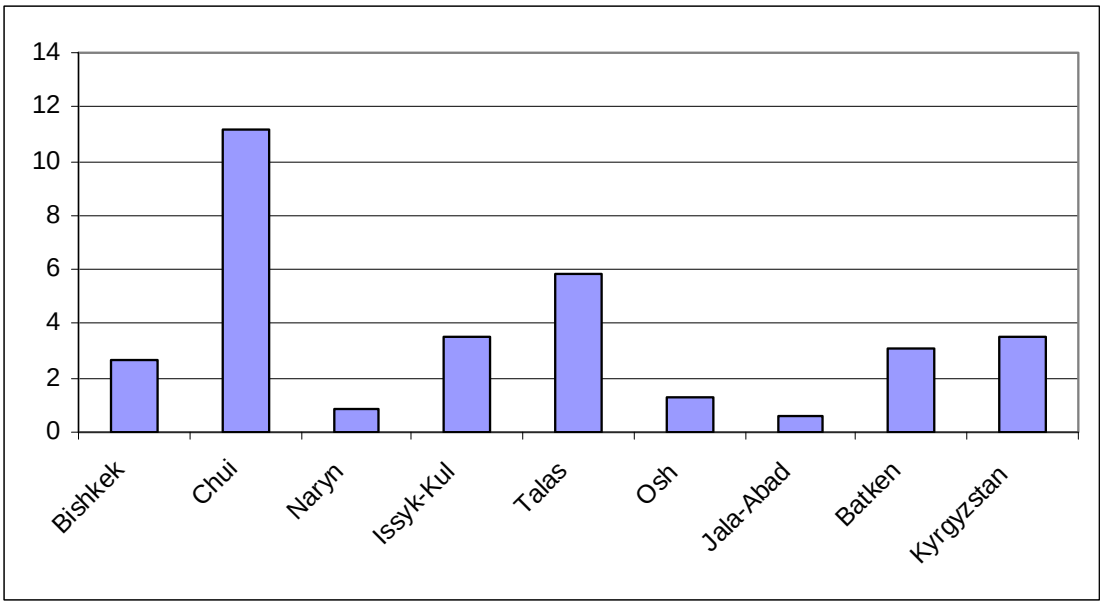


Note: chi-square for differences by gender significant at ($p<0.001$)

Once again, there is a positive association between ill health and economic status, with 1.6 percent of those adults living in households in the poorest quintile reporting an episode of acute ill health compared to 4.6 percent amongst the richest quintile (Table A2, Appendix I). As the overall prevalence of acute health has fallen over time, the gap between the health of the 'rich' and 'poor' has widened - with the ratio between the top and bottom quintile increasing from 2.0 in 2001 to 2.9 in 2007.

There are significant differences in the prevalence of ill health by region (Figure 5). Chui has the highest prevalence of acute ill health (11%) whilst the lowest prevalence is in Jalal-Abad (under 1%).

Figure 5: Percentage population aged 18 and over reporting acute ill health by oblast, 2007

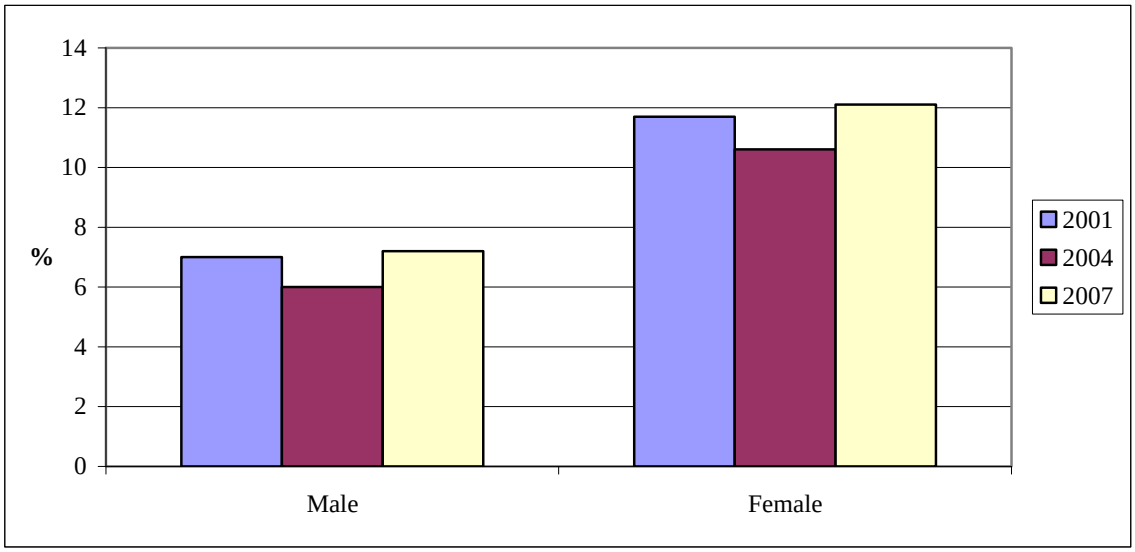


Note: chi-square for differences by region significant at ($p<0.001$)

3. Utilisation of health care services at primary care level

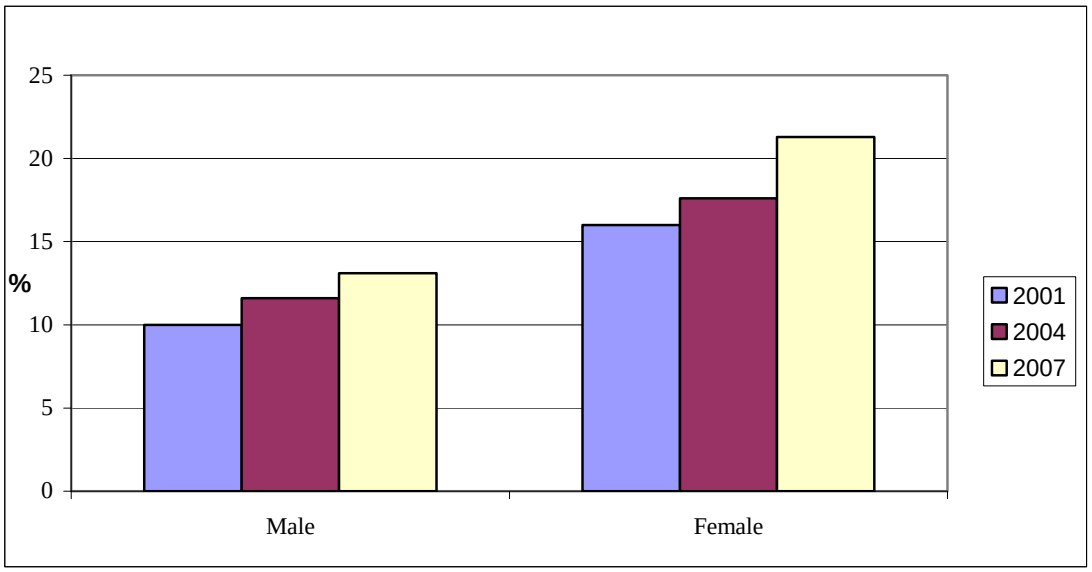
Overall 7 percent of Kyrgyz men and 12 percent of Kyrgyz women reported that they had sought medical assistance in the last 30 days in March 2007 (Figure 6). This represents a slight increase compared to the same period in 2004, but is similar to the utilisation rates observed in 2001. Utilisation rates follow the same trend across time in all age and gender groups (Table B1, Appendix I). It is somewhat surprising that the health care utilisation rates are so stable over time given the significant falls in self-reported morbidity, particularly acute ill health, noted above. However it is important to note that the placement of the health questions within the questionnaire of KHHS 2007 was changed compare to 2001 and 2004, and so the reporting of ill health presented in the previous part may have been affected.

Figure 6: Percent who sought medical assistance in last 30 days, 2001, 2004 and 2007



In addition to those seeking health care, a further 13 percent of men and 21 percent of women reported that they had needed medical assistance but had not sought treatment (Figure 7). This is an increase on the proportions in previous surveys. The proportion with a perceived 'unmet need' for medical care increased between 2001 and 2007 in all age and gender groups, with the exception of older men (Table B1, Appendix I).

Figure 7: Percent who needed medical assistance but did not consult in last 30 days, 2001, 2004 and 2007



The main reason given for not seeking health care in 2007 was that the person self-medicated using either pharmaceuticals (82%) or herbs (9%). 3 percent of men and 2 percent of women thought that the problem would go away. Only 4 percent of both men and women reported that they did not seek medical assistance as it was 'too expensive' (Figure 8a and b). This compares with 11 % of men and 16 % of women in 2004.

Fig 8a: Reasons why women did not seek health care, 2004 and 2007

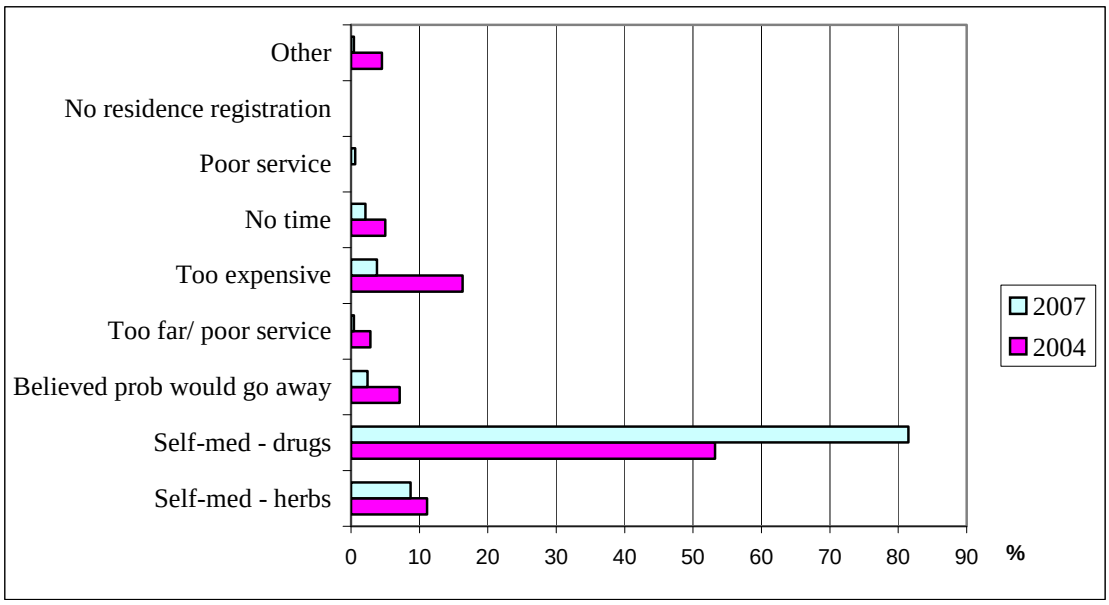
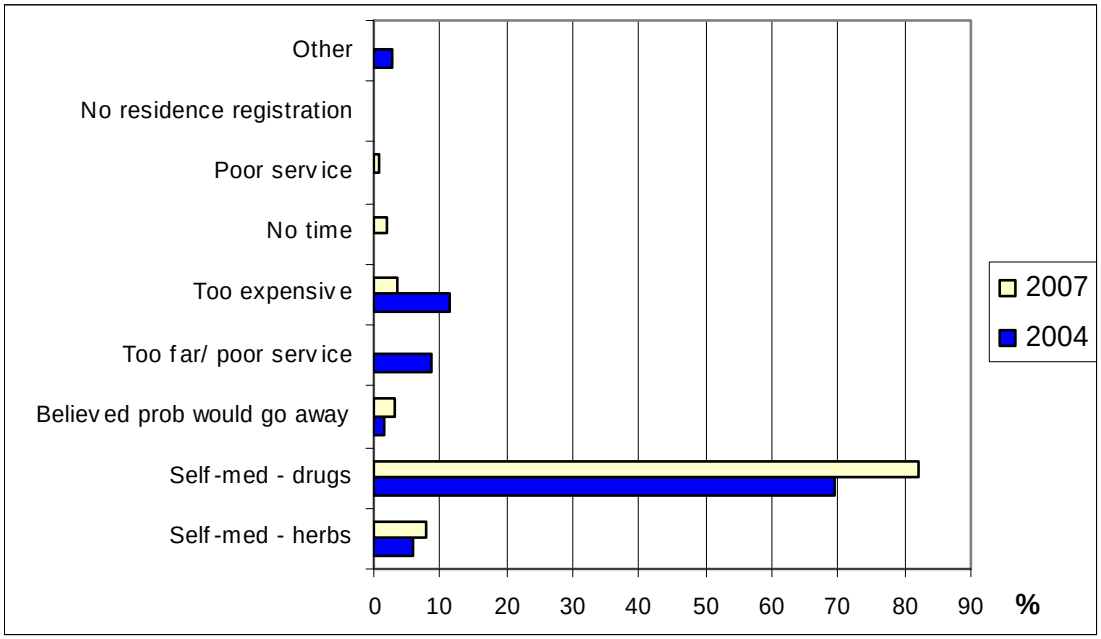


Fig 8b: Reasons why men did not seek health care, 2004 and 2007



The first **Manas Taalimi dashboard indicator for 'Accessibility and Equity of Health Services'** is **"the share of population that didn't seek necessary health care due to lack of money and remoteness of health care facility"**. According to analysis of the 2001-2007 KHHS a) the proportion of the *population that said they needed health care but did not seek it* who said the main reason was expense or distance to facility has fallen from 14.7% in 2001 to 5.7% in 2004 and to 3.6% in 2007; b) the proportion of the *total population* (regardless of stated need) who did not seek health care due expense or distance to facility has fallen from 1.9% in 2001 to 0.9% in 2004 and to 0.6% in 2007. Thus it is clear that the health reforms have made considerable progress in reducing financial barriers to accessing health care in Kyrgyzstan.

KEY FINDING #1: FINANCIAL BARRIERS TO HEALTH CARE SERVICES ARE DECREASING: THE PROPORTION OF THE POPULATION REPORTING THEY NEEDED HEALTH CARE BUT DID NOT SEEK DUE TO EXPENSES OR DISTANCE TO FACILITY HAS FALLEN FROM 14.7% IN 2001 TO 5.7% IN 2004 AND TO 3.6% IN 2007.

3.1 Patterns of health care utilisation

3.1.1 Consultation rates

Health seeking behaviour is strongly related to poor health. In 2007, just seven percent of those with no chronic condition reported a health care consultation in the last 30 days, compared with 28 percent amongst those with a chronic condition, and 47 percent amongst those whose chronic illness or disability limited their activity. Consultation rates amongst those with acute ill health are 32 percent compared with ten percent of persons without acute ill health (Figure 9).

Fig 9: Percent seeking health care in last 30 days

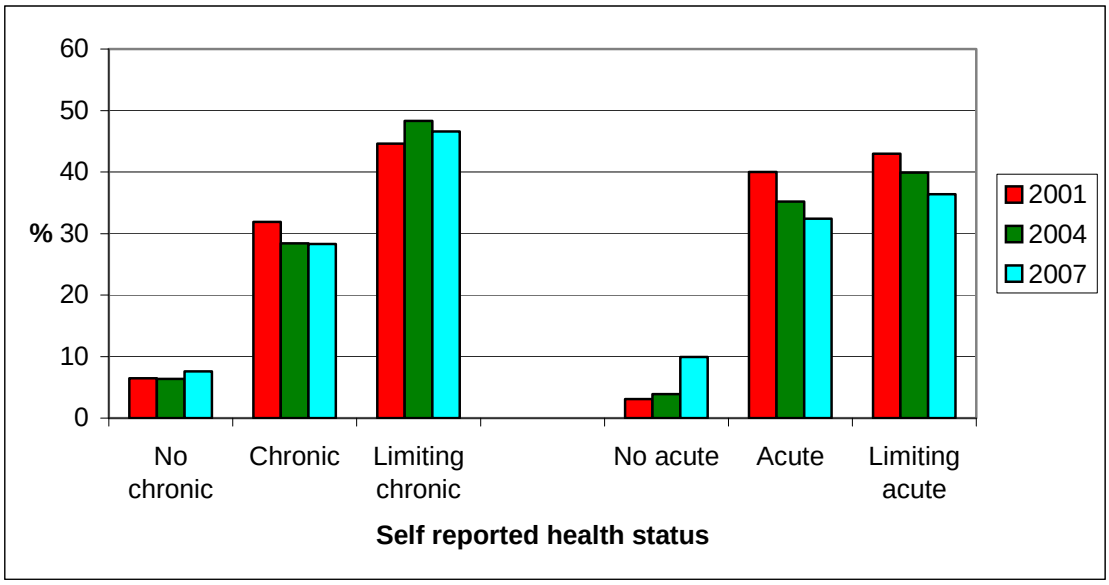


Table B4 in Appendix I, presents data on the types of conditions for which medical assistance sought, by age and gender. Consultations related to pregnancy were accounted for 17 percent of visits by women aged 16-54 in 2007 compared with 12% in 2004. Consultations for mental health problems were relatively rare, accounting for just 2 percent of all visits. In 2001, a quarter of all child consultations were for a vaccination – and in these cases parents provided the syringes for the vaccinations in 47 percent of cases. By 2007, vaccinations accounted for around 17 percent of child consultations.

Consultation rates vary by age and gender, with women being more likely to seek help than men, and the highest consultation rates being amongst the old (Appendix I, Table B1). The likelihood of consulting a health professional also varies by household economic

status, with those in the richest consumption quintile being over one and a half times more likely to seek health care than those in the poorest (Appendix I, Table B2). These patterns in part reflect the differences in health status discussed above. Interestingly the relative gap between the rich and poor, as exemplified by the ratio between the richest quintile (Q5) and the poorest quintile (Q1), has narrowed over time from 2.3 to 1.6. However the proportion reporting *needing to seek health care but not seeking help* has risen between 2001 and 2007 in all quintiles. As we have seen above, the majority of people do not report expense as the primary reason for not seeking care, with the majority relying on self-medication. However this may be due to the cost of drugs, which as we will see, constitute the lions share of the expense associated with a consultation.

In order to investigate how consultation rates vary across different sub-sections of the population, Table B3 in Appendix I presents the results of a series of logistic regressions. The dependent variable is having sought medical assistance for any reason during the last 30 days. The multi-variate analysis confirms that health status is an important predictor of consulting. Persons suffering from an acute illness in the last 30 days that has limited their usual activities are nearly four times more likely to seek medical assistance than those who have no acute illness. Women are twice as likely to consult than men and the likelihood of consulting is highest amongst those over 60.

After controlling for health, people living in rural areas are slightly more likely to seek medical assistance than those living in urban areas, perhaps reflecting the more limited access to hospital care and to over the counter pharmaceuticals, and also opportunities to self medicate. There are significant regional differences in consultation rates with people living in Jalal-abad, and Naryn being more likely to consult compared with the reference group of Issyk-kul, whereas those living elsewhere were less likely to do so.

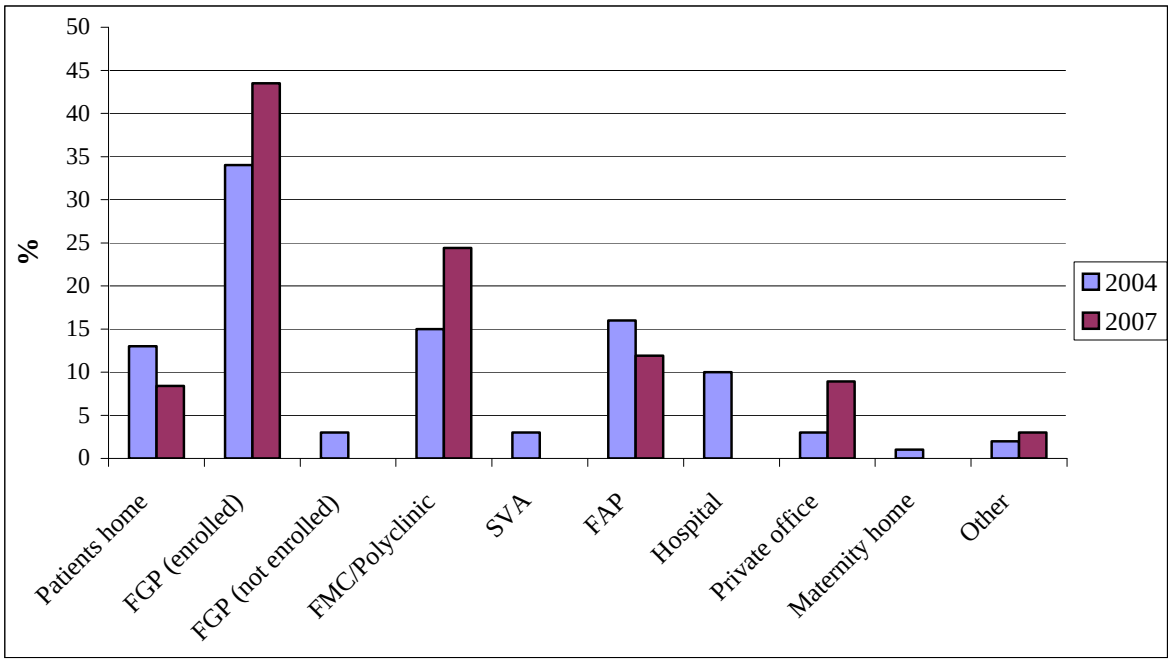
Finally, even after controlling for differences in self reported health status, there remains a significant difference in the likelihood of seeking medical assistance by socio-economic group, with those in the better off four quintiles being around 20-30% more likely to consult than those in the poorest quintile. One of the reasons for this could be that the rich oversee health care. However the gradient of the odds ratios by quintile was less

steep than that found in a similar multi-variate analysis conducted in 2004, pointing to a reduction in inequality in access.

3.1.2 Type of health care facility and professional consulted

As the reform process has continued to take effect, there has been a shift in the location at which consultation take place (Figure 10). In 2007, the vast majority of consultations were within a health facility; with less than one in ten (8%) taking place in the patient's home. Nearly half of all consultations took place at an FGP where the patient was enrolled; 44% in 2007 up from 34% in 2004, reflecting the expansion of FGP across the country (see also Table B5, Appendix I).

Figure 10. Location of consultation, 2004 and 200



The type of facility visited varies between urban and rural areas, with people living in urban areas being much more likely to attend an FGP/polyclinic, whilst those in rural areas were more likely to attend a hospital or FAP (Table B5). One notable change since 2004 is the increase in the share of visits to private offices in both urban and rural areas, up from 3% in 2004 to 9% in 2007.

In 2007, the majority (74%) of people consulting a health professional in the 30 days prior to the interview saw a state doctor. Only four percent saw a private doctor and less than one percent a 'healer'. The remainder have seen a dentist (6%), nurse (4%), midwife (6%), feldsher (5%), and pharmacist (under 1%). There has been little change in the distribution of care by personnel across time (see Appendix I, Table B6).

The relationship between economic status and the *type* of health care used sheds light on issues of affordability and health care access. Table B6 in Appendix I shows that a higher proportion of the poor continue to use primary care facilities and providers, such as nurses and feldshers, than the non-poor - who are better able to afford the higher costs of polyclinic and tertiary care. Those living in the poorest households surveyed are more likely than those living rich households to be treated at home which reflects a feldscher or nurse visit (8% v 5%), or in a FAP (physician assistant/midwife posts) (14% v 4%). However, the gap in utilisation patterns between rich and poor has narrowed over time. In 2001 just 16% of the poorest fifth of households saw a doctor at a FGP where they were enrolled; by 2007 this had risen to 53%.

3.1.3 Physical access to services and quality of care

Physical access to health care services can be evaluated according to two different indicators, geographical proximity (i.e. distance from the patient's home to the health facility) and travel time. The latter will vary according to both the geographic distance and the mode of transport used to cover that distance.

Table B7 in Appendix I presents information on the average distances travelled according to type of health facility and by region. Primary health care facilities tend to be located relatively close to patients homes, with the median distance around 1-2 km, whilst tertiary facilities involve greater distances. Not surprisingly, average distances are also greater in the less densely populated regions of the country and are highest in Naryn. Travel times are also significantly higher in Naryn, with a fifth of health facility visits involving a journey of over an hour (Appendix I, Table B8). The majority of patients (83%) travelled for less than half an hour, with those visiting tertiary facilities being most likely to experience longer journeys. There has been little change since 2004.

Just over half of all respondents who sought medical assistance in the 30 days prior to the survey incurred expenses in travelling to the health care facility (Appendix I, Table B9). The proportion varied by region, with 30 percent of those living in Jalalabad reporting some travel costs compared to 65 percent amongst those living in Osh and 68 percent in Chui. The amount paid also varied by region from a median of 10 soms in Jalal-abad and 20 soms in Bishkek to 80 soms in Naryn. Travel costs are strongly associated with the distance travelled and the mode of transport, with those travelling by ambulance incurring the highest costs.

Once people have accessed health care, one indicator of the quality of care received is the time spent waiting to be seen. In general average waiting times are quite short. Half of all respondents report seeing a professional within 15 minutes (Appendix I, Table B10). Waiting times have increased slightly between 2004 and 2007, although the differences are small.

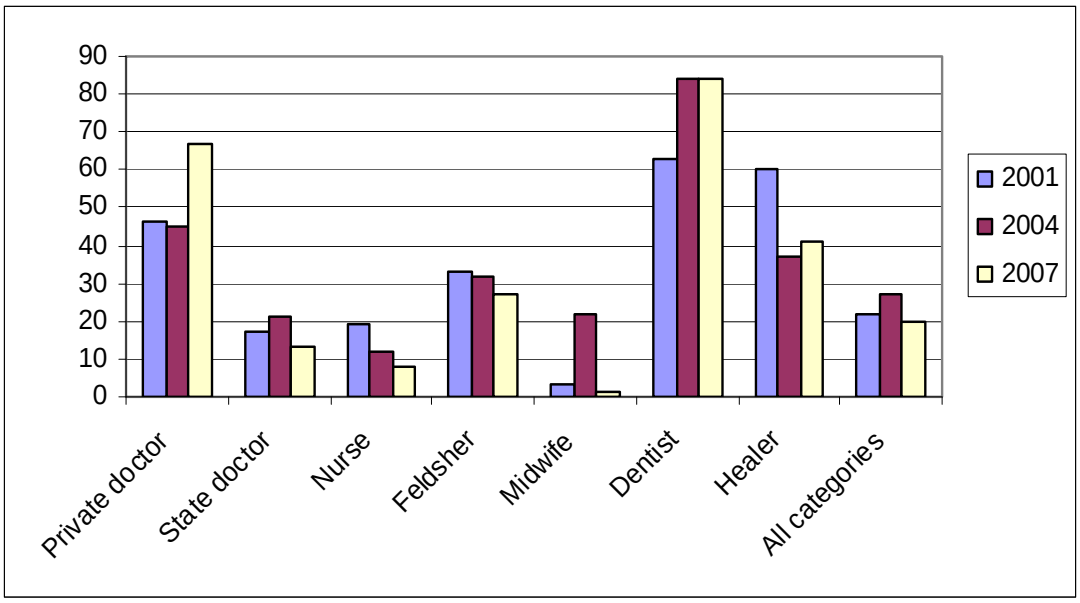
3.1.4 Payments for consultations

a) payments to providers

The proportion paying for outpatient health care fell between 2004 and 2007. Overall, 20 percent of those who reported that they had sought medical assistance in the last 30 days paid for the consultation in 2007, compared with 27 percent in 2004, 22 percent in 2001 and 25 percent in 1994 (Appendix I, Table B11). The largest fall between 2004 and 2007 was amongst those seeing a midwife (down to just 1% from to 22% in 2004) and public doctor (down to 13% from 21%), whilst those paying a private doctor increased from 45% in 2004 to 67% in 2007 (Figure 11).

KEY FINDING #2: THE PERCENTAGE OF PATIENTS PAYING TO PUBLIC OUTPATIENT PROVIDERS HAS FALLEN FROM 27% IN 2004 TO 20% IN 2007.

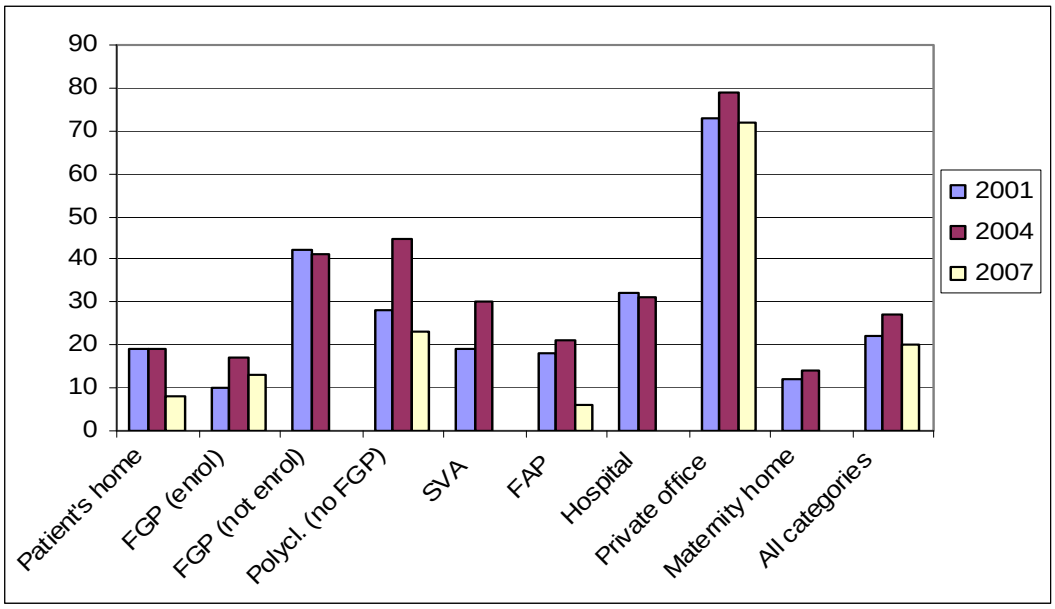
Figure 11: Percentage paying for a consultation by type of medical personnel, 2001, 2004, 2007



It's important to note, in 2007 a few types of medical facility were not included into the questionnaire, such as visits to FGPs that a person no involed, SVA, hospitals and maternal homes. With regard to this, the analysis presented below describes the expenditures made for consultations by those type of medical facilities that were included also in into 2007. The percentage paying also varies by the type of facility visited (Figure 12 and Appendix I, Table B11).

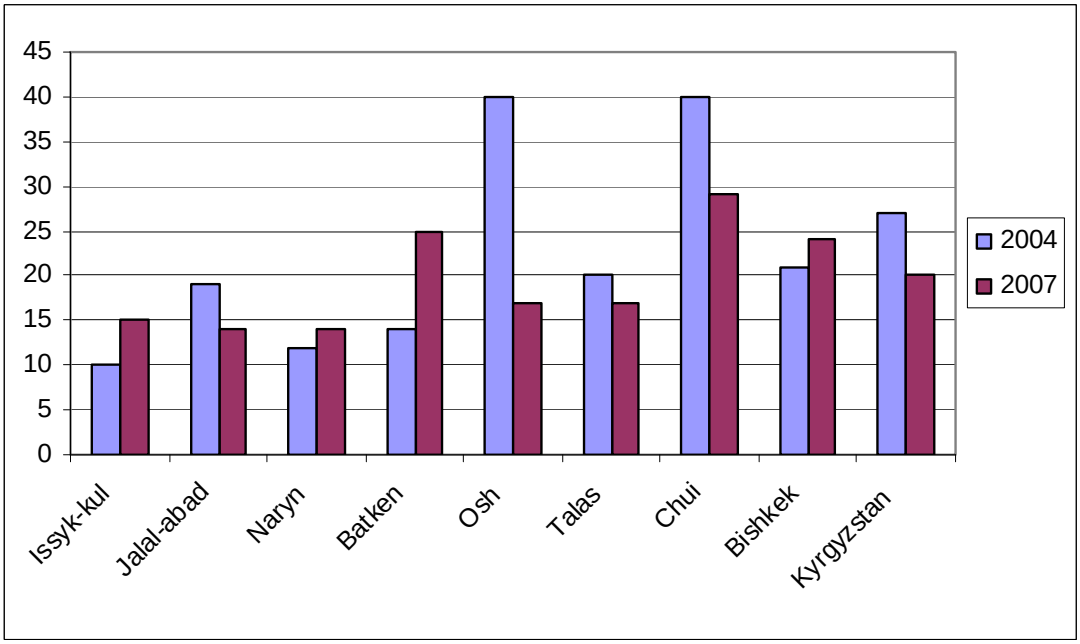
The good news is that proportion of people who visited an FGP where they were enrolled who reporting making any payment has fallen from 17% in 2004 to 13% in 2007, and the share of those paying at a polyclinic/ FMC has fallen from 45% in 2004 to 23% in 2007. No-one in 2007 paid for a visit to an FGP where they were not enrolled.

Figure 12: Percentage paying for a consultation by type of medical facility, 2001, 2004, 2007



Similar amounts are paid for consultations at FGP where the respondent is enrolled, at a polyclinic or at FAP (median 50 soms). As expected, payments are highest for private health care visits. Payments are also higher to doctors than nurses, with dentists receiving the largest sums.

Figure 13: Percentage paying for a consultation by region, 2004 and 2007



Regional differences in the proportion of those seeking medical assistance who have paid for the consultation remain (Figure 13 and Table B12 in Appendix I). However the differentials are much less marked than in 2004 when 40 percent of patients in Osh and Chui reported making a payment; by 2007 this had fallen to 17% and 29% respectively. Interestingly, the proportion paying has actually risen in 4 of the 7 regions, with the rise being higest in Batken, up from 14% in 2004 to 25% in 2007.

There is little difference in the proportion of patients reporting making a payment between rural and urban areas, although the mean level of payments is higher in urban areas. Table B13 in Appendix I explores this further, looking at average payments by type of provider and facility in urban and rural areas. An average (mean) payment to state doctors in urban areas in 2007 was 163 soms compared with 97 soms in rural areas.

The survey provides some insights into the functioning of the system of **exemptions**. On average, in 2007 just under 10% of the population reported seeking health care in the last 30 days. However 27% of those who fall into one of the 'exempt' categories (detailed in question 8 of the questionnaire) sought medical assistance; and these 'exempt' categories constituted 8% of all consultation. Only 9 percent of exempt people reported making a payment for a consultation compared with 21 percent of non-exempt people. T his is a significant improvement on the 15% of exempt patients making a payment in 2004, indicating that the system of exemptions is operating more effectively.

KEY FINDING #3: THE OPERATION OF THE SYSTEM OF EXEMPTIONS AT THE PRIMARY CARE LEVEL HAS IMPROVED.

People were also asked whether they were covered by the **Mandatory Health Insurance Fund**. In 2007, 80% of respondents answered in the affirmative. There were no differences in consultation rates between the insured and non-insured; insured respondents were however slightly less likely to report making a payment for the consultation (19% amongst those covered by MHIF v 22% not covered).

When asked if they had received a **receipt for the payment**, 90 percent of all respondents who had paid replied *'it was difficult to say'* with the remainder reporting that they had received a receipt. This is deterioration since 2004, where around a quarter of

those paying positively responded that they had got a receipt. However as the overall proportion paying has fallen, the absolute numbers are similar.

In order to assess factors associated with paying for primary care Table B14 in Appendix I presents the results of multi-variate analysis using logistic regression. It appears that the new system is operating well in terms of targeting. People covered by MHIF were less likely to pay than those who are not, as are those who are exempt. People with limiting chronic conditions were two-thirds as likely to pay as those with no chronic conditions, after controlling for other factors. There remain, however significant regional disparities, with people in Chui being 2.5 times as likely to pay than those in Issyk-kul. This warrants further exploration. It also appears that those in the bottom quintile are more likely to pay than other groups although the gradient by socio-economic group is not linear.

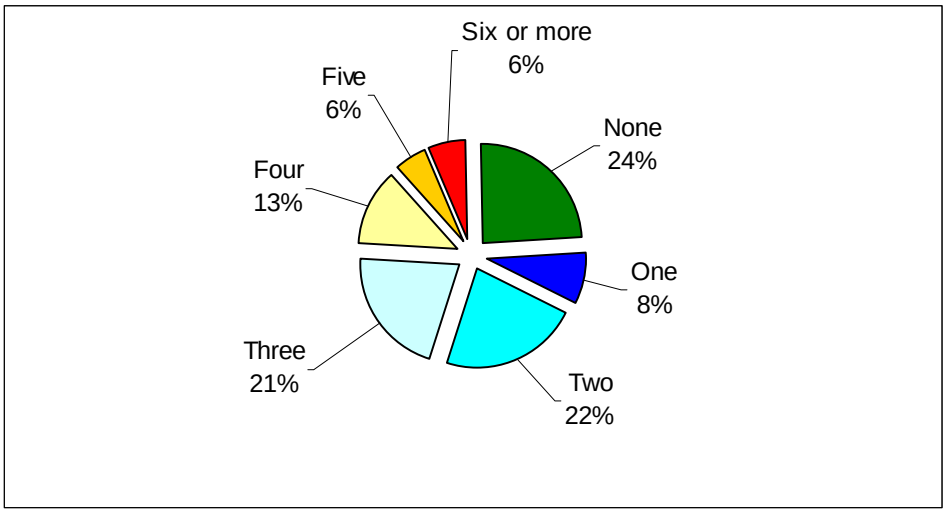
b) other payments

A similar level of people reported that they made *'other payments'* in connection with the consultation, such as those for diagnostic tests, in 2007 as was the case in 2004 (20% v 17% respectively). This is a marked reduction in comparison with 32 percent in 2001 and 55 percent in 1994 (Appendix I, Table B15). Moreover less than two percent reported giving a **gift** to the health personnel during the consultation. In this respect, it appears that the new charging mechanism of a single co-payment is working well.

3.2 Prescriptions

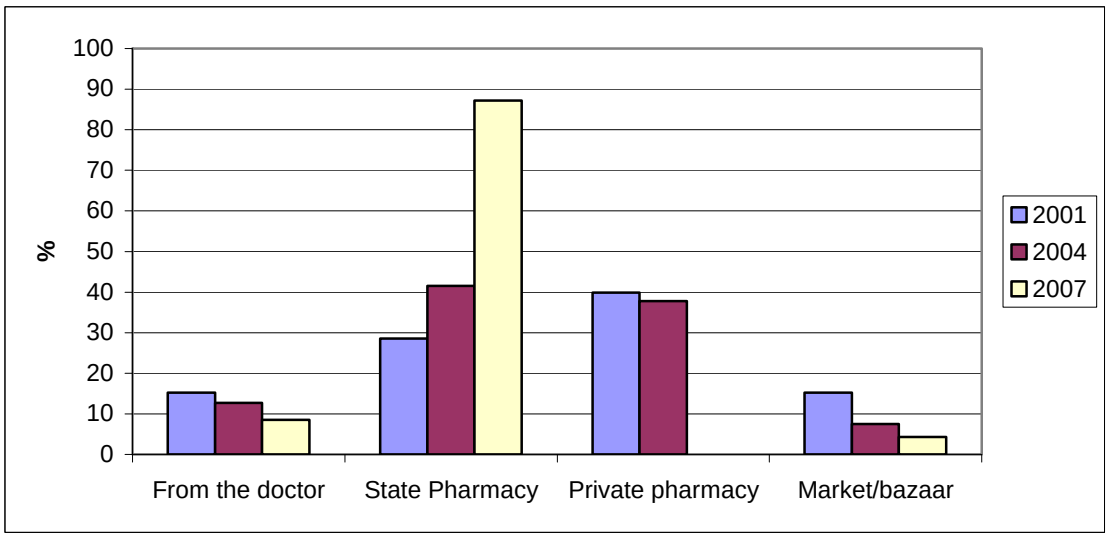
Of those consulting a health professional in the last month in 2007, 76 percent received a prescription for at least one item (Figure 14). This is the same as in 2004 and compares with 65 percent in 2001. However, a quarter (25%) received a prescription for 4 or more items (up from 20% in 2004).

Figure 14: Number of items prescribed



The majority of respondents managed to obtain all the items prescribed (92%) and a further 5 percent obtained some of the items. Only 3 percent did not obtain any (Appendix I, Table B16). This is a significant improvement on the situation in 2001, when only 77 percent obtained all the medicines prescribed, 14 percent obtained only a part and 9 percent obtained none at all. This can be explained by an expansion of pharmacy network making medicines more available, economic growth (population has become richer) and potentially that Additional Drug Package is working. When asked why they did not obtain the medicines, 43% of respondents in 2007 cited that the drugs were too expensive, compared with 54% in 2004 and 61% in 2001.

Figure 15: Location where prescriptions obtained, 2001, 2004, 2007



Nearly 90% of respondents with a prescription reported that they filled the prescription in a state pharmacy (Figure 15). The median amount paid varied little according to location, varying from 150 soms at a pharmacy, 160 soms from the Doctor and 175 soms at the bazaar. (Table B18).

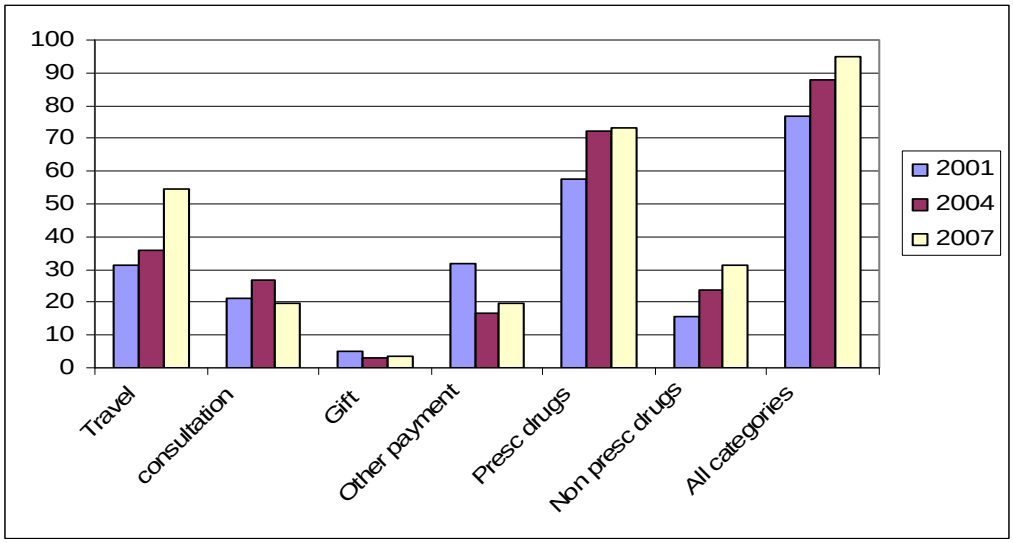
One fifth (21%) of the total sample report that they have purchased some medication without a prescription in the last month at an average (mean) cost of 87 soms.

KEY FINDING #4: THERE HAS BEEN SIGNIFICANT IMPROVEMENT IN OBTAINING PRESCRIBED DRUGS: 92% OF PATIENTS OBTAINED ALL MEDICINES PRESCRIBED BY THE DOCTOR IN 2007 AS COMPARED TO 77% IN 2001.

3.3 Total payments relating to consultation

In 2007, the mean amount paid in relation to a consultation; amongst all who consulted a health professional was just over 350 soms (median 170 soms) (Appendix I, Table B19). Spending on drugs (with and without a prescription) constituted the largest share of total expenditures (74%), with payments for consultations being the next most important (11%). Of course, not everyone who sought medical care in the last 30 days made a payment and in fact the median value for most types of payment amongst all consulters was zero, indicating that less than half of all patients incurred a particular type of expense, as indicated in Figure 16 below.

Fig 16: Of those who consulted, % reporting incurring various costs: 2001,2004,2007



Examining spending on health care *only* amongst those who *actually incurred some cost*s, the median (mean) total amount paid by those who consulted is 180 (374) soms in 2007 compared with 120 (276) soms in 2004 and 86 (193) soms in 2001 (Appendix I, Table B20). Regional variations in the levels of payments remain, with average payments being highest in Chui and Bishkek and lowest in Talas and Naryn – although in Naryn the mean is much highest than the median indicating that the distribution of payments is skewed with a few people making very high payments (note: payments that are two standard deviations from the national mean are capped at this level) (Appendix I, Table B21).

Looking at the burden of heath care expenditure, amongst those who have consulted in the last month total payments for health care constitute on average nearly 7 percent of usual total household monthly expenditures. Health care payments represent a greater burden for the poor than the rich with health care expenses on average accounting for nearly 8 percent of total household expenditures for the poorest households compared to 6 percent amongst the richest. However, poorer households tend to be larger in size than richer households. If one looks at spending on outpatient care as a proportion of *per capita* household expenditures, on average such expenditures account for 34% of per capita household expenditure amongst the poorest quintile compared to just 16% amongst the richest (and 24% for all households). Thus in poor households, the ill health of one person can account for around a third of usual per capita consumption.

KEY FINDING #5: ALTHOUGH OVERALL ACCESS TO OUTPATIENT CARE HAS IMPROVED, THE BURDEN OF HEALTH CARE PAYMENTS FOR THE POOR IS STILL SIGNIFICANT BECAUSE OF THE INCREASE IN EXPENDITURES FOR OUTPATIENT DRUGS.

3.4 Barriers to access?

Figure 7 above highlighted the fact that a higher proportion of men and women who felt they need heath care in the last 30 days did not seek treatment than those who did, and that this had increased over time. Tables B23-25 in Appendix I present the reasons for non-

use by different characteristics. As was the case in previous years, one of the areas with the highest proportion reporting **affordability** as a reason for non-use was Chui (10%, down from 31% in 2004). However interestingly affordability also seems to have emerged as an issue in Issyk-kul where 11 percent of those deterred from seeking treatment reported cost as the main reason for not consulting (up from zero in 2004). (*Note*: these regional differences may to some extent reflect regional differentials in the average payments for outpatient care. Payments are highest in Chui (Appendix I, Table b26 and b27)).

Affordability still appears to be a greater issue amongst male pensioners than other age groups, but surprisingly there appears to be no strong association with household economic welfare, although cell counts are low. However multi-variate analysis (Appendix I, Table B3) demonstrates there is a significant difference in the likelihood of seeking medical assistance by socio-economic group even after controlling for health, age and region, with those in the poorest quintile being significantly less likely to consult. Thus issues of improving access to primary care amongst the very poorest should continue to be of concern to policy makers.

4. Hospitalisation in the last year

4.1 Patterns of hospital use

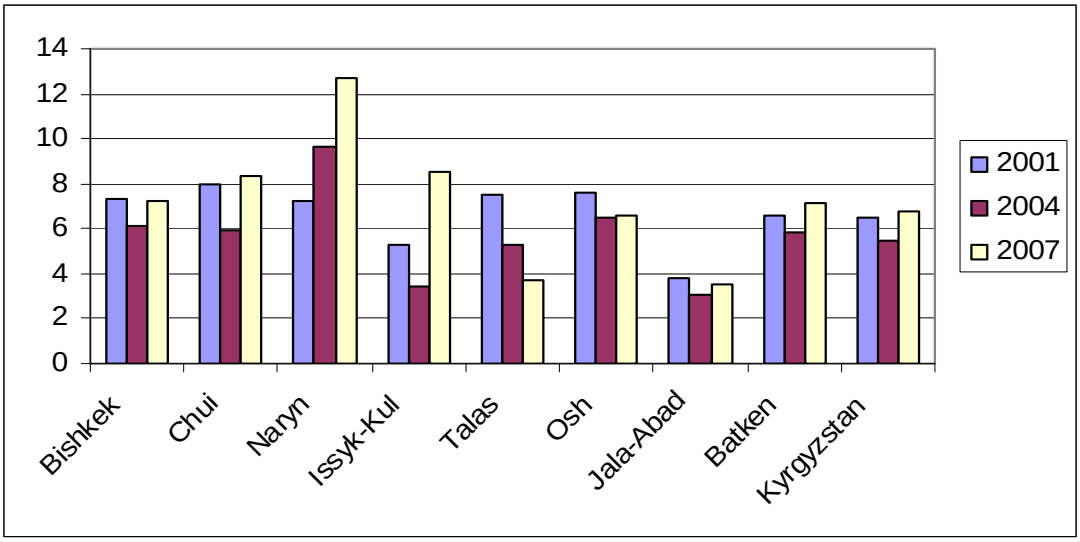
In the 12 months prior to the survey (February 2006-February 2007) 6.4 percent of all respondents reported at least one hospital inpatient stay (compared to 5.5% in 2004). Of these, 7 percent were hospitalised twice and 4 percent three or more times.

4.1.1 Hospitalisation rates

Hospitalisation rates vary by age and gender (Appendix I, Table C1), the highest hospitalisation rates being amongst older men (10%) and women (14%) and working age women (11%). The median length of stay has been gradually falling over time within all age groups. In 2007 the average length of stay for all hospital visits was around 12.7 days.

There are significant regional differentials in hospitalisation rates; the highest in being in Naryn (13%) and the lowest in Jalal- Abad (3.5%), as was also the case in 2004 (Figure 17). There was no difference in the hospitalisation rates between the urban and rural population. Hospitalisation rates rose in all regions between 2004 and 2007, with the exception of Talas.

Fig 17: Percent hospitalised in last year by oblast



The report on the previous KHHS in 2004 noted that the differences in hospitalisation rates across socio-economic groups narrowed between 2001 and 2004; hospitalisation rates amongst the lowest quintile remained unchanged as compared with 2001 whilst rates amongst the richest quintile fell from 9 percent to just under 6 percent. Between 2004 and 2007, the utilisation gap has widened again so that in 2007 the ratio of utilisation between quintile 1 (the poorest 20%) and quintile 5 (the richest 20%) was virtually the same as in 2001.

These patterns in hospital use may reflect the differences in age composition and health status between different socio-economic groups. In order to further investigate how hospitalisation rates vary across different sub-sections of the population, Table C3 in Appendix I presents the results of a logistic regression for all those aged 18 and over (as in the 2007 survey health status was only asked of adults). The dependent variable is having an inpatient stay during the last 12 months. After controlling for health status, age and sex, significant differences in hospitalisation by socio-economic group remain with those in the richest quintile being nearly 50% more likely to be hospitalised than those in the poorest quintile. Clear regional differentials also remain, with a lower likelihood of hospitalisation in all other regions when compared with Issyk-kul, with the exception of Naryn.

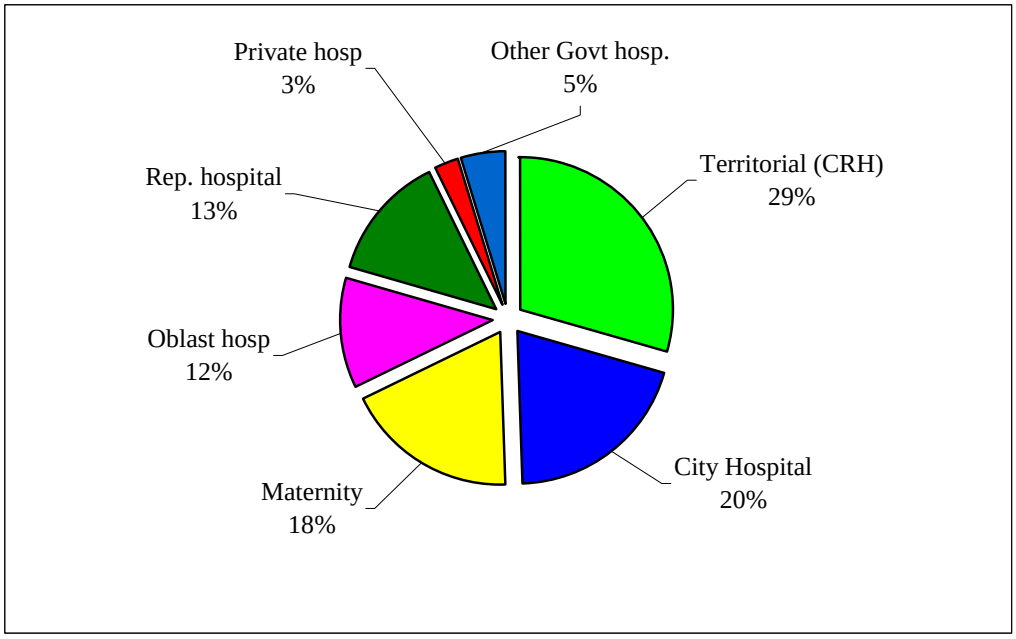
KEY FINDING #6: HOSPITAL UTILISATION RATES HAVE RISEN FROM 2004 TO 2007, AND RATES HAVE RETURNED TO SIMILAR LEVELS AS THOSE OBSERVED IN 2001. THE GAP IN HOSPITALISATION RATES BETWEEN THE RICH AND POOR HAS WIDENED BETWEEN 2004 AND 2007. IN THE 12 MONTHS PRIOR TO MARCH 2007, THOSE IN THE RICHEST HOUSEHOLDS WERE 50% MORE LIKELY TO HAVE AN INPATIENT STAY THAN THOSE IN THE POOREST HOUSEHOLDS.

4.1.2 Type of facility

Nearly a third of people were admitted to a Territorial Hospital (TH) (earlier it was Central Rayon Hospital), a fifth to a City hospital and a further fifth to a maternity home. Oblast and Republican hospitals both account for around one in ten hospitalisations, whilst

private hospitals account for around three percent (Figure 18). This distribution is similar to that observed in previous years, although the proportion attending private hospitals is gradually increasing – from less than 1 % in 2001 to 3% in 2007. The type of facility a person is referred to varies by region, with Republican hospitals accounting for 30 percent of people hospitalised from Bishkek compared with less than 1 percent of people from Osh.

Figure 18: Type of facility, 2007



The type of facility also differs according to economic status (Appendix I, Table C4). Persons living in the poorest fifth of households remain much more likely to report being hospitalised in a TH (30%) compared to the richest fifth (21%). In contrast those patients in the richest quintile are twice as likely to receive care in the Republican Hospital than those in the poorest quintile (14% v 6%).

Amongst those hospitalised, in 2007 there are marked differences in the distribution of types of treatment received by quintile group, with the poor half as likely to be the subject of a surgical intervention and intensive care as the rich (14% v 29%) but rich more likely to be hospitalised for childbirth (25% v 19%) or medication (53% v 38%). Overall, 16% of those hospitalised in the 12 months prior to the March 2007 survey underwent surgery compared to 20 percent in 2004.

4.1.3 Type of referral

The majority of people hospitalised are referred from a primary care facility such as an FGP (39%), FMC (14%) and a FAP (11%) (Figure 19). There has been a rise in the proportion who are self-referred, up to 26 percent compared with 19 percent in 2004. This is surprising given the higher co-payment for such referrals. However it is important to take into account the type of facility (Appendix I, Table C5). In 2001 11 percent of visits to the Republican Hospital were self-referred; by 2004 this had risen to 19 percent and by 2007 to 28%. Thus a key issue with self-referrals therefore appears to be at the Republican level; 15% of *all* self referral are at this level.

Figure 19: Type of referral, 2007

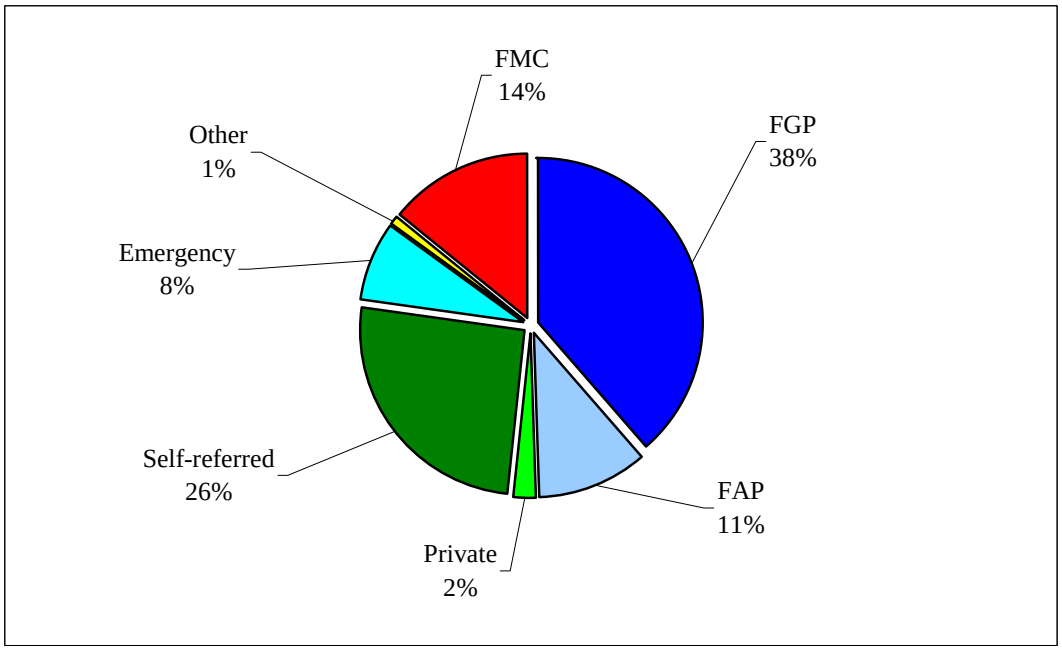


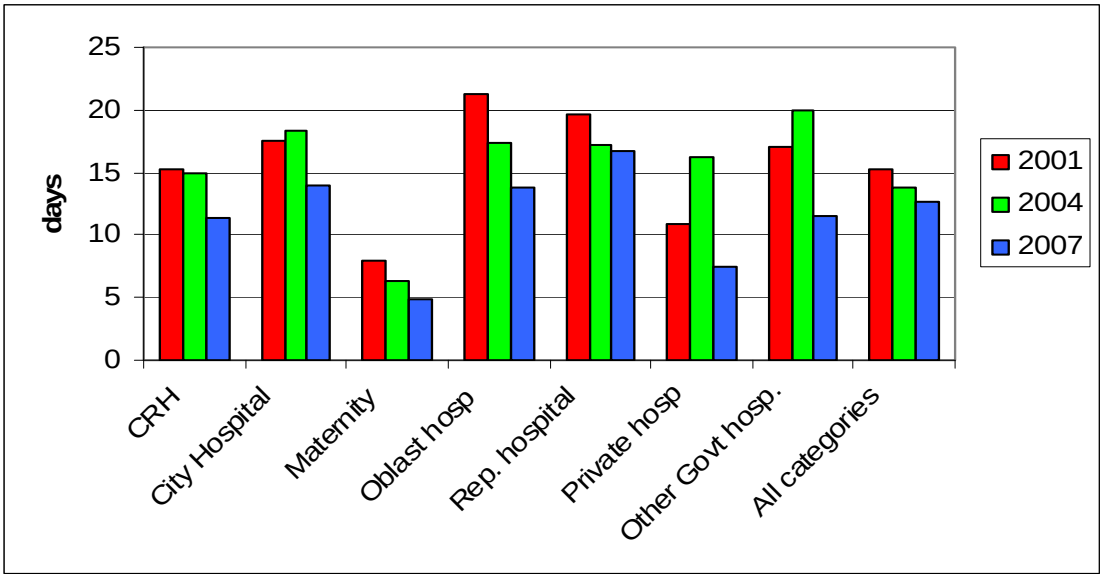
Table C6 in Appendix I examines differences in self-referrals by socio-economic group. In general, those living in households in the poorest 60 percent of the welfare distribution are most likely to self-refer to hospital for health care, with only 14 percent of the richest quintile compared to 36 percent of the middle quintile and 45 percent of the second poorest quintile. Moreover this differential has widened since 2004 – possibly indicating that those people living in poorer households are less knowledgeable about the reform process. Ironically this means that those from the lower end of the welfare distribution are more likely to face higher levels of co-payments than those at the top.

4.1.4 Length of stay

The mean length of an inpatient stay in 2007 was 12.7 days, and the median stay was 10 days. This is a reduction from 2001 when the mean (median) length of stay was 15.3 (12) days; and significantly shorter than was the case in 1994, when the mean (median) length of stay was 26.0 (15) days. Thus it appears that the continuing efforts by the Ministry of Health to reduce the time patients are in hospital have been successful.

The mean length of stay varies considerably by type of facility, from 5 days in a maternity hospital to 17 days in the Republican hospital (Figure 20). Between 2001 and 2007, length of stay has fallen in all types of hospitals, will the largest falls been seen in oblast hospitals. (NB: 'Other hospitals' in 2007 excludes TB hospitals so comparison across time is not strictly comparable. In TB hospitals in 2007 the average length of stay was 61 days.)

Figure 20: Average (mean) length of stay by type of facility



4.2 The ‘costs’ of hospitalisation

4.2.1 Travel expenses

As was the case in previous years, the majority of people attended a hospital close to their home. The median distance travelled was just 5km. However, there was a very wide degree of variation, with a minimum of 10 metres and maximum of 1100 km (Appendix I, Table C7). The distance varied by the type of hospital, with people travelling furthest to reach Republican hospitals, private hospitals and oblast hospitals. The time spent travelling also varied widely. Overall around 58% of patients had to travel less than half an hour. However seven percent travelled for more than four hours; and over a third of those visiting a Republican hospital spent over 4 hours getting there (Appendix I, Table C8).

There are clear differences in the mode of transport used to access hospital services by type of facility and by region (Appendix I, Table C9). Ten percent of all inpatients were brought to hospital by ambulance. This figure rose to 15 percent for patients admitted to maternity homes.

4.2.2 Family support

Hospitalisation represents a major expenditure for most households. It is common for patient’s families to offset some of the costs by providing food and linen and taking responsibility for personal care tasks such as bathing and feeding their ill family member However, it also appears that a number of families are assuming other responsibilities conventionally restricted to nurses and doctors, such as administering medications and injections. Looking at changes over the period 2001-2007, it seems that provision of personal care has increased between 2001 and 2004 and then declined somewhat (Figure 21a). In 2007 a higher proportion of patients reported family members assisting with feeding but a lower proportion with bathing tasks as compared with 2001. Similar levels of family members are providing food but a lower proportion are now providing drugs, which is good news as these should be included in the ‘services’ provided following the co-payment (Figure 21b). The proportion providing help with administering injections has stayed roughly the same: 6 percent in 2001 and 5 percent in 2007 (Figure 21c).

Fig 21a: Percent reporting family help with personal tasks during inpatient stay

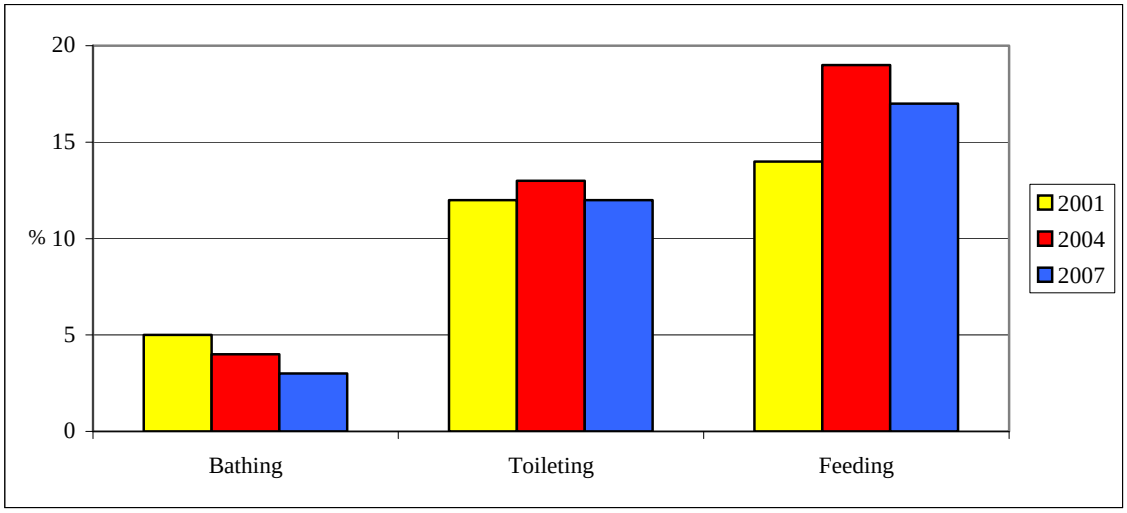


Fig 21b: Percent reporting family supplying selected items during inpatient stay

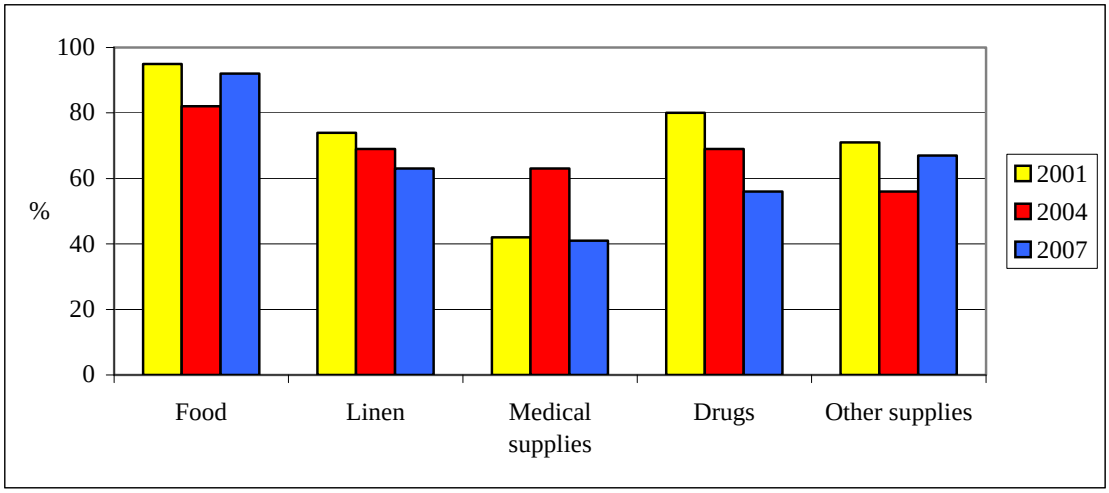
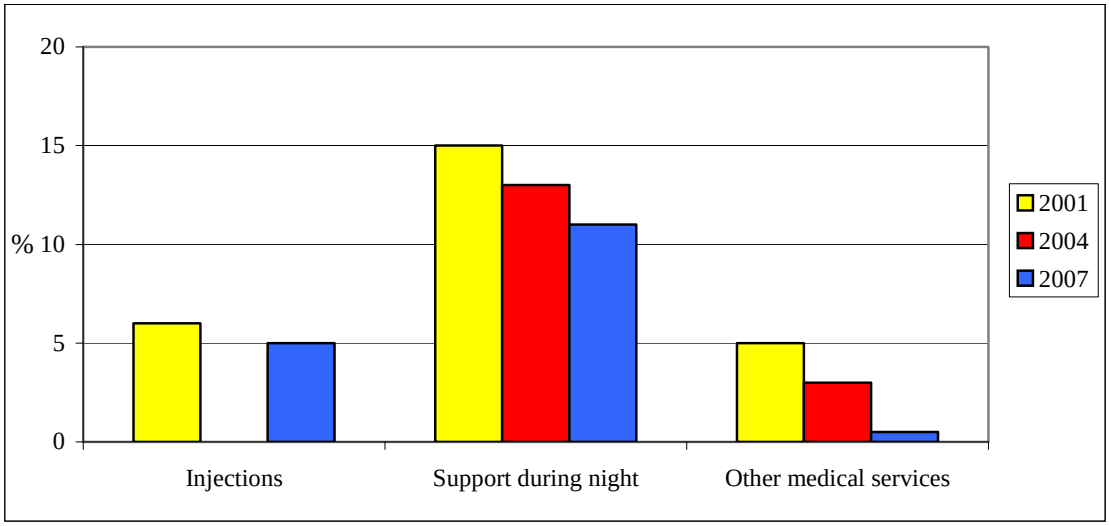


Fig 21c: Percent reporting family providing selected services during inpatient stay



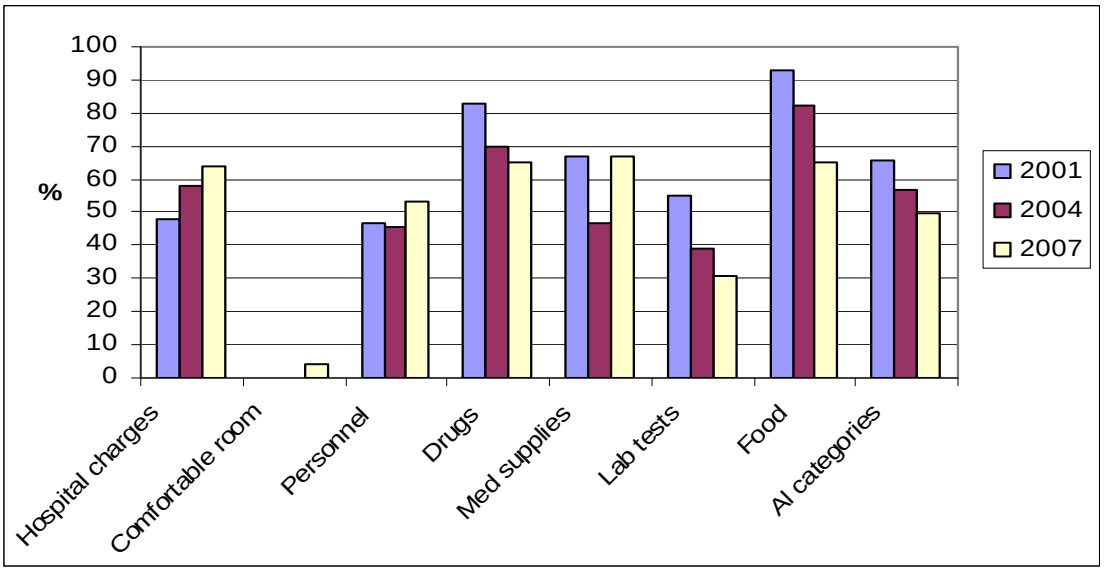
There are differences in the patterns of in-kind contributions by socio-economic group, with those from richer households being more likely to receive linen or food than those from poor households, whilst the poor are more likely to bring in only food (Appendix I, Table C10). Interestingly the socio-economic differentials in in-kind provision have generally narrowed between 2001 and 2007 and by 2007 it appears that the provision of family assistance has shifted from being a way to reduce costs to one of increasing patient comfort; with those in the richest households being able to enjoy fresh linen and home cooked food.

KEY FINDING #7: THE PROVISION OF FAMILY ASSISTANCE DURING AN INPATIENT STAY APPEARS TO HAVE SHIFTED FROM BEING A WAY TO REDUCE COSTS TO ONE OF INCREASING PATIENT COMFORT.

4.2.3 Payments for medicines and services

Overall payments for health services in general provided during hospitalization have been decreasing over the period of 2001 and 2007 (Figure 22). If we look at the expenses made by patients at inpatient level separately, the proportion of payments for hospital charges has increased over the observed period; however, the proportion reporting making payments for drugs, laboratory tests and food has fallen, which suggests the single co-payment policy is taking affect. Although this is excellent news but it is important to note that the proportion reporting making payments to medical personnel has risen. Other issues that cause concern and have to be taken into consideration is that the proportion of payment for medicines and other services during hospitalisation still remains high. In 2007 amongst all inpatients, 65 percent report paying for food, 65 percent for medicines, 64 percent for hospital charges and 31 percent for laboratory tests. Four percent of hospital inpatients reported paying an additional official charge for a comfortable room. Over half of people paying hospital and laboratory charges reported that they did *not* get a receipt, making it difficult to identify whether these charges were formal or informal.

Figure 22: Proportion paying for services during hospitalisation, 2001, 2004 and 2007



There is evidence that in 2007 a slightly lower proportion of the poor pay hospital charges and for other services than the rich (Appendix I, Table C11). Moreover, those in the lowest quintile pay, on average, a lower amount. However even then costs of charges and medicines can be prohibitive. The median payment for medicines for those in the lowest quintile was 500 soms, which is in addition to the official co-payment of 500 soms (see also research paper on catastrophic payments).

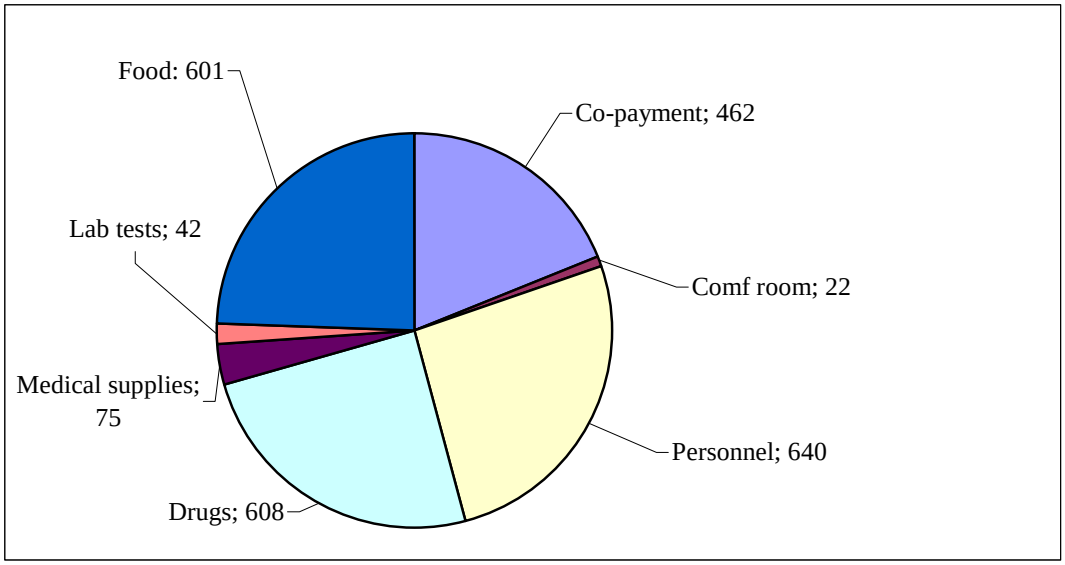
4.2.4 Payments to staff

Table C12 in Appendix I presents some information on the proportion making a payment/gift direct to staff during hospitalisation. The differences by economic status partly reflect differences in the types of treatment obtained during hospitalisation, as the data in Table C12 in Appendix I is for *all* inpatients rather than those 'at risk of paying'. In general, the proportion of inpatients living in the poorest quintile reporting of making direct payments to staff is low in comparison to the inpatients living in the richest fifth of households. However, the size of the payments may be considerable – especially to surgeons, where the median payment is 1,000 soms. There appears to be some evidence that payments are solicited by hospital staff, particularly anaesthesiologists (Appendix I, Table C13), although in the majority of cases inpatients reported that the payment was a gift.

4.3.5 Total expenditure

Overall, the mean total cost incurred during a spell in hospital in the year prior to the survey was 2,452 soms (median 1,650 coms). Of this, the co-payment accounted for 19%, drugs 25%, payments to personnel 25% and food 25%.

Fig 23: Average total payment for hospitalisation amongst all patients (inc zeros), 2007



Average expenditure, excluding food, varied considerably by oblast:

- Jalal-Abad 958 soms (median 550)
- Batken 1,194 soms (median 720)
- Naryn 1,387 soms (median 631)
- Osh 1,535 soms (median 850)
- Issyk-kul 1,684 soms (median 960)
- Talas 1,704 soms (median 1,110)
- Bishkek 2,054 soms (median 1,450)
- Chui 3,202 soms (median 2,050)
- All Kyrgyzstan 1,850 soms (median 1,070)

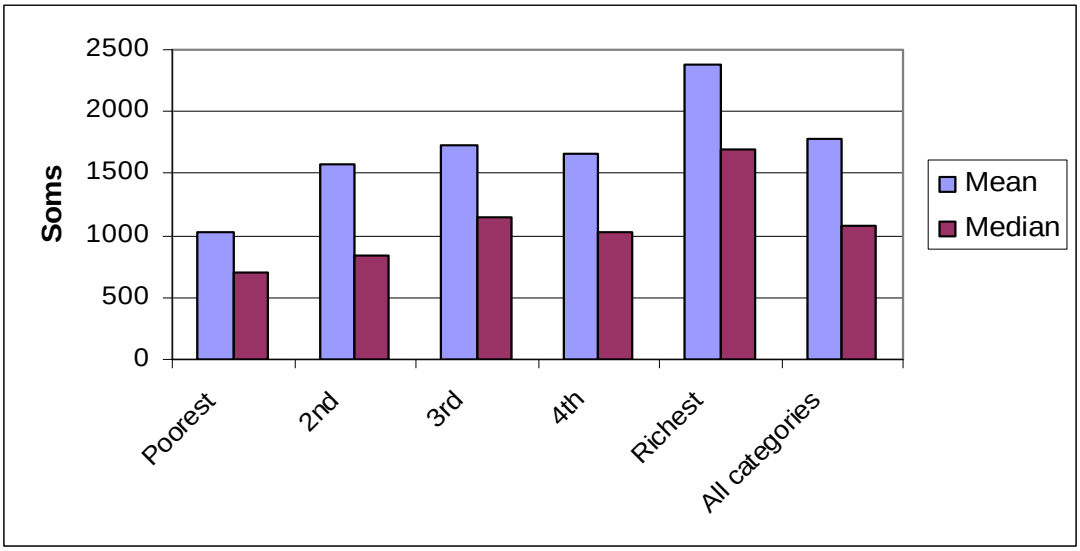
Mean expenditures are lowest in Jalal-Abad and Batken, highest in Chui and Bishkek, which was also the case 2001.

Hospital expenses also varied by age and gender:

- Child under 16
  - Boy 1,127 soms (median 846)
  - Girl 2,321 soms (median 1,500)
- Working age
  - Male 2,400 soms (median 1,700)
  - Female 1,485 soms (median 860)
- Pension age
  - Male 2,758 soms (median 1,700)
  - Female 1,514 soms (median 880)

The level of expenses by children and persons over pension age is surprising given that both these groups are theoretically covered by the MHIF. However it is lower than that recorded from the 2004 survey.

Figure 24: Total expenditure on hospitalisation (excluding food) by economic status, 2007



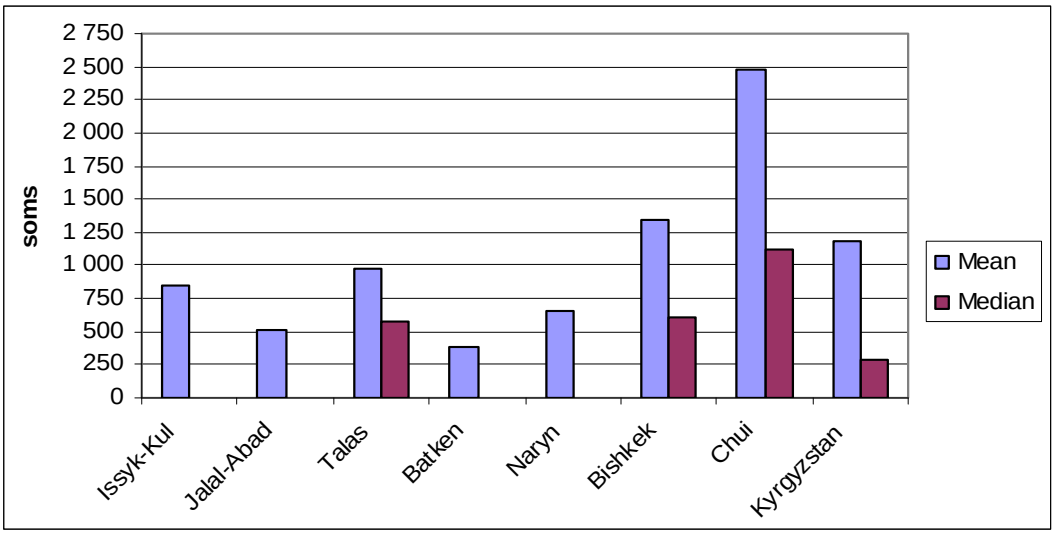
Total expenditures on hospitalisation, excluding food, also varied by economic status from a mean (median) of 1,035 (700) soms for those living in the poorest fifth of households to 2,373 (1,700) for those living in the richest fifth of households (Figure 24). Thus, looking at absolutely levels of payments, hospital payments appear to be progressive. Table C14 in Appendix I presents data on hospitalisation costs as a *share* of total household resources. There are two encouraging signs; first the overall share of household expenditure on inpatient care has fallen from 3.2% to 2.6%. Secondly, the gap between the rich and poor has been closed. This is excellent news, although as noted above poorer households tend to be larger than richer ones and so per capita consumption is lower.

KEY FINDING #8: THE OVERALL COSTS OF INPATIENT CARE HAVE FALLEN AND EQUITY HAS IMPROVED BETWEEN 2004 AND 2007. THE PROPORTION OF THE PATIENTS REPORTING MAKING PAYMENTS FOR DRUGS AND MEDICAL SUPPLIES, LABORATORY TESTS AND FOOD HAS FALLEN BUT THE FREQUENCY OF PAYMENTS TO MEDICAL PERSONNEL HAS RISEN SLIGHTLY.

4.3 Co-payments and household expenditures on health care

Given that one of the main purposes of the survey was to provide data for the evaluation of the new official co-payments for inpatient stays, it is useful to examine the distribution of payments in relation to the co-payment thresholds. Using the current co-payment rates combined with information on patient's status, i.e. exempt, insured, uninsured, without referral and whether or not the admission involved surgery, it is possible to calculate the actual payment over and above the expected co-payment. The analysis is presented in Table C15 in Appendix I and Figure 25 below.

Figure 25: Payments for hospitalisation in excess of co-payment rate (excl. food expenditure), 2007



There are several points to note. First, substantial expenses over and above the co-payment rate are being incurred for hospital stays, particularly in Bishkek and Chui. However median levels of payment are much lower than mean payments, indicating that a considerable proportion of patients are paying nothing or very little over and above the co-payment rates, but a few people are paying substantial amounts (see 3rd column in Appendix I, Table C15). Secondly, if one excludes spending on food, then hospital expenditures are much lower and indeed median excess payments are zero in everywhere except Talas, Chui and Bishkek– indicating that at least half of all inpatients do not pay more than the co-payment rate. Thus the new co-payments seem to be working.

Table C16 in Appendix I presents the same analysis for socioeconomic groups. Average excess payments are lower for the bottom 40 percent than the top 60 percent, again demonstrating improved equity. However, there are still some poor people making significant payments. The impact of payments for health care on household welfare is further examined in the separate paper on catastrophic payments.

KEY FINDING #9: MORE THAN HALF OF ALL INPATIENTS ARE NOT MAKING PAYMENT IN EXCESS OF THE CO-PAYMENT RATE; HOWEVER THERE ARE STILL SOME POOR PEOPLE MAKING SIGNIFICANT PAYMENTS.

5. Total private health care expenditures

The results of the KHHS can be used to estimate total household spending on both outpatient and inpatient care for population as a whole. Table D1 in Appendix I shows the average per capita spending on a range of different components of health care. These figures are for the last consultation in the previous 30 days or the most recent inpatient stay in the last year. Amongst those who consulted in the last 30 days, patients reported an average of 1.43 visits, with the median being 1 visit and the maximum being 15. Similarly amongst those with an inpatient stay in the last year, the average number of stays was 1.16 with a median of 1 and a maximum of 5.

In order to obtain annual estimates for the population as a whole we to

a) need to multiply the outpatient data by a factor of 12. This assumes that the last month was typical for the year. As the survey was conducted in March, the 30 days prior to the survey covered February. One might expect acute ill health to be worse in the winter months, with the result that we may over-estimate yearly outpatient expenditure.

b) adjust the data to take into account the average number of visits in the reference period. This can be done in two ways. First one can multiple the data for each respondent by their *actual* number of reported visits. This assumes that the expenditure on the last visit is typical of all their visits. This is shown as Variant A below. However this may overestimate total expenditure, particularly for those people who report a large number of visits. An alternative is to use *average* number of visits, shown as Variant B.

c) aggregate the data for different demographic groups to obtain a total for the population. Here we use the grossing up sampling weights provided by the NSC.

The full results for these alternative approaches are shown in Table D2 in Appendix I,, which includes two variants: A and B. Variant A reflects the lower boundary, assuming that respondents reported all expenditures associated with health care as being associated with the last visit. In fact the questionnaire does not explicitly ask respondents to limit their answers to the last visit so it is plausible that some respondents have actually amalgamated all the expenses for all outpatient and inpatient visits in the reference period associated with

their chronic or acute illness. Variant B therefore adjusts the population based data using *average* number of visits. In sum, total private spending on health care in 2006-07 ranged from 3.6 billion som to 5 billion som.

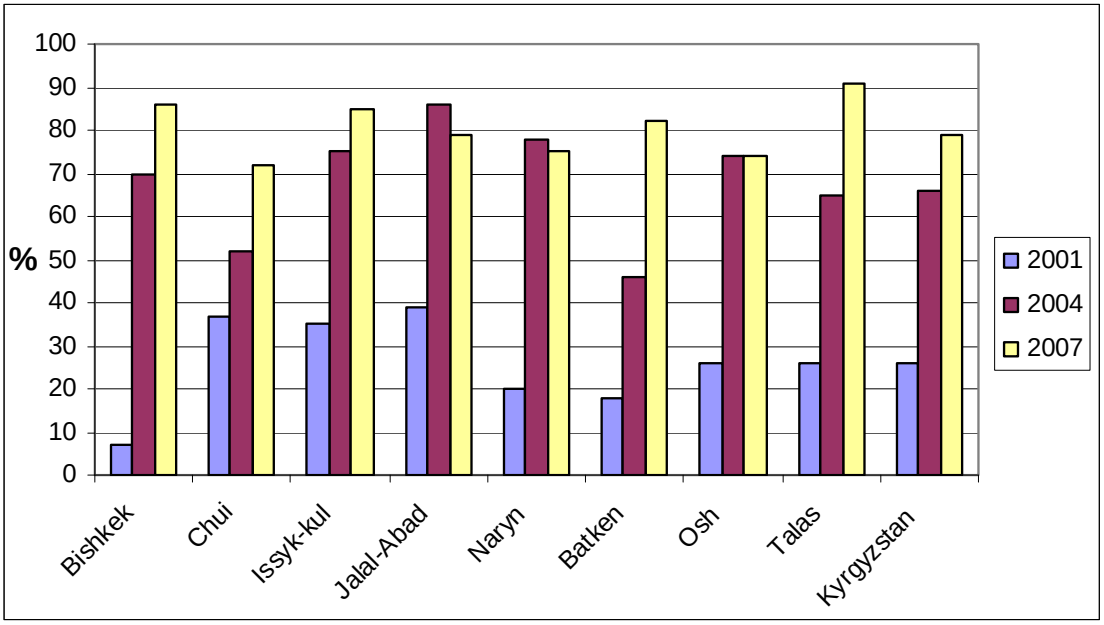
	Mean expenditure per capita (soms)	**Total spending on population Millions of Som (population = 5,189,837)**
Variant A		
Annual private exp on health exc travel and food	**690**	**3,581,590,655**
Of which, annual private spending on drugs	**538**	**2,795,994,984**
Variant B		
Annual private exp on health exc travel and food	**958**	**4,972,052,753**
Of which, annual private spending on drugs	**759**	**3,938,605,358**

6. Access to health care

6.1 Coverage of MHIF

Knowledge of coverage by the Mandatory Health Insurance Fund (MHIF) has continued to improve, particularly in Batken where knowledge in 2004 was relatively low (Figure 26). In 2007 around 75 percent of boys and girls are now reported as being covered, compared with just 14 percent in 2001. Amongst pensioners, knowledge is also high at around nine out of ten knowing they are insured (Appendix I, Table E1). However, although knowledge of coverage has increased, it remains worrying that around a quarter of parents think their children under 1 are either not covered or are unsure.

Fig 26: Percentage of individuals reporting that they are covered by MHIF



6.2 Access to health care

Only in a very few cases (2%) do households report that a persons has ever been *refused* health services (this is the same percentage as in 2004). Of these, 48 percent said it was because they could not afford the services. However, over two-fifths (42%) of households reported that someone had been ill but did not seek health care.

Of these:

- 58% self-medicated using traditional herbs
- 37% self-medicated using medicines they already had
- 17% thought they would get better without doing anything
- 14% put off getting help as they could not afford it
- 7% were deterred from seeking help by their distrust of doctors
- 3% were deterred from seeking help by their perception of poor quality services

Thus, it appears that a minority of households are still deferring seeking health care due to financial barriers. Moreover, qualitative interviews have shown that many people self-medicate in order to avoid the costs of a formal health care visit. Therefore the actual proportion deferring seeking formal health care in Kyrgyzstan due to its cost may actually be considerably higher.

In addition, 10% of households had someone who had been referred to hospital but not gone (this is higher than in 2004, when the figure was 4%). Of these:

- 53% did not attend as they could not afford it
- 42% thought they would get better without doing anything
- 13% were deterred from seeking help by their distrust of doctors
- 3% were referred to another hospital
- 2% were unable to physically get to the health care facility

Four in ten households reported that it had been ‘difficult’ or ‘very difficult’ to find the money to pay for health care over the 12 months prior to the survey in March 2007 (Figure 27). These households had employed a variety of coping strategies, including reducing consumption, using savings and borrowing money (Figure 28).

Fig 27: Percentage of households reporting difficulty in finding the money to pay for health care in the last year

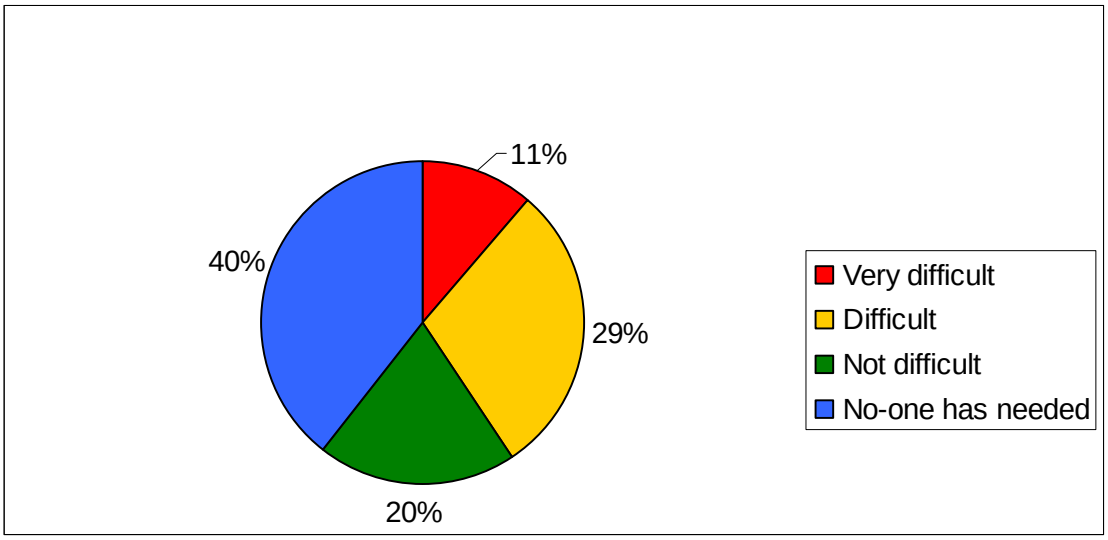
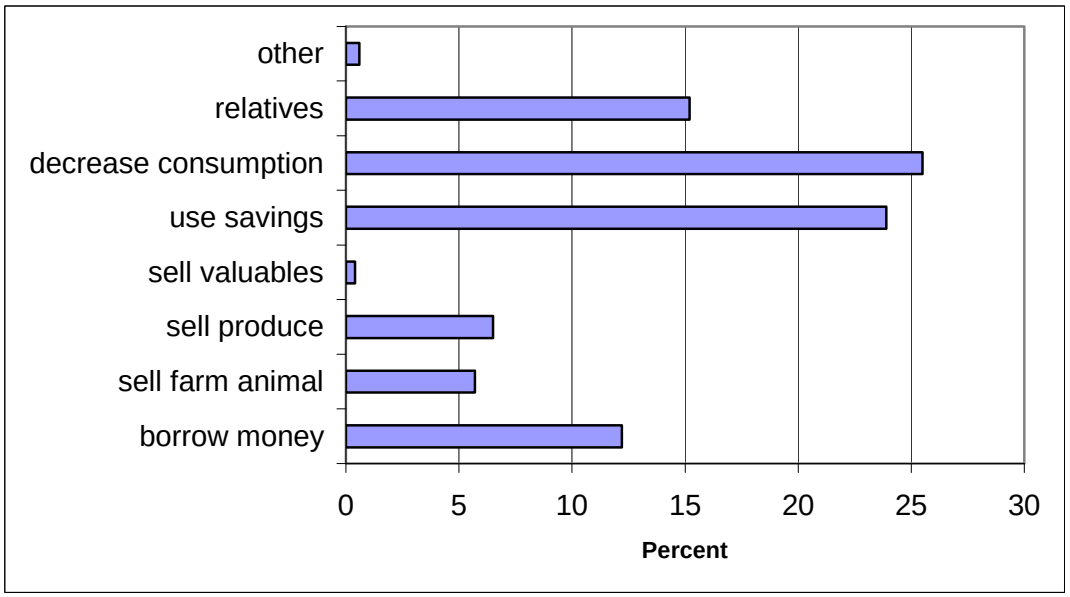


Fig 28: Proportion of households reporting various coping strategies to pay for health care in past 12 months



7. Conclusions

On balance the analysis of the KHHS for 2007 shows encouraging signs that equity within the health sector has improved since 2001. Financial barriers to access the primary care are decreasing. The percentage paying state providers at primary care level has fallen between 2004 and 2007 and financial access to consultation with regard to maternity care has improved. The operation of the system of exemptions at primary care level has improved. Very few people report making gifts – indicating a decline in these types of informal payments. However, although overall financial access for outpatient treatment has improved, the burden of health care payments for the poor is still significant

Hospitalisation utilisation rates have risen from 2004 to 2007, and rates have returned to at similar levels as those observed in 2001. The gap in hospitalisation rates between the rich and poor has widened between 2004 and 2007. In the 12 months prior to March 2007, those in the richest households are 50% more likely to have an inpatient stay than those in the poorest households.

The provision of family assistance during an inpatient stay appears to have shifted from being a way to reduce costs to one of increasing patient comfort.

Fewer inpatients report payments to medical personnel, but when made – payment are high, especially to surgeons and anaesthetists. The overall costs of inpatient care have fallen slightly and equity has improved. More than half of all inpatients are not making payment in excess of the co-payment rate; however there are still some poor people making significant payments.

Appendix I: Tables

The analysis is on weighted data; weights are provided to ensure the sample is representative at the oblast level.

List of tables

Table B16 Of those with a prescription, percentage reporting that they were able to obtain the prescribed medicines; and amongst those who did not reasons why, 1994 - 2007.

Table B17 Location where prescriptions were obtained, 2001, 2004, 2007

Table B18 Average amount paid for prescribed medicines by location where it was obtained, 2004 and 2007

Table B19 Average amounts paid amongst *all who consulted a health professional in last 30 days*, 2001, 2004 and 2007 (inc zeros)

Table B20 Average amounts paid amongst those who consulted in last 30 days, amongst who paid for that service (i.e. excluding zeros), 2001, 2004 and 2007

Table B21 Average total payments amongst those who consulted in last 30 days (not inc zeros) by region, type of settlement, and age group, 2001, 2004 and 2007

Table B22 Total payment amongst those who consulted in last 30 days as a percentage of usual monthly total household expenditure (inc durables), by economic status of the household, 2007

Table B23 Reasons given for why respondents did not seek medical assistance by quintile of per capita household expenditure (%), 2004 and 2007

Table B24 Reasons given for why respondents did not seek medical assistance by age and gender, 2004 and 2007 (%)

Table B25 Reasons given for why respondents did not seek medical assistance by quintile of per capita household expenditure, 2004 and 2007 (%)

Table B26. Total health expenditure including gifts among those who sought medical assistance within the last 30 days, 2007

Table B27. Total health care expenditure excluding travel among those who sought medical assistance within the last 30 days, 2007

C. Hospitalisation

Table C1 Utilization of hospital services in the last year by age and gender, 2001 & 2004.

Table C2 Utilization of hospital services in the last year by quintile of per capita household expenditure (%), 2001, 2004 2007.

Table C3: Odds ratios for hospitalisation in the last 12 months, 2007. Adults only.

Table C4 Type of hospital facility visited and treatment obtained by economic status quintile (%), 2001-2007

Table C5 Hospital facility visited by type of referral (%), 2007

Table C6 Proportion of self-referrals by socio-economic group, 2004 and 2007.

Table C8 Travel time to hospital (percent), 2007

Table C9 Mode of transport used to get to hospital (percent), 2007

Table C10 Proportion reporting services provided by family members by economic status quintile (%), 2007.

Table C11 Proportion paying for services during hospitalisation, with mean (median) values amongst those that have paid, by economic status quintile (%), 2007.

Table C12 Proportion of inpatients making a payment/gift to staff during hospitalisation, with mean (median) values amongst those that have paid, by economic status quintile (%), 2007

A. Health status

Table A1. Percentage reporting chronic and acute ill health over 18 years old by age and gender, 2001, 2004 and 2007.

	Men		Women	
	18-64	**65+**	**18-64**	**65+**
2001				
Chronic ill health lasting more than 3 months	11.5	37.3	17.9	48.3
Limiting chronic ill health	4.1	13.8	6.3	22.0
Acute ill health in last 30 days	11.8	25.9	22.8	39.3
Limiting acute ill health	8.2	21.8	14.7	28.1
2004				
Chronic ill health lasting more than 3 months	8.4	29.1	12.5	42.4
Limiting chronic ill health	2.6	12.1	3.3	19.6
Acute ill health in last 30 days	8.8	20.8	16.3	28.3
Limiting acute ill health	5.8	15.1	10.4	22.2
2007				
Chronic ill health lasting more than 3 months	9.2	29.2	15.1	45.5
Limiting chronic ill health	2.3	13.9	4.2	18.6
Acute ill health in last 30 days	2.5	3.1	3.6	10.0
Limiting acute ill health	1.7	2.3	2.4	7.9

Note: chi-square for differences by age for both men and women significant at ($p<0.001$)
Note: the questions related to the health status were administered at people over 18 years old. The age groups were divided into 2 simple groups as working age is defined as 16-57 for women and 16-63 for men. Pension age is defined as 57 and over for women and 63 and over for men. So that we analyse 2 groups: 18-64 and 65 and over.

Table A2. Percentage reporting chronic and acute ill health over 18 years old by economic status (quintile of per capita total monthly household expenditure), 2001, 2004 and 2007.

	Quintile of per capita monthly expenditure						
	Bottom	**2**	**3**	**4**	**Top**	**All**	**Ratio Q5:Q1**
2001							
Chronic ill health lasting more than 3 months	**9.4**	11.8	16.5	19.4	**29.0**	17.6	3.1
Limiting chronic ill health	**3.6**	3.8	6.8	7.9	**10.2**	6.6	2.8
Acute ill health in last 30 days	**13.3**	13.2	17.3	23.2	**26.6**	19.0	2.0
Limiting acute ill health	**9.8**	8.9	12.0	15.5	**18.3**	13.1	1.9
2004							
Chronic ill health lasting more than 3 months	**7.0**	7.5	11.1	13.9	**21.0**	12.8	3.0
Limiting chronic ill health	**2.4**	3.4	4.3	5.3	**6.6**	4.6	2.8
Acute ill health in last 30 days	**10.1**	9.1	13.8	15.3	**18.0**	13.7	1.8
Limiting acute ill health	**6.4**	5.8	9.6	10.2	**12.9**	9.3	2.0
2007							
Chronic ill health lasting more than 3 months	**6.3**	8.6	13.5	17.1	**20.2**	13.5	3.2
Limiting chronic ill health	**2.6**	2.7	4.6	6.5	**4.7**	4.3	1.8
Acute ill health in last 30 days	**1.6**	1.0	2.3	4.6	**4.6**	2.9	2.9
Limiting acute ill health	**1.4**	0.4	1.6	3.2	**3.3**	2.1	2.4

Note: chi-square for differences by economic status significant at ($p<0.001$)

B. Utilization of health care services

Table B1. Utilization of health care services by age and gender, 2001, 2004, 2007.

Sought medical assistance in last 30 days	Men			Women		
	0-15	**16-59**	**60+**	**0-15**	**16-54**	**55+**
2001						
Yes	8.2	5.3	13.7	9.4	11.0	22.3
Needed, but did not seek	9.6	9.3	17.8	11.7	15.7	31.1
2004						
Yes	7.9	4.2	13.4	9.0	9.7	19.7
Needed, but did not seek	13.0	9.8	21.6	13.6	16.4	35.1
2007						
Yes	7.2	5.1	17.7	9.7	11.9	20.8
Needed, but did not seek	19.3	10.0	16.0	19.1	20.3	36.4

Table B1a. Utilization of health care services by detailed age group and gender, 2007.

Sought medical assistance in last 30 days	**Men**									
	0-4	**5-9**	**10-15**	**16-24**	**25-34**	**35-44**	**45-54**	**55-59**	**60-64**	**65+**
2007										
Yes	15.2	6.1	5.2	3.3	4.1	6.0	7.4	12.5	11.3	18.1
Needed, but did not seek	17.7	15.5	12.9	8.6	9.8	11.5	12.9	17.6	15.5	23.1
	Women									
Yes	15.3	8.9	5.9	8.1	10.6	13.6	15.0	18.3	23.5	20.7
Needed, but did not seek	15.3	14.1	15.0	11.8	19.0	26.5	29.3	34.9	33.9	36.0

Note: chi-square for differences by age significant at ($p<0.001$) for both men and women

Table B2. Utilization of health care services by economic status (quintile of per capita total monthly household expenditure), 2001, 2004 and 2007.

Sought medical assistance in last 30 days	**Quintile of per capita monthly expenditure**					
	Bottom	**2**	**3**	**4**	**Top**	**Ratio Q5: Q1**
2001						
Yes	6.3	6.2	8.8	12.5	14.3	2.3
Needed, but did not seek	10.4	9.9	12.6	14.1	20.2	1.9
2004						
Yes	5.9	8.0	8.5	9.1	11.1	1.9
Needed, but did not seek	12.1	10.9	12.7	17.4	19.8	1.6
2007						
Yes	7.6	7.3	11.6	11.0	12.1	1.6
Needed, but did not seek	14.0	17.6	18.3	19.9	20.7	1.5

Note: chi-square for differences by economic status significant at ($p<0.001$)

Table B3: Odds ratios of having applied for medical assistance in the last 30 days, 2007.

	(3)
Ref. No acute ill health	1.00
Non limiting acute	1.92 ***
Limiting acute	3.91 ***
Ref. No chronic ill health	1.00
Non limiting chronic	2.43 ***
Limiting chronic	7.71 ***
Ref. 18-24	1.00
25-34	1.31 ***
35-44	1.02 *
45-54	1.06 ***
55-59	1.21 ***
60-64	2.87 ***
65+	1.62 ***
Ref. male	1.00
female	2.00 ***
Ref. urban	1.00
rural	1.06 ***
Ref. Issyk-Ku	1.00
Jalal-abad	1.11 ***
Naryn	1.19 ***
Batken	0.80 ***
Osh	0.86 ***
Talas	0.67 ***
Chui	0.56 ***
Bishkek	0.92 ***
Ref. Bottom 20th quintile	1.00
quintile==2	1.31 ***
quintile==3	1.23 ***
quintile==4	1.15 ***
Top 20th quintile	1.44 ***
Constant	-3.175
Cox R-squared	0.144
Observations	11357

Weighted data).
* significant at p< 0.05; *** p<0.01; *** p < 0.001.

Table B4. Condition for which medical assistance sought, by age and gender (%), 2007

	Men			Women		
	0-15	**16-59**	**60+**	**0-15**	**16-54**	**55+**
2007						
Pregnancy/Maternity	-	-	-	-	17.4	-
Contraception	-	-	-	-	0.7	<0.01
Child vaccination	17.2	-	-	16.6	-	-
Common cold	33.6	20.7	18.2	31.7	26.4	13.5
Sever cold with persistent cough and fever	20.5	16.1	20.9	31.7	9.7	20.1
Diarrhea	0	<0.01	-	0.3	0	-
Anaemia	3.7	0	2.1	1.0	1.8	1.6
Asthma	-	1.6	4.6	-	1.9	5.2
Ulcer	1.1	1.9	2.1	0	2.8	4.5
TB	<0.01	2.3	0	0	0.6	0.2
Injury	1.7	5.4	0.3	1.1	0.5	2.7
Mental disorder	2.1	2.2	2.4	<0.01	2.1	0.9
Other	20.1	49.8	49.4	17.5	36.2	51.3
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B5. Type of facility visited by location of residence (urban/rural), 2001, 2004 and 2007

	Urban			Rural		
	2001	**2004**	**2007**	**2001**	**2004**	**2007**
Patient's home	12	14	6	9	12	10
FGP (enrolled)	47	53	51	20	23	37
FGP (not enrolled)	3	4	-	2	3	-
Polyclinic (without FGP)/FMC	24	13	29	21	16	21
SVA	<1	-	-	4	4	-
FAP	<1	<1	3	19	26	19
Hospital	9	9	-	19	10	-
Private office	2	3	9	2	3	9
Maternity home	2	<1	-	2	1	-
Other	2	1	3	2	2	3
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Note: chi-square significant at ($p<0.001$)

Table B6. Type of medical personnel providing care and facility visited by economic status quintile (per capita household expenditure including durables), 2001, 2004, 2007 (%)

	Poorest 20%			Richest 20%			All		
	2001	**2004**	**2007**	**2001**	**2004**	**2007**	**2001**	**2004**	**2007**
Type of medical personnel consulted									
Private doctor	<1	4	1	5	6	2	2	4	4
State doctor	69	55	77	70	69	77	73	68	74
Nurse/midwife*	18	28	5	5	12	2	11	19	4
Midwife	-	-	3	-	-	3	-	-	6
Feldsher	5	5	12	4	2	5	4	4	5
Dentist	5	8	1	12	11	8	8	7	6
Healer	3	1	<1	1	1	1	1	1	1
Pharmacist*	-	-	<1	-	-	2	-	-	1
Other (inc pharmacist)	1	-	1	3	<1	1	2	<1	<1
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Type of facility visited									
Patients home	13	16	8	11	13	5	11	13	8
FGP (enrolled)	16	24	53	32	41	44	32	36	44
FGP (not enrolled)	1	1	-	5	5	-	2	3	-
Polyclinic/FMC	18	15	23	24	15	31	22	15	24
SVA	6	6	-	-	-	-	2	3	-
FAP	21	31	14	6	11	4	11	16	12
Hospital	21	7	-	13	8	-	14	9	-
Private office	1	1	3	2	5	12	2	3	9
Maternity home	2	<1	-	1	<1	-	2	1	-
Other	2	-	<1	5	2	4	2	2	3
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Note: chi-square significant at ($p<0.001$)
*In 2001 and 2004 nurses and midwifes were joint into one category, in 2007 they were spited into two categories

Table B7. Average distance health facility is located from Patient's home (km), 2004 and 2007

	Mean		Median		Min		Max	
	2004	**2007**	**2004**	**2007**	**2004**	**2007**	**2004**	**2007**
Type of facility visited								
FGP (enrolled)	2.6	4.5	1.0	1	0.1	0.02	300	400
FGP (not enrolled)	3.3	-	2.0	-	0.1	-	25	-
Polyclinic (without FGP)/FMC	10.7	11.9	3.0	2	0.1	0.02	420	380
SVA	2.6	-	2.0	-	0.3	-	8	-
FAP	3.2	2.4	1.0	1	0.1	0.03	35	50
Hospital	23.4	-	7.0	-	0.1	-	420	-
Private office	19.6	28.6	5.0	2	0.3	0.01	500	740
Maternity home	9.4	-	8.0	-	0.6	-	30	-
Private pharmacy	0.4	-	0.3	-	0.1	-	2	-
Other	20.2	60.1	10.0	1.8	1.0	0.2	100	380
Total	**6.7**	**9.5**	**1.0**	**1.0**	**0.1**	**0.01**	**500**	**740**
Region								
Bishkek	2.1	1.7	1.0	0.6	0.1	0.01	13.0	30
Issyk-Kul	5.4	23.2	0.6	1.1	0.1	0.01	300	355
Jalal-Abad	6.4	3.2	1.0	0.8	0.1	0.01	400	300
Naryn	28.0	42.0	0.8	2.0	0.1	0.01	500	421
Batken	5.4	16.1	1.0	2.0	0.1	0.01	80	740
Osh	5.1	3.6	2.0	1.2	0.1	0.01	110	120
Talas	16.7	4.4	1.0	1.0	0.1	0.01	100	360
Chui	5.2	8.6	2.0	2.0	0.1	0.01	100	160
Total	**6.7**	**9.5**	**1.0**	**1.0**	**0.1**	**0.01**	**500**	**740**

Note: ANOVA for between group variation significant at ($p<0.001$)

Table B8. Travel time to health facility (percent), 2004 and 2007

	Less than 1/2 hour		Less than 1 hour		1-4 hours		More than4 hours	
Type of facility visited	**2004**	**2007**	**2004**	**2007**	**2004**	**2007**	**2004**	**2007**
FGP (enrolled)	84	93	15	5	1	2	-	0
FGP (not enrolled)	80	-	12	-	8	-	-	-
Polyclinic (without FGP)	78	73	15	18	7	8	1	1
SVA	72	-	12	-	16	-	-	-
FAP	94	81	6	17	-	2	-	-
Hospital	59	-	23	-	15	-	3	-
Private office	82	74	11	15	4	8	3	3
Maternity home	93	-	8	-	-	-	-	-
Private pharmacy	100	-	-	-	-	-	-	-
Other	47	49	34	26	29	12	-	13
Total	**81**	**83**	**14**	**12**	**5**	**5**	**1**	**1**
Region								
Bishkek	84	85	15	15	1	<1	-	-
Issyk-Kul	86	60	11	27	3	10	-	4
Jalal-Abad	69	97	23	2	8	<1	<1	1
Naryn	60	70	20	10	14	16	6	4
Batken	71	84	21	14	7	1	1	2
Osh	93	94	6	6	1	<1	-	-
Talas	68	73	25	22	3	5	4	1
Chui	80	73	11	14	8	13	1	-
Total	**81**	**83**	**14**	**12**	**5**	**5**	**1**	**1**

Note: Chi square significant at ($p<0.001$)

Table B9. Average amount spent on travel to health facility by type of facility, 2004 and 2007

	% paying		Mean amt. paid (soms)		Median amt. paid (soms)	
	2004	**2007**	**2004**	**2007**	**2004**	**2007**
Type of facility visited						
FGP (enrolled)	27	48	18	35	10	20
FGP (not enrolled)	39	-	35	-	15	-
Polyclinic (without FGP)/FMC	67	63	29	57	15	30
SVA	11	-	30	-	30	-
FAP	30	27	17	37	15	24
Hospital	58	-	71	-	40	-
Private office	73	61	50	120	15	20
Maternity home	89	-	72	-	100	-
Other	86	55	52	163	50	80
Specialist in FMC	42	-	50	-	50	-
Specialist in private office	76	-	289	-	400	-
Total	**41**	**50**	**35**	**57**	**15**	**20**
Region						
Bishkek	36	54	18	36	10	20
Issyk-Kul	24	40	24	115	10	50
Jalal-Abad	37	30	31	41	16	10
Naryn	49	41	137	207	50	80
Batken	28	40	53	120	30	30
Osh	56	65	24	27	15	30
Talas	43	42	58	48	30	30
Chui	39	68	41	43	26	25
Total	**41**	**50**	**35**	**57**	**15**	**25**

Note: ANOVA for between group variation significant at ($p<0.001$)

Table B10. Average waiting time (minutes) by type of medical personnel providing care and facility visited, 2004 and 2007

	Mean (minutes)		Median (minutes)		Max (minutes)	
	2004	**2007**	**2004**	**2007**	**2004**	**2007**
Type of medical personnel consulted						
Private doctor	20	22	10	10	120	120
State doctor	20	23	10	20	240	360
Nurse/midwife*	11	13	10	10	120	240
Feldsher	18	21	15	15	180	180
Midwife	-	13	-	10	-	40
Pharmacist	-	6	-	5	-	10
Dentist	24	24	15	20	180	150
Healer	8	28	5	30	40	180
Other	-	56	-	60	-	200
Total	**18**	**22**	**10**	**15**	**240**	**360**
Type of facility visited						
FGP (enrolled)	21	24	10	20	240	300
FGP (not enrolled)	20	-	15	-	240	-
Polyclinic (without FGP)/FMC	20	24	15	20	240	360
SVA	12	-	10	-	30	-
FAP	11	15	10	10	60	90
Hospital	20	-	10	-	240	-
Private office	26	21	15	15	240	180
Maternity home	7	-	1	-	20	-
Other	12	20	10	20	40	150
Specialist in FMC	25	-	10	-	45	-
Specialist in private office	7	-	1	-	20	-
Total	**18**	**22**	**10**	**15**	**240**	**360**

Note: chi-square significant at ($p<0.001$)
*In 2001 and 2004 nurses and midwifes were joint into one category, in 2007 they were spited into two categories

Table B11. Percentage reporting paying for a consultation and average payments made, by type of medical personnel providing care and facility visited, 2001, 2004 and 2007

	Percent reporting paying for consultation			Mean amt. paid (soms)		Median amt. paid (soms)	
	2001	**2004**	**2007**	**2004**	**2007**	**2004**	**2007**
Type of medical personnel consulted							
Private doctor	46	45	67	132	441	60	100
State doctor	17	21	13	93	130	30	50
Nurse	19	12	8	129	82	35	100
Feldsher	33	32	27	130	85	200	60
Midwife	3	22	1	38	33	20	25
Pharmacist	-	-	1	-	60		60
Dentist	63	84	84	203	382	50	125
Healer	60	37	41	114	97	100	50
Other	-	-	4		50		50
Total	**22**	**27**	**20**	**118**	**234**	**40**	**60**
Type of facility visited							
Patient's home	19	19	8	117	102	30	100
FGP (enrolled)	10	17	13	44	86	25	50
FGP (not enrolled)	42	41	-	210	-	50	-
Polyclinic (without FGP)/FMC	28	45	23	105	131	40	50
SVA	19	30	-	37	-	30	-
FAP	18	21	6	42	121	20	50
Hospital	32	31	-	179	-	50	-
Private office	73	79	72	325	482	60	150
Maternity home	12	14	-	199	-	300	-
Other	49	36	19	187	244	100	200
Specialist in FMC	n/a	58	-	60	-	60	-
Specialist in private office	n/a	76	-	62	-	25	-
Total	**22**	**27**	**20**	**118**	**234**	**40**	**60**

Note: ANOVA for between group variation significant at ($p<0.001$)

Table B12. Percentage reporting paying for a consultation and average payments made, 2004 and 2007

Oblast	Percent reporting paying for consultation						Mean amt. paid (soms)			
	All		Urban		Rural		Urban		Rural	
	2004	2007	2004	2007	2004	2007	2004	2007	2004	2007
Issyk-kul	10	15	13	20	8	14	238	233	84	218
Jalal-abad	19	14	23	16	17	13	53	34	36	46
Naryn	12	14	14	38	12	9	226	115	132	66
Batken	14	25	23	13	10	29	32	52	109	67
Osh	40	17	33	11	42	23	68	665	52	68
Talas	20	17	40	39	18	13	88	140	59	213
Chui	40	29	18	19	46	34	80	885	184	277
Bishkek	21	24	21	24	-	-	247	269	-	-
Total	**27**	**20**	**23**	**19**	**29**	**20**	**159**	**344**	**98**	**147**

Note: ANOVA for between group variation significant at ($p<0.001$)

Table B13. Urban-rural differences in percentage reporting paying for a consultation and average payments made, by type of medical personnel providing care and facility visited, 2004 and 2007

	Percent reporting paying for consultation				Mean amt. paid (soms)		Mean amt. paid (soms)	
	Urban		Rural		Urban		Rural	
	2004	2007	2004	2007	2004	2007	2004	2007
Type of medical personnel consulted								
Private doctor	51	61	41	72	192	801	80	190
State doctor	18	13	24	13	101	163	87	97
Nurse	15	9	12	7	352	51	44	100
Feldsher	45	32	27	23	78	108	166	57
Midwife	22	-	22	1	88	-	37	33
Pharmacist	-	1		-		-	-	60
Dentist	72	97	88	79	405	763	150	220
Healer	43	82	31	26	-	124	-	66
Other	-	8		-	-	50	-	-
Total	**23**	**19**	**29**	**20**	**159**	**344**	**98**	**147**
Type of facility visited								
Patient's home	13	5	23	10	172	82	94	107
FGP (enrolled)	15	9	18	18	48		39	
FGP (not enrolled)	26	-	56	-	531		57	
Polyclinic (without FGP)/FMC	36	25	47	21	181	167	78	84
SVA	-	-	31	-	-	-	38	-
FAP	-	17	21	5	-	154	42	108
Hospital	30	-	31	-	81	-	230	-
Private office	91	69	71	75	336	779	316	262
Maternity home	8	-	15	-	-	-	218	-
Other	48	28	31	13	344	164	89	349
Specialist in FMC	100	-	-	-	60	-	-	-
Specialist in private office	49	-	100	-	142	-	25	-
Total	**23**	**19**	**29**	**20**	**159**	**344**	**98**	**147**

Note: ANOVA for between group variation significant at ($p<0.001$)

Table B14: Odds ratios of having paid for consultation, amongst all those who applied medical assistance in the last 30 days, 2007.

Ref. No acute ill health	1.00
Non limiting acute	1.08 ***
Limiting acute	2.43 ***
Ref. No chronic ill health	1.00
Non limiting chronic	0.70 ***
Limiting chronic	0.66 ***
Ref. 18-24	1.00
25-34	2.00 ***
35-44	2.34 ***
45-54	2.76 ***
55-59	0.97
60-64	1.39 ***
65+	0.62 ***
Ref. urban	1.00
rural	0.91 ***
Ref. Issyk-Ku	1.00
Jalal-abad	0.57 ***
Naryn	1.40 ***
Batken	1.64 ***
Osh	1.24 ***
Talas	1.20 ***
Chui	2.58 ***
Bishkek	1.70 ***
Ref. Bottom 20th quintile	1.00
quintile==2	0.62 ***
quintile==3	0.49 ***
quintile==4	1.32 ***
Top 20th quintile	0.83 ***
Ref. Yes, Covered by MHIF	1.00
NO	1.66 ***
Difficult to say	0.40 ***
Ref Exempt	1.00
Not exempt	2.03 ***
Constant	-2.409
Cox R-squared	0.157
Observations	1243

Weighted data
* significant at p< 0.05; *** p<0.01; *** p < 0.001.

Table B15. Percentage reporting making other payments associated with consultation and average payments made, type of medical personnel providing care and facility visited, 2001, 2004 and 2007

	Percent reporting making other payments in relation to a consultation			Mean amt. paid (soms)		Median amt. paid (soms)	
	2001	**2004**	**2007**	**2004**	**2007**	**2004**	**2007**
Type of medical personnel consulted							
Private doctor	22	10	27	80	336	50	50
State doctor	42	19	23	97	136	50	40
Nurse	-	19	1	27	37	22	40
Feldsher	83	22	27	32	153	20	90
Midwife	-	13	3	16	32	10	26
Dentist	10	3	<1	49	130	30	130
Healer	-	3	5	100	50	100	50
Other	-	-	1		50		50
Total	**32**	**17**	**20**	**81**	**148**	**33**	**50**
Type of facility visited							
Patient's home	20	8	2	53	78	45	70
FGP (enrolled)	28	16	22	77	77	27	40
FGP (not enrolled)	-	14	-	70	-	100	-
Polyclinic (without FGP)/FMC	29	19	21	144	221	60	50
SVA	49	13	-	18	-	10	-
FAP	30	18	19	25	43	10	20
Hospital	57	29	-	102	-	60	-
Private office	17	18	23	93	434	60	90
Maternity home	47	11	-	35	-	35	-
Other	-	7	16	59	52	50	20
Specialist in FMC	n/a	42	-	150	-	150	-
Specialist in private office	n/a	52	-	90	-	90	-
Total	**32**	**17**	**20**	**81**	**148**	**33**	**50**

Note: ANOVA for between group variation significant at ($p<0.001$)

Table B16. Of those with a prescription, percentage reporting that they were able to obtain the prescribed medicines; and amongst those who did not reasons why, 1994 - 2007.

	1994	**2001**	**2004**	**2007**
Yes, obtained all items	66	77	91	92
Yes, but only obtained some	23	14	6	5
None at all obtained	11	9	3	3
	100%	100%	100%	100%
Amongst those not obtaining all items, reasons why not :				
Could not find	49	11	17	6
Too expensive	35	61	54	43
Didn't want them		67	3	47
Pharmacy is too far				3
Other	72	22	26	

Note in 1994, percentages for why medicines were not obtained do not sum to 100% as respondents were allowed to give more than one answer

Table B17. Location where prescriptions were obtained, 2001, 2004, 2007

	2001	2004	2007
From the doctor	15.2	12.7	9
State Pharmacy	28.6	41.5	87
Private pharmacy	39.9	37.8	-
Market/bazaar	15.2	7.5	4
Other	1.1	0.5	1
Total	100%	100%	100%

Table B18. Average amount paid for prescribed medicines by location where it was obtained, 2004 and 2007

	Mean amt. paid (soms)		Median amt. paid (soms)	
	2004	2007	2004	2007
From the doctor	260	475	80	160
State Pharmacy	252	341	113	150
Private pharmacy	258	-	150	-
Market/bazaar	225	315	140	175
Other	241	175	200	120
Total	253	351	120	150

Note: ANOVA for between group variation significant at ($p<0.001$)
Note: There is no division between private and state pharmacy lately. Any pharmacy (private and state) could have a contract with MHIF to serve the population within ADP.

Table B18b Amount of payment for subsidized medication by beneficiaries, 2007

Beneficiary groups	(N)	% paying	Mean amt. paid (soms)	Median amt. paid (soms)
	(316,620)	6	198	100
WW-2 participant or invalid	(655)	-		
Internationalist-warrior 3	(95)	-		
Person suffered from the Chernobyl AES accident	(21)	100	200	200
Person awarded with “Baatyr Ene” order 8	(1,359)	-		
Personal pensioner 9	(571)	-		
Worker of the rear	(1,115)	5	150	150
Died servicemen family member	(45)	-		
Childhood invalid of the I and II groups	(804)	3	36	36
Childhood invalid under 16	(1,608)	50	342	342
Invalid of the I and II groups by common disease, eye-sight and ear invalid	(12,575)	12	177	200
Sugar and sugar-free diabetes	(6,279)	13	1,557	56
Bronchial asthma patients 19	(1,124)	52	57	25
Mental disease patient	(324)	-		
Aplastic anemia, leukemia and hemophilia patient	(155)	15	42	42
Tuberculosis patient	(2,874)	-		
Oncological patient, 4 degree	(522)	-		
Child under 1 from the families, who receive MTB	(314)	17	40	40
Total	**(347,060)**	**7**	**245**	**100**

Table B19. Average amounts paid amongst *all who consulted a health professional in last 30 days*, 2001, 2004 and 2007 (inc zeros)

	Median (soms)			Mean (soms)			Item share of total expenditures		
	2001	2004	2007	2001	2004	2007	2001	2004	2007
Travel expenses	0	0	0	13	13	26	9%	5%	7%
Consultation	0	0	0	24	31	38	16%	13%	11%
Gift for consultation	0	0	0	7	4	3	5%	2%	1%
Other payments	0	0	0	9	13	23	6%	5%	7%
Other gifts	0	0	0	1	1	2	<1%	<1%	<1%
Drugs with prescriptions	25	70	100	94	183	228	64%	75%	64%
Drugs without prescriptions	-	-	0	-	-	37	-	-	10%
Total expenditure	**50**	**0**	**170**	**148**	**245**	**355**	**100%**	**100%**	**100%**

Nb Cases where expenditure exceeds 2s.d. from the mean are capped at this level. Results may differ from previous published results.

Table B20. Average amounts paid amongst those who consulted in last 30 days, amongst who paid for that service (i.e. excluding zeros), 2001, 2004 and 2007

	travel expenses	consultation	gift for consultation	other payments	other gifts	prescriptions	Total expenditure
% paying for item							
2001	31%	21%	3%	32%	2%	58%	77%
2004	36%	27%	2%	17%	1%	72%	88%
2007	**55%**	20%	3%	20%	-	73%	95% *
Average payment 2001							
Median (soms)	10	30	0	25	40	85	86
Mean (soms)	42	111	7	51	78	163	193
Average payment 2004							
Median (soms)	15	40	100	33	59	130	120
Mean (soms)	35	118	181	81	66	253	276
Average payment 2007							
Median (soms)	25	60	100	50	70	150	180
Mean (soms)	57	182	180	117	82	311	374

Nb Cases where expenditure exceeds 2s.d. from the mean are capped at this level. Results may differ from previous published results.
In 2007 total expenditure includes spending on non-prescription drugs (mean; median 60 soms)

Table B21. Average total payments amongst those who consulted in last 30 days (not inc zeros) by region, type of settlement, and age group, 2001, 2004 and 2007

	2001		2004		2007	
	Mean amt. paid (soms)	Median amt. paid (soms)	Mean amt. paid (soms)	Median amt. paid (soms)	Mean amt. paid (soms)	Median amt. paid (soms)
Region						
Bishkek	126	50	290	150	489	340
Issyk-kul	170	35	207	100	268	140
Jalal-Abad	186	90	134	60	277	120
Naryn	128	40	264	100	431	107
Batken	254	115	291	120	312	220
Osh	190	90	241	80	298	170
Talas	132	55	229	130	207	130
Chui	97	20	297	140	557	280
Type of settlement						
Urban	134	50	263	130	380	
Rural	160	50	234	85	369	
Age Group						
Child	99	25	112	30	166	110
Working age	190	70	302	135	483	270
Pensioner	131	60	333	150	346	180

Note: ANOVA for between group variation significant at ($p<0.001$) for all variables

Table B22. Total payment amongst those who consulted in last 30 days as a percentage of usual monthly total household expenditure (inc durables), by economic status of the household, 2007

	Quintile of per capita monthly expenditure					
	Bottom	**2**	**3**	**4**	**Top**	**All**
2001						
Mean	10.4	9.8	7.6	7.6	5.2	7.7
Median	6.2	2.3	3.3	2.9	1.7	2.8
Maximum	323	287	96	87	84	323
2004						
Mean	8.3	7.2	6.9	7.5	7.5	7.4
Median	2.6	2.8	3.0	3.4	2.9	2.9
Maximum	299	104	128	233	196	299
2007						
Mean	7.6	10.0	5.2	6.6	5.8	6.7
Median	3.6	4.8	3.1	2.9	3.3	3.3
Maximum	124	64	115	89	122	124

Note: Usual monthly total household expenditures calculated as the average over the previous 12 months. Analysis includes patients only. Includes patients who made no payments zeros, but excludes those who did not consult.
ANOVA for between group variation significant at ($p<0.001$) for all variables

Table B23. Reasons given for why respondents did not seek medical assistance by quintile of per capita household expenditure (%), 2004 and 2007

	Bishkek	Issyk-kul	Jalal-Abad	Naryn	Batken	Osh	Talas	Chui
2004								
Self-medicated using herbs	12	12	24	1	13		2	12
Self-medicated using pharmaceuticals	63	82	27	61	58	77	92	32
Believed problem would go away	3	6		9	4	20		
Too far/poor service	22		4	19			7	13
Too expensive			**6**	**5**	**13**	**1**		**31**
No time			25		3			6
Other			14	5	9	2		6
2007								
Self-medicated using herbs	3	18	3	6	10	4	8	29
Self-medicated using pharmaceuticals	85	55	92	84	80	94	83	54
Believed problem would go away	2	8	3	1	8	1	4	1
Too far/poor service	1	<1	-	<1	-	-	<1	1
Poor service	1	<1	<1	<1	<1	<1	<1	4
Too expensive	**4**	**11**	**1**	**3**	**2**	**1**	**4**	**10**
No time	4	7	1	1	1	<1	2	2
Other	-	-	-	4	-	-	<1	<1

Note: chi-square significant at (p<0.001)

Table B24. Reasons given for why respondents did not seek medical assistance by age and gender, 2004 and 2007 (%)

	Men			Women		
	0-15	16-59	60+	0-15	16-54	55+
2004						
Self-medicated using herbs	12	5		15	5	19
Self-medicated using pharmaceuticals	78	64	70	66	47	59
Believed problem would go away		3	1		12	2
Too far/poor service	-	18			3	3
Too expensive	**9**	**6**	**25**	**20**	**15**	**18**
No time		1			10	
Other		4	4		9	
2007						
Self-medicated using herbs	4	13	14	2	10	14
Self-medicated using pharmaceuticals	95	75	64	95	78	76
Believed problem would go away	1	2	11	1	2	4
Too far/poor service	-	<1	-	<1	<1	<1
Poor service	1	1	1	1	1	1
Too expensive	**<1**	**6**	**7**	**1**	**5**	**4**
No residence registration	-	<1	-	-	<1	-
No time	<1	3	4	1	3	1
Other	-	<1	1	<1	<1	1

Note: chi-square significant at (p<0.001)

Table B25. Reasons given for why respondents did not seek medical assistance by quintile of per capita household expenditure, 2004 and 2007 (%)

	Poorest 20%	2	3	4	Richest 20%	All
2004						
Self-medicated using herbs	11	9	2	17	9	9
Self-medicated using pharmaceuticals	84	57	53	66	55	60
Believed problem would go away		31	<1	1	3	6
Too far/poor service		3	20	1	1	3
Too expensive	**3**	**<1**	**20**	**1**	**21**	**13**
No time						
Other	2		5	3	6	4
2007						
Self-medicated using herbs	3	4	6	10	12	7
Self-medicated using pharmaceuticals	87	91	86	80	78	84
Believed problem would go away	4	2	2	3	3	3
Too far/poor service	-	1	-	<1	-	<1
Poor service	<1	-	1	1	1	<1
Too expensive	**4**	**1**	**3**	**3**	**3**	**3**
No time	1	1	2	3	3	3
No residence registration	-	-	<1	-	-	<1
Other	1	-	<1	-	-	<1

Note: chi-square significant at ($p<0.001$)

Table B26. Total health expenditure including gifts among those who sought medical assistance within the last 30 days, 2007

	% paying	Mean amt. paid (soms)	Median amt. paid (soms)
Type of facility visited			
Patient's home	8	297	116
FGP	13	337	174
Polyclinic (without FGP)/FMC	23	342	175
FAP	6	182	110
Private office	72	738	340
Other	19	427	340
Total	**20**	**359**	**170**
Type of medical personnel consulted			
Private doctor	67	816	675
State doctor	13	356	180
Nurse	8	98	40
Feldsher	27	427	195
Midwife	1	99	70
Pharmacist	1	122	120
Dentist	84	287	130
Healer	41	799	1340
Other	4	120	90
Total	20	359	170
Region			
Bishkek	24	463	310
Issyk-Kul	15	243	130
Jalal-Abad	14	266	116
Naryn	14	397	90
Batken	25	296	220
Osh	17	289	160
Talas	17	178	100
Chui	29	538	260
Total	**20**	359	170

Nb Cases where expenditure exceeds 2s.d. from the mean are capped at this level
Note: ANOVA for between group variation significant at ($p<0.001$)

Table B27. Total health care expenditure excluding travel among those who sought medical assistance within the last 30 days, 2007

	Mean amt. paid (soms)	Median amt. paid (soms)
Type of facility visited		
Patient's home	297	116
FGP	321	157
Polyclinic (without FGP)/FMC	302	150
FAP	172	105
Private office	664	300
Other	338	220
Total	**329**	**150**
Type of medical personnel consulted		
Private doctor	760	656
State doctor	329	157
Nurse	92	40
Feldsher	413	195
Midwife	69	55
Pharmacist	121	120
Dentist	272	125
Healer	642	1010
Other	69	90
Total	329	150
Region		
Bishkek	460	300
Issyk-Kul	199	120
Jalal-Abad	255	115
Naryn	319	78
Batken	249	160
Osh	274	140
Talas	158	90
Chui	511	200
Total	329	150

Nb Cases where expenditure exceeds 2s.d. from the mean are capped at this level
Note: ANOVA for between group variation significant at ($p<0.001$)

C. Hospitalisation

Table C1. Utilization of hospital services in the last year by age and gender, 2001 & 2004.

	Men			Women		
	0-15	**16-59**	**60+**	**0-15**	**16-54**	**55+**
2001						
Hospitalised in last year (%)	3.4	4.8	10.6	3.6	10.6	13.3
Amongst those hospitalised:						
Average number of times hospitalised	1.12	1.23	1.44	1.08	1.15	1.17
Average length of stay (days - mean)	13	20	19	16	13	17
Average length of stay (days - median)	10	15	13	12	10	14
2004						
Hospitalised in last year (%)	2.3	3.8	10.2	2.1	9.8	9.0
Amongst those hospitalised:						
Average number of times hospitalised	1.07	1.22	1.19	1.07	1.14	1.25
Average length of stay (days - mean)	13	18	17	12	12	17
Average length of stay (days - median)	10	13	15	10	7	14
2007						
Hospitalised in last year (%)	2.1	4.9	10	3.5	10.9	14.4
Amongst those hospitalised:						
Average number of times hospitalised	1.08	1.09	1.11	1.16	1.20	1.21
Average length of stay (days - mean)	12	16	17	19	9	14
Average length of stay (days - median)	10	12	12	10	9	12

Note: chi-square for differences by age significant at ($p<0.001$) for both men and women

Table C2. Utilization of hospital services in the last year by quintile of per capita household expenditure (%), 2001, 2004 2007.

Hospitalised in last year (%)	**Poorest 20%**	**2**	**3**	**4**	**Richest 20%**	**All**	**Q1: Q5**
2001	5.2	5.0	6.3	7.8	8.8	6.5	0.59
2004	5.1	4.6	5.4	6.8	5.8	5.5	0.88
2007	5.6	4.9	5.1	7.0	9.6	6.4	0.58

Note: chi-square significant at ($p<0.001$)

Table C3: Odds ratios for hospitalisation in the last 12 months, 2007. Adults only.

Ref. No acute ill health	1.00
Non limiting acute	1.11 ***
Limiting acute	1.48 ***
Ref. No chronic ill health	1.00
Non limiting chronic	2.31 ***
Limiting chronic	4.21 ***
Ref. 16-24	1.00
25-34	1.26 ***
35-44	1.13 ***
45-54	1.06 ***
55-59	1.34 ***
60-64	1.22 ***
65+	0.87 ***
Ref. male	1.00
female	2.39 ***
Ref. urban	1.00
rural	1.76 ***
Ref. Issyk-Ku	1.00
Jalal-abad	0.48 ***
Naryn	1.62 ***
Batken	0.91 ***
Osh	0.98 **
Talas	0.55 ***
Chui	0.60 ***
Bishkek	0.89 ***
Ref. Bottom 20th quintile	1.00
quintile==2	1.03 **
quintile==3	0.66 ***
quintile==4	1.08 ***
Top 20th quintile	1.49 ***
Constant	-3.34
Cox R-squared	0.047
Observations	11357

Weighted data
* significant at p< 0.05; *** p<0.01; *** p < 0.001.

Table C4. Type of hospital facility visited and treatment obtained by economic status quintile (%), 2001-2007

	2001		2004		2007	
	Poorest 20%	**Richest 20%**	**Poorest 20%**	**Richest 20%**	**Poorest 20%**	**Richest 20%**
Type of facility visited						
Territorial (CRH)	45	25	31	22	30	21
City Hospital	13	28	14	28	19	26
Maternity Hospital	26	14	36	11	23	24
Oblast Hospital	12	9	11	17	14	6
Republican Hospital	3	19	2	21	6	14
Private Hospital	-	1	<1	1	<1	3
Other Govt. Hospital	2	4	7	<1	8	6
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Had surgery	4	16	20	22	12	19

Note: chi-square significant at (p<0.001)

Table C5. Hospital facility visited by type of referral (%), 2007

	Territorial (CRH)	**City Hosp**	**Maternity**	**Oblast Hosp**	**Repub Hosp**	**Private**	**Other**
Source of referral							
FGP	42	47	33	36	34	3	70
FAP	16	11	8	13	6	<1	<1
FMC	7	12	17	19	21	1	-
Private	<1	3	4	-	3	15	-
Self	25	16	28	25	28	81	29
Emergency	9	10	10	6	5	-	-
Other	<1	-	-	-	-	-	-
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Note: chi-square significant at (p<0.001)

Table C6. Proportion of self-referrals by socio-economic group, 2004 and 2007.

% self-referring	**Poorest 20%**	**Next 20%**	**Middle 20%**	**Next 20%**	**Richest 20%**	**All**
2004	19	24	26	18	12	20
2007	22	45	36	19	14	25

Note: Chi-square significant at (p<0.05).

Table C7. Average distance hospital is located from Patient's home (km), 2007.

	Mean	Median	Minimum	Maximum
Type of facility visited				
Territorial (CRH)	11	2	0.1	180
City Hospital	33	5	0.01	530
Maternity Hospital	8	2	0.1	260
Oblast Hospital	35	8	.02	365
Republican Hospital	194	75	0.4	1100
Private Hospital	63	40	0.1	370
Other Govt. Hospital	115	15	0.4	430
Total	**45**	**5**	**0.01**	**1100**
Region				
Bishkek	5	3	0.03	30
Issyk-Kul	112	45	0.1	460
Jalal-Abad	37	1	0.2	750
Naryn	134	35	0.01	530
Batken	75	7	0.3	1100
Osh	24	5	0.2	600
Talas	46	6	0.4	452
Chui	16	3	0.1	150
Total	**45**	**5**	**0.01**	**1100**

Note: ANOVA for between group variation significant at ($p<0.001$).

Table C8. Travel time to hospital (percent), 2007

	Less than half an hour	Less than 1 hour	1-4 hours	More than 4 hours	Total
Type of facility visited					
Territorial (CRH)	65	25	10	-	100%
City Hospital	56	25	16	3	100%
Maternity Hospital	79	19	3	-	100%
Oblast Hospital	53	26	15	6	100%
Republican Hospital	25	18	20	37	100%
Private Hospital	43	20	31	6	100%
Other Govt. Hospital	66	-	8	26	100%
Total	**58**	**23**	**12**	**7**	**100%**
Region					
Bishkek	65	33	2	-	100%
Issyk-Kul	27	23	25	26	100%
Jalal-Abad	71	15	9	5	100%
Naryn	38	19	20	23	100%
Batken	59	30	5	5	100%
Osh	58	26	13	3	100%
Talas	54	27	12	8	100%
Chui	71	15	14	<1	100%
Total	**58**	**23**	**12**	**7**	**100%**

Note: Chi square significant at (p<0.001)

Table C9. Mode of transport used to get to hospital (percent), 2007

	Ambulance	Own car	Taxi	Public Transport	Walk	Other	Total
Type of facility visited							
Territorial (CRH)	12	19	19	22	27	1	100%
City Hospital	11	13	40	31	4	<1	100%
Maternity Hospital	15	15	45	17	6	2	100%
Oblast Hospital	6	7	49	30	7	<1	100%
Republican Hospital	5	10	36	48	<1	1	100%
Private Hospital	-	13	29	58	1	-	100%
Other Govt. Hospital	-	55	28	3	15	-	100%
Total	**10**	**14**	**34**	**29**	**12**	**1**	**100%**
Region							
Bishkek	20	14	17	44	4	-	100%
Issyk-Kul	3	20	27	43	8	-	100%
Jalal-Abad	3	30	14	33	21	-	100%
Naryn	11	5	71	4	9	1	100%
Batken	2	10	41	32	10	6	100%
Osh	10	8	42	19	21	-	100%
Talas	13	5	56	26	-	-	100%
Chui	11	20	28	31	8	2	100%
Total	**10**	**14**	**34**	**29**	**12**	**1**	**100%**

Note: Chi square significant at (p<0.001)

Table C10. Proportion reporting services provided by family members by economic status quintile (%), 2007.

	2007		
	Poorest 20%	**Richest 20%**	**All Kyrgyzstan**
Help with:			
Bathing	1	<1	3
Toileting	11	12	12
Feeding	12	18	17
Provision of:			
Food	81	96	92
Linen	60	74	63
Medical Supplies	40	41	41
Drugs	57	59	56
Other supplies	65	68	67
Administering:			
Injections	7	9	5
Support during the night	7	13	11
Other medical services	<1	<1	<1

Note: differences by economic status for all services significant at (p<0.001)

Table C11. Proportion paying for services during hospitalisation, with mean (median) values amongst those that have paid, by economic status quintile (%), 2007.

	Poorest 20%		**Richest 20%**		**All Kyrgyzstan**	
	% paying	**Mean (median)**	**% paying**	**Mean (median)**	**% paying**	**Mean (median)**
Hospital charges	65	491 (500)	69	1 076 (750)	64	751 (530)
Food	59	552 (400)	69	785 (600)	65	644 (500)
Medicines	61	568 (450)	69	1 063 (500)	65	988 (500)
Other supplies	65	114 (100)	68	125 (60)	67	121 (60)
Laboratory tests	23	126 (100)	31	197 (120)	31	135 (90)
Comfortable room	-		10	700 (700)	4	728 (700)
Medical Personnel	53		54		54	

Table C12. Proportion of inpatients making a payment/gift to staff during hospitalisation, with mean (median) values amongst those that have paid, by economic status quintile (%), 2007

	Poorest 20%		Richest 20%		All Kyrgyzstan	
	% paying	Mean (median)	% paying	Mean (median)	% paying	Mean (median)
Physician services	20	293 (200)	8	427 (500)	13	352 (300)
Cash		118 (100)		225 (200)		175 (150)
In-kind						
Surgeon	10		18		14	
Cash		1185 (300)		5527 (1000)		3372 (1000)
In-kind		528 (500)		392 (350)		475 (350)
Paediatrician	2		7		5	
Cash		128 (100)		374 (500)		262 (150)
In-kind		102 (100)		120 (120)		119 (100)
Gynaecologist	18		22		18	
Cash		191 (200)		1072 (500)		586 (200)
In-kind		129 (100)		174 (150)		196 (150)
Anaesthesiologist	2		9		5	
Cash		197 (200)		454 (300)		489 (300)
In-kind		-		108 (100)		176 (200)
Ancillary staff	6		10		8	
Cash		99 (100)		159 (100)		196 (100)
In-kind		68 (50)		97 (120)		95 (100)
Other payments	11		11		17	
Cash		1544 (500)		1288 (200)		702 (200)
In-kind		211 (100)		237 (200)		236 (200)

Table C13. Amongst those inpatients who paid, reasons why payments in cash or kind to selected health care staff were made, 2007.

	It was a gift	Person asked for it	Person hinted for it	Difficult to say	Total
Physician services	65	5	17	13	100%
Surgeon	55	22	13	11	100%
Paediatrician	84	13	2	1	100%
Gynaecologist	63	12	15	9	100%
Anaesthesiologist	44	47	2	7	100%
Ancillary staff	67	19	9	5	100%

Table C14. Total payment in relation to hospitalisation (exc food) as a percentage of annual total household expenditure, by economic status of the household

	Quintile of per capita monthly expenditure					
	Bottom	**2**	**3**	**4**	**Top**	**All**
2004						
Mean	4.7	3.1	2.6	3.1	2.6	3.2
Median	1.7	1.9	1.7	1.9	1.8	1.8
Maximum	67	31	37	41	17	67
2007						
Mean	2.3	3.0	2.8	2.4	2.7	2.6
Median	1.8	1.6	1.5	1.2	1.4	1.5
Maximum	32	21	30	20	29	32

Note: Yearly household expenditures calculated as the sum over the last 12 months.
ANOVA for between group variation significant at ($p<0.001$) for all variables

Table C15. Average payments in excess of co-payment rates by region, 2007.

	Expenditure inc food			**Expenditure exc food**		
	Mean	**Median**	**Max**	**Mean**	**Median**	**Max**
Issyk-Kul	1119	200	13423	846	0	12423
Jalal-Abad	642	160	6161	515	0	5761
Talas	1224	880	9711	968	580	8711
Batken	695	0	8561	389	0	8061
Naryn	989	130	8861	654	0	7861
Bishkek	1936	1230	13350	1346	600	11850
Chui	3287	202	20200	2473	1120	17210
All Kyrgyzstan	**1688**	**890**	**20200**	**1185**	**290**	**17210**

Note: The appropriate co-payment rates were calculated taking into account whether the co-payment was for admission with diagnosis and treatment only or for admission with surgery and taking into account the patient's status i.e. exempt, insured, uninsured or without referral.

Table C16. Average payments in excess of co-payment rates by socio-economic group.

	Expenditure inc food			**Expenditure exc food**		
	Mean	**Median**	**Max**	**Mean**	**Median**	**Max**
Poorest 20%	891	462	13423	531	30	12423
2	1169	340	13350	835	0	11850
3	1520	710	8862	1014	170	7861
4	1462	910	9911	1008	470	8011
Richest 20%	2404	1600	9973	1670	1000	9420

D. Total private spending on health care

Table D1. Components of average and total private payments for health care, 2007

	Mean expenditure per capita (soms)	Total spending on population (population = 5,189,837)
Consultation in the last 30 days		
Expenditure on travel	2.39	12,417,301
Expenditure consultation	4.20	21,775,154
Gifts consultation?	0.27	1,417,967
Other payments consultation	2.63	13,666,685
Other gifts consultation	0.16	842,792
Expenditure prescription	23.44	121,672,748
Expenditure other med	17.90	92,910,949
Hospitalization in the last 12 months		
Exp food	40.05	207,866,037
Exp medicine	42.58	220,990,628
Exp other supplies	5.48	28,443,858
Exp hosp charges	32.66	169,493,173
Comfortable room	1.48	7,678,133
Exp lab tests	2.94	15,277,137
Exp doctor (cash)	1.99	10,304,057
Exp doctor (inkind)	0.34	1,764,190
Exp surgeon (cash)	1.49	7,716,537
Exp surgeon (inkind)	0.02	85,037
Exp Ped (cash)	0.55	2,836,054
Exp Ped (inkind)	0.15	756,821
Exp Obs/Gyn (cash)	3.95	20,517,144
Exp Obs/Gyn (inkind)	0.94	4,896,380
Exp Anaest (cash)	1.61	8,343,772
Exp Anaest (inkind)	0.11	554,334
Exp Ancil (cash)	0.67	3,461,995
Exp Ancil (inkind)	0.26	1,337,560
Other (cash)	8.87	46,019,053
Other (inkind)	0.71	3,679,260

Note: These figures are for most recent consultation or inpatient stay.
Average number of consultations amongst those who consulted in last 30 days in 2007 was 1.43.
Average number of hospital inpatient stays amongst those who had an inpatient stay in the last year was 1.16.

Table D2. Average and total household payments for health care

VARIANT A: Assuming respondents reported expenditures as being all those associated with consultations and inpatient stays	Mean expenditure per capita (soms)	Total spending on population (population = 5,189,837)
Outpatient care (monthly)		
Total monthly spending on primary care	51.00	264,703,596
Total monthly spending on primary care excluding travel	48.61	252,286,294
Total monthly spending on primary care excluding travel and drugs	7.26	37,702,598
Total monthly spending on outpatient drugs	41.35	214,583,696
Hospital care (annual)		
Total expenditure on inpatient stay	146.83	762,021,160
Total expenditure on inpatient stay exc food	106.78	554,155,123
Of which, expenditure on hospital drugs	42.58	220,990,628
Total private health care spending		
Annual private exp on health including travel	758.88	3,938,464,309
Annual private exp on health excluding travel	730.17	3,789,456,692
Annual private exp on health exc travel and food	**690.12**	**3,581,590,655**
Of which, annual private spending on drugs	**538.74**	**2,795,994,984**

VARIANT B: Assuming respondents reported expenditures as only those associated with last consultation and inpatient stay (values for last visit grossed up by average reported number of visits)	Mean expenditure per capita (soms)	Total spending on population (population = 5,189,837)
Outpatient care (monthly)		
Total monthly spending on primary care	72.94	378,526,142
Total monthly spending on primary care excluding travel	69.51	360,769,401
Total monthly spending on primary care excluding travel and drugs	10.39	53,914,715
Total monthly spending on outpatient drugs	59.13	306,854,686
Hospital care (annual)		
Total expenditure on inpatient stay	170.32	883,944,546
Total expenditure on inpatient stay exc food	123.86	642,819,943
Of which, expenditure on hospital drugs	49.39	256,349,128
Total private health care spending		
Annual private exp on health including travel	1045.55	5,426,258,249
Annual private exp on health excluding travel	1004.50	5,213,177,356
Annual private exp on health exc travel and food	**958.04**	**4,972,052,753**
Of which, annual private spending on	**758.91**	**3,938,605,358**

drugs

E. Coverage with MHIF

Table E1. Proportion that report they are covered by the Mandatory Health insurance Fund (MHIF) by age and gender, 2007.

	Men			Women		
	0-15	**16-59**	**60+**	**0-15**	**16-54**	**55+**
Yes	75	80	91	76	79	90
No	18	18	9	17	19	6
Difficult to say	7	2	1	7	2	4
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Note: chi-square for differences by age for both men and women significant at ($p<0.001$)