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# HEALTH EXPENDITURES, REFORMS AND POLICY PRIORITIES FOR THE KYRGYZ REPUBLIC

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# Health Expenditures, Reforms and Policy Priorities for the Kyrgyz Republic

## Executive Summary

Kyrgyz health policy makers are addressing the enormous challenge of drastically reduced funding levels arising from the transition of the country's first decade of independence. The reforms in health financing that began in 1997 with the introduction of the Mandatory Health Insurance Fund and accelerated in 2001 with the advent of the "Single Payer" system are perhaps the most far-reaching of any CIS country. These reforms have changed the way that business is done in the health sector, moving away from historical budgeting processes driven by input norms towards coherent and strategic purchasing arrangements based on outputs and population needs. In particular, the Single Payer system introduced in two oblasts in 2001 and two more in 2002 is a comprehensive health financing reform that addresses many of the major shortcomings of the inherited system. It has expanded the scope for cross-subsidy to benefit those in ill health, thereby expanding the potential of public spending on health to insure the population. It also established incentives that led to demonstrable gains in technical efficiency, such as the downsizing of staff and physical infrastructure, and increases in the share of public spending devoted to patient treatment expenses. Policies on benefits and co-payments have also resulted in improved transparency of the system to patients with regard to their financial obligations, reduced informal payments, and improved targeting of services to persons in disadvantaged groups. Apart from the gains this reform has brought to the health sector, the Single Payer provides an example to the rest of the public sector of how to use public resources to "buy outputs" rather than "fund inputs".

Despite these advantages, or indeed perhaps because of them, the further extension of this system has come under threat. In particular, the system is at financial risk because of instability in the flow of funds into the system from local governments and the Social Fund. It is also at political risk because the reforms are only grounded in temporary instructions, rules and provisions. The reforms need a clear legal basis before they can be extended nationally.

Changes are needed in how the broader public sector operates to create an enabling environment for the health reforms. While the Single Payer reform has greatly improved transparency and changed incentives ***within*** the health system in those oblasts in which it is functioning, its success is jeopardized by a lack of transparency in the flow of funds ***to*** the health system. In 2001 and 2002 for example, the level of revenues provided by the Social Fund to the MHIF was only about 36% of what should have been provided according to existing law and regulations. Moreover, the share of local government spending allocated to health declined substantially in the Single Payer oblasts in 2001 as compared to the other oblasts. Reportedly, the success of the Single Payer in improving transparency in patient contributions led local governments to reduce their budget allocations to health due to the apparent increase in funding coming from this source. Survey-based analysis of the co-payment shows clearly, however, that ***the co-payment is not a new source of funding for the health system***. It is, instead, a transformation of an existing funding source (i.e. out-of-pocket payments by patients at the time of service use), making it more transparent and subject to policy and management control. To the extent that local governments reduce their budget allocations to the health sector in response to data on co-payment collections or

reductions in building and staff, they are effectively penalizing the success of the reforms with regard to improved efficiency and transparency. If such actions are allowed to continue, the incentives will be undermined, and the gains in efficiency and transparency will be short-lived. Moreover, this will damage efforts to reduce poverty and mitigate its effects. By reducing budget allocations in response to an apparent, but not real, increase in out-of-pocket spending, the mix of funding sources will shift to a greater reliance on patient contributions. This is the most regressive form of financing that poses the greatest obstacle to service use by the poor as well as the greatest burden on their family budgets.

While the reforms have done much to improve technical efficiency and transparency and to mitigate the effects of poverty in the health sector, there remains considerable room for improvement, particularly with regard to redressing geographic inequity in the allocation of financial and human resources. Hence, changes are also needed to enhance the pro-poor nature of the health reforms. This includes the need to improve geographic equity in the co-payment policy, so that the financial obligations of patients more closely reflect their ability to contribute. Given the tight budget constraints in the public sector, however, identifying resources for reallocation is a challenge. Although the government and World Bank agreed to a plan for progressive redistribution of a part of Republican health spending to the regions that was meant to begin in 2003 as a condition of the Health II Project, it faced strong political opposition from the Republican Institutes and has not been put into effect. Nevertheless, such redistribution must occur if the reform process is to become more equitable. This could take the form of redistribution to each oblast or simply as a transfer to the MHIF national pool (which would then redistribute through its payment methods). To adjust patient co-payment levels for inpatient care and outpatient drug costs, there also has to be some form of reallocation of pooled funding. The categorical grants offer great potential to resolve this problem, so long as the basis for allocating them is changed to a needs-based approach rather then the current "gap-filling" measure to meet personnel-related costs. Hence, beyond the current equalization grants in the inter-governmental finance process, additional inter-regional balancing is needed to promote greater equity in the finance and utilization of health care. This will require a strong hand from central government.

Apart from the need to support the reforms and make them more pro-poor, there are emerging priorities for the health system that require new approaches and new investments. These have to do with the need to improve the energy efficiency of the physical infrastructure of the health system, and the need to address the public health challenges of tuberculosis and HIV.

A major focus of the reform effort is to "right-size" the physical infrastructure of the health care delivery system. This implies a reduction in the number of (mainly hospital) buildings through the rationalization of individual facility sites (e.g. consolidating hospital functions in a smaller number of buildings) and the merger of separate specialty hospitals into general hospitals. One important objective of this is to reduce the amount of resources in the health sector that are devoted to fixed costs, namely heat and electricity. While restructuring has proceeded rapidly in response to the incentives of the Single Payer reform, the early evidence suggests that there has been little financial gain from this. While part of the reason for this is the change in the energy sector that has involved increased tariff rates, a major problem facing the health system is that the hospital buildings are not efficient users of energy. Reducing the recurrent cost of heating the hospitals requires significant investments, such as for insulation and the ability to monitor and control heat and electricity use in individual hospital buildings (i.e. meters). It is estimated that insulation of hospitals could reduce heat loss by as much as 77%. The government and MOH need to focus any new investments

(from donor or domestic sources) on improving the energy efficiency of the service delivery infrastructure. This should include explicit attention to medium and long term recurrent cost implications as part of the investment planning process, with due consideration of the changes occurring in the energy sector.

Finally, increased attention (and expenditures) is needed to control the threats to public health and welfare posed by TB and HIV/AIDS. These conditions warrant special attention because their communicable nature means they affect not only currently infected persons but others as well. The potential growth of multi-drug resistant (MDR) TB and HIV in the very near future, and the overwhelming social and economic disruption they would bring to the health system and Kyrgyz society, demand immediate action while containment is feasible.

The number of HIV-infected persons is currently small, but the pattern of infection is similar to Russia and Ukraine, the countries with the fastest growing HIV epidemics in the world. There is a window of opportunity to interrupt transmission of the virus in the Kyrgyz Republic, but only with a rapid scaling up of "harm reduction" activities (needle exchange, drug treatment, efforts to reduce risky sexual behavior) to about 60% of intravenous drug users from the current level of about 2%. While the $17.1 million approved by the Global Fund can be expected to cover much of the costs, there will also be a need for increased levels of domestic spending for training of specialists in modern methods of HIV prevention and control, and for the drugs and training needed to manage sexually transmitted infections at primary care level.

Despite the introduction of the modern method of TB control in the general health system (Directly Observed Therapy, Short-course, or "DOTS"), TB continues to pose a public health threat to the population. Apart from the problem in the general population, TB in prisons poses a particular challenge, because of the high rates of infection there, the policy of granting amnesty to TB-infected persons, and because the "prison health system" is not coordinated with the general health system. Of particular concern is the possible emergence of multi-drug resistant (MDR) TB in prisons, and the spread of this to the general population through the amnesty policy. There is an immediate need to upgrade the ability of the prison health system to detect and treat TB and MDR TB using modern methods. Related to this is the need to coordinate TB control efforts with the general health system of the country to ensure continuity of care when prisoners are released and to share skilled staff and expensive diagnostic equipment. New investments are needed to establish the capacity to detect and treat MDR TB. Finally, the legislation that grants amnesty to prisoners on the grounds of moderate or severe TB needs to be reconsidered and made consistent with public health and public policy concerns to protect the broader population.

## Introduction/Background

As with most of the countries of the former Soviet Union, the Kyrgyz Republic (KR) experienced a painful social and economic transition in its first decade since independence in 1991. During the Soviet era, most health services were free, and there were extensive social services and transfers. The withdrawal of subsidies from Moscow aggravated the rapid decline in per capita GDP and particularly the ratio of public revenues to GDP. This led to a decline in public spending that impacted upon health and other social sectors.

The Review of Kyrgyz Social Policy and Expenditures prepared during 2000 (World Bank 2001a) described the health sector strategy for the country based on an analysis of expenditure patterns and population health needs. This included a specification of policy priorities and the next steps in the reform process. The current paper updates the expenditure and health data from that report, and re-assesses policy priorities in the light of new evidence gathered on the effects of the far-reaching health financing reforms introduced during 2001. The purpose of this report is inform decision makers about the performance of the health system and the institutional and financial changes needed to enable the health reforms to achieve their aims of improving efficiency, equity, and transparency while mitigating the effects of poverty. There is also an identification of emerging public health threats, namely tuberculosis and HIV-infection, that demand concerted action in the short run to prevent major economic and social consequences in the medium term. Despite this, the main focus of the report is the health financing system of the KR, and hence the paper is not meant to serve as a comprehensive review of the health sector. For this purpose, a broader paper addressing the full scope of public health and quality of care issues would be needed.

## Trends in health status and service use

*Health status*

In the KR, as in most other countries of the former Soviet Union, officially reported health status indicators deteriorated in the early part of the 1990s (a trend that began in the 1980s), and began to improve again in the middle of the decade (Table 1). For example, life expectancy at birth began increasing in 1996, and overall mortality began decreasing in 1995. Another common feature of the countries in the region is the large gap between female and male life expectancy. In the KR, this reached a peak of 9.1 years in 1994 but since declined, with a gap of 7.6 years in 2001. Overall infant and maternal mortality rates were also lower in the second half of the 90s.

**Table 1. Main health status measures for the Kyrgyz Republic**

| Indicators | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Life expectancy at birth | 68.8 | 68.3 | 67.3 | 65.9 | 65.9 | 66.6 | 66.7 | 67.1 | 68.7 | 68.5 | 68.6 |
| Female | 72.7 | 72.2 | 71.7 | 70.7 | 70.4 | 70.9 | 71.4 | 71.2 | 72.6 | 72.4 | 72.5 |
| Male | 64.6 | 64.2 | 62.9 | 61.6 | 61.4 | 62.3 | 62.5 | 63.1 | 64.9 | 64.9 | 64.9 |
| Mortality rate | 6.9 | 7.2 | 7.7 | 8.3 | 8.2 | 7.6 | 7.4 | 7.4 | 6.8 | 6.9 | 6.6 |
| Female | 6.42 | 6.69 | 7.09 | 7.6 | 7.47 | 6.91 | 6.76 | 6.78 | 6.22 | 6.24 | 5.80 |
| Male | 7.57 | 7.75 | 8.45 | 9.14 | 9.02 | 8.33 | 8.26 | 8.06 | 7.38 | 7.73 | 7.90 |
| Infant Mortality Rate (IMR) | 29.7 | 31.5 | 31.9 | 29.1 | 28.1 | 25.9 | 28.2 | 26.2 | 22.7 | 22.6 | 21.7 |
| Maternal Mortality rate (MMR) | 76.4 | 70.1 | 80.1 | 80.1 | 67.4 | 65 | 76.4 | 54.7 | 45.9 | 46.5 | 49.9 |

Data from the National Statistical Committee and MOH Health Information Center. IMR is per 1000 live births, and MMR is per 100,000 live births. These reported mortality rates are based on the definition of live birth

inherited from the Soviet Union. The IMR and MMR reported here are useful for analysis of trends within the country but not for comparisons with countries that use the WHO international definition of live birth.[1]

The leading causes of mortality are diseases of the circulatory system (44% of total mortality in 2000), primarily cardiovascular diseases, which highlights the need for increased attention to health promotion actions and primary care to prevent and manage these conditions before they become very severe and expensive to treat. This is followed by respiratory system diseases (13%), injuries and poisoning (11%) and neoplasms (9%). The leading reported causes of illness in that year were respiratory conditions (24%), diseases of the endocrine system (17%) and urino-genital system (10%) (MOH 2001).

The national levels of these indicators mask important variations in health status within the country. An analysis of Kyrgyz data from the 1997 Demographic and Health Survey (DHS) suggested that the IMR was 1.8 times higher in the poorest 20% of households than in the wealthiest 20%. Similar differences were found for under-5 mortality and nutritional status indicators (Gwatkin *et al*. 2000). The official statistics also reveal regional variations in child health measures, as shown in Table 2 and Table 3. For example, the IMR in Batken was 25.6 as compared to 16.8 in Chui in 2001, a difference of 52%. The difference in under-5 mortality between these two oblasts in 2001 was more than 80%.

**Table 2. Infant Mortality Rate, by region**

| | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **KR** | **32.2** | **30.0** | **29.7** | **31.5** | **31.9** | **29.1** | **28.1** | **25.9** | **28.2** | **26.2** | **22.7** | **22.6** | **21.7** |
| Batken | 38.6 | 33.3 | 31.1 | 34.3 | 32.6 | 28.5 | 29.9 | 28.9 | 29.6 | 30.4 | 26.3 | 27.6 | 25.6 |
| Jalal-Abad | 28.6 | 26.2 | 28.2 | 32.9 | 29.0 | 28.7 | 26.2 | 24.2 | 27.8 | 21.3 | 19.4 | 18.3 | 18.9 |
| Issyk-Kul | 28.2 | 30.5 | 28.3 | 28.4 | 34.3 | 27.3 | 29.8 | 23.1 | 30.5 | 21.8 | 19.5 | 18.1 | 16.8 |
| Naryn | 34.9 | 28.0 | 31.2 | 33.1 | 38.9 | 28.9 | 29.8 | 22.5 | 28.9 | 21.2 | 18.3 | 18.5 | 22.2 |
| Osh | 36.4 | 35.2 | 32.7 | 33.4 | 31.8 | 31.5 | 30.6 | 30.2 | 29.6 | 32.2 | 27.7 | 25.5 | 24.0 |
| Talas | 35.5 | 29.2 | 33.2 | 29.3 | 33.6 | 26.0 | 26.9 | 20.7 | 29.0 | 19.2 | 23.1 | 23.1 | 20.8 |
| Chui | 27.0 | 26.0 | 25.5 | 23.0 | 20.8 | 18.2 | 18.3 | 17.0 | 19.8 | 20.1 | 16.4 | 19.4 | 16.8 |
| Bishkek | 30.8 | 28.0 | 27.9 | 36.5 | 50.0 | 44.1 | 37.1 | 30.3 | 30.4 | 29.0 | 23.8 | 27.5 | 27.2 |

Data from the National Statistical Committee and MOH Health Information Center.

**Table 3. Under-5 Mortality Rate, by region**

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **KR** | **38.6** | **42.2** | **44.6** | **41.9** | **41.3** | **36.4** | **42.1** | **40.7** | **35.5** | **33.2** | **29.5** |
| Batken | | | | | | | | | 44.5 | 44.0 | *38.0* |
| Jalal-Abad | 37.1 | 44.2 | 43.1 | 44.6 | 42.4 | 35.1 | 41.9 | 35.5 | 32.1 | 27.3 | 27.3 |
| Issyk-Kul | 36.4 | 35.5 | 42.4 | 33.2 | 37.1 | 29.4 | 38.8 | 27.8 | 23.8 | 23.7 | 21.5 |
| Naryn | 42.2 | 48.9 | 50.3 | 42.4 | 45.5 | 30.9 | 44.7 | 36.4 | 31.0 | 32.7 | 31.0 |
| Osh | 43.5 | 48.3 | 49.9 | 48.0 | 47.2 | 44.9 | 48.5 | 53.8 | 46.9 | 41.0 | 39.2 |
| Talas | 42.2 | 38.2 | 45.1 | 35.9 | 35.9 | 26.0 | 45.4 | 28.2 | 33.8 | 32.5 | 29.0 |
| Chui | 31.0 | 32.3 | 25.8 | 23.7 | 24.0 | 21.5 | 25.0 | 26.7 | 21.5 | 24.1 | 20.5 |
| Bishkek | 30.8 | 38.5 | 53.1 | 46.9 | 40.3 | 33.6 | 34.6 | 31.3 | 26.4 | 30.1 | 28.2 |

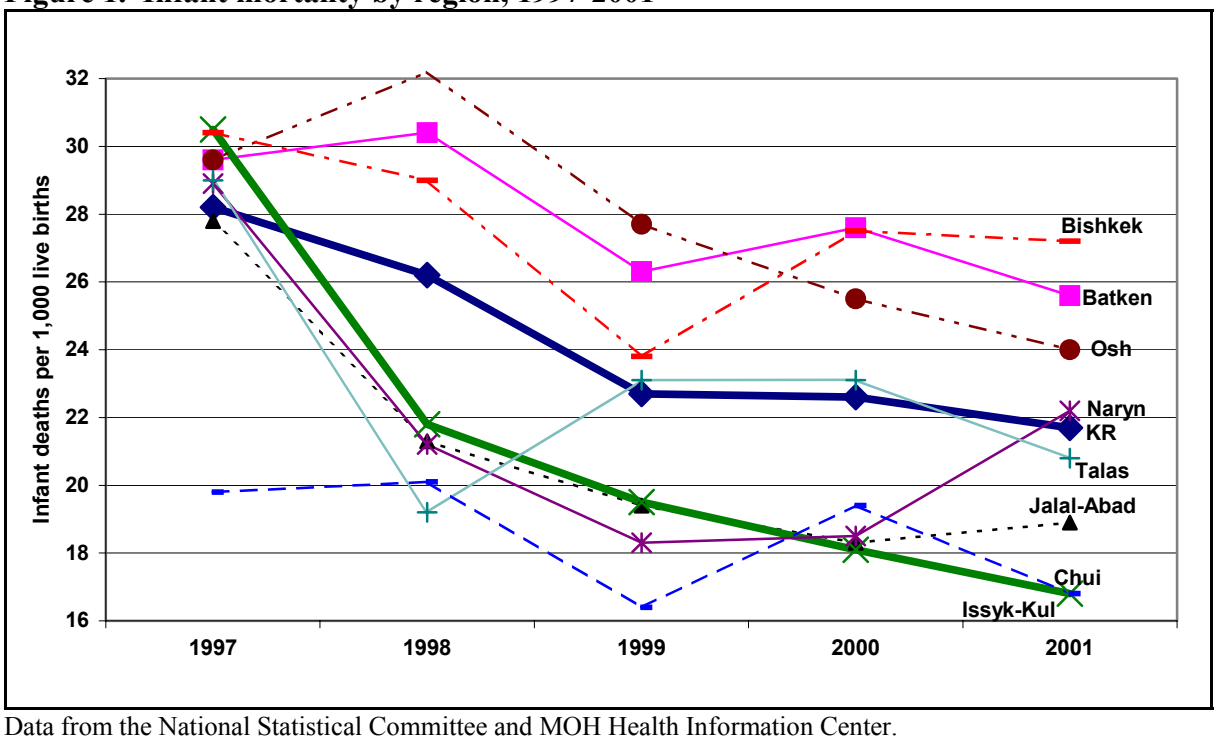
Data from the National Statistical Committee and MOH Health Information Center.

A more detailed look at trends in child health reveals an association with the implementation of reforms in primary care. In particular, the reorganization of primary care into Family

[1] The population-based DHS estimate of IMR (using the WHO definition of live birth) of 61 per 1000 live births for the period 1992-1997 is more than twice the official MOH figure of 29 per 1000 for 1993-1996 (Research Institute of Obstetrics and Pediatrics [Kyrgyz Republic] and Macro International Inc. (1998)).

Group Practices (FGPs) began in 1997 in Issyk-Kul. The FGP reform diffused rapidly after that, particularly in Chui and Bishkek, and there are now FGPs in every oblast. In Issyk-Kul, however, they have the most experience and have received the most training in new clinical practices. As shown in Table 2 and Table 3, Issyk-Kul experienced the most rapid decline in IMR and U5MR compared to other regions of the Republic. Indeed, in 1997 it had the highest IMR of any region, but by 2000 it had the lowest (see Figure 1). There is limited evidence to suggest that the primary care reforms may be related to this decline. Nationwide, acute respiratory infections (ARIs) are the leading cause of infant mortality, comprising about 35% of deaths (MOH 2001). A survey of patient records undertaken in 2001-02 compared treatment practices of FGPs in 4 regions to new clinical guidelines for the management of ARIs (MOH 2002). This found that FGPs in Issyk-Kul were in compliance with the guidelines in about 95% of cases, as compared to 44% in Bishkek, 54% in Chui, and 78% in Osh. This suggests that clinical practices of primary care physicians in Issyk-Kul may be better than in other regions (at least for the management of ARIs). While this does not prove that the primary care reforms were the cause of infant (and child, as evidenced from the data in Table 3) mortality decline, it does give cause for optimism that as the FGP reform and retraining of physicians is having a positive effect on health outcomes.

**Figure 1. Infant mortality by region, 1997-2001**




Data from the National Statistical Committee and MOH Health Information Center.

Trends in communicable diseases are a particular concern from a social welfare perspective because they jeopardize not only the infected individual but others in the community as well. These externalities make control of communicable diseases a strong candidate for public action, including finance. As shown in Table 4, the incidence of tuberculosis (TB) and syphilis grew rapidly in the 1990s. Among the "CIS-7" countries,[2] the KR has the highest reported rate of TB. The incidence of TB appears to have grown rapidly until 1998 and then leveled off somewhat (though still increasing). However, this acceleration and leveling off

[2] The CIS-7 countries include Armenia, Azerbaijan, Georgia, Kyrgyz Republic, Moldova, Tajikistan and Uzbekistan.

are an artifact of better diagnostics and the introduction of the "DOTS" (Directly Observed Treatment, Short-course) treatment strategy, which leads to an increase in case detection rates. The desired pattern of indicators following the introduction of DOTS is an increase in reported incidence but a decrease in mortality resulting from the success of the treatment strategy. TB mortality did decline from 1997-2000, but then increased again in 2001. TB is a particular problem in the prison system. Reportedly, the incidence rate in 2001 was over 40 times more in the prison population than the general population, and the mortality rate was 150 times higher. Prisons tend to be a breeding ground for multi-drug resistant TB, which poses a severe and expensive public health threat. Amnesty of prisoners due to the presence of active TB is a common practice (e.g. about 1600 prisoners were released during 2001 as a consequence of their TB, of which only 600 were registered for follow up treatment in the TB control system at large), and hence there is great risk for the TB epidemic in prisons to be generalized to the population at large (Kokko *et al*. 2002).

**Table 4. Trends in selected communicable diseases**

| **Indicators** | **1991** | **1992** | **1993** | **1994** | **1995** | **1996** | **1997** | **1998** | **1999** | **2000** | **2001** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tuberculosis incidence | 56.9 | 57.9 | 54.5 | 61.4 | 72.4 | 86.9 | 95.3 | 108.9 | 114.4 | 121.8 | 128.4 |
| Tuberculosis mortality rate | | | 9.5 | 13.6 | 13.4 | 13.5 | 16.0 | 13.5 | 13.6 | 12.6 | 13.6 |
| Syphilis incidence | 2.0 | 2.8 | 4.5 | 22.5 | 73.6 | 152.8 | 167.8 | 144.4 | 116.7 | 73.4 | 49.4 |
| Number of new HIV cases | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 6 | 10 | 16 | 149 |

Data from the National Statistical Committee, MOH Health Information Center and CCM (2002). Incidence and mortality rates are per 100,000 persons. TB data are for the general population only, excluding the prison population. It is estimated that if the prison population were included, the TB incidence rate for 2001 would be 167.8.

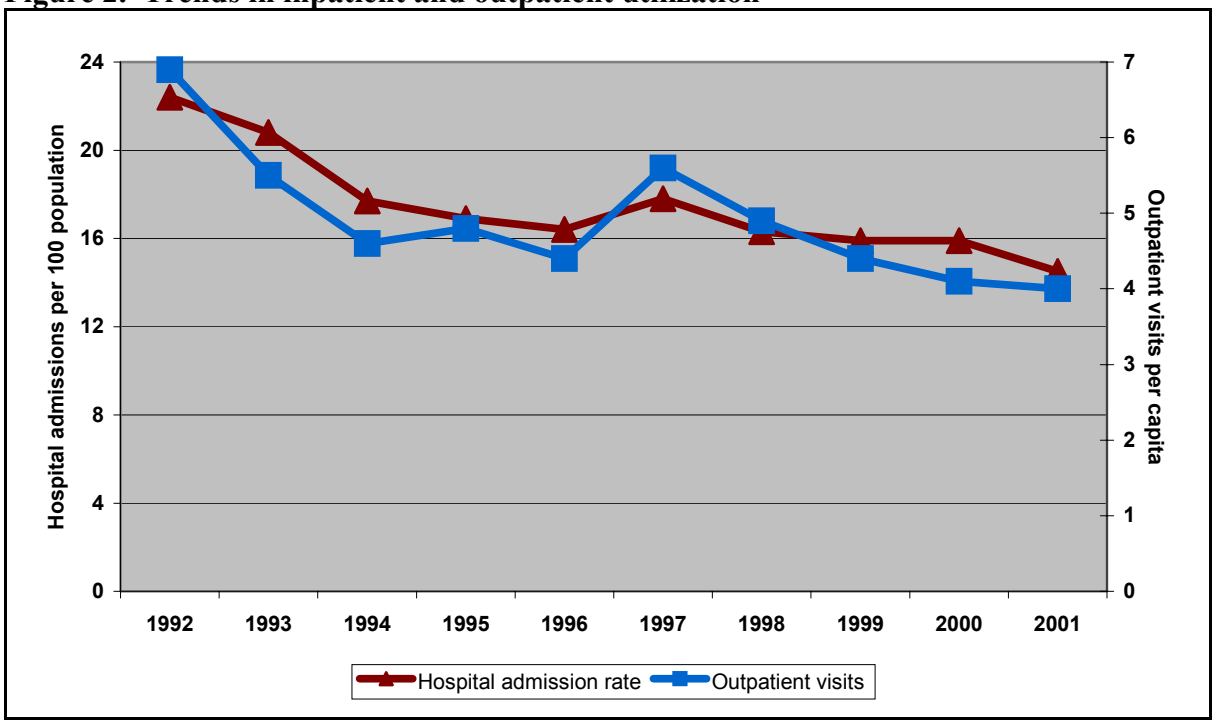
Table 4 also shows how the number of HIV-positive persons grew rapidly in 2001. An additional 108 HIV cases were identified in the first 8 months of 2002. In part, this very rapid growth in the number of cases in the past two years is due to better reporting, but it is all a warning sign of how this condition can grow at an exponential rate if insufficient action is taken to interrupt transmission. Most of this recent growth in detected cases was among intravenous drug users (IDUs), who comprise 85% of all HIV cases. The growth of HIV-infection is also concentrated in Osh oblast, home of 81% of the cases identified in 2002. 56% of the persons currently identified as living with HIV are in prisons or other correctional facilities (CCM 2002).

While the number of HIV cases has grown rapidly, the real number of infected persons in the KR is not known with certainty. UNAIDS estimates the actual number of cases as about 3,000 or ten times the reported level. A survey of blood traces in IDUs' syringes in 2000 showed HIV prevalence ranging from 11.5%-18.5% in Bishkek and 32.2%-49.8% in Osh. From this, the current number of infected IDUs was estimated at 6,550 in Bishkek and 2,050 in Osh. IDUs were also the first risk group for HIV in Russia. The Russian experience shows, however, that without immediate intervention to interrupt transmission, the disease can grow rapidly among IDUs, and may reach up to 70% of them by the end of 2003. This would mean about 40,000 people could be infected. Moreover, the experience of Russia and other countries suggests that the epidemic can spread from IDUs to prostitutes and their clients, and then to the general population. Hence, despite the relatively small number of HIV-infected persons in the KR currently, immediate action is warranted to contain the disease before it becomes an epidemic (CCM 2002).

*Health service use*

Trends in the utilization rates of outpatient and inpatient care are shown in Figure 2. This shows the declining pattern of utilization, interrupted in 1997 by an increase and then a return to the declining trend (though at a slower rate). As shown in the Social Expenditure Review (World Bank 2001a), this marks a continuation of a trend that began in 1987. Despite this decline, the utilization rates are still rather high by international standards, particularly for the use of inpatient care.

**Figure 2. Trends in inpatient and outpatient utilization**




Data from the National Statistical Committee and MOH Health Information Center.

Table 5 and Table 6 show the trends in outpatient and inpatient utilization by region. Both show that there is substantial variation in utilization across the country. Utilization rates for outpatient care are much higher in Bishkek than the rest of the country, but the inpatient data appear to show the reverse. However, the inpatient data exclude the Republican level hospitals. Most of these hospitals are located in Bishkek and largely serve the population of the city and nearby Chui oblast. It is notable that inpatient utilization rates fell sharply in Issyk-Kul and Chui in 2001. This may be associated with the reforms implemented in those regions in that year.

**Table 5. Outpatient visits per capita, by region**

| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|---|---|
| **KR** | **6.9** | **6.4** | **4.6** | **4.8** | **4.4** | **5.6** | **4.9** | **4.4** | **4.1** | **4.0** |
| Batken | | | | | | | | | 3.2 | 3.6 |
| Jalal-Abad | 5.6 | 5.0 | 3.9 | 4.6 | 3.6 | 4.0 | 3.1 | 3.4 | 3.3 | 3.5 |
| Issyk-Kul | 6.4 | 7.6 | 4.6 | 4.3 | 3.3 | 4.3 | 3.8 | 3.8 | 3.5 | 3.5 |
| Naryn | 6.9 | 5.9 | 5.1 | 5.4 | 5.4 | 6.5 | 5.8 | 5.2 | 4.3 | 4.1 |
| Osh | 6.1 | 5.5 | 3.9 | 3.8 | 3.3 | 4.5 | 3.9 | 4.8 | 3.1 | 3.7 |
| Talas | 6.5 | 5.2 | 5.0 | 5.6 | 4.9 | 5.8 | 5.3 | 4.8 | 3.7 | 4.1 |
| Chui | 8.2 | 6.1 | 5.1 | 4.4 | 4.0 | 5.0 | 4.3 | 3.6 | 3.2 | 3.5 |
| Bishkek | 11.6 | 10.6 | 9.0 | 9.7 | 9.0 | 9.7 | 9.1 | 6.4 | 6.7 | 6.6 |

Data from the National Statistical Committee and MOH Health Information Center.

**Table 6. Hospital admissions per 100 population, by region**

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **KR** | **23.0** | **22.4** | **20.8** | **17.7** | **16.9** | **16.4** | **17.8** | **16.3** | **15.9** | **15.9** | **14.5** |
| Batken | | | | | | | | | | 16.1 | 15.3 |
| Jalal-Abad | 22.4 | | 19.7 | 16.2 | 14.7 | 15.1 | 16.5 | 14.7 | 14.6 | 14.7 | 14.0 |
| Issyk-Kul | 22.6 | | 20.6 | 17.1 | 15.3 | 13.5 | 13.5 | 11.9 | 12.9 | 13.6 | 10.0 |
| Naryn | 22.1 | | 20.0 | 15.6 | 15.4 | 15.5 | 16.9 | 16.4 | 17.8 | 16.4 | 14.9 |
| Osh | 23.1 | | 20.7 | 17.6 | 17.1 | 15.9 | 17.1 | 15.7 | 20.4 | 14.5 | 13.5 |
| Talas | 22.5 | | 21.1 | 17.3 | 16.3 | 15.8 | 16.1 | 14.0 | 15.3 | 15.6 | 14.1 |
| Chui | 21.1 | | 18.2 | 14.9 | 13.7 | 12.7 | 13.6 | 13.2 | 13.4 | 13.7 | 9.7 |
| Bishkek | 27.0 | | 26.2 | 24.6 | 25.3 | 27.0 | 11.3 | 10.3 | 8.1 | 8.7 | 10.1 |

Data from the National Statistical Committee and MOH Health Information Center. Admissions to Republican health facilities are included in national total but excluded from the regional figures.

## Health expenditures: levels and trends

*Total expenditure levels and mix of funding sources*

There is a considerable amount of information available on levels, trends, and patterns of publicly funded health spending from the Kyrgyz Government Treasury system and the MHIF. Information on private health spending is scarce, but a DFID-funded survey implemented by the National Statistical Committee in March 2001 allows for estimates to be made for 2000 and 2001.[3] By combining these sources, it is possible to construct an estimate of the total level of national health spending (i.e. excluding donor funds) and its distribution by source of funds for these two years. This is shown in Table 7.

By these calculations, private health expenditure constitutes 51-52% of total health spending.[4] Most of this was for ambulatory care, and in particular, for the purchase of drugs, as shown in Figure 3. Outpatient drugs constitute 56% of total private health spending. Most of this is not expenditure in health facilities, but rather the private purchase of prescribed and non-prescribed items from private suppliers (pharmacies, bazaars, etc.).

Private, out-of-pocket spending constitutes the least equitable form of payment for health care, and the need to make such payments poses the greatest barrier to access for the poor. Hence, shifting an increasing share of health spending from out-of-pocket to prepaid sources (i.e. from general or payroll taxation) is one of the aims of health financing policy. Internationally, there is substantial evidence that the percent of private spending in total health expenditure is inversely related to a country's level of income (Schieber and Maeda 1997).[5] In other words, the poorer the country, the higher the percent of total health spending made directly by individual users of health care services. For example, private out-of-pocket

[3] Detail on the survey's methods and findings are summarized in Falkingham (2001) and NSC (2001). Additional analyses were undertaken by Jane Falkingham that enabled the estimation of the per capita level of private health expenditure for 2000 and 2001 to be derived. Because the recall period for hospital care was one year, expenditures reported in the survey spanned a time period of 2000 and 2001. The estimates for each year contained here are based on the same data with adjustments for population increase, health care cost inflation, the relative level of health spending in February compared to other months, and GDP. Implicitly, this assumes that there was no change in the real level of private per capita health spending between the two years.

[4] The estimates reported in the table exclude the cost of travel to consultations. If this were included, private spending would rise to 305 soms per capita in 2000 and 320 soms in 2001. This would bring the overall private share to 52.9% in 2000 and 52.5% in 2001. Total health spending as a percent of GDP would rise to 4.34% and 4.09% of GDP, respectively.

[5] A more precise formation of this would probably relate the private health expenditure share to a country's ability to collect taxes (measured perhaps by the percent of GDP represented by tax revenues).

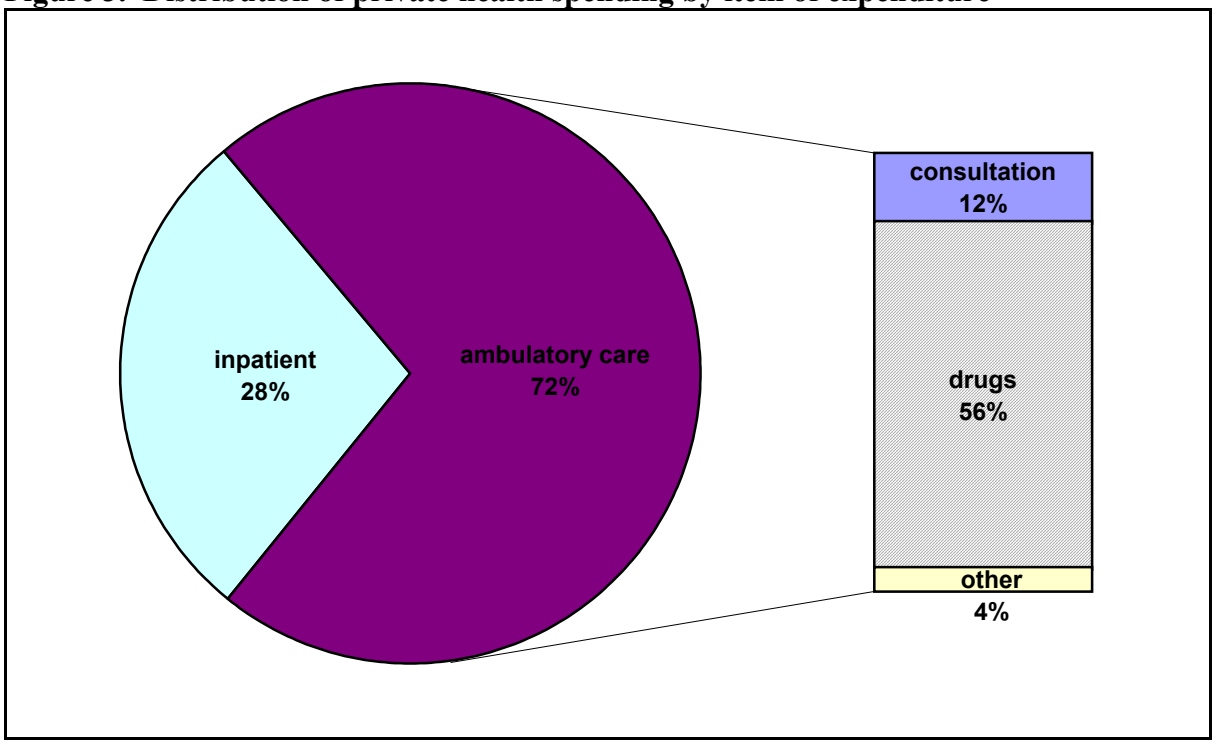
spending has been estimated at about 70% of total health spending in Tajikistan (Falkingham forthcoming) and 87% in Georgia (Gamkrelidze *et al*. 2002). This international perspective suggests that the figure of 51-52% for the KR is "good news" in the sense that it constitutes a relatively a low share of out-of-pocket spending, given that the KR is a low-income country.

**Table 7. Health expenditure indicators, 2000-2001**

| | 2000 | | 2001 | |
|---|---|---|---|---|
| **Total health spending as percent of GDP** | **4.23%** | | **4.00%** | |
| Budget | 1.88% | | 1.78% | |
| MHIF | 0.16% | | 0.16% | |
| Private out-of-pocket spending | 2.19% | | 2.05% | |
| **Per capita health spending** | **Soms** | **Dollars** | **Soms** | **Dollars** |
| **Total** | **562.5** | **$11.8** | **595.7** | **$12.3** |
| Budget | 250.4 | $5.2 | 265.8 | $5.5 |
| MHIF | 21.3 | $0.4 | 24.3 | $0.5 |
| Private out-of-pocket spending | 290.7 | $6.1 | 305.6 | $6.3 |
| **Percent of total health spending** | | | | |
| Budget | 44.5% | | 44.6% | |
| MHIF | 3.8% | | 4.1% | |
| Private out-of-pocket spending | 51.7% | | 51.3% | |

Note: Expenditures are measured in terms of the source of funds. "Budget" reflects all health expenditures coming from budgetary sources, including expenditures made by the MHIF with funds transferred from the Republican budget and by the TDMHIFs with funds transferred from local budgets. "MHIF" reflects only those expenditures derived from revenues transferred to the MHIF from the Social Fund. As described below, analyzing expenditures only by these sources grossly understates the role of the MHIF in the health system, as it is taking principal responsibility for the management of "budget" funds with the extension of the "Single Payer" reform that begin in 2001. Calculation of dollar amounts and percents of GDP based on data from NSC (2003).

**Figure 3. Distribution of private health spending by item of expenditure**




Source: analysis of data from February 2001 household survey (Falkingham 2001). If travel costs to consultation were included, ambulatory care would rise to 73%. Of that, travel would be 5%, consultation 11%, drugs 54%, and other 3%.

*Levels and trends in government health expenditures*

The Treasury provides a wealth of data on health spending from budgetary sources from 1995 through 2001 and allows for comparisons with Treasury data on the total level of government spending. There is clear evidence that the level of government health spending has been falling. Table 8 shows that there has been a steady decline in spending, from 4% of GDP in 1995 to 1.9% in 2001. The advent of the MHIF in 1997 may have mitigated the drop in "state budget" (i.e. expenditures from Republican and local governments, including health spending by ministries other than the MOH) health spending slightly but has not fully compensated for the spending decline.

**Table 8. Public spending on health as a percent of GDP**

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|
| **Total** | **4.0%** | **3.1%** | **2.8%** | **2.8%** | **2.4%** | **2.0%** | **1.9%** |
| State budget | 4.0% | 3.1% | 2.7% | 2.7% | 2.2% | 1.9% | 1.8% |
| MHIF | | | 0.0% | 0.1% | 0.2% | 0.2% | 0.2% |

Source: Treasury data for state budget health spending, MHIF for MHIF expenditures from revenues received from the Social Fund, and NSC for GDP data. Budget health spending data exclude "special means" (official user fees).

There are two possible reasons why state budget health spending has fallen as a percent of GDP: (1) there has been an overall decline in public expenditures as a percent of GDP, and/or (2) Republican and local governments have reallocated their spending patterns away from the health sector. As shown in Table 9 and Table 10, both of these have occurred. Since 1995, public revenues have fluctuated between 17.5% and 21.3% of GDP. However, apart from an increase in 1998, public expenditures have steadily declined as a percent of GDP, reflecting the government's efforts to attain fiscal balance. Hence, an important cause of the decline in government health spending is simply the decline in government spending more generally.

**Table 9. Government revenues and expenditures as a percent of GDP**

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|
| Revenues | 21.2% | 18.4% | 19.3% | 21.3% | 19.5% | 17.5% | 19.4% |
| Expenditures | 38.3% | 29.8% | 29.3% | 33.5% | 32.0% | 28.1% | 26.1% |

World Bank data. Includes revenues and expenditures from PIP and off-budget funds.

**Table 10. Health as a percent of total state budget expenditures**

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|
| **Total** | **12.3%** | **13.5%** | **11.6%** | **11.7%** | **10.8%** | **10.1%** | **9.9%** |
| Republican | 4.7% | 5.8% | 5.4% | 5.3% | 4.8% | 4.5% | 4.3% |
| Local | 25.5% | 28.4% | 28.0% | 27.7% | 27.6% | 25.9% | 23.7% |

Source: Treasury data.

This decline in overall government spending does not explain everything, however. As shown in Table 10, there has been a substantial decline in the share of state budget spending allocated to the health sector. Thus, part of the decline in overall health spending occurred

because governments at local and Republican levels shifted their priorities away from the health sector. In 2001, health fell below 10% of total state budget spending for the first time. While the above describes the reasons for the decline in an accounting sense, it does not explain *why* the change occurred, and in particular, why governments have been steadily shifting their resources away from the health sector. Given the advent of the MHIF in 1997, it is possible that financial authorities are treating the HIF's payroll tax revenues as substitutes for rather than as complements to budget funds. This was the experience of Kazakhstan when a compulsory health insurance scheme was introduced there in 1996, with the consequence that overall health spending suffered a rapid decline (Kutzin and Cashin 2002). While the evidence does not point to a causal connection in the KR to the extent that it did in Kazakhstan, any such substitution could have grave consequences for the success of the "Single Payer" reform introduced in 2001. As described below, these different sources of public funding are meant explicitly to be complementary in the new system, and to the extent that they are treated as substitutes, the benefits of the reforms will be reduced.

Table 11 presents data on current and real levels of public sector per capita health spending. In nominal and local currency terms, there has been a steady increase in spending. There was a substantial drop in dollar terms between 1998 and 1999, but this mostly reflects the rapid depreciation of the som, which lost about half its value to the dollar in this period. In real terms, per capita spending from the budget declined every year until 2001. The stabilization achieved in 2001 (increase of 1% in real per capita state budget spending) is primarily due to the control over inflation that the government achieved, so that the nominal increase in per capita budget spending was greater than the increase in the health care component of the Consumer Price Index. MHIF spending was very little in 1997, and the extension of the program in 1998 explains the large percentage increase in MHIF spending in that year. In 2000, however, real per capita spending by the MHIF declined, but then increased again in 2001. In real terms, the level of per capita MHIF spending was less in 2001 than in 1999.

**Table 11. Per capita spending indicators**

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|
| **Current health expenditure indicators** | | | | | | | |
| Per capita state budget health spending | 140.3 | 155.6 | 178.9 | 191.7 | 221.2 | 250.4 | 265.8 |
| Per capita special means | | 5.2 | 12.2 | 18.4 | 17.8 | 18.2 | 19.2 |
| Per capita MHIF spending | | | 1.0 | 8.8 | 20.4 | 21.3 | 24.3 |
| Per capita total recorded expenditures | 140.3 | 160.9 | 192.1 | 219.0 | 259.4 | 289.9 | 309.3 |
| Percent increase in recorded per capita health spending | | 14.7% | 19.4% | 14.0% | 18.5% | 11.8% | 6.7% |
| Exchange rate: soms to one US dollar | 10.82 | 12.84 | 17.37 | 20.77 | 39.02 | 47.72 | 48.44 |
| Per capita total recorded expenditures (dollars) | $13.0 | $12.5 | $11.1 | $10.5 | $6.6 | $6.1 | $6.4 |
| **Real Health Expenditure Indicators (1995 soms)** | | | | | | | |
| Percent increase in health care component of CPI | 38.8% | 20.6% | 21.1% | 13.0% | 25.5% | 20.5% | 5.1% |
| Real per capita state budget spending | 140.3 | 129.1 | 122.6 | 116.2 | 106.9 | 100.4 | 101.4 |
| Percent increase | | -8.0% | -5.0% | -5.2% | -8.0% | -6.1% | 1.0% |
| Real per capita special means | | 4.3 | 8.3 | 11.2 | 8.6 | 7.3 | 7.3 |
| Percent increase | | | 91.9% | 34.1% | -23.0% | -15.3% | 0.4% |
| Real per capita MHIF spending | | | 0.7 | 5.3 | 9.8 | 8.5 | 9.3 |
| Percent increase | | | | 668.4% | 84.8% | -13.2% | 8.3% |
| Per capita total recorded expenditures | 140.3 | 133.4 | 131.6 | 132.7 | 125.3 | 116.2 | 117.9 |
| Percent increase in real per capita expenditures | | -4.9% | -1.4% | 0.8% | -5.6% | -7.3% | 1.5% |

Sources: NSC for population, price index, and exchange rate data. Treasury for health expenditures from state budget and special means. MHIF for MHIF expenditures from revenues received from the Social Fund.

*Local government health spending and categorical grants*

As shown in Table 10, health spending has comprised a substantial percentage of local government spending. This is further reflected in Table 12, which shows that local budgets have consistently accounted for more than two-thirds of total state budget health spending. An important change was introduced in 1997 to "guarantee" payments to staff working in the education and health sectors. By this system of "categorical grants" (CGs), funding for salaries and Social Fund contributions for the staff of these two sectors was centralized at the Republican level and paid directly to the oblast finance departments on their behalf. Unlike the infrastructure-based norms governing the rest of the budget allocations, the size of the CG for health made to each oblast was intended to be calculated on a weighted per capita basis, with the weights determined by the age structure of each oblast's population and by the relative proportion of each oblast's population living in urban, rural, and high-altitude settings (Tacis 1999). CGs were also meant to be used for "priority" activities in health and education rather than just personnel-related costs. While these plans offered the potential of great improvements in efficiency and equity in resource allocation, they were never implemented, and the CGs remained a vehicle for ensuring that predetermined personnel costs (wages and social fund contributions) are met (World Bank 2002). Hence, the potential of CGs to support the provision of priority services and to redress some of the regional imbalances in resources relative to population needs has not been realized.

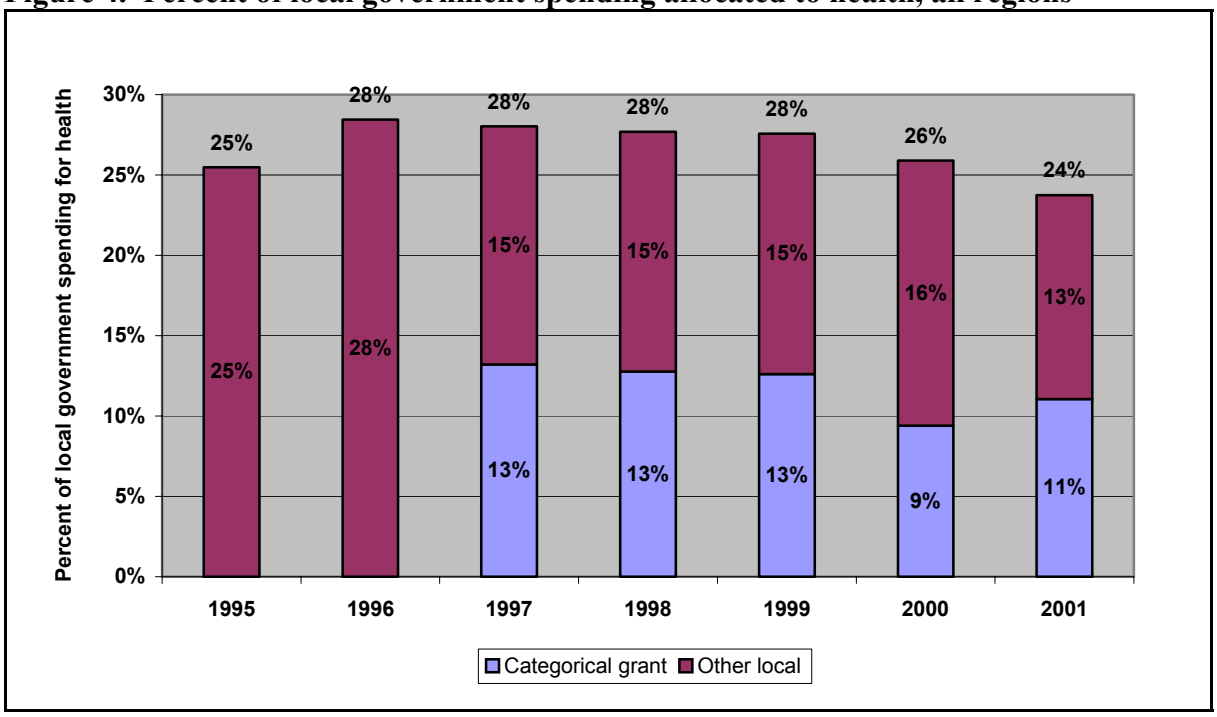
**Table 12. Local and Republican shares of state budget health spending**

| Percent shares | **1995** | **1996** | **1997** | **1998** | **1999** | **2000** | **2001** |
|---|---|---|---|---|---|---|---|
| Republican Budget | 23.8% | 28.3% | 33.9% | 31.8% | 32.2% | 33.3% | 31.6% |
| Local Budget | 76.2% | 71.7% | 66.1% | 68.2% | 67.8% | 66.7% | 68.4% |
| *categorical grants* | | | *31.1%* | *31.4%* | *31.0%* | *24.2%* | *31.8%* |
| *local means* | *76.2%* | *71.7%* | *35.0%* | *36.7%* | *36.8%* | *42.5%* | *36.6%* |

Source: Treasury data. Categorical grants included with local budget spending.

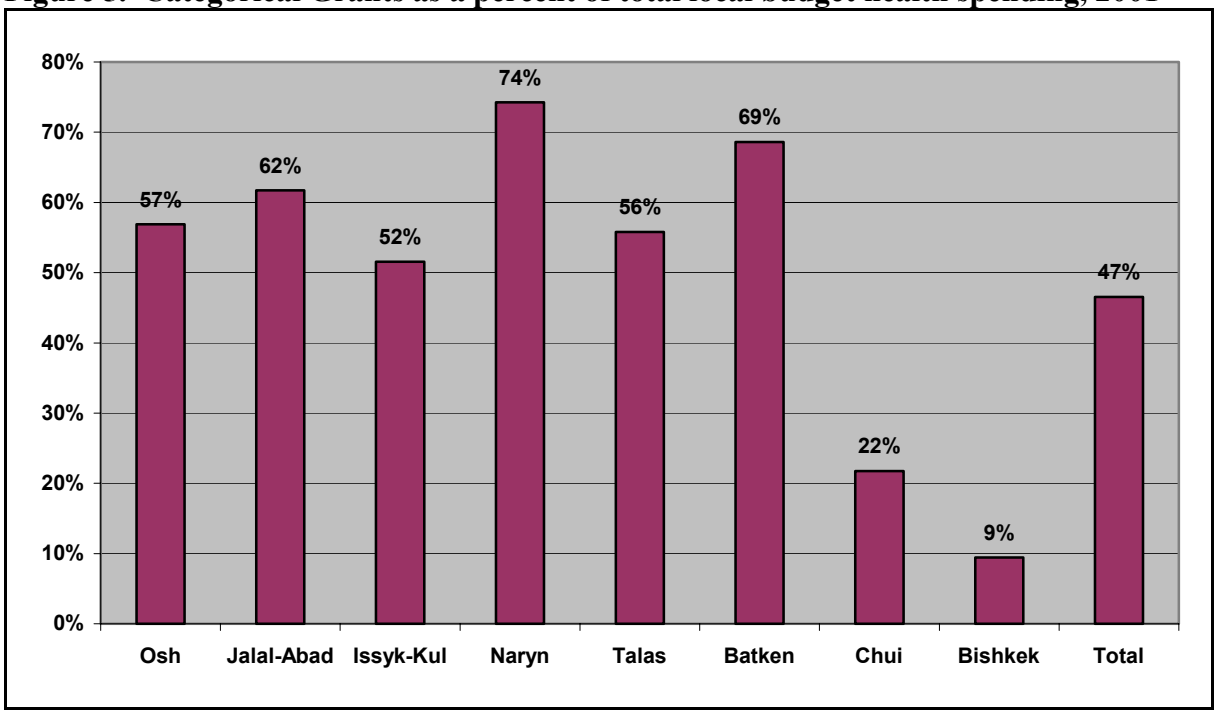
As shown in Table 12, Figure 4, and Figure 5, CGs have usually accounted for about half of local budget health spending, though there is considerable variation by oblast. However, the share of CGs declined in 2000, as did their absolute level. In 2001, there was a substantial increase in the level of CGs, even though their share of local spending on health remained below the shares attained in 1997-99. Worryingly for the health sector, however, the approved local budgets for 2002 include a 14% reduction in CGs for health as compared to the level of spending made in 2001. All regions except Bishkek, Chui and Talas have planned for a decline (Socium Consult 2002). This may well exacerbate the problem of the declining share of health in local government spending that began in 2000 and continued in 2001. As shown later in the paper, reducing the CGs for health is also likely to impact negatively on the health reform process.

**Figure 4. Percent of local government spending allocated to health, all regions**




Source: Treasury data.

**Figure 5. Categorical Grants as a percent of total local budget health spending, 2001**



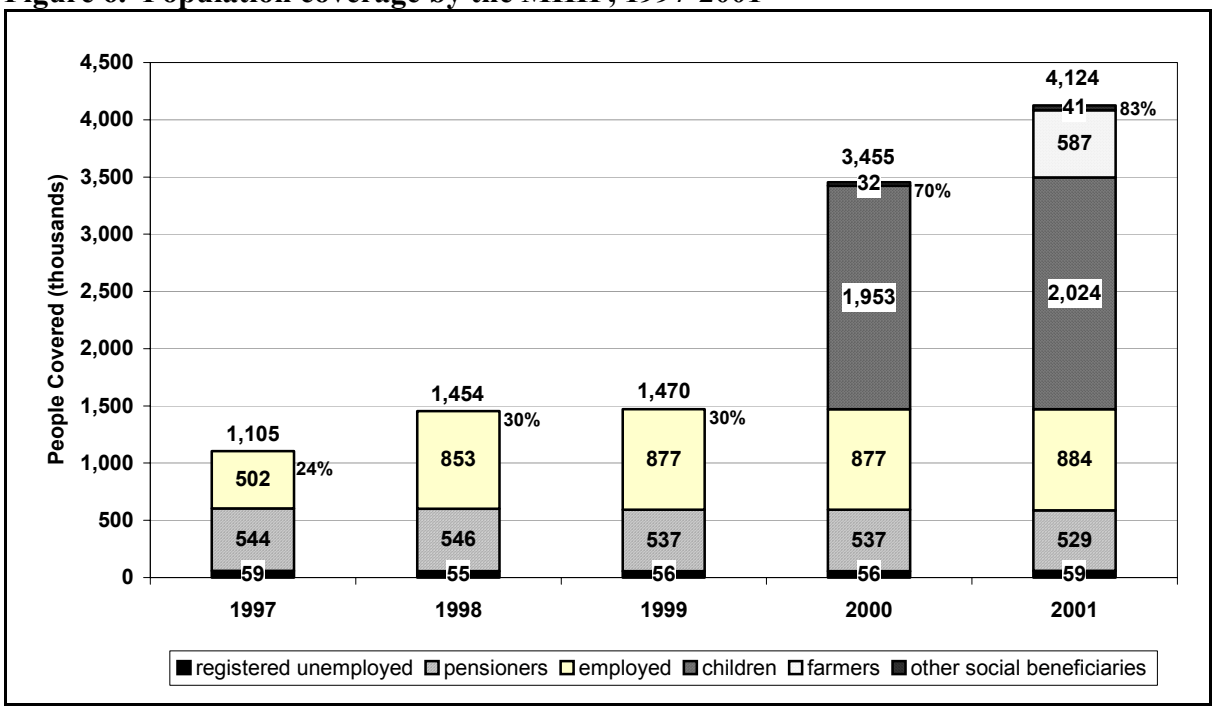

Source: Treasury data.

*MHIF expenditures and financial status*

In 1997, the Mandatory Health Insurance Fund was introduced as an "off-budget" agency under the government. Figure 6 shows how population coverage by the MHIF has increased since its introduction. In 1998 and 1999, the insured comprised just over 30% of the population, including pensioners, registered unemployed, and employed persons for whom

employers had made a contribution. In 2000, the inclusion of children and persons receiving social benefits raised coverage (funded by a direct transfer from the Republican budget to the MHIF) to about 70%, and in 2001, the inclusion of farmers who had paid land tax raised the coverage level still further. Although the overall level of population coverage increased rapidly, there were not significant changes within any category of the insured.[6]

**Figure 6. Population coverage by the MHIF, 1997-2001**




Source: Meimanaliev (2001). Percents next to each "bar" refer to extent of population coverage by MHIF.

Funding sources for MHIF coverage for different population groups, as defined in Kyrgyz legislation, are summarized in Table 13. Apart from the transfers for children and social beneficiaries that were introduced in 2000, revenues destined for the MHIF are collected by the Social Fund, which also collects payroll taxes for pensions, unemployment, and cash benefits. Because of the large share of insured persons comprised of pensioners, and the relatively high health care needs of these persons, the transfer of revenues from the pension fund to the MHIF is particularly important.

[6] The increase in the number of employed insured in 1998 was due to the exclusion in 1997 of civil servants and employees of public enterprises. They were included in 1998 and each year thereafter.

**Table 13. Funding and coverage rules for the MHIF**

| Population Group | Funding Source |
|---|---|
| Workers, including | |
| Employees in formal sector | 2% payroll contribution by employer to Social Fund |
| Civil servants and public enterprises | 2% payroll contribution by employer (i.e. the government) to Social Fund |
| Self-employed | 2% of total enterprise income to Social Fund |
| Private farmers | 25% of the land tax basic rate to the Social Fund, of which 5% is for MHIF |
| Pensioners | Value of 1.5 x minimum salary from pension fund to MHIF |
| Registered unemployed | Value of 1.5 x minimum salary from unemployment fund to MHIF |
| Children under 16 and students under 18 | Republican budget transfer to MHIF |
| Persons receiving social benefits | Republican budget transfer to MHIF |

While the separation of collection and pooling responsibilities between the Social Fund and MHIF were well defined, the amounts allocated to the MHIF have always been less than the amounts that should have been transferred. As shown in Table 14, there was an increase from 1997 to 1999, followed by stagnation and decrease after that. The execution rate of the planned transfers from the Republican budget that began in 2000 was higher than that coming from the Social Fund, but this also showed a steep decline in 2001 as compared to 2000, followed by some recovery in 2002. With regard to employees, the gap between the premiums paid to the Social Fund and the revenues transferred to the MHIF that existed in 1997 was narrowed considerably (in percentage terms) in 1998 and more again in 1999 and 2000. However, the gap increased again in 2001. Rates of transfer for pensioners are considerably lower, with nearly three-quarters of the planned amount not transferred to the MHIF in 2000. This too dropped considerably in 2001, and went to zero in 2002. Transfers on behalf of the registered unemployed are also less than planned, but the financial consequences of this are less important to the MHIF because the total amount of revenue concerned is much less than for pensioners and insured employed persons. The reasons for this non-transfer of revenues by the Social Fund are related to its own financial problems, but the consequence of this is that the money meant for the MHIF is effectively cross-subsidizing other programs, particularly pensions. Pensioners also benefit from cross-subsidies within the health insurance program, as is strongly suggested by the data in Table 14 and because, for demographic reasons, pensioners are relatively high users of health care services.

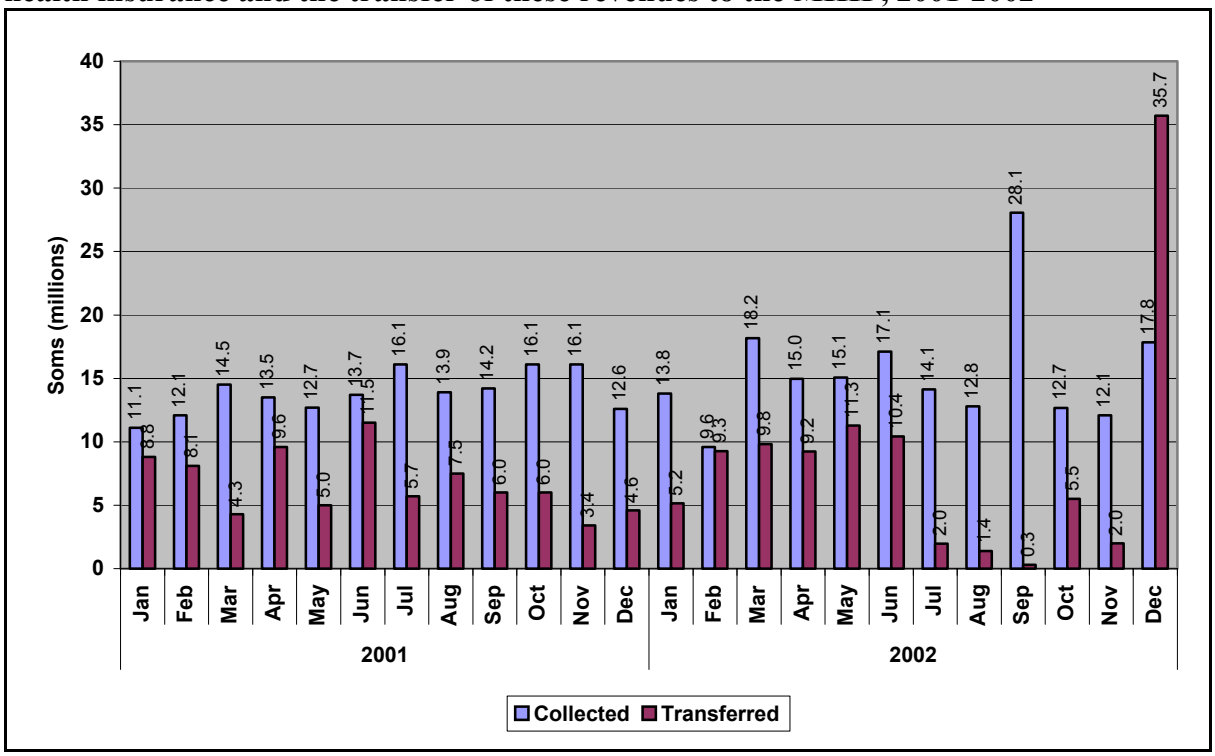
**Table 14. Revenue transfers to the MHIF**

| (million soms) | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|---|---|
| MHIF premia collected by Social Fund | 41.0 | 82.8 | 117.1 | 138.3 | 166.6 | 186.3 |
| Revenues transferred to MHIF for employees | 9.2 | 30.9 | 73.1 | 89.4 | 80.5 | 102.1 |
| **Percent of collections transferred** | **22.4%** | **37.3%** | **62.4%** | **64.6%** | **48.3%** | **54.8%** |
| Planned revenues for pensioners | 15.0 | 38.0 | 48.0 | 48.0 | 80.0 | 80.0 |
| Revenues transferred for pensioners | 0.0 | 9.8 | 14.5 | 12.5 | 7.8 | 0.0 |
| **Percent of planned transferred** | **0.0%** | **25.8%** | **30.2%** | **26.1%** | **9.8%** | **0.0%** |
| Planned revenues for unemployed | 0.0 | 8.5 | 9.0 | 9.0 | 9.0 | 9.0 |
| Revenues transferred for unemployed | 0.0 | 1.3 | 6.0 | 3.1 | 2.5 | 0.5 |
| **Percent of planned transferred** | | **15.3%** | **66.7%** | **34.4%** | **27.8%** | **5.9%** |
| Total planned/collected revenues by SF | 56.0 | 129.3 | 174.1 | 195.3 | 255.6 | 275.3 |
| Revenues actually transferred by SF | 9.2 | 42.0 | 93.6 | 105.0 | 90.8 | 102.6 |
| **Percent of planned/collected transferred by SF** | **16.4%** | **32.5%** | **53.8%** | **53.8%** | **35.5%** | **37.3%** |
| **Republican Budget transfers** | | | | | | |
| Planned transfers for children | | | | 35.0 | 46.5 | 72.5 |
| Actual transfers for children | | | | 25.5 | 24.7 | 46.3 |
| **Percent of planned transferred** | | | | **72.9%** | **53.1%** | **63.9%** |
| Planned transfers for social beneficiaries | | | | 5.0 | 3.8 | 7.7 |
| Actual transfers for social beneficiaries | | | | 4.2 | 2.3 | 5.0 |
| **Percent of planned transferred** | | | | **84.0%** | **60.5%** | **65.4%** |
| Republican Budget planned transfers | | | | 40.0 | 50.3 | 80.3 |
| Republican budget actual transfers | | | | 29.7 | 27.0 | 51.4 |
| **Percent of budget actually transferred** | | | | **74.3%** | **53.7%** | **64.0%** |
| Total Planned MHIF Revenues | 56.0 | 129.3 | 174.1 | 235.3 | 305.9 | 355.6 |
| Total Actual MHIF Revenues | 9.2 | 42.0 | 93.6 | 134.7 | 117.8 | 154.0 |
| **Actual MHIF revenues as a percent of planned** | **16.4%** | **32.5%** | **53.8%** | **57.2%** | **38.5%** | **43.3%** |

Source: MHIF data.

While the Social Fund has always transferred considerably less revenue to the MHIF than the amount that is legally obligated, the pattern of decline in 2001 is particularly worrisome. As shown in Table 14, revenue collections on behalf of employed persons were actually higher than in 2000, but revenue transfers were lower. Moreover, a detailed look at transfers from the Social Fund to the MHIF for employees during 2001 and 2002 (Figure 7) shows that, in addition to the overall level of the transfers being much lower than they should have been, they were also quite irregular. From these figures, it is evident that transfers from the Social Fund to the MHIF fluctuated considerably from month to month. Transfers in some months were over 70% of collections (January, April and June 2001; February, May and December 2002), while in other months, particularly in the second half of 2002 (July, August, September, November), transfers were less than 20% of collections. As suggested by the steady annual increase in payroll tax collections in Table 14, the problem is not one of revenue collection but rather of the failure of the Social Fund to live up to its obligations to the MHIF and the insured population as defined by law.

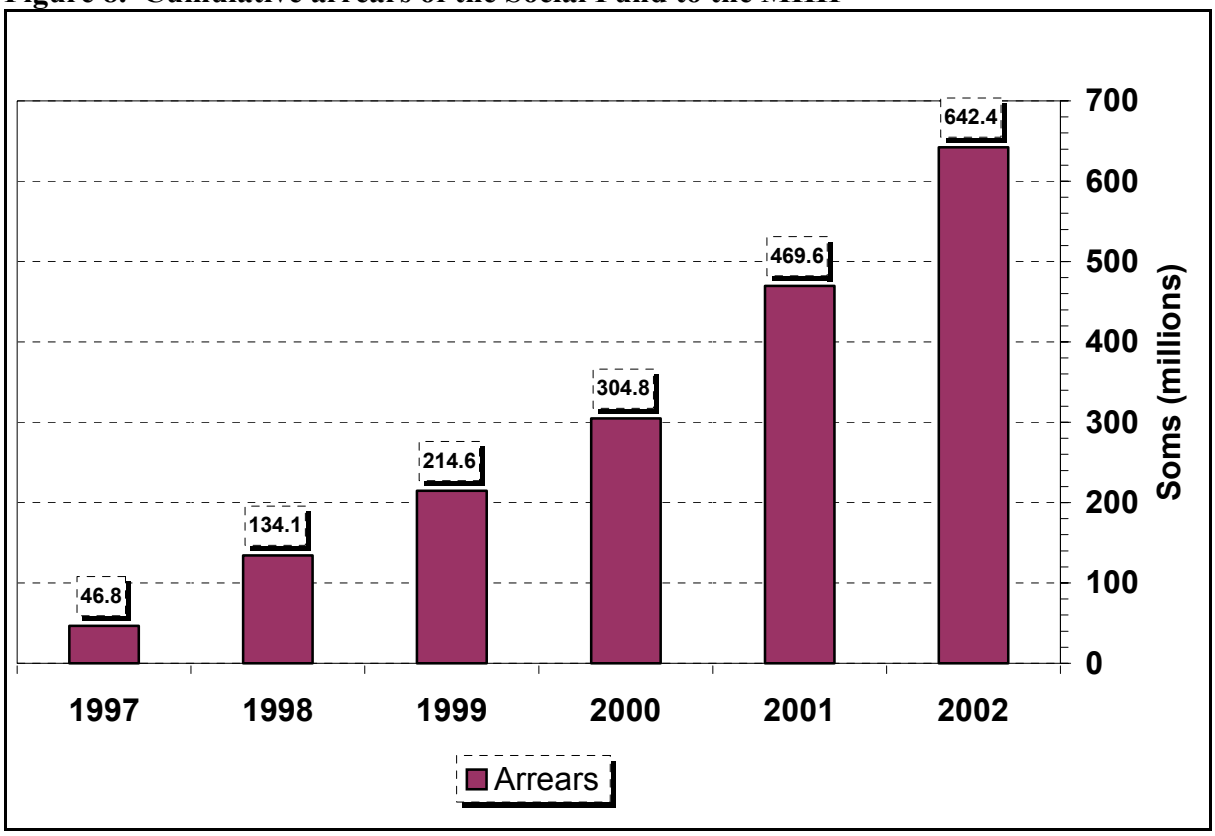
**Figure 7. Social Fund collections of contributions made on behalf of the employed for health insurance and the transfer of these revenues to the MHIF, 2001-2002**




Source: Mandatory Health Insurance Fund data.

As shown in Figure 8, the cumulative debt of the Social Fund to the MHIF reached over 640 million soms by the end of 2002. The Ministry of Health has raised the issue of the payoff of this debt to the Government, the Supervisory Board on management of national social insurance, and sessions of the relevant committees of both chambers of the Kyrgyz Parliament on numerous occasions. Government Decree №704 of November 12, 2001 "On results of social economic development for the first 9 months of 2001" entrusted the Social Fund to ensure "the transfer of insurance premiums for mandatory health insurance under the Ministry of Health of the Kyrgyz Republic made by contributors from January 1, 2002… directly to the payment account of the MHIF". Beginning in 2002, an agreement was signed between the Social Fund and MHIF involving a daily transfer of 12% of the total amount of Social Fund contributions collected in Bishkek to the MHIF. This turned out to be only a temporary solution, however. In June 2002, the new director of the Social Fund drastically reduced all transfers to the MHIF, declaring that, due to the lack of revenues to pay pensions, virtually all Social Fund proceeds would be directed to this end. This is reflected in the drastic fall in transfers in the third quarter of 2002, as shown in Figure 7. The situation became so grave that the agreement between the government and the International Monetary Fund (IMF) was amended to include a condition that, beginning in October 2002 the Social Fund must remain current in its cash transfers to the MHIF (i.e. no new arrears). The IMF checks this condition quarterly, which explains the high level of transfers in December 2002. In fact, MHIF data show that most of the money was transferred by the Social Fund on the last four days of December. The amount transferred between 27 and 31 December accounted for 73% of all transfers for the 4$^{th}$ quarter of 2002, 68% of all transfers made during the second half of 2002, and 31% of all transfers made for the full year.

**Figure 8. Cumulative arrears of the Social Fund to the MHIF**




Source: Socium Consult (2002) and MHIF data for 2002.

The accumulated arrears and irregularity of transfers pose a grave threat to the financial stability of MHIF. MHIF data show that its debt to providers grew from 94.9 million soms at the beginning of 2002 to 144.8 million soms by the end of September, an increase of 53% in just 9 months. The irregularity and unpredictability of revenue inflows undermines the contractual relations that exist between purchaser and providers, with the result that providers cannot be sure if and when they will be paid. This has further harmful implications for the population, as patients are more likely to be subjected to informal payments as a consequence of this.

The role of the MHIF as a manager of resources for the health system is far more important than its role as a source of funds, as reflected in the percent of health spending coming from payroll taxation. From 1997 to 1999, the MHIF only managed the revenues it received from the Social Fund on behalf of insured persons. In 2000, the establishment of MHIF coverage for children and persons receiving social benefits meant that the MHIF took responsibility for managing funds transferred to it from the Republican budget. Also in 2000, the government eliminated the oblast health departments and, prompted by the MOH, passed a decree to shift responsibility for pooling and allocating oblast-level budget funds for health to the Territorial Departments (TDs) of the MHIF. This set the stage for the "Single Payer" reform that was introduced in Chui and Issyk-Kul oblasts in 2001 (this is described in detail below). Hence, the magnitude of the MHIF's role in the financing of the health system in 2001 can be portrayed as in Table 15, which describes different shares of responsibility for different functions in the health financing system with regard to prepaid (i.e. either general tax or payroll tax) revenues. As a source of funds, the payroll tax for MHIF contributed 8.4% of total prepaid funding in 2001. When only Republican budget transfers to the MHIF are

considered, the MHIF was responsible for managing 10.2% of prepaid health sector revenues. Adding the responsibility for managing all local budget health revenues in Chui and Issyk-Kul brings the MHIF share to nearly 25%. Finally, considering the transfer of responsibility to all the TDMHIFs to manage local budget funds in 2000, the total amount of prepaid sectoral resources managed by the MHIF is about 62%. This latter may be an overstatement, however, because the TDMHIF does not administer the rayon and municipal health revenues in the non-Single Payer oblasts but only the oblast-level funds. But the extension of the Single Payer nationwide, including Bishkek, is government policy, and thus it becomes clear that the role of the MHIF in the health financing system is of major importance even as its role as a source of funds through payroll taxation is relatively minor.

**Table 15. Percent distribution of prepaid health financing responsibilities, 2001**

| Agency | Source of funds | Management of funds | | |
|---|---|---|---|---|
| | | Republican transfers | Single Payer | All oblast budgets |
| Republican MOH | 24.1% | 22.2% | 22.2% | 22.2% |
| Other Republican | 4.8% | 4.8% | 4.8% | 4.8% |
| Local governments | 62.7% | 62.7% | 48.5% | 10.6% |
| MHIF and TDMHIFs | 8.4% | 10.2% | 24.4% | 62.4% |

Source: Treasury and MHIF data. The 10.6% of local government responsibility in the final column represents the expenditures made by the Bishkek City Health Department, which, unlike the oblast health departments, was not eliminated in 2000. Expenditures for higher medical education are included with the Republican MOH.

Despite the relatively small share of revenues in the national pool of funds managed by the MHIF (i.e. transfers from the Social Fund and Republican budget on behalf of the insured population), the way these funds were targeted enabled them to have a substantial effect on contracted providers (FGPs and general hospitals). The expenditures of the MHIF were less than 1% of total prepaid/pooled (i.e. budget plus MHIF) health spending in 1997, and this grew to just over 10% by 2000. However, as shown in Table 16, MHIF revenues constituted about 16% of hospital revenues in 2001 and 24% of primary care revenues (excluding formal and informal out-of-pocket payments). In fact, these percentages understate the true impact because MHIF funds were targeted to specific inputs such as drugs and staff bonuses, and this allowed these limited funds to have a noticeable impact to both providers and patients in contracted health facilities. By 2000, the MHIF was funding over 40% of recorded drug costs in the system (though this fell back to 35% in 2001 with the overall decline in MHIF revenues), more than either the Republican budget or local health budgets.

**Table 16. Budget and MHIF shares of pooled health financing**

| | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| **Total health spending** | | | | | |
| From Budget | 99.4% | 95.6% | 91.6% | 89.9% | 89.8% |
| From MHIF | 0.6% | 4.4% | 8.4% | 10.1% | 10.2% |
| **MOH general hospitals** | | | | | |
| From Budget | 99.7% | 92.9% | 86.1% | 82.3% | 84.0% |
| From MHIF | 0.3% | 7.1% | 13.9% | 17.7% | 16.0% |
| **MOH primary care providers** | | | | | |
| From Budget | 100.0% | 89.6% | 75.7% | 80.8% | 76.4% |
| From MHIF | 0.0% | 10.4% | 24.3% | 19.2% | 23.6% |
| **MOH general hospitals and primary care providers combined** | | | | | |
| From Budget | 99.7% | 92.5% | 84.4% | 82.1% | 82.9% |
| From MHIF | 0.3% | 7.5% | 15.6% | 17.9% | 17.1% |

Source: Treasury data (excluding special means) and MHIF data. Budget excludes transfers to MHIF; MHIF includes such transfers.

## Patterns of health sector resource allocation from the state budget

Table 17 shows the allocation of state budget funds (consolidated Republican and local budget health spending, including from categorical grants) across broad program areas from 1995 to 2001. As noted in the World Bank's Social Expenditure Review (World Bank 2001a), the country's epidemiological situation, as well as stated health policies, demand a shift in resource allocation away from specialized and inpatient services and towards primary care and public health services. Yet the percentage distribution of expenditure by program area (e.g. hospitals remaining 70-73%, ambulatory care 9.5-10.5%, public health 5.6-7%) has changed very little in the past 7 years, suggesting that there has been little effective action to re-prioritize broad spending patterns from state budget funds.

**Table 17. Distribution of state budget health spending, by program**

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|
| Wide profile (child and adult general) hospitals | 53.3% | 52.3% | 48.6% | 49.1% | 47.6% | 51.0% | 50.2% |
| Specialty hospitals | 14.5% | 15.6% | 18.2% | 19.7% | 21.3% | 19.9% | 19.8% |
| Maternity hospitals | 3.8% | 3.1% | 3.0% | 3.4% | 3.2% | 2.5% | 2.0% |
| Rehabilitation hospitals | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.2% |
| Other hospitals | 0.2% | 0.3% | 0.2% | 0.2% | 0.2% | 0.2% | 0.1% |
| **Hospital sub-total** | **71.7%** | **71.3%** | **70.2%** | **72.5%** | **72.3%** | **73.6%** | **72.3%** |
| General polyclinics & OPD physicians | 7.9% | 8.0% | 7.5% | 7.3% | 8.0% | 7.7% | 7.9% |
| Specialty polyclinics and specialty physicians | 0.2% | 0.2% | 0.2% | 0.2% | 0.3% | 0.1% | 0.0% |
| Dental polyclinics | 1.2% | 1.3% | 1.1% | 1.1% | 1.1% | 1.1% | 1.0% |
| Ambulance stations | 1.0% | 1.1% | 0.9% | 1.0% | 1.1% | 1.0% | 1.1% |
| **Ambulatory care sub-total** | **10.3%** | **10.6%** | **9.7%** | **9.5%** | **10.5%** | **10.0%** | **10.1%** |
| **Public health (SES, etc.)** | **7.1%** | **6.8%** | **6.5%** | **5.7%** | **6.1%** | **5.7%** | **5.6%** |
| **Health research institutes** | **0.7%** | **0.6%** | **0.6%** | **0.7%** | **0.8%** | **0.6%** | **0.7%** |
| **Administration and accounting** | **0.7%** | **0.6%** | **0.7%** | **0.8%** | **0.9%** | **0.7%** | **0.7%** |
| **Central maintenance services** | **0.9%** | **1.3%** | **0.0%** | **0.1%** | **0.1%** | **0.1%** | **0.2%** |
| **Capital investments** | **4.4%** | **5.2%** | **3.5%** | **1.7%** | **1.6%** | **1.6%** | **2.2%** |
| **Education of health professionals** | **1.9%** | **1.5%** | **1.8%** | **1.5%** | **1.4%** | **1.1%** | **1.3%** |
| **Other services not included in other categories**[a] | **2.4%** | **2.1%** | **7.0%** | **7.5%** | **6.3%** | **6.6%** | **7.0%** |
| **Consolidated Budgetary Health Spending** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** |

Source: Kyrgyz Government Treasury data. Data include non-MOH as well as MOH health spending. Percents exclude special means and transfers to the MHIF. Beginning in 1999, centralized utility costs for Republican level are attributed to national hospitals and research institutes in proportion to their other costs.
[a] Includes Department of Drugs and Supplies (beginning 1997), Republican Immuno-Prophlaxis Center, Medical Information Center, and a variety of other centralized units of the MOH.

The Treasury data also allow for an analysis of state budget health resource allocation by input (line item or "chapter"). The data are summarized in Table 18. Of particular concern here is the large percentage of spending that is tied up in fixed costs, namely personnel and utilities. Utility expenditures reached over 20% of total spending in 2000 and 2001. This does not reflect an increase in the consumption of heat and electricity in these years, but rather an attempt by the government to pay off part of the debt owed by the health facilities to the utility companies and also to compensate for the increased tariffs for electricity. Despite this increase, however, debts remain. Corresponding to the high percents of expenditure on fixed items are low shares devoted to patient treatment items, particularly drugs and medical supplies. Expenditure on these fell below 10% in 2000. This pattern of expenditure highlights the need for restructuring of the health care delivery system in order to reduce fixed costs. Some gains in this respect were made in 2001 as a consequence of the health financing reforms introduced in Chui and Issyk-Kul. Also of concern in these expenditure patterns is the low percent of spending on capital investment. This reflects the increased dependence of the health system on donor funds for upgrading and renewal of buildings and equipment.

**Table 18. Distribution of state budget health spending, by chapter**

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|
| **Total Recurrent Expenditure** | **91.0%** | **90.9%** | **91.7%** | **93.7%** | **94.9%** | **94.1%** | **94.6%** |
| Personnel-related expenditures | 56.3% | 51.6% | 52.3% | 51.8% | 56.4% | 50.5% | 52.5% |
| *of which, Categorical grants* | *0.0%* | *0.0%* | *59.7%* | *61.0%* | *55.2%* | *49.6%* | *62.2%* |
| Travel expenses | 0.2% | 0.2% | 0.2% | 0.3% | 0.3% | 0.4% | 0.2% |
| Pharmaceuticals and supplies | 8.4% | 9.8% | 12.7% | 12.0% | 12.0% | 9.3% | 9.4% |
| Food | 8.3% | 9.0% | 8.3% | 10.0% | 8.5% | 9.0% | 9.1% |
| Utility costs (heat, electricity, gas, phone) | 12.4% | 15.5% | 13.7% | 15.4% | 14.0% | 21.3% | 20.2% |
| Hiring and maintenance of vehicles | 2.5% | 2.0% | 1.8% | 1.8% | 2.0% | 2.2% | 1.9% |
| Other purchases and services | 3.1% | 2.9% | 2.9% | 2.7% | 2.0% | 1.8% | 1.4% |
| **Total Capital Investment** | **9.0%** | **9.1%** | **8.3%** | **6.3%** | **5.1%** | **5.9%** | **5.4%** |
| Equipment and materials | 2.1% | 2.1% | 2.0% | 1.7% | 1.5% | 1.5% | 0.9% |
| Buildings, facilities, other civil works | 4.4% | 4.8% | 3.4% | 1.7% | 1.5% | 1.5% | 2.1% |
| Capital renovation | 2.5% | 2.2% | 2.8% | 2.9% | 2.0% | 2.9% | 2.4% |
| **Total Expenditures from Budget** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** |

The percentage distribution across line items excludes expenditures from special means and transfers to the MHIF. Personnel-related expenditures include salaries and social fund contributions.

## Health financing system and reforms

As described in several publications (WHO 2000, Baeza *et al*. 2001, Kutzin 2001a), health financing systems consist of several related functions and policies related to the delivery of services to the population. The functions are:

- Collection of revenues for the health system
- Pooling (accumulation) of funds for health services for the population
- Purchasing of services (allocation of resources to providers)

In addition to these functions, an integral part of a health financing system is policy and practice with regard to out-of-pocket payment and the benefit package. It is useful to conceptualize benefit packages "as those services, and means of accessing services, for which the purchaser will pay from pooled funds" (Kutzin 2001a, p.190). This concept implies that services outside of a package must be funded on an out-of-pocket basis (or from another purchaser's pooled funds). Between the extremes of "fully covered" and "fully excluded" services are services for which partial payment (cost sharing) is required. In the KR, as in many low and middle income countries, the gap between the allocation of pooled funds plus any formal cost sharing revenues (where these exist) has often been filled by informal payments[7] by patients.

Key issues with regard to the overall system have to do with the organizational and institutional arrangements for implementing the functions and policies. The "vertical" dimension of this involves whether responsibility for implementing the functions (including service delivery) is integrated within a single organization or if there is a separation of

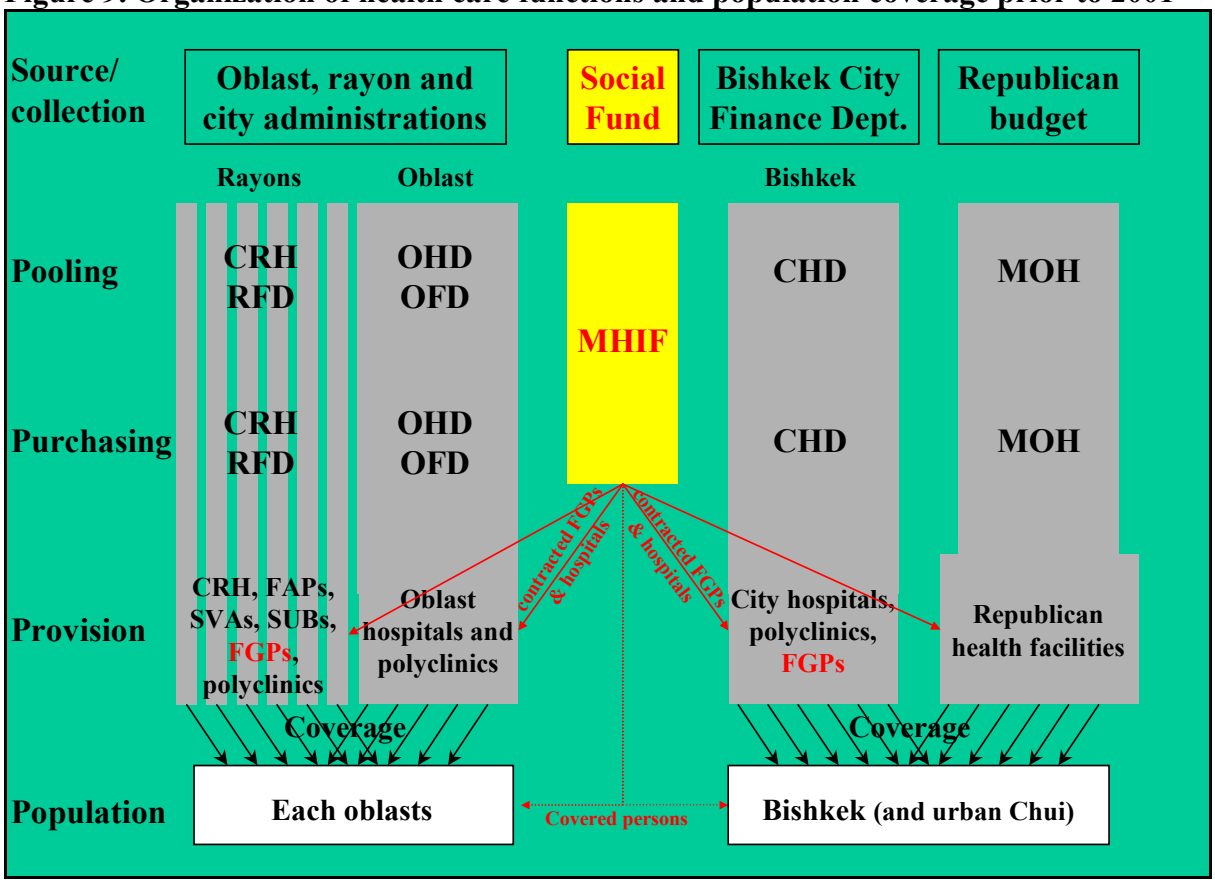
[7] "Informal payments can be defined as to individual and institutional providers in kind or in cash that are outside official payment channels or for purchases meant to be covered by the health care system. This encompasses 'envelope' payments to physicians and 'contributions' to hospitals as well as the value of medical supplies purchased by patients and drugs obtained from private pharmacies but intended to be part of government-financed health care services." (Lewis 2002, p.184).

functional responsibilities. The "horizontal" dimension involves the market structure (i.e. number of providers and extent to which they compete) for the implementation of each function or networks of integrated functions.

*Health financing arrangements prior to 2001*

The organizational and institutional arrangements for financing the Kyrgyz health system were largely unchanged from independence in 1991 through the end of 2000, with the very important exception of the introduction of the Mandatory Health Insurance Fund (MHIF) in 1997. Figure 9 is a *function and coverage chart* that depicts the financing and service delivery arrangements and population coverage provided by the health system. The depiction relates only to prepaid sources of health system revenues. The main sources of prepaid funds for the health system were the local and Republican governments, with the Social Fund becoming a source in 1997.[8]

**Figure 9. Organization of health care functions and population coverage prior to 2001**




Note: CRH = Central Rayon Hospital; RFD = Rayon Finance Department (in some oblasts, rayon health funds were pooled in the CRH and allocated to rayon providers from there, whereas in others, the funds were retained and allocated from the RFD); OHD = Oblast Health Department; OFD = Oblast Finance Department (again, responsibilities for pooling and purchasing varied between oblasts); CHD = Bishkek City Health Department; FAP = feldsher and midwife post; SVA = rural primary care center; SUB = rural hospital.

The inherited health financing system contributed greatly to inefficiency. The main evidence of this was excess capacity, particularly at the hospital level.[9] The KR (and the CIS countries

[8] As shown above in Table 7, private out-of-pocket spending is estimated to be just over 50% of total health expenditure.

[9] This is also reflected in the high percentage of health spending allocated to utility costs (see Table 18).

on average) had substantially higher numbers of hospitals and beds per capita than, for example, the countries of Central and Eastern Europe and the European Union (WHO/EURO 2003), much more than a low-income country could sustain, especially from public funds. This resulted from a combination of factors. The basis for allocating budgets to providers was driven by input norms (e.g. number of beds), and staffing norms were based on the number of beds of various specialties. The incentives from these norms rewarded expansions in physical capacity and increased specialization. As shown in Figure 9, each level of government had its own health system that integrated pooling, purchasing and provision, and these systems provided overlapping population coverage, particularly in Bishkek (between city and Republican systems) and the capitals of each oblast (between oblast and municipal/rayon systems). This resulted in duplication of service delivery responsibilities. In urban areas, both outpatient and inpatient care were fragmented into multiple but non-competing facilities, and the catchment areas of oblast and rayon/city facilities often overlapped. Similarly in Bishkek, the coverage of Republic and City health facilities overlapped. With this organizational structure, there was no incentive to plan health services on a population basis, and no incentive for different levels of government to coordinate service delivery.[10] The provision of budget funds was tied to strict line item controls, and the managers of health facilities could not alter these and thus had little control over the factors of production. This inflexibility was also a source of inefficiency in the system.

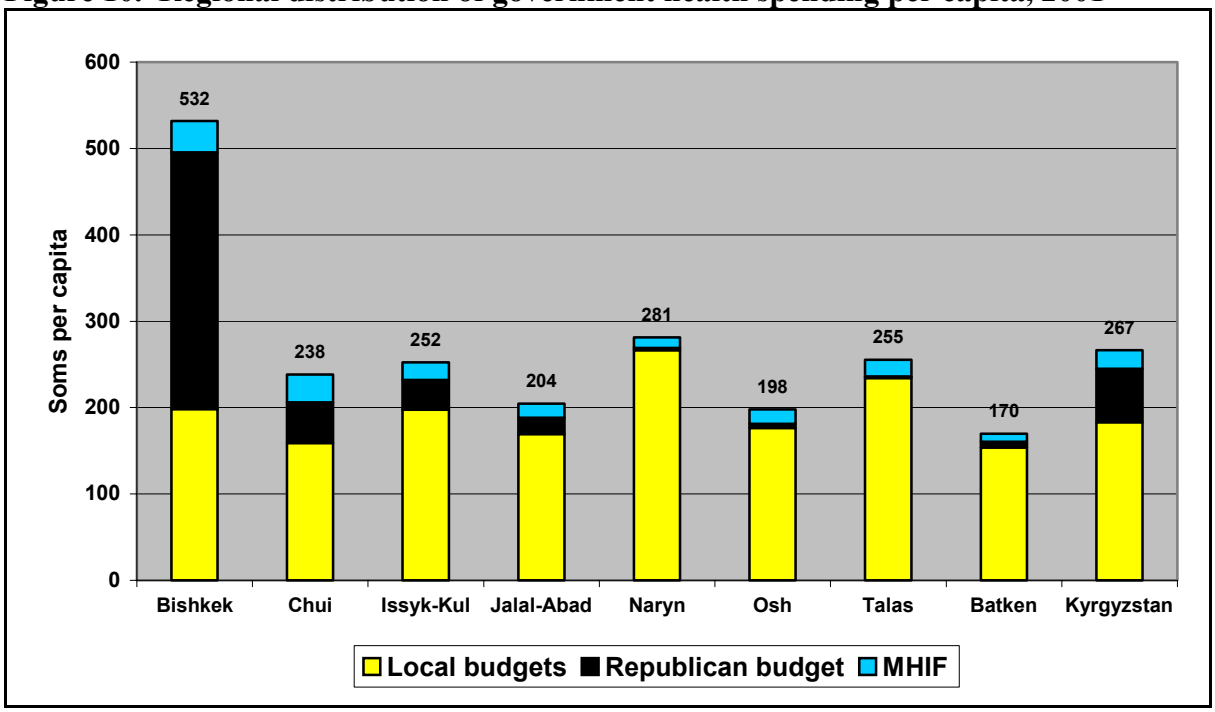
In addition to inefficiency, the health financing system did not allow for funds to flow in a way to maximize the protection of the population against the risk of health expenditures. Such protection is needed to mitigate the effects of poverty (by enabling access to needed services even for poor people) and to prevent an increase in poverty (by protecting family income against potentially impoverishing levels of health expenditure). A goal of health financing policy is to provide this protection by directing resources (cross-subsidies) to those in greatest need for care (the "sick") from those with less or no need (the "healthy") (Baeza *et al*. 2001). For a given level of funding, the maximum insurance potential can be achieved when the funds are in a single national *risk pool*. In the Kyrgyz health system, however, there was a pool associated with each level of government, i.e. each rayon, municipality, and oblast in the country. These fragmented pooling arrangements and the criteria for allocating budget resources to providers thus limited the insurance potential of the health system, as cross-subsidies could only occur within each level of government. Indeed, within these geographically-based pools, funds were also divided into specific budgets for each health facility. Within any budget year, there was little scope for moving funds across facilities, even facilities of the same type. Effectively, therefore, risk pooling was fragmented to the level of the catchment area of each health facility.

Public expenditures on health were also distributed in a highly inequitable manner, and remain so. While the equalization grants in the overall budgeting process did compensate poorer regions to some extent, Figure 10 shows that the concentration of Republican health spending in Bishkek resulted in substantial inequality in the per capita distribution of government health spending. While this would not be problematic if these facilities were used by the entire population of the country according to their needs, but the available evidence (reported in World Bank 2001a) indicates that they largely serve the Bishkek

[10] Excess capacity and specialization were not purely a product of financial incentives and institutional arrangements. These factors served to reinforce the way that health professionals were trained in the Soviet system. Clinical protocols and norms encouraged, and even required, an emphasis on specialized hospital care, and the principal role of primary care providers was to "dispatch" patients to specialty providers and facilities (Borowitz *et al*. 1999).

population (and that of nearby Chui). Hence, the overall pattern of public subsidies for health from the state budget favors the geographic area with the highest income population.

**Figure 10. Regional distribution of government health spending per capita, 2001**




This is an update to a similar figure included in the Social Expenditure Review for 1998, adjusting the figures for both the 2001 expenditure data and the revised population figures derived from the 1999 census. Expenditures for education of health professionals, health research, AIDS and health promotion centers, transfers to the MHIF, and "services not included in other categories" (e.g. Department of Drugs and Medical Supplies, Republican Immuno-Prophylaxis Center) are excluded from Republican spending in this figure because the benefits of this spending cannot be attributed plausibly to any particular geographic region.

Another problem associated with the health financing system was a growing lack of transparency. Informal payments became widespread, principally for the purchase of drugs and medical supplies needed for treatment, but also in the form of direct payments to health workers. A survey (Abel-Smith and Falkingham 1995) revealed that, even as early as 1994, 69% of outpatients and 86% of inpatients contributed something towards the cost of their care in what were ostensibly free (except for some limited official user charges) government health facilities. There is also reason to believe that the demand for payments by health workers has grown. According to official government statistics, wages in the health sector have always been below average for the country and have declined in relative terms from 92% of the average wage in 1994 to 51% by 2001 (NSC 2003). Increasingly in Kyrgyz hospitals, access to inpatient care, including drugs, medical and non-medical supplies, and the time of providers, depended on the ability of the patient and his/her family to pay. Informal payments were the tangible symptom of a system characterized by excess physical and human resource capacity in a context of shrinking public resource availability, low wages, and rising prices for key inputs such as drugs and electricity.

In 1997, the Mandatory Health Insurance Fund (MHIF) was created and brought new resource allocation mechanisms to the sector. While integrating pooling and purchasing as in the budget-funded health system, the MHIF established a split between purchasing and provision. The MHIF also differed in that its pooling and purchasing were national in scope, rather than confined within an oblast or rayon. Consequently, population coverage and risk

pooling was not limited by geographic considerations. The mechanisms and approach of the MHIF changed the way that the health system functions, despite the relatively small amount of funds that it generated. As reflected in Figure 9, however, the MHIF did not change the underlying structural problems of the system related to vertical integration and duplication of coverage of the main "budget" system.

There is quantitative evidence that MHIF coverage offered insured persons some protection against out-of-pocket expenses in hospitals.[11] As shown in Table 19, insured patients had lower mean and median out-of-pocket expenditures than uninsured patients. This was true despite the fact that, on average, insured patients suffered from more severe and costly (to treat) conditions than uninsured patients. This difference in severity is to be expected given the presence of all pensioners (men over 60, women over 55) amongst the insured. Despite the protection offered by MHIF coverage, however, the survey also revealed that even insured patients had to make informal payments and thus also bore a degree of financial risk.

**Table 19. Patient expenditures, case mix, and insurance status, February 2001**

| Patient insurance status | Nonfood Expenditures | | Total Expenditures | | Case Mix Index | |
|---|---|---|---|---|---|---|
| | Mean | Median | Mean | Median | Mean | Median |
| Insured | 839 | 439 | 1,246 | 771 | 0.997 | 0.942 |
| Uninsured | 1,028 | 620 | 1,401 | 950 | 0.883 | 0.868 |
| Total | 930 | 520 | 1,321 | 850 | 0.942 | 0.892 |

The case mix index (CMI) was calculated as the average (mean and median) of the case mix weights (KZGs) for each category of patients. The survey included 2917 patients from hospitals throughout the country, including 1510 insured and 1407 uninsured patients, and the data reflects the experience from the month prior to the introduction of formal co-payments for inpatient care.

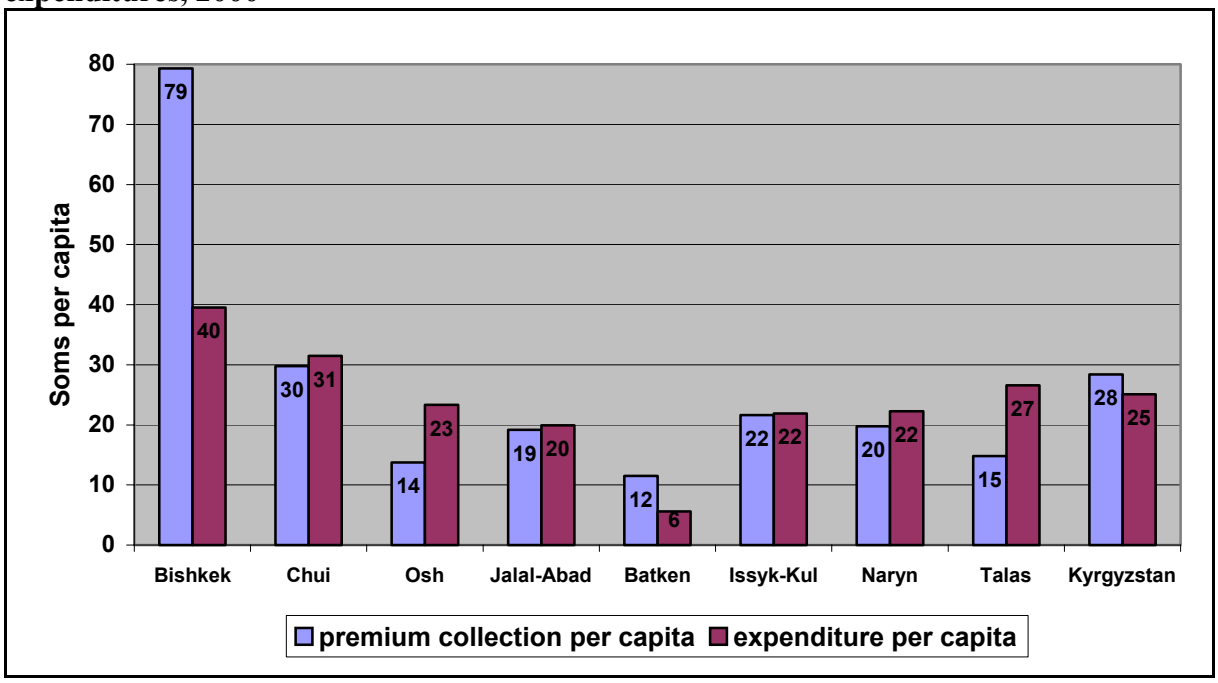
The main changes introduced by the MHIF were new methods of purchasing services and the creation of a national pool of funds. Organizationally, this was made possible because it was not integrated with service providers (i.e. there was a "purchaser-provider split") and because, as an "off-budget" fund, its financial resources were not subject to the strict line item control system of budget resources. Instead of passively allocating money to providers based on the inherited system, the MHIF has been an *active purchaser*, linking its decisions on the allocation of resources to information on the performance of providers and the needs of the population. Contracted hospitals were paid according to their *outputs* (number and type of treated cases) using a case-based payment system modeled on that used for the US Medicare program. Primary care providers (Family Group Practices, or FGPs, which have disseminated rapidly since their introduction in 1997) are paid per person enrolled with them. The enrollment process changed the former system by which people were assigned to a polyclinic based on their residence, to a system in which a family's choice of primary care provider actually steers to distribution of financial resources from the MHIF pool. Beginning in 2000, the MHIF introduced an outpatient drug benefit (the Additional Drug Package, or ADP) that targets important causes of ill-health and hospitalization (hypertension, iron deficiency anemia, bronchial asthma, and stomach/duodenal ulcers), covering the drugs needed to enable effective outpatient treatment to both improve health and reduce system-wide costs. The MOH is in the process of extending the ADP nationwide.

[11] This is because MHIF expenditures were targeted to drugs even though an explicit benefit package was not defined.

The redistributive effect of creating a national pool of funds and paying providers according to their workload and population served is reflected in Figure 11. For 2000, the figure compares the per capita levels of premium collections for MHIF coverage from employers to the per capita levels of health expenditure by the MHIF. The figure shows that per capita contributions reflect the patterns of per capita income distribution in the country, with much higher contributions coming from Bishkek and Chui than from the other regions. The distribution of per capita health care expenditures by the MHIF, though greatest in Bishkek and Chui, is much more equitable than the distribution of premium income sources, indicating that there is a substantial degree of cross-subsidy from these richer regions to the rest of the country. The data show, for example, that contributions from Bishkek and Chui represented 60% of all premium income, but those regions received only 44.5% of health expenditures. Conversely, Batken, Jalal-Abad and Osh contributed 27% of revenues but received 39% of expenditures. Naryn and Talas contributed 6% of revenues but received 9% of expenditures. Of course, this redistribution also occurs with general tax revenues, but only because of the government's equalization grants. With the MHIF's national pool of funds, such a measure is not needed because the output-driven payment methods automatically promote geographic equity in the allocation of resources.

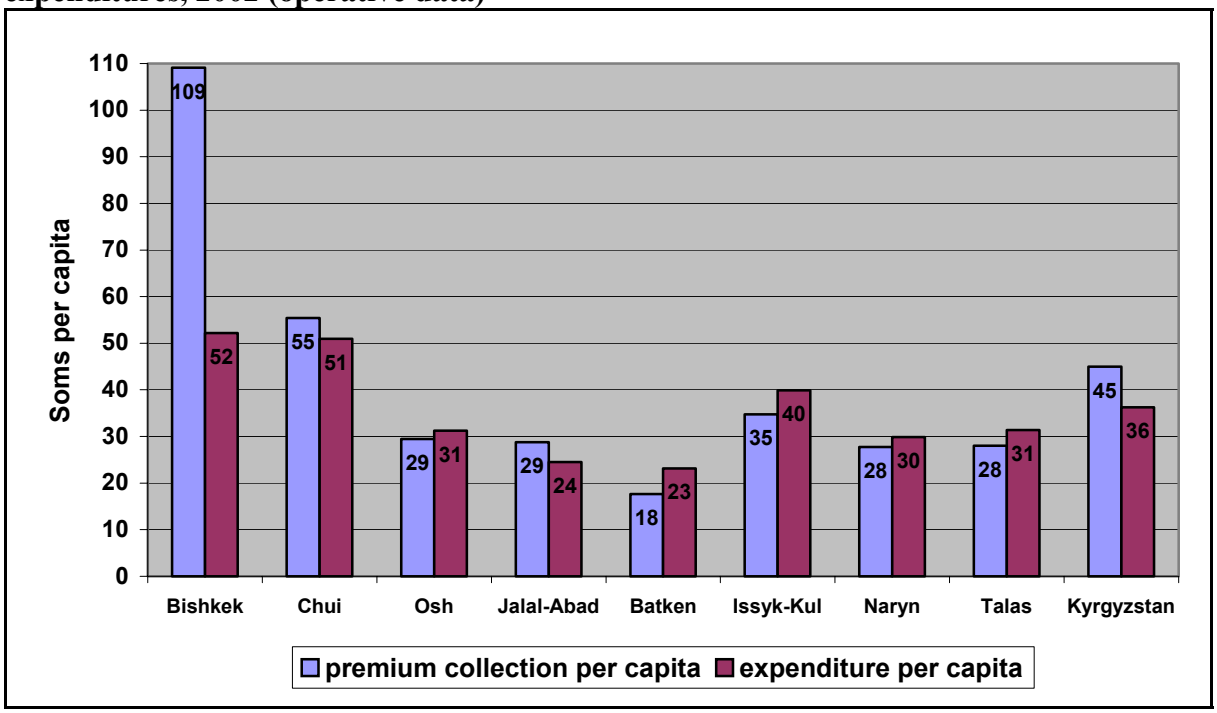
Although the MHIF pays hospitals throughout the country, geographic equity in the distribution of expenditures has been constrained by the inability of the MHIF to contract with all FGPs. In 2000, for example, the MHIF had contracts with all FGPs in Bishkek, Chui and Issyk-Kul, but only 52% of FGPs in Talas, 25% in Jalal-Abad, 22% in Osh, and 0 in Batken and Naryn. In 2002, the MHIF contracted with more FGPs in these regions, and regional equity in per capita spending appears to have improved (Figure 12). Hence, while per capita spending by the MHIF in Bishkek was over 7 times higher than in Batken in 2000, this fell to 3.8 times in 2001 and 2.25 times in 2002 (MHIF data). To the extent that the MHIF is able to contract all FGPs in the country, equity in its expenditures will improve.

**Figure 11. Source of MHIF premium income and destination of health care expenditures, 2000**




Source: MHIF data for revenues and expenditures; NSC for population.

**Figure 12. Source of MHIF premium income and destination of health care expenditures, 2002 (operative data)**




Source: MHIF data for revenues and expenditures; NSC for population.

Importantly, the MHIF did not establish a separate, parallel health system; instead, its payments provided incremental revenues to hospitals and FGPs that continued to receive a budget allocation according to the old methods. The MHIF and MOH worked together closely, an arrangement that was formalized in late 1998 when the MHIF was brought under the explicit policy direction of the MOH, while maintaining its separate source of funds. In the 1997-2000 period, the MHIF and MOH created the institutional preconditions for restructuring the health sector. One example of this was that any hospital contracted with the MHIF had to use a new Clinical Information Form (CIF) and report data on all patients using the new forms. This established the technical basis for the future development of a universal system. Also, by using a common form for all patients, administrative costs for providers were minimized (Kutzin *et al*. 2002).

In retrospect, the MHIF can be seen as the agent of change in the sector. Its payment methods injected both additional resources and a new way of doing business into the health sector. After gaining experience in pooling funds and purchasing services from 1997-2000, the MHIF had developed the systems and skills to move from managing a relatively small share of overall sectoral resources to taking over these functions on behalf of the MOH. This began in 2001 with the initial implementation of the Single Payer reform, which is directly aimed at resolving the underlying structural problems in the health system.

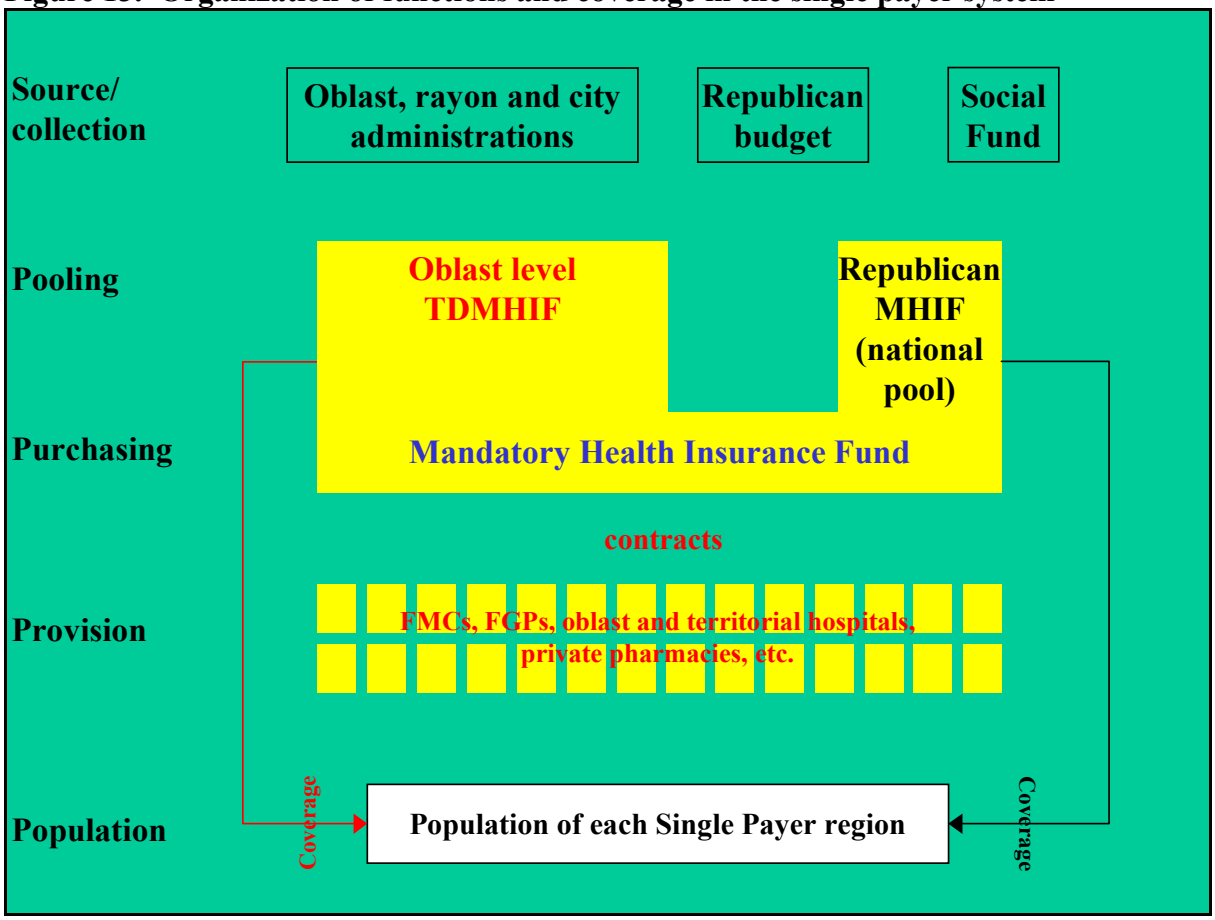
### *The Kyrgyz "Single Payer" system*

The Single Payer system introduced in Chui and Issyk-Kul in 2001 and extended to Naryn and Talas in 2002 involves a radical change in pooling arrangements for budget funds, complemented by a unification of provider payment methods and measures to increase transparency of financial contributions by patients. The financing reform did not involve any

significant change in the sources of funds for the health system. The main organizational features of this model, summarized in Figure 13, are:

- pooling of all local budget (oblast, rayons and cities) funds for health, including categorical grants, in the oblast TDMHIF;
- unified system of provider payment using the methods of the MHIF (i.e. case-based payment to hospitals, capitation payment to FGPs) from these budget funds (by the TDMHIF), complemented by additional payments on behalf of insured persons from the national MHIF pool; and
- purchaser-provider split, ending vertically integrated financial relations between public sector purchasers and providers, coupled with the extension of greater autonomy to providers including a reduction in line item constraints on the use of budget funds.

**Figure 13. Organization of functions and coverage in the single payer system**




Note: FMC = Family Medicine Center (more comprehensive setting for primary care and some specialized diagnostic and therapeutic services).

The MHIF is the single purchaser in the reformed system, applying its payment methods for inpatient and primary care to the budget funds in the oblast pool managed by its TD and the national pool it manages directly.[12] It makes hospital and primary care payments on behalf of each patient/enrollee from the oblast pool, and for insured persons it makes additional payments from the national pool. The same clinical information form data are used as the basis for both payments, so there is no additional administrative cost (at hospital or purchaser

[12] Some providers, such as tuberculosis hospitals, continue to be paid by line-item budgets, now administered by the TDMHIF.

level) associated with payments coming from two pools. With the payment by the MHIF (national) still complementary to that paid from budget sources, there is no fragmentation of the population and the system into separate pools on the basis of their insurance status.

An integral part of the reform is the specification of benefits, cost sharing, and coverage for the population. Figure 14 shows how the depth (extent of services funded from pooled revenues) and breadth (extent of the population with effective access) of coverage[13] link to funding sources under the Single Payer. The basic benefit package for the entire population of the oblast is funded through the contributions of local governments to the TDMHIF pool. This package consists of free primary care from the contracted FGP with which the person is enrolled, and inpatient care on referral, subject to a co-payment. The basic benefit package also provides for free or nearly free referral care for persons in defined exempt categories of the population (based on individual or disease-specific characteristics, such as World War II veterans, low income pensioners, cancer and TB patients, etc.). Exemptions are funded through the establishment of higher payments to hospitals (i.e. a higher base rate) from the oblast pool.[14] For insured persons, contributions made on their behalf to the national MHIF pool of funds entitle them to reduced co-payments for inpatient care and outpatient specialist services, and also provide access to an outpatient drug benefit package (see below). Hence, being "insured" in the Kyrgyz context is akin to having a voluntary "Medigap" policy in the US or a "*mutuelle*" in France: coverage is complementary to that funded from general revenues.[15]

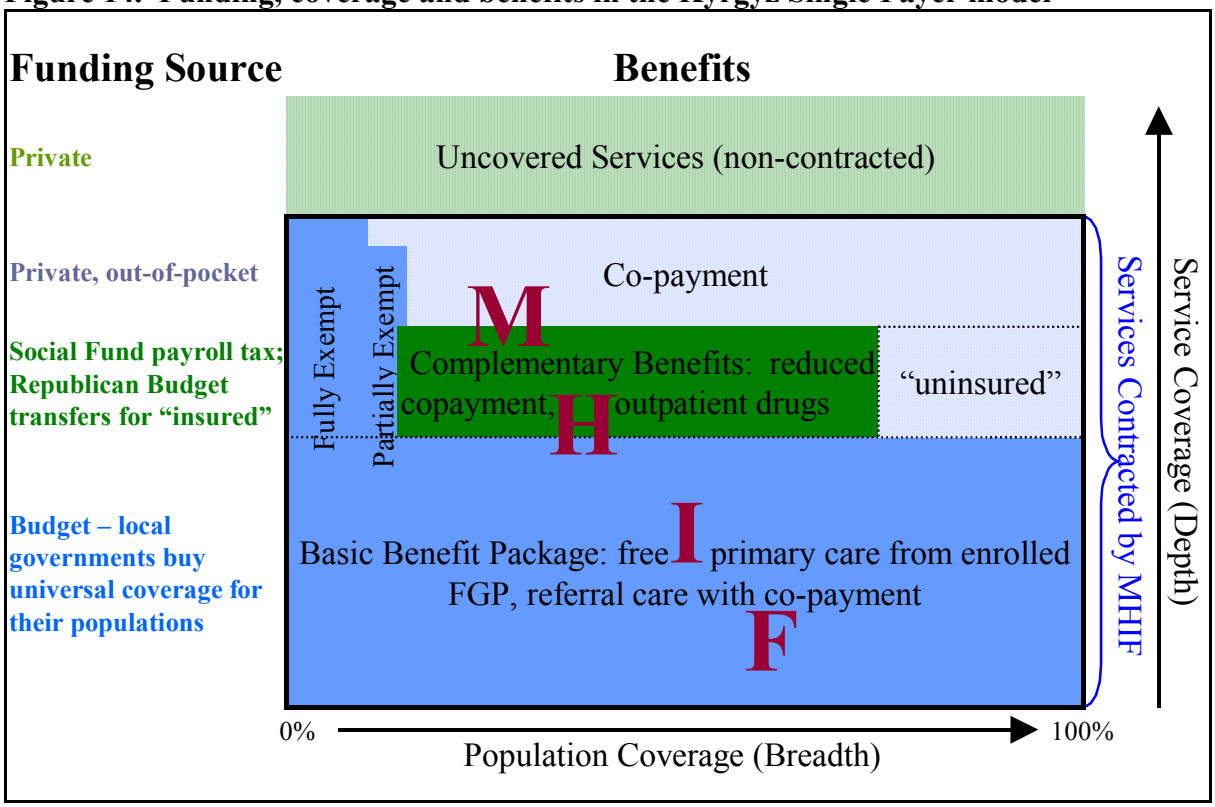
Figure 14 also depicts the complementary nature of two distinct pools of funds and out-of-pocket payment by patients: (1) local government transfers (including categorical grants) to the TDMHIF for the basic benefit package for the entire population of the oblast; (2) Social Fund and Republican budget transfers to the MHIF national pool for complementary benefits; and (3) patient co-payments. The ability of the system to function effectively depends critically on maintaining the levels of pooled funding so that the formal co-payment can fill the gap. To the extent that local governments do not meet their commitments to fund the basic benefit package on behalf of their entire population, or that the necessary funds are not transferred to the MHIF, there is an increase in the burden of funding on the population in the form of increased formal and (probably) informal payments. Hence, to the extent that the funding sources are treated as substitutes, such as reducing budget allocations to the Single Payer in response to the collection of co-payment revenues, the distributional consequences for the population will be severe, harming national efforts to alleviate poverty and mitigate its effects.

[13] See Kutzin (2000) for a discussion of these concepts of coverage.

[14] Hence, the provision of care to exempt persons is not an "unfunded mandate" placed on hospitals.

[15] As described by Mossialos and Thompson (2002, p.130), "complementary voluntary health insurance provides full or partial cover for services that are excluded or not fully covered" by the main system.

**Figure 14. Funding, coverage and benefits in the Kyrgyz Single Payer model**




Annex 1 describes the flow of funds within the Single Payer system

The Single Payer reform includes measures meant to address the major causes of inefficiency, inequity, and inadequate financial protection, and also to improve transparency. The next section of the paper reports on evidence gathered on the effects of the Single Payer reforms and identifies the challenges, particularly those that must be met from parts of the government outside the health sector, to facilitate the success of the reforms in improving the health and welfare of the population.

## Health reform: achievements and challenges

A considerable amount of quantitative and qualitative evidence on the effects of the Single Payer in Chui and Issyk-Kul was gathered during 2001 and 2002. This shows clearly that there were gains in efficiency, equity and transparency, but also a risk that, perversely, this success may be penalized by the broader governmental financial system. If this happens, the gains will be eroded, as will the incentive for further improvement.

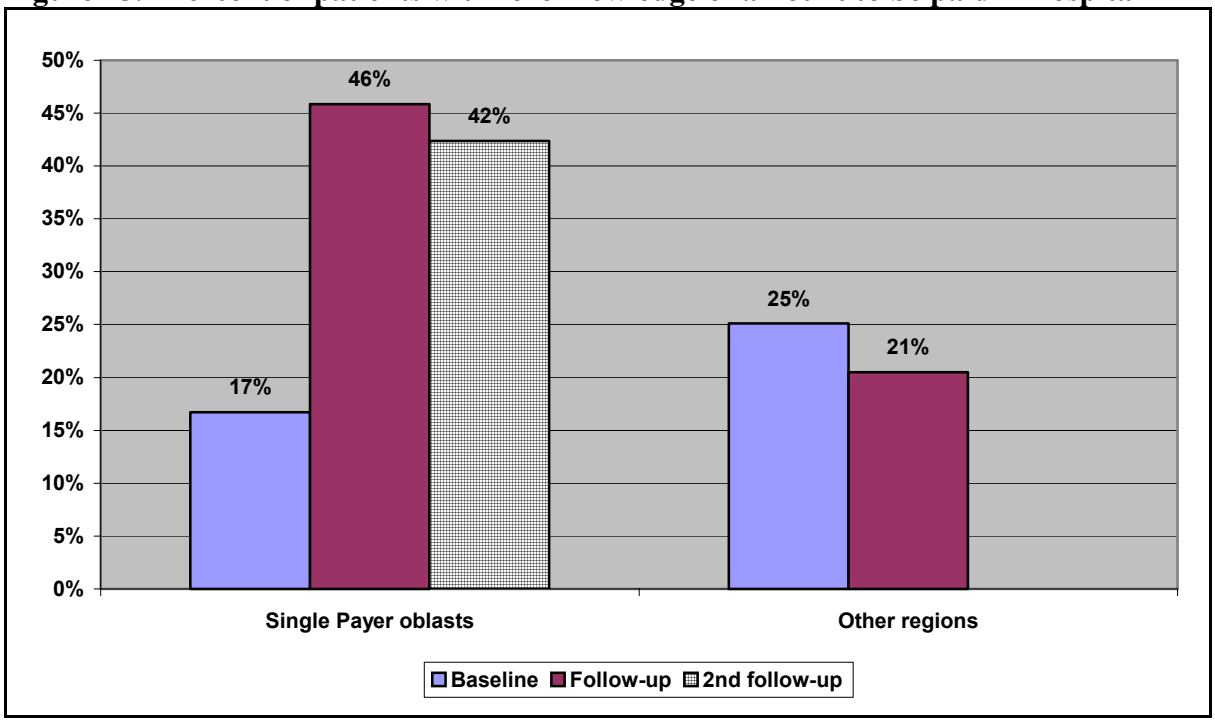
### *Technical efficiency of service delivery and transparency to patients*

The Single Payer reform has yielded demonstrable gains in technical efficiency and transparency. Perhaps the most visible part of the reform to the population and to providers was the introduction of the formal inpatient co-payment. The principal objective of this was to replace informal payments, with the aims of increasing transparency, reducing patient uncertainty, and adding to the revenues subject to the managerial control of the health system.

The evidence[16] suggests that the co-payment was successful, though with differences observed between the two Single Payer oblasts.

**Reducing uncertainty for patients.** One aim of improving transparency in financial obligations for patients was to reduce uncertainty about the costs of inpatient health care. As shown in Figure 15, about 17% of the respondents to a baseline survey[17] in the two Single Payer oblasts had an idea of the total amount that they would have to pay prior to their hospitalization, and about 25% of the respondents in the other oblasts reported having such knowledge. The results of the first follow-up survey show a radical improvement in knowledge (reduction of uncertainty) in Chui and Issyk-Kul. There, foreknowledge of the total amount to be paid increased to 46% of patients, whereas there was a slight decrease in the other oblasts. This suggests strongly that, even after only five months of implementation, the efforts of the MOH to inform the population about the new policy had reduced uncertainty substantially. However, results from a second follow-up survey in Chui and Issyk-Kul, one year after the introduction of the policy, do not indicate a continued reduction in uncertainty.

**Figure 15. Percent of patients with foreknowledge of amount to be paid in hospital**




Source: WHO surveys of discharged hospital patients.

**Reducing informal payments.** There are several different ways to assess the impact of the reforms on the frequency and level of informal payments. The evidence from the patient survey data shows, in several ways, that the reforms were successful in reducing informal payments.

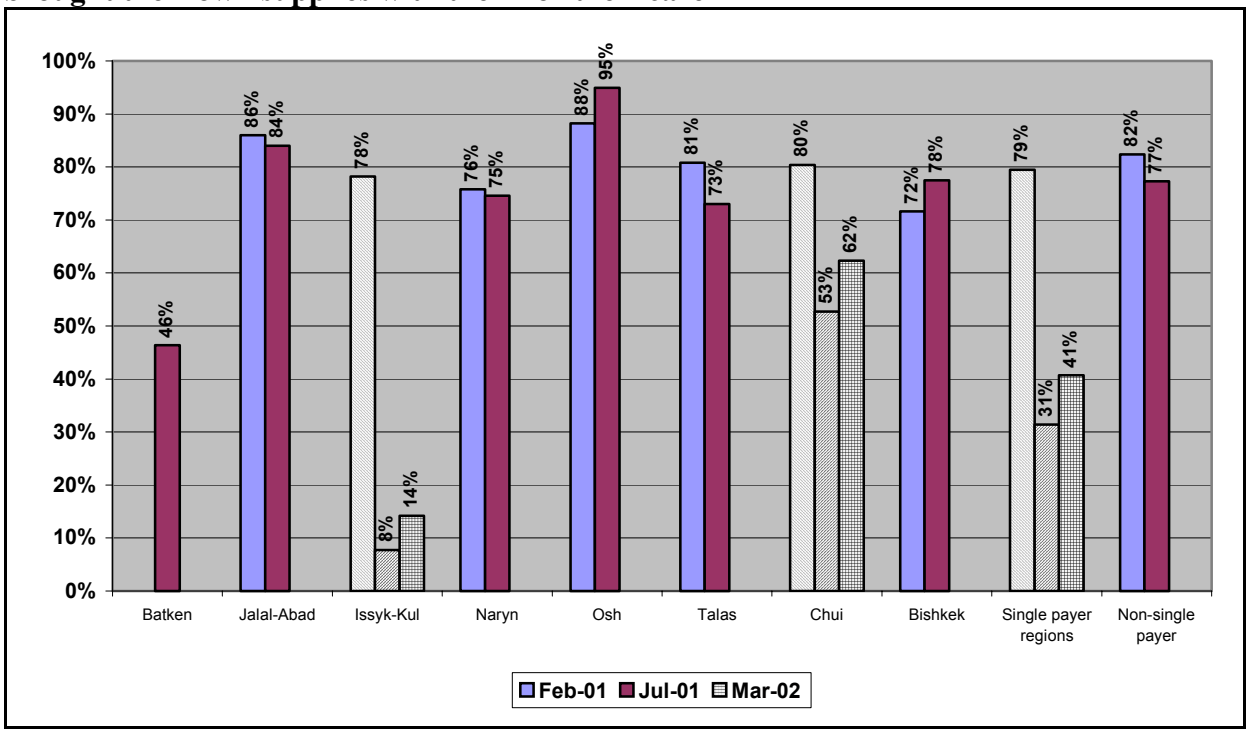
[16] The survey-based evidence presented below is drawn from Kutzin (2002).

[17] Samples were drawn from MHIF records, with patients interviewed in their homes about 3-4 months after discharge. The baseline survey comprised 2917 patients nationwide discharged in February 2001 (7.4% of total discharges in February, the month prior to the implementation of the co-payment). The first follow-up survey included 3731 patients nationwide discharged in July 2001 (9.9% of total discharges in that month). The second follow-up survey included 1456 patients discharged from hospitals in Chui and Issyk-Kul only in March 2002 (17.7% of total discharges from these two oblasts in that month).

Figure 16 shows the percent of patients who reported paying something for the drugs and medical supplies used during their hospitalization. This includes expenditures made in the hospital as well as the purchase of items outside the hospital that were used for the case. This is important because payment for drugs and medical supplies was the most widespread form of informal payment by patients, representing about 65% of patient out-of-pocket payments for hospitalization. Survey data are available from each oblast for cases discharged in February and July 2001 and from Chui and Issyk-Kul hospitals for cases discharged in March 2002. By looking at the data from each region at these different points in time, it is possible to can get an idea of the change that was associated with the introduction of the Single Payer in Chui and Issyk-Kul after February 2001.

The figure shows that in February 2001, about 80% of hospital patients had to either pay directly for drugs and medical supplies or procure these items outside the hospital for their treatment. In Issyk-Kul, the frequency of such payments fell dramatically, from 78% of patients in February to 8% of patients in July 2001. There was also a substantial decline in Chui, but still over half of patients there had to contribute for their drugs and medical supplies even after the co-payment was in place. In the other oblasts, the frequency of such payments remained high (about 80% of patients contributed directly for drugs and medical supplies). In March 2002, the percent that had to pay in Chui and Issyk-Kul increased slightly. These data suggest that the Single Payer was associated with a reduction in the frequency with which patients needed to purchase or supply the drugs and medical supplies needed for their care, with Issyk-Kul showing a greater decline than Chui.

**Figure 16. Percent of patients that either paid for drugs and medical supplies or brought their own supplies with them for their care**

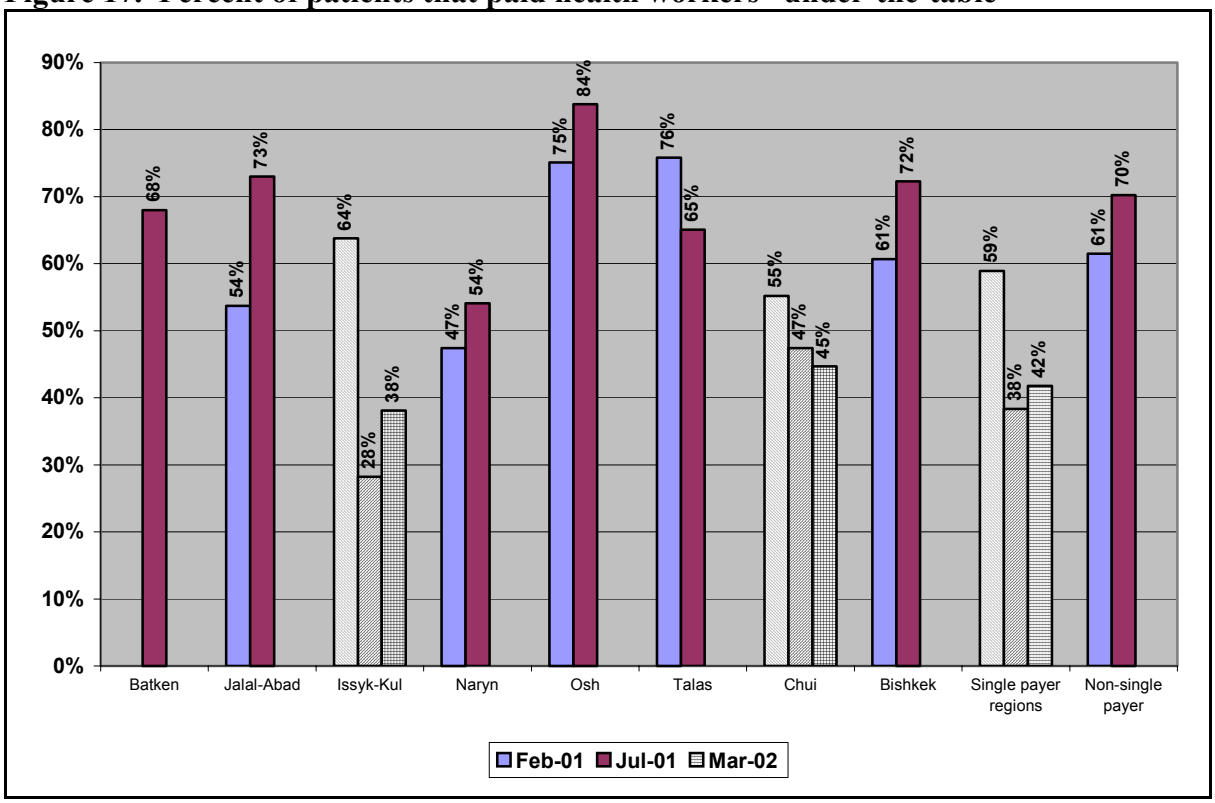



Source: WHO surveys of discharged hospital patients.

Another important form of informal payments is so-called *under-the-table* payments to health workers. Figure 17 provides evidence on the frequency of payments made directly to any health worker (doctor, surgeon, nurses, etc.) during a hospitalization. The mode of this type

of informal payment varies from gifts given by patients to their providers, to bribes solicited by the doctors from their patients. The figure shows the frequency of any kind of payment or contribution made directly to health workers. As with drugs and medical supplies, there was a large decline in the frequency of such payments in Issyk-Kul hospitals after the Single Payer reform, and a lesser decline in Chui. For the country as a whole, about 60% of patients made some form of payment to health workers. By July of 2001, this had fallen to 38% of patients in the two Single Payer oblasts, while in the rest of the country the frequency increased to 70%. In March, the frequency of these payments increased in Issyk-Kul while decreasing slightly in Chui. When compared to the rest of the country, however, it is evident that the policy did have a positive effect on reducing the frequency of these payments.

**Figure 17. Percent of patients that paid health workers "under-the-table"**



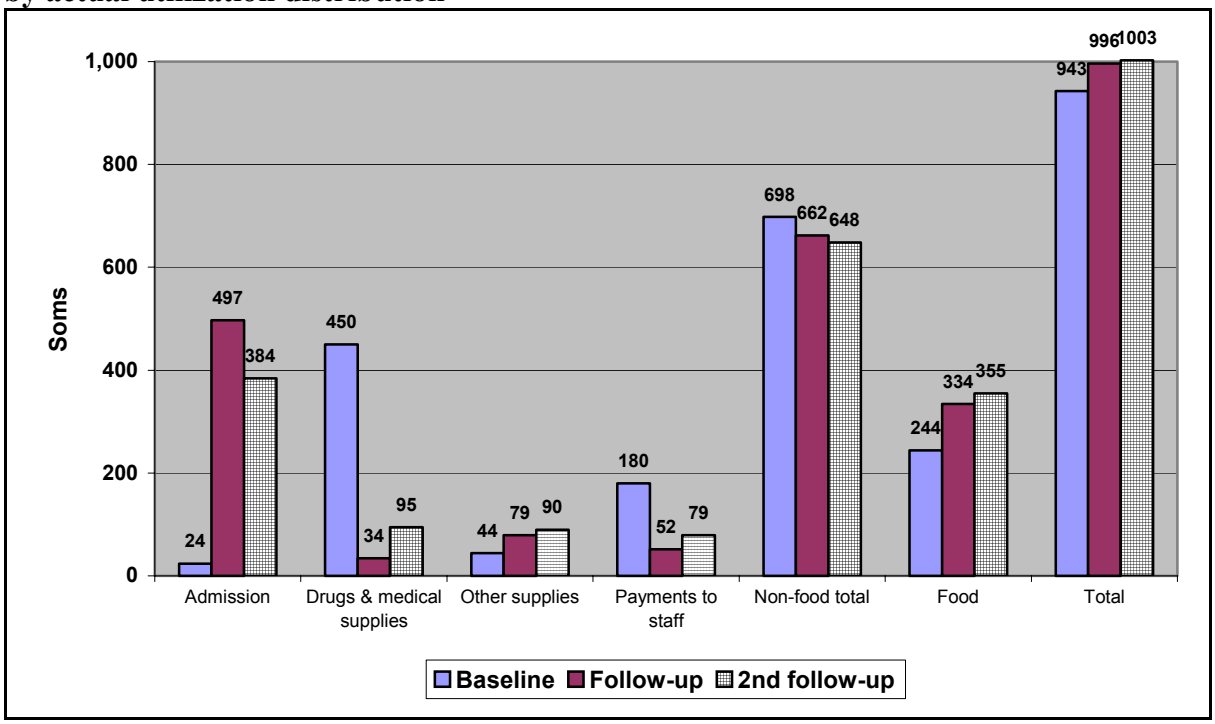

Source: WHO surveys of discharged hospital patients.

Figure 18 presents data from the baseline and follow-up surveys of discharged hospital patients on average patient payments in hospitals in Issyk-Kul, by item of expenditure. Nearly all of these categories could be considered informal, apart from the payment for admission in the follow-up survey, which represents the co-payment. The follow-up survey results suggest that, with the exception of the value of food brought for the hospitalization,[18] the policy was remarkably successful in terms of replacing informal payments with the formal co-payment. Average expenditures specifically for drugs and medical supplies were 92% less in July 2001 than in February; hence, the need for patients to search for these and

[18] Bringing food for a hospitalized family member is considered to be a normal "cultural practice" in the KR, but there is no obvious reason why this should have increased to the extent that it did. In the 2nd follow-up survey, patients were asked about their food consumption during hospitalization. In Issyk-Kul, 30% of patients only ate the food brought by family or friends, whereas 70% ate at least some food provided by the hospital. Although 59% of patients said that it was a tradition for friends and family to bring food, fully 51% of patients said that poor quality and insufficient quantity of hospital food were reasons why they ate food other than that provided by the hospital.

buy them prior to hospitalization (or for their families to do so during the case) was almost completely eliminated. Payments made directly to staff were also cut by over 70%. For all intents and purposes, the total level of patient expenditure (excluding or including food) was about the same before and after the co-payment. In March 2002, the average levels of informal payments were slightly higher than in July 2001. On balance, however, the data from Issyk-Kul suggest that the policy achieved a remarkable degree of success in reducing informal payments, particularly for health care expenses, and replacing them with a formal co-payment.

**Figure 18. Mean expenditure by all surveyed patients in Issyk-Kul hospitals, weighted by actual utilization distribution**




The baseline survey included 381 cases from Issyk-Kul, representing 11.5% of February 2001 cases. The first follow-up survey included 560 cases, representing 16.3% of July 2001 cases. The second follow-up survey included 653 cases, representing 19.6% of March 2002 cases. The survey results were weighted to reflect the actual distribution of patients in these months by insurance and exemption status, as well as by type of case (medical, surgical, and maternity).

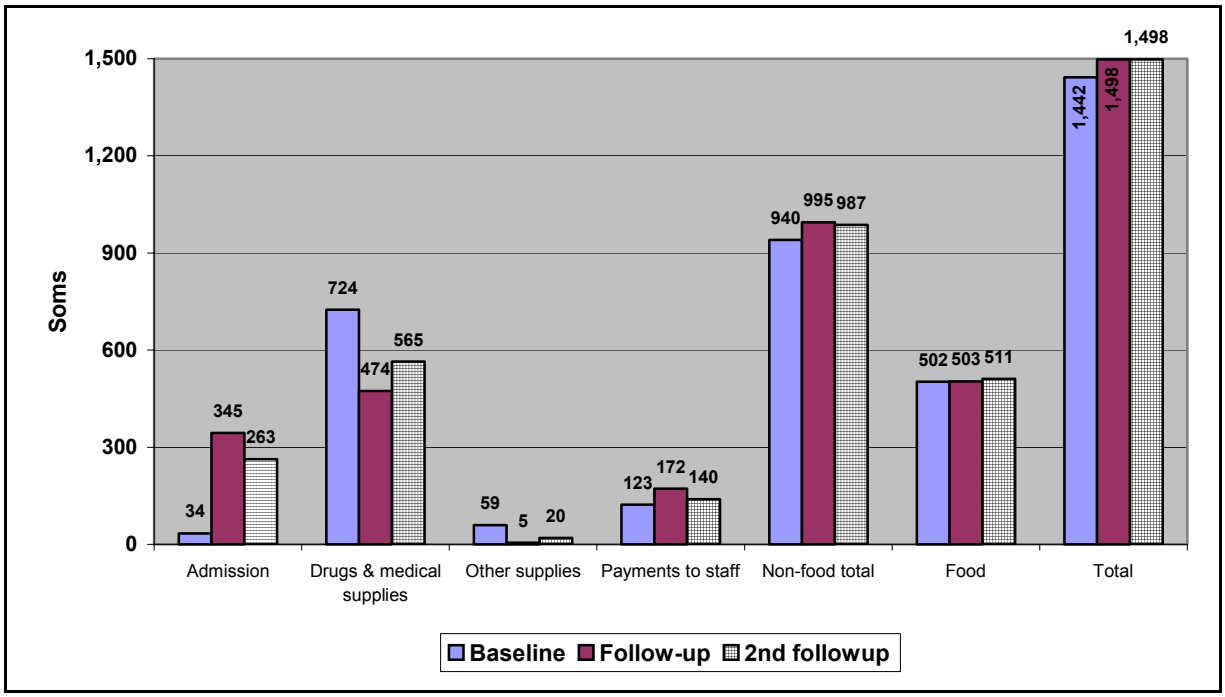
Figure 19 presents the corresponding results from Chui. The levels of out-of-pocket spending were considerably higher than in Issyk-Kul, reflecting the higher average incomes of the Chui population.[19] The results also suggest that while the co-payment seems to have had some effect in reducing patient expenditures for drugs and medical supplies (by about 36% in July 2001), this was not nearly as great as in Issyk-Kul. Moreover, there was an increase in payments made directly to health workers. As in Issyk-Kul, both non-food and total patient expenditures were very similar before and after the policy.[20] Overall, while Chui did make

[19] It also reflects the impact of the Chui Oblast Hospital in particular, which is located in the territory of Bishkek and appears to be, on average, the most expensive hospital in the country, particularly for surgical care.

[20] In response to the food questions in the 2nd follow-up survey, about 47% of Chui patients only ate the food brought by family or friends, meaning only 53% ate at least some food provided by the hospital. 46% of patients said that it was a tradition for friends and family to bring food, while 60% of Chui patients said that poor quality and insufficient quantity of hospital food were reasons why they ate food other than that provided by the hospital.

some progress in replacing informal with formal payments, it achieved much less success than did Issyk-Kul.

**Figure 19. Mean expenditure by all surveyed patients in Chui hospitals, weighted by actual utilization distribution**




The baseline survey included 505 cases, representing 7.5% of February cases from Chui hospitals. The follow-up survey included 622 cases, representing 10.9% of July cases.

How can the different performance of the policy between these regions be explained? The evidence is not definitive, but one possibility relates to differences in implementation of the broader package of health financing reforms in the two oblasts. In particular, the level of execution of planned budget allocations to the Single Payer was only about 73% in Chui as compared to 98% in Issyk-Kul (Socium Consult 2002). The Chui local finance authorities did not meet their financial commitments to the health system, in part because the appearance of seemingly new revenues from the co-payment prompted them to redirect budget funds to other sectors.[21] As a result, greater financial responsibility was shifted to patients. This suggests that the success of the co-payment is linked closely to the magnitude of prepaid funding provided.

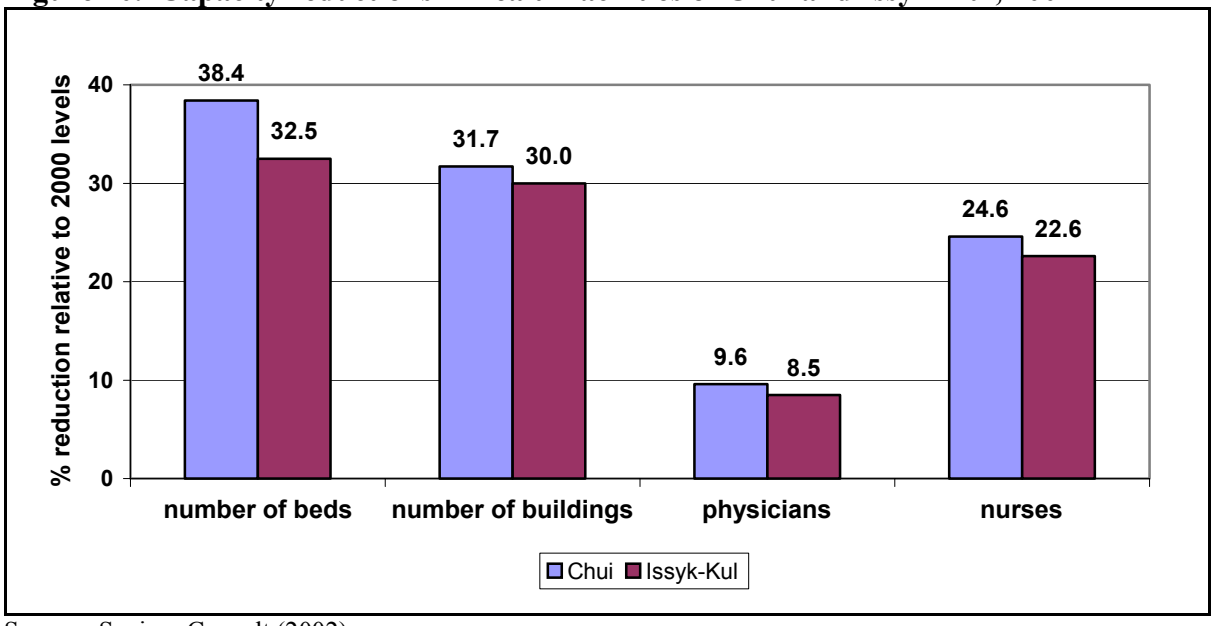
The 2nd follow-up survey implemented in Chui and Issyk-Kul in March 2002 suggests that there was some deterioration in the gains achieved by July 2001 in reducing informal payments and uncertainty. While the evidence is circumstantial, it lends further credence to the idea that the ability of the co-payment policy to succeed depends critically on the flow of prepaid funding to the Single Payer system. In addition to the issue of local budget funding are the problems with the flow of funds to the MHIF from the Social Fund that became especially severe in the second half of 2001. Figure 7 shows, for example, that while 61% of revenues collected for health insurance for employees were transferred to the MHIF for the 1st half of 2001, this fell to 37% in the second half of the year. This contributed to the buildup of arrears from the MHIF to providers, which effectively meant that there was a gap

[21] Early in 2002, however, an agreement was reached with the Chui state administration to cover some of the debt caused by the low level of budget execution 2001 (Socium Consult 2002).

in the "complementary benefits" section of the financing system described in Figure 14. With a much lower level of this prepaid source of funds available, more burden was shifted to patients in the form of increased informal payments.

**Reduction of fixed input costs.** Another important achievement of the Single Payer has been the progress made in restructuring the health system in Chui and Issyk-Kul. The "rationalization" of the health care delivery system infrastructure was intended to be the first step of the Manas reform plan approved by the government in 1996 (MOH 1996), but this was never implemented in any significant way. Not only were there political obstacles, but the pooling and purchasing arrangements in the health system created economic disincentives to restructuring. The Single Payer eliminated the economic obstacles. The change in payment methods from budget funds, combined with the restructuring of pooling arrangements and the ability to reinvest savings, implied a complete change in the incentives facing providers. In this system, there is no longer any advantage to expanding capacity as under the old normative budgeting process. Instead, the incentives (for hospitals) are to reduce costs while increasing throughput. The evidence presented in Figure 20 suggests that, in Chui and Issyk-Kul, the incentives worked to reduce hospital fixed costs. The combination of capacity reductions and co-payment revenues that were visible and subject to policy and management control altered the mix of expenditures in these two oblasts in 2001 as compared to 2000 (Figure 21). Hence, *observable* expenditures in the two Single Payer oblasts showed an increase in the share devoted to variable (patient care) inputs.[22]

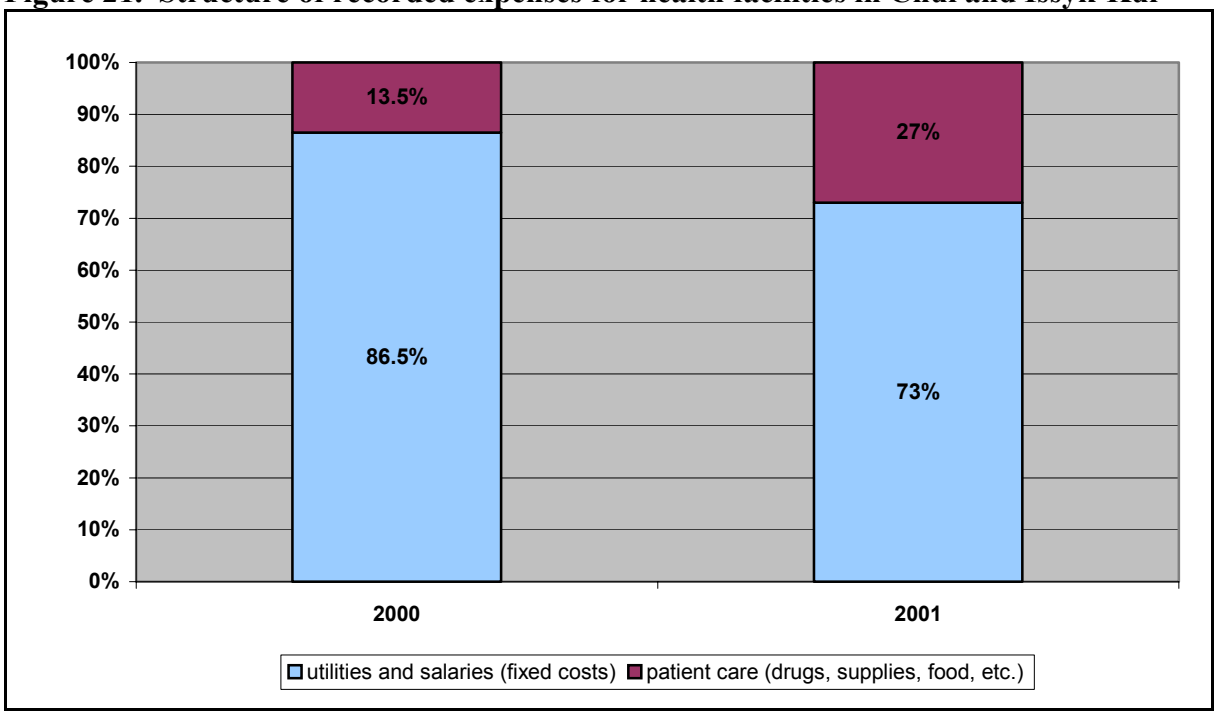
**Figure 20. Capacity reductions in health facilities of Chui and Issyk-Kul, 2001**




Source: Socium Consult (2002).

[22] In 2000, patient payments were largely informal and not detectable by accounting systems in the health sector. Hence, it is unknown what the real input mix was. The shift towards variable costs in 2001 reflects a combination of a real change brought about by capacity reductions and an apparent change arising from the transformation of informal payments into observable formal co-payments, expenditures from which were recorded and which went mainly for drugs.

**Figure 21. Structure of recorded expenses for health facilities in Chui and Issyk-Kul**




Source: MHIF data.

**Adding to the revenues subject to managerial control.** According to MOH/MHIF regulations, hospitals could use 50% of their co-payment revenues for drugs, 20% for food, and 20% to supplement staff salaries. The remaining 10% is also meant for drugs, but specifically to create a "reserve fund" to provide free drugs to the poorest population that has no documentation to show entitlement to exemption. The co-payment revenues, in combination with cost savings from restructuring, enabled increases in average drug expenditures per patient-day of 1.9 times in Chui and 2.5 times in Issyk-Kul, and also enabled salaries to be increased (relative to 2000 levels) by an average of 29% and 24% respectively (Ibraimova 2002). Hence, by formalizing patient payments, new revenues became subject to policy and management directives. Implementation of policy on the use of funds has enabled the co-payment to do more than merely substitute for informal payments; it allowed for the targeting of subsidies to key inputs (and also, through exemptions and the reserve fund policy, to poor persons). This led to improvements in access to care and efficiency in the delivery of health care services, as described previously and reflected in Figure 21). Box 1 gives an example of how restructuring was implemented in one rayon of Chui oblast and some of the resulting benefits arising from this in combination with the co-payment revenues.

**Box 1. Restructuring hospitals under new incentives: an example from Chui**

At the beginning of 2001, Issyk-Ata rayon in Chui oblast had 580 hospital beds distributed as follows: a CRH with 305, a "numerical hospital" with 125, and 6 SUBs ranging from 10 to 60 beds. In preparation for the introduction of the new financing system, a plan was developed to restructure the system to reduce costs while maintaining access to needed services. The plans were implemented, and by the end of the year, the inpatient care delivery system was reduced by 300 beds organized as follows: Territorial Hospital (former CRH) with 190 beds, plus three branches of the TH: one with 70 beds, and two with 10 beds each. As a part of this restructuring, 28 buildings were put out of operation, and additional measures were taken to reduce utility costs (e.g. installing meters, challenging bills from the utility companies). Restructuring also involved staff, with the number of positions in the rayon reduced by 543 (33% of total), including 57 physical persons. The co-payment revenues also allowed for additional expenses to be made for drugs, medical supplies, food, and staff salary supplements. As a consequence of these various changes, utility expenses in the rayon's health facilities were reduced by 1.1 million soms, which allowed for a substantial reduction in the debt of the hospitals for heat and electricity. The overall debt of the health facilities was reduced by 93% during 2001. Average salary payments to staff increased by 2.4 times as compared to 2000, average expenditure for drugs per case increased by 2.7 times, and for food by 2.35 times. Overall treatment expenses (i.e. for variable cost items) rose to 36% of inpatient care expenses in 2001 from 12% in 2000 (Isakov 2002).

### *Allocative efficiency*

Despite the clear gains in technical efficiency caused by the Single Payer (i.e. the restructuring of health facilities and the reallocation of pooled funding from fixed to variable inputs), there is no evidence of any change as yet to the broad patterns of resource allocation in the health system. From 1995 to 2001, the distribution of state budget funds across levels and types of care (e.g. inpatient, outpatient, public health) did not change to any noticeable degree (Table 17). Although the health system is restructuring to enable a greater emphasis on primary care and there are now plans to reform the SES and improve its functioning, resource allocation patterns do not yet support the rhetoric of reform. This is not a call to shift allocation patterns immediately, however. While it would appear that directing increased funding to public health services would improve allocative efficiency, this should be undertaken in due consideration of the implementation of planned reforms in the SES and the ability of the "health protection" services to absorb increased budget allocations and use the resources well.

The most hopeful sign of change with regard to allocative efficiency derives from the Additional Drug Package (ADP) of the MHIF. The implementation of the ADP yielded demonstrable gains in the efficiency of service delivery. Table 20 shows, for the three initial pilot sites, the percentage of outpatient visits for specific conditions covered by the ADP for which patients were referred to inpatient care. In nearly all cases, the percentage decreased between 2000 and 2001. The ADP was first implemented in August 2000; hence, the comparative data suggest its success in improving outpatient management of these conditions. This further implies a considerable savings on the costs of hospitalization (less the cost of the drugs covered by the ADP), as well as improved health for patients whose conditions did not deteriorate to the extent that hospitalization was required.

**Table 20. Percent of cases referred for hospitalization in ADP pilot sites**

| | Hypertension | | Stomach/duodenal ulcer | | Bronchial asthma | | Anemia | |
|---|---|---|---|---|---|---|---|---|
| Polyclinic | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 |
| Bishkek #1 | 10.8% | 2.9% | 9.6% | 7.8% | 22.0% | 17.0% | 11.3% | 1.8% |
| Bishkek #6 | 1.0% | 0.4% | 2.4% | 2.6% | 8.0% | 2.8% | 1.0% | 0.4% |
| Alamudin | 17.0% | 15.0% | 23.6% | 9.6% | 40.6% | 25.6% | 17.2% | 4.3% |

Source: MOH data (1st 9 months of each year).

This positive experience with the ADP encouraged the MOH and MHIF to expand it rapidly. In so doing, it caused a changed in the way that the MHIF allocates its health care resources. In its planning process each year, the MHIF has to estimate the relative size of its expected revenues that it will devote to inpatient care and primary care. In 1998, the MHIF decided to maintain the 1997 base rate for hospital payment in nominal terms.[23] The total size of the inpatient payment pool was thus determined by multiplying this base rate by the projected number of inpatient cases. This process made the size of the primary care pool a residual (total MHIF revenues less administrative costs and the inpatient payment pool), and effectively gave higher priority to inpatient care. Given the limited budget of the MHIF and the implicit priority given to contracting for inpatient care, the MHIF was only able to contract with about half of the country's FGPs in 1999 and 2000. The ADP is funded out of the FGP capitation payment, and hence this constraint on contracting FGPs also constrained the ability of the MHIF to roll out the ADP. The desire to extend the ADP rapidly led to a reversal in the way that the MHIF established its resource allocation priorities in 2002. The MHIF first established contracts with all FGPs in the Single Payer regions (plus those from other regions that had already been contracted in previous years) and ensured their capitation payments. This left the inpatient pool as a residual, making primary care the explicit priority.[24] This suggests the importance of maintaining the momentum for this reform and ensuring the flow of funds to the MHIF.

### *Mitigating the effects of poverty*

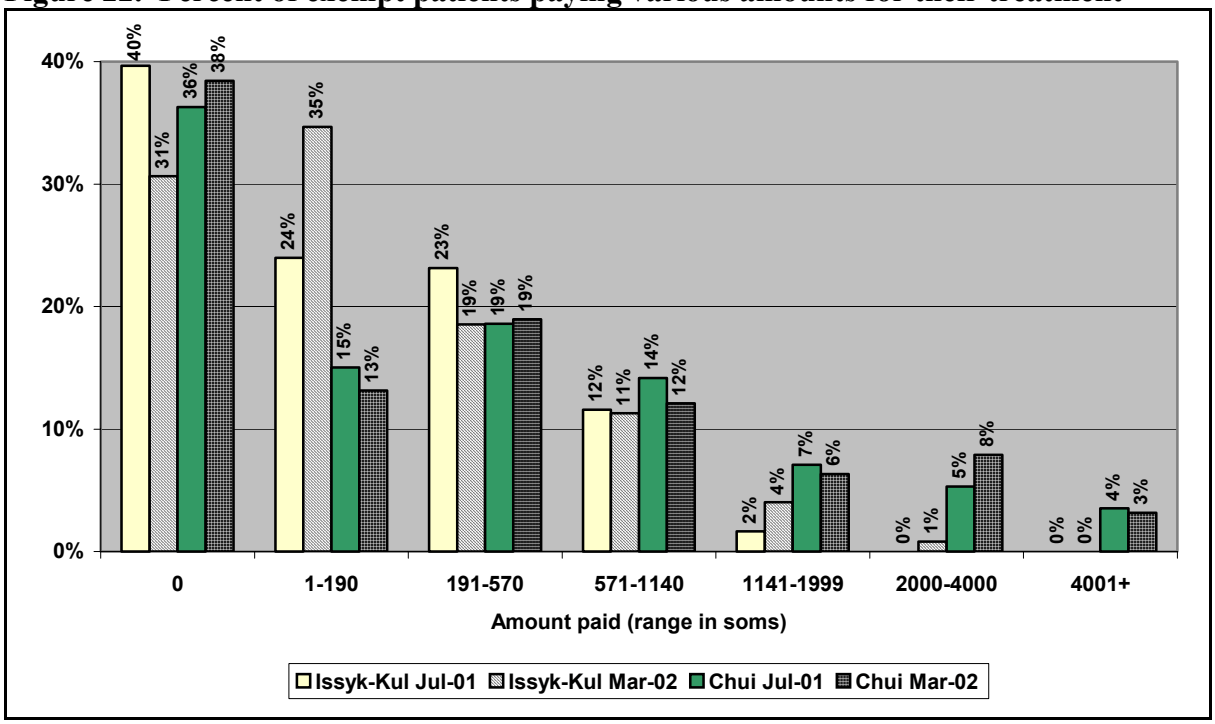
The Single Payer reform and definition of the State Benefit Package has allowed for health spending to be better able to mitigate the effects of poverty in the health sector. By pooling all local budget revenues at oblast level, the potential for risk protection for the population has been greatly enhanced. Moreover, the establishment of higher payments for persons in exempt categories has enabled subsidies to be targeted to individuals in these groups. Also, as noted above, hospitals have set aside 10% of their co-payment revenues in their "reserve funds" to provide free drugs for locally identified poor patients who lack documentation of any right to exemption. From March to December 2001, MHIF data indicate that about 9.5% of patients in Chui and Issyk-Kul received free treatment, of whom 57% were exempted because of their personal or disease characteristics, with the remaining 43% provided care at the expense of hospital reserve funds (Ibraimova 2002). Hence, the policies associated with the formalization of private payments for health care have led not only to increased transparency but have also supported the targeting of subsidies to disadvantaged persons.

[23] This has remained unchanged.

[24] Because the MHIF believed it was politically necessary to maintain the same inpatient base rate, this shift in resource allocation priorities also led them to impose hospital-specific volume and budget caps.

The patient survey data show, as might be expected, that some patients who were officially categorized as exempt actually paid something for their treatment. Figure 22 shows the percent of exempt patients that paid amounts within various ranges in the first and second follow-up surveys in Chui and Issyk-Kul (official exemptions were only recorded on the clinical information form after the Single Payer was introduced). In July 2001, about 40% of exempt patients in Issyk-Kul and 36% in Chui reported that they did not, in fact, spend anything for their treatment. The corresponding figures for March 2002 were 31% for Issyk-Kul and 38% for Chui. So in reality, most exempt patients were paying something for their treatment. On average, however, they paid much less than non-exempt patients.

**Figure 22. Percent of exempt patients paying various amounts for their treatment**



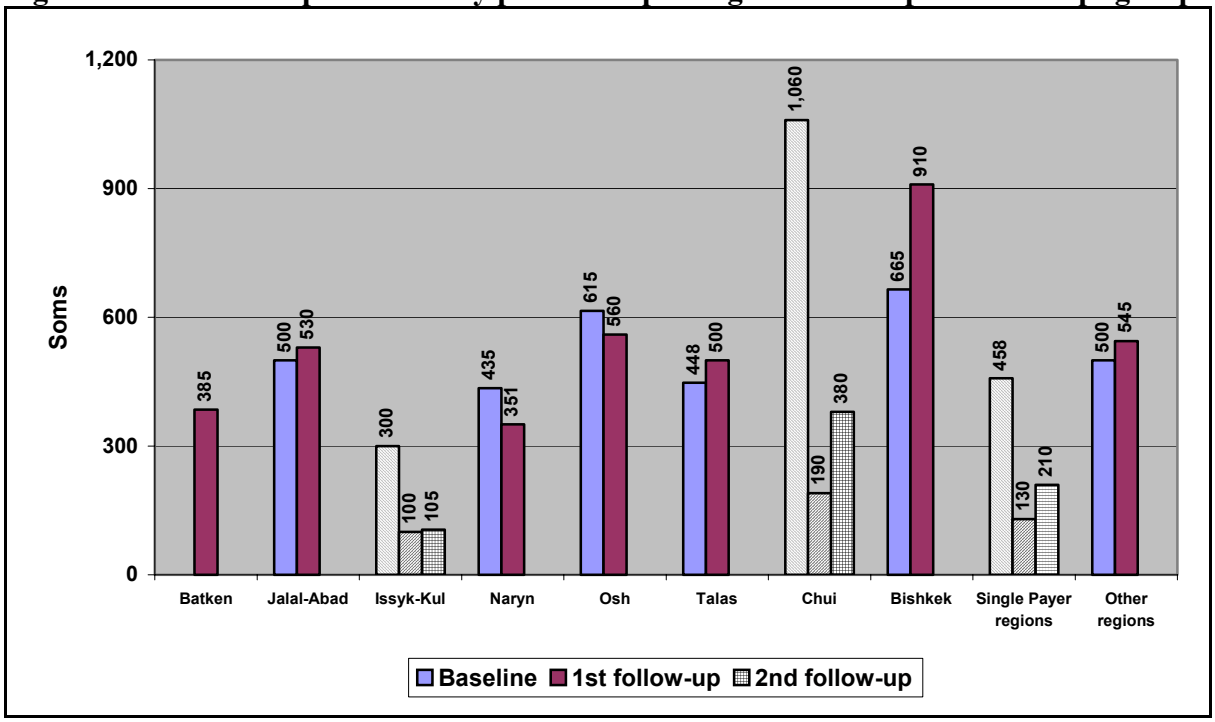

Source: WHO surveys of discharged hospital patients. July 2001 survey included 121 exempt cases in Issyk-Kul and 113 in Chui. March 2002 survey included 124 exempt cases in Issyk-Kul and 190 in Chui.

While the evidence suggests that the exemption system is far from perfect (i.e. most exempt patients had to pay something for their care), a more detailed analysis shows that the system did have a substantial protective effect for persons in these categories. Ideally, an assessment of this system would compare what persons in exempt categories were paying before the co-payment and after in both the Single Payer oblasts and the other regions of the country. It is not possible to make this comparison directly, however, because the inpatient Clinical Information Form (CIF) data only includes exemption codes in those regions in which the co-payment was implemented (i.e. Chui and Issyk-Kul for the two follow-up surveys). In the survey, however, patients were asked if they belonged to any of the various categories that qualify for exemption (e.g. war veteran, various types of disability, heart attack patient, TB patient, etc.). A comparison of this "self-reported" exemption status with the exemption status recorded on the CIFs from Chui and Issyk-Kul in the two follow-up surveys shows a fairly close correspondence. Of the 272 surveyed patients from these two oblasts reporting that they were in an exempt category in July 2001, for example, 209 (77%) were coded as an exempt patient on the CIF. Of the 235 surveyed patients in that month coded on the CIF as exempt, 209 (89%) identified themselves in the survey as belonging to at least one exempt category. For March 2002, the corresponding figures are 69% of self-reported exempt coded

as exempt on the CIF, and 92% of those coded as exempt on the CIF reporting membership in an exempt category. For both of the follow-up surveys combined, the self-reported exemption status and exemption status reported on the CIF are closely correlated (Spearman's rho coefficient of 0.759, significant at .01 level).

Based on this fairly close correlation between self-reported and "actual" exemption status, it is reasonable to compare average expenditures by persons in self-reported exempt groups before and after the co-payment, in the Single Payer and other regions. Figure 23 shows the median[25] levels of expenditures by persons who reported that they were in a category that would qualify for exemption. The comparison by region and at different points in time allows for an assessment of the impact of the Single Payer reform in Chui and Issyk-Kul, while controlling for seasonal effects. The median amount spent by persons who reported themselves in an exempt group fell by 3 times in Issyk-Kul and 5.6 times in Chui between the baseline and 1st follow-up survey. Elsewhere, patterns of change varied by region, averaging a slight increase in median spending levels across all the non-Single Payer regions. This evidence, taken together with that presented in Figure 22, suggests that the exemption system within the Single Payer reform did not function perfectly but was very effective at protecting exempt persons from high levels of out-of-pocket spending.

**Figure 23. Median expenditures by patients reporting membership in an exempt group**



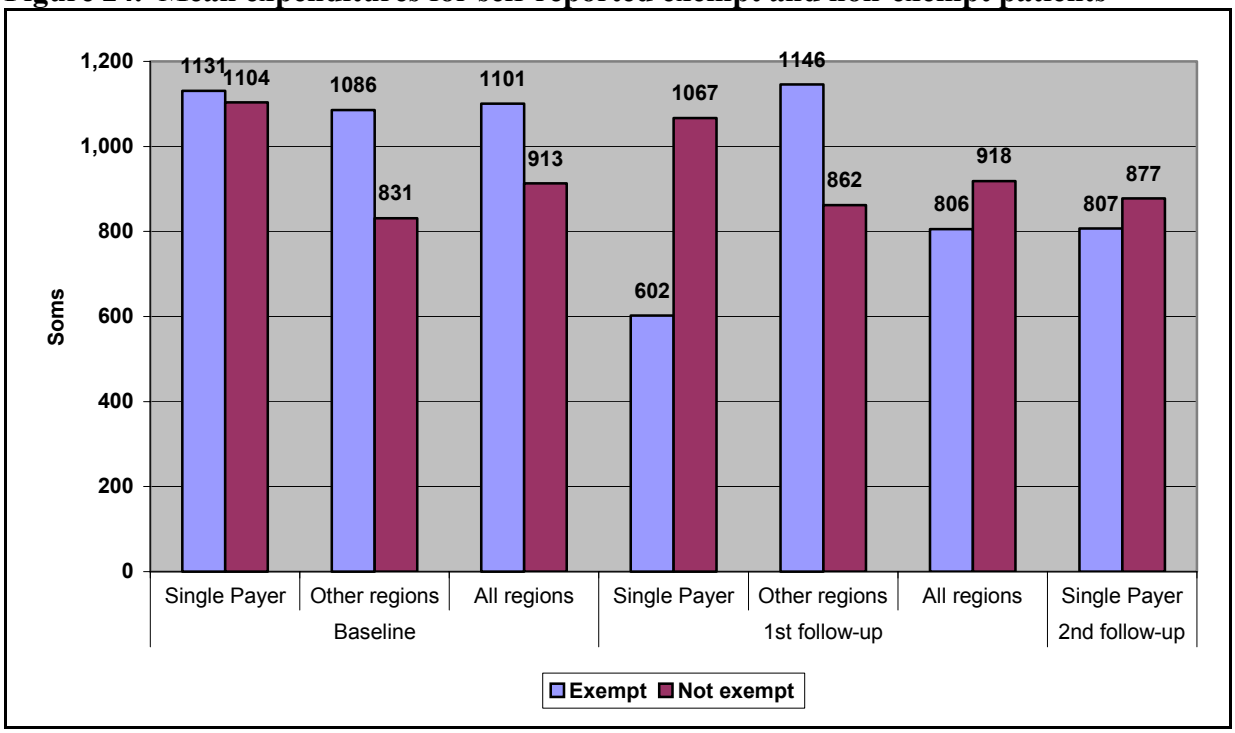

Source: WHO surveys of discharged hospital patients. The baseline survey included 262 self-reported exempt cases. The first follow-up survey (July 2001) included 435 self-reported exempt cases, and the second follow-up survey (March 2002, Chui and Issyk-Kul only) included 351 such cases.

Analysis of household survey data conducted in March 2001 (Falkingham 2001) showed that, perversely, being part of an (self-reported) exempt group was associated with higher rather

[25] The median is the mid-point in the distribution of values in each category (e.g. for all of the self-reported exempt cases in the baseline survey of Issyk-Kul patients, half spent more than 300 soms and half spent less than 300 soms). It is a measure of central tendency that is affecting by high outlying values, unlike the mean. If the mean values were used, however, all the values in the graph would be higher, but the conclusions would be the same.

than lower out-of-pocket payments. The data from that survey included hospitalizations that occurred between March 2000 and February 2001 (before the co-payment was implemented). The data from the WHO patient surveys implemented in 2001 and 2002 suggest that this situation has changed. As shown in Figure 24, mean levels of patient spending were higher for self-reported exempt persons than for non-exempt persons in February 2001, consistent with the earlier survey results (Falkingham 2001). In July 2001, however, different patterns emerged in the Single Payer oblasts as compared to other regions of the country. In Chui and Issyk-Kul, the average amount paid by self-reported exempt persons fell substantially compared to February, whereas that paid by non-exempt persons did not change much. In the other regions, the amounts paid by the exempt remained higher than that paid by the non-exempt.

**Figure 24. Mean expenditures for self-reported exempt and non-exempt patients**




Source: WHO surveys of discharged hospital patients. The results are not weighted by type of case, level of hospital, or insurance status of the respondents.

Despite the positive steps taken to protect specific population groups and the positive results obtained, there is a long way to go to make hospital care more affordable to the population. In February 2001, 50% of patients reported that finding the money for hospitalization was "difficult" and another 13% said it was "very difficult". For Chui and Issyk-Kul, the corresponding figures were 43% and 16%. In March 2002 in Chui and Issyk-Kul, there was only a slight reduction, with 41% reporting "difficult" and 12% reporting "very difficult". Patients also reported using a variety of methods to raise money to pay for hospitalization. As shown in Table 21, patients in Chui and Issyk-Kul were initially more likely to report that they needed no special money-raising techniques (10% as compared to 7% in the other regions), and this increased to 16% in July 2001 while falling in the other regions to 5%. This may indicate a greater protective effect against impoverishment in the Single Payer oblasts, but more evidence is needed before strong conclusions can be reached about the extent to which the Single Payer reforms have improved protection against potentially impoverishing out-of-pocket health expenditures.

**Table 21. Percent of patients using various strategies to raise money to pay for hospitalization**

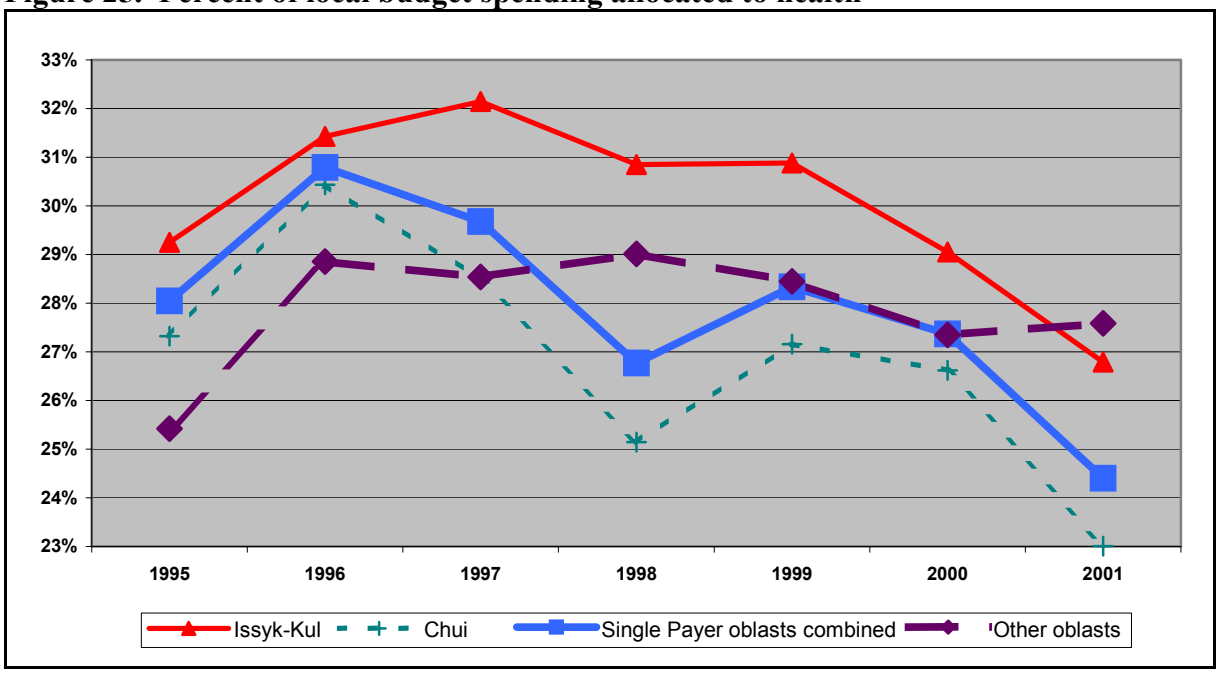
| | Chui and Issyk-Kul | | | Other regions | |
|---|---|---|---|---|---|
| | Baseline | 1st follow-up | 2nd follow-up | Baseline | 1st follow-up |
| Borrow money | 25% | 22% | 21% | 16% | 20% |
| sell farm animals | 12% | 11% | 6% | 14% | 14% |
| sell produce | 8% | 9% | 7% | 8% | 11% |
| sell valuables | 1% | 0% | 0% | 0% | 1% |
| use savings | 32% | 34% | 34% | 42% | 49% |
| significantly decrease current expenses | 16% | 11% | 11% | 16% | 16% |
| help from relatives | 28% | 29% | 28% | 33% | 31% |
| help from charitable associations | 0% | 0% | 0% | 0% | 0% |
| Other | 2% | 2% | 3% | 2% | 1% |
| Nothing special | 10% | 16% | 16% | 7% | 5% |

Source: WHO surveys of discharged hospital patients (2917 patients in February 2001, 3731 patients in July 2001, and 1456 patients (Chui and Issyk-Kul only) in March 2002).

### *Threats to the success of the Single Payer reform*

**Transparency and stability in the flow of public funds into the health system.** In both Issyk-Kul and Chui, the level of officially reported revenues increased as a consequence of the co-payment. However, the patient survey results indicate clearly that the overall average level of out-of-pocket payments by patients was about the same after the co-payment as before. This suggests that ***the co-payment is not a new source of funding for the health system***. Instead, it is a transformation of an existing funding source, making it more transparent and subject to policy and management control. Therefore, it is essential that the level of local budget provision not be related to any data or projections on the actual or expected level of co-payment collections. To the extent that local governments withdraw budget allocations from the health sector in response to the collection of co-payment revenues, they are ***effectively penalizing the success of the policy in improving transparency***. The long-term implication of such behavior would probably be to undermine the policy and drive patient spending underground once more. An examination of the changing pattern in the share of local budgets allocated to the health sector that occurred in 2001 gives great cause for concern in this regard. As shown in Figure 25, the share of health in local government spending declined substantially in Chui (13.6%) and Issyk-Kul (7.8%) in 2001 as compared to 2000, whereas not much change occurred in the other oblasts (a slight increase of 0.9%, excluding Bishkek). This difference between the Single Payer and other oblasts suggests that the appearance of the seemingly new co-payment revenues, or the reduction in building, beds and staff, may have led local finance authorities to believe that less funding was needed by the health system and that they could reallocate to other sectors. Hence, while resource allocation methods and incentives have changed within the health sector, the success of these changes is threatened by the failure of the broader government to change from historical input-based budgeting processes.

**Figure 25. Percent of local budget spending allocated to health**




Source: Treasury data. "Other oblasts" excludes Bishkek.

In addition to penalizing improved transparency, such behavior by local governments also damages efforts to reduce poverty and mitigate its effects. As noted previously, one aim of health financing policy is to shift the mix of funding sources towards prepayment (general or payroll taxation) rather than out-of-pocket payment by patients at the point of service. International experience demonstrates clearly that out-of-pocket payment is the most regressive form of payment for health care. It also poses a financial barrier to access to care, a barrier that is more difficult for poorer persons to overcome. By reducing budget allocations in response to an apparent increase in out-of-pocket spending, the mix of funding sources is shifted to a greater reliance on out-of-pocket payment. This would be problematic from an equity perspective even if this meant that the total level of revenues (reimbursements from budget and insurance funds plus out-of-pocket spending) remained the same, because it would mean an increased percentage of total spending would come from out-of-pocket payments. Since the survey evidence suggests that patients were paying about the same before as after the co-payment, the likelihood is that a withdrawal of pooled funding would cause a decline in the overall level of funding for the health system as well as a regressive shift in the mix of funding sources.

While new problems have arisen in the provision of funds from local governments to the oblast pool, there remain problems in the transparency of funding flows to the MHIF national pool of funds from the Social Fund. As noted above and reflected in Figure 7, Figure 8 and Table 14, the MHIF has never received the level of funding from the Social Fund to which it is legally entitled. While the MHIF had adapted to some degree of "under-transfer" from the Social Fund, this reached crisis proportions during 2001 and 2002 as the very low level of transfers from the Social Fund led to an MHIF debt of 144.8 million soms to contracted health facilities by the end of September 2002 (MHIF data). Long delays in payment resulted, which forced hospitals to turn to patients to fund needed inputs.

When financial flows are based on contracts between purchaser and provider, a predictable level and flow of funding is essential. The purchaser needs this in order to plan and establish

affordable payment rates, and the providers need this for their internal management planning and to maintain confidence that they will, in fact, be paid in accord with the information they provide on the number of enrolled persons and treated cases. Interruptions in the flow of funds threaten the financial stability of the health system. In the short run, health facilities survive by shifting the cash flow problem to patients, with consequent harmful effects on equity and poverty. As the problems continue, the viability of the entire system can be undermined and discredited in the eyes of the population and the providers.

**Geographic imbalance in financial and human resources.** A major challenge facing the health system and the reform process is to improve geographic equity in the distribution of health resources. Inequality in the distribution of financial resources was shown in Figure 10. There is also an unequal distribution of health personnel, as shown in Table 22. The staffing patterns reveal that the populations of different regions have differing degrees of access to providers (e.g. the population of Bishkek has nearly twice as many practicing doctors per capita as does the population of Jalal-Abad), and also that they face different mixes of providers. In Batken, Jalad-Abad, Naryn, Osh and Talas, there are over 4 nurses per physician, whereas in Chui and Issyk-Kul, there are less than 3 (and in Bishkek, only 1.3 nurses per physician). Hence, the type of health system available to the population is dependent, to some extent, on the region in which a person lives. Moreover, these oblast-level averages mask variations within regions. Some rural rayons experience severe shortages of qualified physicians, placing their populations at great risk for health care (Socium Consult 2002).

**Table 22. Distribution of health workers by region, 2001**

| | Physicians per 10000 | Nurses per 10000 | Nurses per physician |
|---|---|---|---|
| **KR** | **18.0** | **54.9** | **3.1** |
| Bishkek | 23.5 | 29.7 | 1.3 |
| Chui | 14.1 | 38.9 | 2.8 |
| Naryn | 18.5 | 75.3 | 4.1 |
| Issyk-Kul | 15.7 | 44.8 | 2.9 |
| Talas | 15.1 | 62.0 | 4.1 |
| Jalal-Abad | 12.4 | 54.0 | 4.4 |
| Osh | 13.5 | 56.7 | 4.2 |
| Batken | 12.6 | 61.2 | 4.9 |

Source: MOH Health Information Center. Data reflect practicing physicians and nurses.

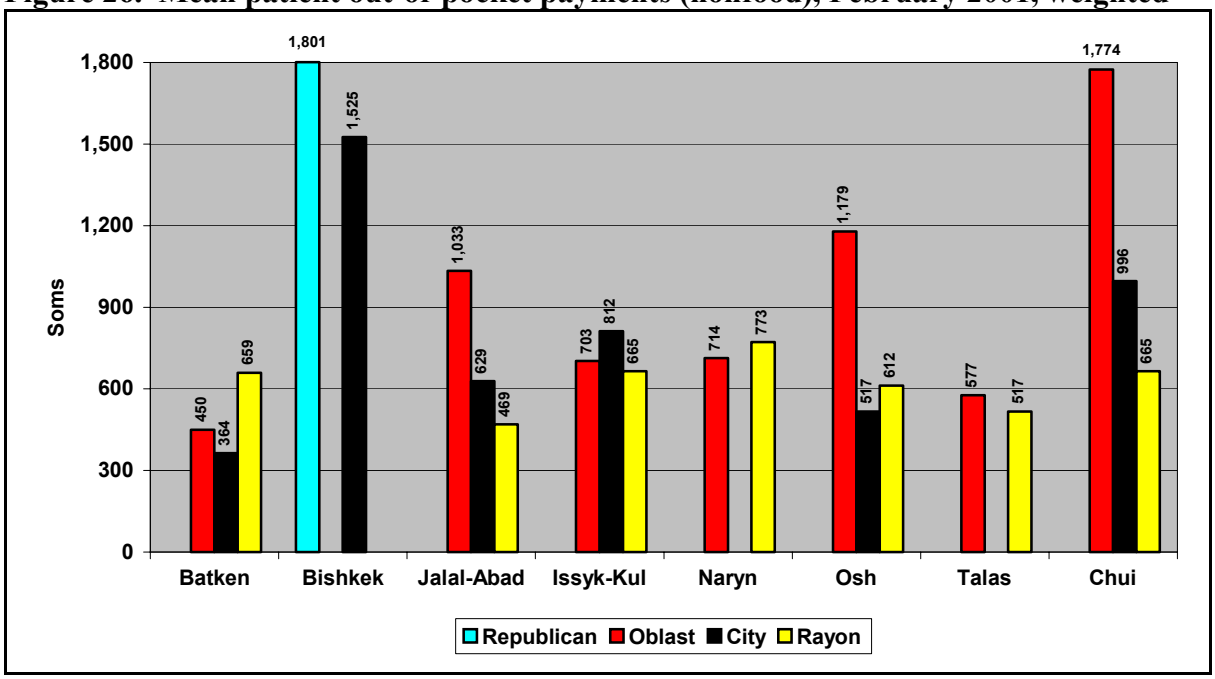
The available evidence suggests, therefore, a need for reallocation of financial and human resources to achieve a more equitable and pro-poor health system. The MOH and World Bank agreed to a plan (Kutzin 2001b) to reallocate about 27% of Republican health spending over a 10-year time period beginning in 2003. Such reallocation would do much to redress the imbalance in per capita resource allocation favoring Bishkek. Initiation of this redistribution by the beginning of 2003 was a condition of the Health II project funded by the World Bank. It was foreseen that a key step in this process would be to implement the Single Payer in Bishkek, putting all health facilities there (both City and Republican) on a territorial basis and pooling funds (other than those subject to redistribution). This was expected to lead to consolidation of physical and human resources corresponding to the needs of the population served by these facilities. To facilitate this process, an agreement was reached between the Bishkek City Administration, Bishkek Parliament, MOH, and MHIF to create

the Merged City Health and Territorial Department of the Health Insurance Fund (Kutzin and Murzalieva 2002). However, there remained great resistance to the implementation of the Single Payer reforms in Bishkek that were meant to commence in July 2002. This has come both from the heads of the Republican health facilities (defending their interests) and the Bishkek City authorities who have not agreed to the possibility that City funds could be used to pay for care provided in Republican health facilities (Socium Consult 2002). Moreover, existing legislation does not allow for Republican money to be transferred to a City department, or vice versa, and the Merged Department (as part of the City Administration) could thus not provide a means for pooling Republican and City money. To enable this pooling to occur so that the Single Payer can be implemented in Bishkek, strong political will and appropriate institutional arrangements will be needed. The latter may require replacing the Merged Department with a Bishkek Territorial Health Insurance Fund that is not a part of the City Administration.

**Promoting geographic equity in financial contribution by patients.** Another equity issue facing the health reform process has to do with the level of co-payment to be implemented around the country. In 2001, the co-payment levels were the same in Chui and Issyk-Kul. It could be argued that this was inequitable, as the Chui population has higher average living standards than that of Issyk-Kul. In addition, survey evidence from 2001 shows that patient payments varied widely by region (Figure 26). Bishkek was the most expensive region for hospital care, a fact further supported by the high level of spending at Chui Oblast hospital, which is located on the territory of Bishkek. In some regions, the level of patient spending at the oblast hospital was substantially greater than in the rayon hospitals. This is true of Chui, Osh and Jalal-Abad, and may reflect variations in income between urban and rural populations within these oblasts. The roughly equal levels of spending across all types of hospitals in Issyk-Kul, Naryn, Talas and (to some extent) Batken may suggest less variation in ability to pay within these regions.

The wide differences in average patient payments shown in Figure 26 between Bishkek and the rest of the country lends support to a policy to have higher levels of co-payment for hospitals located in the capital city. As noted above, users of these hospitals tend to have higher average incomes than users of other hospitals in the country, so they would be better able to afford higher charges. In addition, the survey provides evidence that higher co-payment levels in these hospitals would be consistent with the prevailing pattern of informal patient spending. Hence, higher co-payment levels in Bishkek would be consistent with policy objectives in terms of equity as well as acceptability to the population. Even outside of Bishkek, there is considerable variation, and some adjustments of the co-payment levels would seem important to ensure that these roughly reflect ability to pay.

**Figure 26. Mean patient out-of-pocket payments (nonfood), February 2001, weighted**




Source: WHO survey of 3,256 hospital patients discharged in February 2001 (July for Batken), reflecting situation prior to the introduction of co-payment. The survey results were adjusted by weights reflecting the actual mix of insured and uninsured (and exempt and non-exempt) medical, surgical and maternity cases in the hospitals of each oblast in the survey month. Survey implemented by the National Statistical Committee.

The challenge with regard to implementing such a pro-equity measure is that the level of co-payment is inversely related to the size of the base rate paid to hospitals per case. Thus, to support lower co-payments in Talas, Naryn, and Batken, these regions would need to have higher levels of funding per case in their pools. But these poorer regions are precisely those that are less able to provide the needed funding from their local budgets. This implies a need for central government to promote redistributive policy. A possible solution to this (in addition to the redistribution of Republican health spending) is to reform the basis for allocating categorical grants to health to ensure that there are adjustments for the number of persons in each region that are entitled to free medical care (Socium Consult 2002). In addition, the payments from the MHIF national pool could incorporate a regional adjustor to enable poorer regions to manage with lower co-payment levels.

The experience to date with the ADP reveals that the equity challenge is not limited to hospital care. Data on the share of drug costs that are reimbursed by the ADP suggests that the scheme has worked to control drug prices, thereby improving financial access. In July 2001, for example, reimbursements were about 41% - 63% of the total retail cost of covered drugs across the range of contracted pharmacies. The benefits of this system were greatest in Bishkek. Data from the pilot sites reveal that the prices facing patients were higher in Chui than in Bishkek, and the corresponding reimbursement percentage was less. Even though the Chui pilot site was in a rayon adjacent to Bishkek, the private pharmacy market was essentially a monopoly, whereas the Bishkek market was competitive. This lack of competition, as well as higher supply costs, exists to a greater extent in most of the rest of the country than in the initial pilot sites. This gives cause for concern regarding the extent to which rural populations will benefit from the ADP. Since the package is funded out of the FGP capitation payment, one possible response to this is to build a geographic adjustor into the payment formula to increase the per capita drug budget for FGPs located in rural areas

(Kutzin *et al*. 2002). Implementing such an adjustor implies a redistribution of resources from urban to rural areas.

## Recommendations

A series of recommendations follow from the analysis of the health reforms and the broader health and health expenditure information presented above. While much of this has to do with sustaining and extending the gains arising from the Single Payer reform, there are also other challenges that the health system must address and that require new investment. These are described below.

### *1. Support the Single Payer system and extend it nationwide*

The Single Payer is a comprehensive health financing reform that addresses many of the major shortcomings of the inherited system. It is conceptually sound, in terms of expanding risk pooling and establishing appropriate incentives. It has also achieved results in terms of improved technical efficiency, improved transparency to the patients with regard to their financial obligations, reduced informal payments, and improved targeting of services to persons in disadvantaged groups. Moreover, the system is an example of how to use public resources to "buy outputs" rather than "fund inputs". If more money flows into this system, the results can be defined in terms of increased payments per enrolled person in primary care or increased payment per treated case in inpatient care, rather than just increased expenditure on various line items. Despite its obvious success, the system is at risk because of instability in the flow of funds into the system from local governments and the Social Fund. It is also at risk because the reforms are only grounded in temporary instructions, rules and provisions. It is essential to ground this reform in legislation.

**Change the basis for budgeting and avoid penalizing success.** While the Single Payer reform has demonstrated clear gains in transparency and efficiency, within the health system, its success is jeopardized by a lack of transparency in the flow of funds to the pools managed by the MHIF at oblast and national levels. Paradoxically, a major challenge for the government is to develop an approach to budgeting that does not punish this success. The evidence on both the transfer of revenues to the MHIF national pool (Table 14), and the percent of local government expenditure allocated to the health sector in 2001 (Figure 25), indicate that, indeed, the consequence of success in health financing reform is a reduced level of funding. Clearly, this has to change if the momentum for reform is to be maintained. In the Review of Social Expenditures (World Bank 2001a), the first recommendation to enable change in the health sector was to "change the basis for determining the size and allocation of budgets" (p.25, volume 2). This recommendation stands as a critical priority. In the context of the Single Payer, the process for determining the level of funding for the health sector from local budgets and categorical grants in any region (and for the flow of funds to the MHIF national pool) must be completely divorced from considerations of the sector's inputs (e.g. number of hospitals, beds, and staff). Within the health sector, the reforms are working because payment methods have been re-oriented from inputs to outputs. It is essential that the method of providing funds to the health sector be similarly re-oriented.

The process of determining the magnitude of funding to provide to the oblast and national MHIF pools must be similarly divorced from considerations of the level of revenues collected from co-payments. The available evidence shows clearly that patients were paying about as much before as after the co-payment was introduced. The only difference is that these payments are now transparent. Any reduction in the provision of budgets to the health sector

in response to this would effectively penalize this gain in transparency and run counter to the objective of improving governance and transparency in the public sector. It would also impact the poor disproportionately, as a greater share of health spending would have to come directly from patients.

**Categorical grants.** The system of categorical grants is meant to fund priority services rather than just meet personnel costs. Hence, reforms in the distribution of CGs for health could be ideally suited to support the Single Payer reform. In particular, if the distribution of CGs by oblast was based on a needs-based capitation formula (e.g. relative population size weighted by the number of persons in exempt categories in each oblast), this would be of great support to the implementation of the Single Payer, as it would also reflect a shift in allocating resources based on inputs to an allocation based on outputs (i.e. population coverage, with an adjustment for relative need). Apart from the methods used to distribute CGs for health across regions, there is also a need to ensure that an adequate level of CGs for health is maintained. Approved budgets for 2002 signaled a substantial decrease in the absolute level of CGs for health. There is no basis for such a decrease, which can only serve to undermine the incentives created by the new health financing system.

**Promote predictability in funding flows to the MHIF at national and oblast levels.** With a predictable budget envelope over a multi-year period (as with a reasonably enforceable medium-term budget framework), the ability of the health reforms to achieve gains in efficiency and transparency would be greatly enhanced. This would create a "space" within which the reforms could be implemented, enabling managers in the system to respond to the incentives with the knowledge that all efficiency gains would be internalized. Reforms to promote stability and predictability in funding flows must extend to the MHIF national pool for insured persons as well as local budget contributions to the oblast pools. A solution is needed to the problems in funding flows from the Social Fund to the MHIF. One possibility is that the responsibility for funding the MHIF contributions on behalf of pensioners is shifted from the pension fund to the Republican budget. If this is done, however, it should be based on a formula that relates the contribution explicitly to the number of pensioners and a defined contribution rate (e.g. perhaps related to the overall MHIF capitation rate formula for primary care, the MHIF base rate for inpatient care, and data on the inpatient utilization rate of pensioners). The key issue is that, whatever formula is developed is adhered to so that the MHIF can plan its budgets and enter into contracts with providers with confidence that the planned level of funding will be provided in full and in a timely manner.

### *2. Enhance equity in the distribution of resources in the health sector*

Improving equity in the distribution of resources is always challenging in the context of a decentralized budgetary system. In the KR, there is an agreed strategy between the World Bank and the government to improve equity by progressively redistributing a portion of Republican health spending. The method of redistribution has not been defined, but it could occur through some type of population-based formula that allocates to the TDMHIF in each region, or through a simpler but potentially more effective process of providing the funds directly to the MHIF at national level. The latter method may appear to be centralizing funding, but as shown in Figure 12, the payment methods of the MHIF (capitation for primary care and payment per case for inpatient care) achieve a substantial amount of geographic redistribution, provided that the MHIF is able to contract with all FGPs. Even greater equity can be promoted by incorporating geographic and/or rural adjustors into the payment formulas. As noted above, initiation of this redistribution will require the

government to overcome substantial political opposition from the Republican Institutes and the Bishkek City health authorities.

A related equity challenge is to establish a fairer co-payment system that balances the need for contributions from patients with the ability of patients to pay. An important step in this direction would be to vary co-payments for inpatient care and outpatient drugs under the ADP in inverse relation to each region's level of per capita consumption (the standard indicator produced by the NSC that is used to measure poverty). This would lead to higher co-payments in Bishkek and lower co-payments in, for example, Naryn and Batken. Eventually, this might also involve variation within regions, such as between the oblast capital and rural areas. The challenge to implementing this is that lower co-payments require higher base rates for inpatient care and higher capitation payments for FGPs (out of which the ADP is funded). It is technically feasible to do this for the ADP, since this would occur from within the MHIF's national pool. Implementing this for the inpatient co-payment would be more challenging and require some type of redistribution across regions. In principle, this might be achieved through a new categorical grant formula or from the redistribution of some Republican health spending. If the reallocation is to the MHIF national pool, the size of this might become large enough to incorporate regional payment adjustors to "balance" regional differences in ability to pay co-payments. Such a solution might only benefit the insured population, however. If these options are not deemed to be feasible or do not work, a more radical solution involving the creation of a single national pool of funds managed by the MHIF may be the only way of achieving the necessary redistribution.

In summary, to make the health financing reforms more pro-poor, several steps are needed. Implementation of redistribution from Republican health spending to the rest of the country must begin. This could take the form of redistribution to each oblast or simply as a transfer to the MHIF national pool (which would then redistribute through its payment methods). To adjust patient co-payment levels for inpatient care and outpatient drug costs, there also has to be some form of reallocation of pooled funding. The categorical grants offer great potential to resolve this problem, so long as the basis for allocating them is changed to a needs-based approach rather then the current "gap-filling" measure to meet personnel-related costs. In short, beyond the current equalization grants in the inter-governmental finance process, additional inter-regional balancing is needed to promote greater equity in the finance and utilization of health care. This will require a strong hand from central government.

### *3. Renew the infrastructure and make it more energy efficient*

The downsizing of the physical infrastructure that was achieved in Chui and Issyk-Kul under the Single Payer gives great cause for optimism that the new financial incentives can lead to important gains in efficiency that can improve the financial sustainability of the health system. A detailed analysis of restructuring plans in six hospitals suggests, however, that even if the plans are fully implemented, there will not be any financial savings that could then be reallocated to treatment inputs. There will be an economic gain, in that it will become possible to heat the hospitals for a longer period of time to a warmer temperature. But there will remain a large gap between the amount of heat that can be funded and the needs of the hospitals. An important reason for this is that the tariffs for electricity are rising, and in the reformed energy sector, it will be harder for public hospitals to "get away with" large debts to the heat and electricity companies. Hence, other measures to reduce heating costs, including the development of hospital-specific energy savings plans and even more radical restructuring plans to downsize hospitals still further, are needed to promote more economical use of heat, electricity and other utilities (Checheybaev 2002).

A basic problem is that the hospitals are not efficient consumers of energy. Much of the expenditure on heat and electricity is simply lost. Redressing this problem will require new investments to reduce the recurrent cost of heating the hospitals. Engineering analysis of several hospitals led to recommendations to install meters to monitor the consumption of heat, insulate the outside walls of buildings and outside heating networks, and consider the use of solar heating. The costs of some of these options may be high, but the engineer estimated that, for example, insulating the walls of one hospital would reduce heat loss by 77% (Sankov 2001).

In association with any new infrastructural investments aimed at improving energy efficiency, the process of investment planning has to be changed. In particular, detailed assessments should be made of the recurrent cost implications of any new investments as part of the capital investment process. Recent evidence suggests that this has been a problem in the health sector. In particular, 4 CRHs were upgraded in Naryn oblast as part of the Kyrgyz-Swiss Health Reform Support Project. Comparisons of electricity consumption and expenditures for the winter heating periods before and after the investments were made show that in 3 of these hospitals, both consumption and expenditures increased. In the other CRH, both decreased (Checheybaev forthcoming). This illustrates the need for a revised investment strategy for the health sector that includes an emphasis on making health facilities more energy-efficient. An essential part of this will be a process that includes multi-year projections of the recurrent cost implications of alternative investment options.

### *4. Address the emerging public health challenges: TB and HIV*

As noted earlier in the paper, tuberculosis and HIV-infection demand attention and public action not only because they are important problems in their own right but because they are communicable diseases that potentially affect the wider population in addition to currently infected persons. Efforts involving both increased investment and new strategies are needed to contain the spread of these infections before they create overwhelming social and economic disruptions for the health system and indeed, for society.

**HIV/AIDS.** The Kyrgyz Republic is in the early stages of an HIV/AIDS epidemic,[26] with a relatively small number of reported cases of HIV. Most of these cases were registered in 2001 and 2002. Despite the official figures, the government concedes that the real number is at least 10 times as high as the number of reported cases, and all of the pre-conditions exist for a large-scale epidemic:

- high and increasing rates of intravenous drug use (IDU),
- high rates of sexually transmitted infections (STIs),[27] and
- changes in sexual behavior, including increasing numbers of women (and children) engaged in commercial sex work (CSW).

The pattern of HIV-infection in the KR is following the same trajectory as in Russia and Ukraine, which have the fastest growing HIV epidemics in the world. The epidemic begins with cluster outbreaks, spreads rapidly in the IDU population, and then spreads to the general population. Given the preconditions for rapid growth, the KR is unlikely to avoid this path without action now to interrupt transmission of the virus. The available information suggests

[26] This discussion of HIV/AIDS draws heavily from DFID (2002).

[27] The presence of STIs increases the probability of HIV transmission during sexual contact.

that a generalized epidemic could infect 5% of the population by 2015. This would severely hamper prospects for development in the country.

The introduction of scaled up harm reduction interventions at an early stage will be significantly more cost-effective than treating the increasing number of AIDS patients who will emerge if preventative action is not taken. The economic case for intervention is clear:

- the economic impact of AIDS in terms of increased sickness, reduced welfare and the loss of human capital is likely to be high;
- the costs of HIV prevention measures now are low relative to future financial and opportunity costs of managing an AIDS epidemic; and
- an HIV epidemic would threaten successful implementation of the National Poverty Reduction Strategy and the achievement of the Millennium Development Goals.

The Open Society Institute (OSI) has provided funding for three needle exchange sites for IDUs as part of its international harm reduction initiative. They have provided a small amount of funding ($50,000) to start a pilot project on methadone substitution with the Republican Narcology Institute. Currently, it is estimated that harm reduction covers less than 2% of IDUs, far below the 60% coverage target recommended by UNAIDS and that is needed to have an effect on the rate of HIV transmission. Moreover, the concept of "harm reduction" needs to be broadened to incorporate not only needle exchange programs, but also drug treatment and measures to decrease sexual risk behavior among IDUs and CSWs (indeed, many IDUs also engage in commercial sex to support their drug habit, and this is one way that HIV spreads from one risk group to another and then to the general population). More work is also needed to integrate the treatment of STIs and provision of condoms into primary care.

Hence, a substantial level of new investment is needed to scale up harm reduction interventions to the extent needed to interrupt the transmission of HIV and contain it before the situation becomes unmanageable for the health system and society. To this end, the approval in late 2002 by the Global Fund to Fight AIDS, Tuberculosis and Malaria of the Kyrgyz proposal for $17.1 million over five years to combat HIV/AIDS can make an important contribution. While it is expected that donor funds will pick up much of the investment cost, there will also be a need for increased domestic funding to support this. In addition, specialists from a variety of disciplines inside and outside of medicine will need to be trained in modern methods of HIV prevention and control, and it will also be necessary to ensure that drugs and training are provided for the effective treatment of STIs at primary level.

**Tuberculosis.**[28] Despite the introduction of DOTS, TB control continues to be a problem in the KR. Apart from the problem in the general population, TB in prisons poses a particular challenge, because of the high rates of infection there, the policy of granting amnesty to TB-infected persons, and because the "prison health system" is not managed by the MOH. Moreover, TB case detection and treatment in the prison system currently do not adhere to modern methods. In part, this is due to a lack of necessary laboratory equipment and supplies, but also to a lack of knowledge with regard to the bacterioscopic examination used in the DOTS strategy. Moreover, some prisoners actually try to become infected because this entitles them to some special privileges inside the prisons and may even get them amnestied.

[28] This discussion of TB draws heavily from Kokko *et al*. (2002).

Of particular concern is the possible emergence of multi-drug resistant (MDR) TB in prisons.[29] The National TB Institute has the capacity to test for this but has not been certified for MDR diagnostics. Moreover, the Institute's laboratory could not offer this service to the prisons without additional funds and staff. Even though MDR TB is not currently being diagnosed, in all likelihood it exists,[30] and this means that the regular "first line" drugs provided to persons with TB are given in vain.

The amnesty of prisoners infected with TB poses a particular threat to the public health of the Kyrgyz population. As noted earlier in the paper, about 1600 prisoners were amnestied during 2001 because of having TB. Unfortunately, there is no continuity of care between the prison health system and the general health system. While released prisoners should enroll with an FGP, there is no penalty for failing to do so (and no incentive for doing so).

Given the magnitude of the problem currently and the potential for growth, a number of steps are recommended:

- develop a comprehensive national guideline for the whole process of detection, treatment, follow-up and support measures for patients with TB in prisons, and use this as a basis for the development of local applications;
- ensure availability of essential diagnostic equipment to prison health centers, but share staff with the general (MOH) health system to operate the more expensive and skill-demanding instruments;
- develop a masterplan for training the prisons' medical and non-medical staff and also for educating prisoners about TB detection and control;
- close the gaps between the prison health system and the general health system to ensure continuity;
- integrate epidemiological monitoring and TB control in prisons with the general monitoring and control of TB in the broader health system;
- establish appropriate MDR diagnostics;
- begin the process of developing a "DOTS-plus" strategy, involving substantial investments in staff, skills and facilities, to treat effectively patients with MDR TB in prisons and the general population;
- seek economies in laboratory support services by merging funds for TB control between the general and prison health systems and sharing a reduced number of upgraded laboratories; and
- reconsider current legislation that grants amnesty to prisoners on the grounds of active moderate or severe TB to ensure consistency with sound public health principles to protect the population, and make all efforts, including financial incentives, to enroll released prisoners with FGPs and ensure continuity of TB care.

[29] It is not possible to know with certainty if MDR TB has developed because of the lack of necessary diagnostic services in the prison system

[30] For example, the prison system has one hospital for "severe forms of TB", and there during 2001, one patient died every four days, on average.

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## Annex 1. Flow of funds within single payer system

(Socium Consult 2002)