



**HEALTH CARE DURING TRANSITION AND HEALTH  
SYSTEMS REFORM:  
EVIDENCE FROM THE POOREST CIS COUNTRIES**

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## Table of Contents

INTRODUCTION .....	7
HEALTH EXPENDITURES DURING TRANSITION .....	8
The Reduced Level of Public Spending.....	9
Budget Anomalies.....	11
The Increased Role of Private Expenditures.....	11
Public Expenditures on Health still Reflect the Hospital-Oriented Health Care System.....	14
HEALTH STATUS: CHANGING MORBIDITIES AND BIASES IN MEASUREMENT .....	16
CHANGES IN HEALTH CARE UTILIZATION AND RESOURCES .....	21
HEALTH CARE SYSTEM REFORM DURING TRANSITION .....	23
Rationale for Health Care Reform .....	23
Inefficiencies of the System.....	24
Actions Implemented in the Reform Process.....	25
Service Fees .....	25
Social Insurance Funds .....	26
Rationalization and Downsizing of Health Facilities and Staff.....	27
Purchaser and Provider Split.....	29
Provider Payment .....	30
Privatization.....	31
Other Risks for the Reforms .....	33
SOME RESULTS: EFFICIENCY AND EQUITY ON HEALTH CARE UTILIZATION AND SPENDING .....	35
Health Care Among the Poor.....	39
SUMMARY AND RECOMMENDATIONS.....	40
Recommendations .....	42
REFERENCES .....	44

## List of Tables

Table 1	Transition Recession in CIS-7 Countries, 1990-2000 .....	8
Table 2	Public Expenditures on Health as Share of Total Government Spending, % ..	10
Table 3	Public Expenditures in Hospital Care .....	15
Table 4	Insufficient Financing and Arrears in Armenia, 2000 .....	15
Table 5	Official and Survey Differences in Infant Mortality Rates.....	20
Table 6	Incidence of Public Health Expenditures in the CIS-7 .....	38
Table 7	Patterns of Health Sector Spending and Reform .....	41

## List of Figures

Figure 1	Public Spending on Health as Share of GDP in CIS-7 Countries.....	10
Figure 2	Public vs. Private Health Expenditures in the CIS-7 in 1998 .....	12
Figure 3	Informal Payments in Europe and Central Asia .....	13
Figure 4	Reported Tuberculosis Incidence.....	17
Figure 5	Official Maternal Mortality Rates.....	18
Figure 6	Official Infant Mortality Rates.....	19
Figure 7	In Patient Admissions .....	22
Figure 8	Out-Patient Contacts .....	23
Figure 9	Number of Hospital Beds (per 100,000 people) .....	28
Figure 10	Duration of Hospital Stay, 1991-2000 .....	36
Figure 11	Armenia Health Care Utilization 1996-1998/99 .....	36

## List of Boxes

Box 1	Implementation of the Single Payer System in the Kyrgyz Republic .....	34
Box 2	Incidence of Public Spending: Case of Armenia .....	39

## **Health Care during Transition and Health Systems Reform: Evidence from the Poorest CIS Countries**

### **Abstract**

The poorest seven countries of the former Soviet Union (CIS-7) moved from a centralized system of health care funding and delivery to a range of institutional and financial arrangements. The different paths chosen have implied very different results in terms of available resources, internal efficiency, health care inequality, and the corresponding incidence of public expenditures. This paper examines the level, composition, and allocation of public spending on health, in light of the evolution of the health systems during the transition. These countries, however, followed a generic pattern with varying degrees of severity. The financial constraints experienced by CIS-7 countries were reflected in the decrease of health care quality, the collapse of the already inefficient public health activities, and the increased incidence of out-of-pocket expenditures. These factors, along side the increase in poverty, resulted in a decrease in health care utilization and in a change in the morbidity profile of the population of these countries. Although these profiles still reflect the incidence of lifestyle related diseases, there is an increase in the incidence of some contagious diseases and outbreaks of immunization-preventable diseases. Other health status indicators, such as infant and maternal mortality rates, show a more optimistic picture but official statistics are much lower than survey estimates suggesting serious discrepancies that may hide difficulties in achieving the Millennium Development Goals.

Among the variations in the generic path these countries followed, the paper finds four major patterns of evolution during the analyzed period that are roughly represented by advances made by CIS-7 countries in health reforms and level of health expenditures. According to public expenditures on health, measured as percent of GDP or their public budgets, CIS-7 countries can be separated into “very low” and “low” spenders. In the first group are Georgia, Armenia, Tajikistan and Azerbaijan, spending less than 2 percent of GDP. Uzbekistan, Moldova and the Kyrgyz Republic with public health spending of more than 2 percent of GDP are in the second group. Another distinction can be made based on the countries’ health system reforms. While it is difficult to judge the qualitative advances, some countries like Armenia, Georgia, Kyrgyz Republic and Moldova, have advanced significantly in terms of major components of the reforms, despite the differences in initiation, speed and current status. Other countries like Uzbekistan, Tajikistan, and Azerbaijan have made very little or no advance.

Health system reforms need to address the funding, efficiency and equity problems in an integrated fashion. Otherwise, the countries face the risk of increasing funding of an inefficient delivery system, or, increasing efficiency but with less equitable outcomes. The paper offers recommendations for three different stakeholders in the health sectors: providers (supply), government (budget and regulation) and households (demand). These recommendations are: (i) to enhance efficiency on the supply side by changing the clinical protocols, reforming outpatient care, changing the skill mix of the labor force, and strengthening the providers managerial capacities; (ii) to strengthen the role of the government using budgetary and regulatory instruments, by improving public budget management and the supervisory (monitoring) and regulatory role for quality assurance;

(iii) to design and implement mechanisms to meet demand, particularly among the poor;  
and (iv) to improve their programs and insurance protection for the poor.

## INTRODUCTION

1. This paper examines the level, composition and allocation of public spending on health in the CIS-7 countries<sup>1</sup> in light of the evolution of the health systems during transition. The analysis puts together the role of private spending vis-a-vis public spending, and the equity implications of the levels and composition of public spending. The study is a comparative synthesis of existing knowledge, developed largely through Bank sector reviews, expenditure reviews and poverty assessments, the Health for All databases, and those of other agencies (mainly WHO, Health Observatory and other country studies).

2. The IMF and the World Bank are increasingly concerned about the volume and quality of public spending in the poor CIS countries. In particular, multilateral organizations are concerned about the level, efficiency and efficacy of these expenditures in attaining desirable human development targets, such as the Millennium Development Goals (MDG). Reform of public spending is anticipated, and there is a possibility this may be coupled with debt relief in some countries.

3. When some of the CIS-7 countries faced significant fiscal constraints in the early nineties, budgets declined sharply, particularly in the social sectors. Health sectors in most countries were typically oversupplied with physical and human capital and the functioning of the sector could not be sustained with growing budget constraints. Some countries, then, initiated reforms in the health sector aimed at rationalizing the demand and/or supply of health care, and increasing efficiency among providers. Evidence from recent years has shown a significant decrease in health care utilization, an increasing incidence of contagious diseases -- such as tuberculosis, AIDS and malaria, and a still oversupplied health sector.

4. For the CIS-7 countries, the health sector represents a pending issue because of its key role in poverty reduction. The size and increasing nature of out-of-pocket payments (OOP) in the health sector indicate that illnesses create a significant financial burden, especially on poorer households. At the same time the foregone labor earnings due to productivity losses and reduced income are likely to have an impact on living standards. Country studies and qualitative evidence have shown how illness events are correlated with a rising probability of falling into poverty because of a limited ability to pay (Narayan et al., 2000; van Doorslaer and Wagstaff, 2001; Shahriari, 2001).

5. Section 2 describes the expenditure patterns, particularly describing the role of different sources of financing and the composition of public spending. Section 3 describes the changing morbidity profile in the CIS-7 countries and the problems in measuring some outcomes. Changes in utilization of health care services during the nineties, distinguishing in-patient and outpatient care are discussed in Section 4. Section 5 discusses the reform processes and the main policies adopted in these countries. Section 6 discusses the resulting outcomes in terms of efficiency and inequality in health care and presents estimates of incidence of public spending. Section 7 concludes and provides recommendations.

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<sup>1</sup> Armenia, Azerbaijan, Georgia, Kyrgyz Republic, Moldova, Tajikistan and Uzbekistan.

## HEALTH EXPENDITURES DURING TRANSITION

6. When the CIS-7 countries became independent in 1991, they inherited health care systems along the lines of the so-called Semashko model of the Soviet Union. Many of these countries achieved better health outcomes than other countries with similar income levels, due to a number of factors such as high levels of education, adequate access to water and sanitation, and health systems with free, comprehensive health care for the entire population. However, the new economic conditions of the post-Soviet era brought to light inefficiencies of the old systems and placed new demands upon them.

7. In the early 1990s, the fiscal capacity of the new governments to maintain their health systems was limited. This limitation was due to large decreases in output and the consequent reduction in government revenues and, in turn, resources earmarked for health.

**Table 1 Transition Recession in CIS -7 Countries, 1990-2000**

Countries	Consecutive years of output decline	Cumulative output decline (%)	Real GDP, 2000 (1990=100)
Armenia	4	63	67
Azerbaijan	6	60	55
Georgia	5	78	29
Kyrgyz Republic	6	50	66
Moldova	7	63	35
Tajikistan	7	50	48
Uzbekistan	6	18	95
CIS	6.5	50.5	62.7
<b>Great Depression 1930-1934</b>			
US	4	27	n.a.
Germany	3	16	n.a.

*Source: World Bank, 2002. How did transition economies perform? Note: CIS figures are simple averages, except for the index of 1990 GDP, which shows population-weighted averages. The CIS average includes besides the CIS-7, Belarus, Kazakhstan, Russian Federation, Turkmenistan and Ukraine. n.a.: Not applicable.*

8. Abrupt decreases in output affected all CIS-7 countries at the time of independence and the start of the transition to a market economy. This transition brought major changes to the socio-economic structures of these countries, and together with disruptions to the economic links with Russia, produced large and sudden decreases in output. As seen in Table 1, the decrease in production in the CIS-7 countries lasted on average about six years, longer than the decline in output during the Great Depression in the US and in Germany. But not only was the depression long, it was also deep with average cumulative output declines of more than 50%. In some countries this decline in output was extreme, as in Georgia with accumulative output decline of about 80%. Although these countries have since started to grow (with a temporary disruption caused by the Russian financial crisis), their output has not yet reached the levels of 1990. In the extreme case of Moldova, in 2000 its output was only 35% of what it was before independence in 1991.



9. In some countries, the economic problems of the transition were exacerbated by civil unrest and/or armed conflicts, as in the cases of Georgia, Tajikistan, Armenia and Azerbaijan. These conflicts not only caused great loss of lives and led to an increase in internally displaced people but also drained the limited resources available.<sup>2</sup>

### **The Reduced Level of Public Spending**

10. The decline in output during the early 1990s diminished government resources and consequently the resources available for health. Figure 1 summarizes the trend in public health expenditure as percentage of GDP in all CIS-7 countries during the transition years. As can be observed, the public expenditure on health fell in all seven countries. In 1991, in the countries for which data are available, the average health expenditure as percentage of GDP was about 4.5 percent. Seven years later, this average had decreased to a little more than half the previous amount,<sup>3</sup> where it has more or less remained. In extreme cases, as in Tajikistan and Georgia, the total level of public health expenditures in some years dropped to less than 1 percent of GDP. In contrast, the average public expenditure on health in OECD countries in 1998 was about 7.8 percent of GDP. Today, countries like Tajikistan, Georgia, and Armenia (and somewhat Azerbaijan) are still spending too little on health care, when compared to countries with similar income levels and social indicators, and given the household burden that results from such under-spending. In these countries the public resources spent on health might be insufficient to cover health needs and the goal to assure that the poor have access to basic health care interventions.<sup>4</sup>

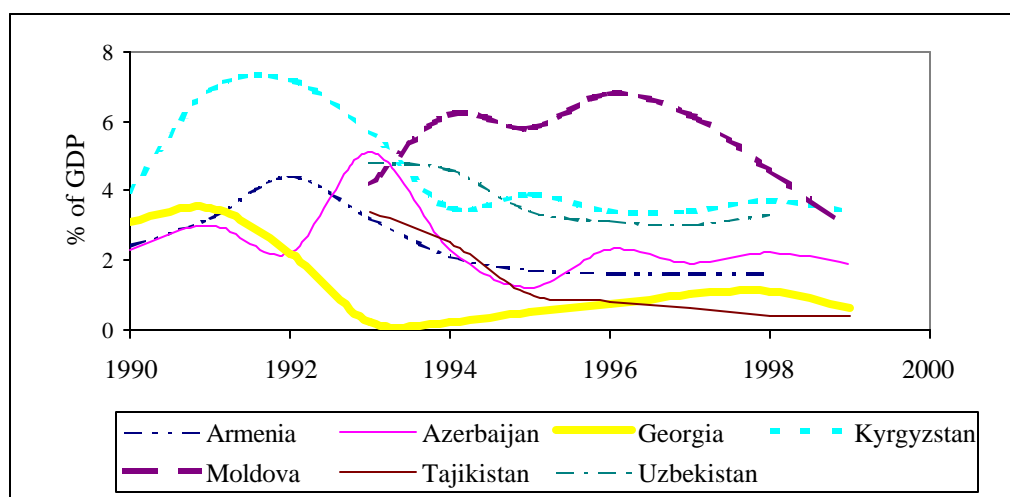
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<sup>2</sup> Even today, these countries spend large amounts of government resources in defense, limiting the resources available for health and other social programs. For instance, in 1997 the government of Armenia spent more than 20% of its total budget in defense; in contrast it only spent 6.5% on health care (World Bank - Armenia PER).

<sup>3</sup> This information comes from the TransMONEE data base (UNICEF, 2001). Information from Tajikistan and Moldova was missing in 1991. In 1995 the average health expenditure as percentage of GDP was equal to 2.38% if Moldova and Tajikistan were not included, and 2.41% if they were.

<sup>4</sup> The pattern of larger drops in health expenditures in countries with larger GDP declines was also observed in Central and Eastern Europe (Goldstein, Preker, Adeyi and Chellaraj; 1996).

**Figure 1 Public Spending on Health as Share of GDP in CIS -7 Countries**



Source: TransMONEE; for Moldova: Ministry of Finance, Department of Statistics.

11. Expenditure as percent of GDP, however, may offer a distorted view as all CIS-7 countries have seen their revenue base collapse, and hence, their ability to fund health expenditures has decreased. A look at the percentage of total government spending allocated to health care will help in assessing their ability to increase spending under the current circumstances. Table 2, which presents the trends in the share of public spending allocated to health, shows that spending has varied from 3 percent of the public budget in Georgia in 2000 to almost 13 percent in the Kyrgyz Republic in 1999. Four of these countries, Tajikistan, Georgia, Armenia and Azerbaijan, allocate less than 7% of government expenditure to the health sector; Georgia in particular allocates less than 5%. In contrast, Greece -- the EU country with the lowest expenditure on health as share of total health spending-- allocates more than 9% of its total government spending to health care (the average share in the EU countries is about 13%).<sup>5</sup> Azerbaijan, Armenia, Georgia and Tajikistan can then be described as low spenders measured either as fraction of GDP (2 percent or less) or the public budget (less than 7 percent).

**Table 2 Public Expenditures on Health as Share of Total Government Spending, %**

Country	1995	1996	1997	1998	1999	2000	2001*
Armenia			6.5	6.7	5.6	4.5	6.4
Azerbaijan					5.7	5.4	
Georgia						3.0	4.8
Moldova			11.1	9.1	7.4	8.0	8.9
Kyrgyz Republic	12.3	13.2	11.7	11.9	12.8		
Tajikistan	7.8	7.3	8.7	6.9	6.0	6.8	6.6
Uzbekistan	11.1	12.1	13.7	11.7	11.6	11.7	

\* Preliminary and planned figures

<sup>5</sup> WHO is the data source for the EU figures.

## **Budget Anomalies**

12. Public expenditures on health in the CIS-7 countries are not only low compared to other countries but are also lower than their own planned budgets. In Georgia, only 55 percent of the health sector budget was executed in 1997 (Chawla, 2001). In Armenia, less than half of the approved health budget was executed in 2000, although it recovered to 86 percent in 2001 -- still, the lowest execution rate across all sectors in Armenia (World Bank, 2002c). While those periods correspond to extreme cases in low budget execution rates for the health sector, the underlying unbalance between expenditure commitments and available resources represents significant uncertainty in the health sector and generates loss of credibility in some of the government interventions. Additionally, the low budget execution is also associated with arrears to providers and inadequate financing of non-staff inputs.

13. The decrease of public spending on health in most of the CIS-7 countries coincided with an increased inflow of donor funding in the health sector. Countries with civil conflicts, like Armenia and Tajikistan, in the mid-nineties received substantial amounts of foreign aid, mostly drugs and other medical supplies for war-affected areas. Though the donor funding in Tajikistan diminished by the late-nineties, in the case of Armenia it has remained significant: the 2001 estimates for donor funding in the health sector in Armenia was almost equal to total spending from the government budget (World Bank, 2002c). There is very limited information on donor funding to the health sector, and those are typically extra budgetary funds. This is a major blow for strengthening the budget as a policy tool, since governments do not have the information and health providers face uncertainties due to disbursement delays.

14. The decrease in output and resources earmarked for health occurred at a time when health problems were increasing as the income of the population declined. During the transition, there were large increases in poverty. For instance, in Armenia, Tajikistan, and Moldova more than a quarter of the population lives under US \$ 2 a day.<sup>6</sup> The increase in poverty and decreased government expenditure had several implications for the health care utilization of the population. Besides the direct effects coming from reduced consumption, the lack of resources in the health system resulted in growth of informal out-of-pocket (OOP) payments for health services. These payments seriously decreased access of the poor to health care, as discussed in the next section.

## **The Increased Role of Private Expenditures**

15. The initial collapse of public expenditures on health implied that households and other parties were involved in financing health care services. These ranged from out-of-pocket payments from patients, to donor contributions to health providers. The CIS-7 countries experienced different degrees of increase in private participation in health financing, almost responding to the lower government health care expenditures. Other countries in Central and Eastern Europe moved from exclusive reliance on general revenue financing toward a mixed system of financing based on national health insurance

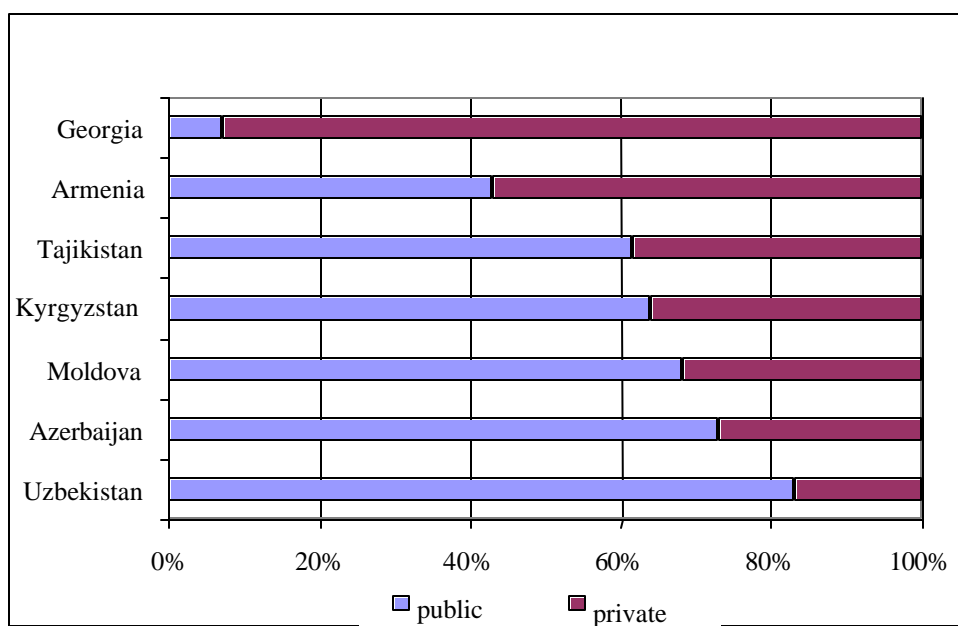
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<sup>6</sup> The source of the information LSMS and other survey data. The years for this information are: 2000 for Moldova, 1999 for Tajikistan and Armenia, and 1995 Azerbaijan.

funded largely through payroll taxation and transfers from general revenues (Goldstein et al.; 1996). CIS-7 countries, however, have increasingly relied on OOP and other direct private contributions to fund the health system, probably due to the increased informalization of the labor market and more limited government capacity after the initial fiscal collapse.

16. In countries where public expenditures decreased the most, such as Georgia, Armenia and Tajikistan, private financing represented more than two thirds of national health expenditures. In Georgia, for example, estimates for out-of-pocket private spending range from 66 to 87 percent of total health spending (World Bank, 2002e). A recent study by the Department of Statistics of Georgia found that out-of-pocket payments were approximately US \$28 per capita or 73 percent of total health expenditures. Evidence for Armenia is equally strong: household expenditures and donors contributions have represented between 63 and 69 percent of total health spending in Armenia (World Bank, 2002c).<sup>7</sup> Estimation of private payments in Tajikistan ranged from almost 40 percent in 1998 (see Figure) to about 70 percent of total national expenditures in 1999 (WHO, 2002).

**Figure 2 Public vs. Private Health Expenditures in the CIS -7 in 1998**



Source: *The 2002 World Health Report, WHO*

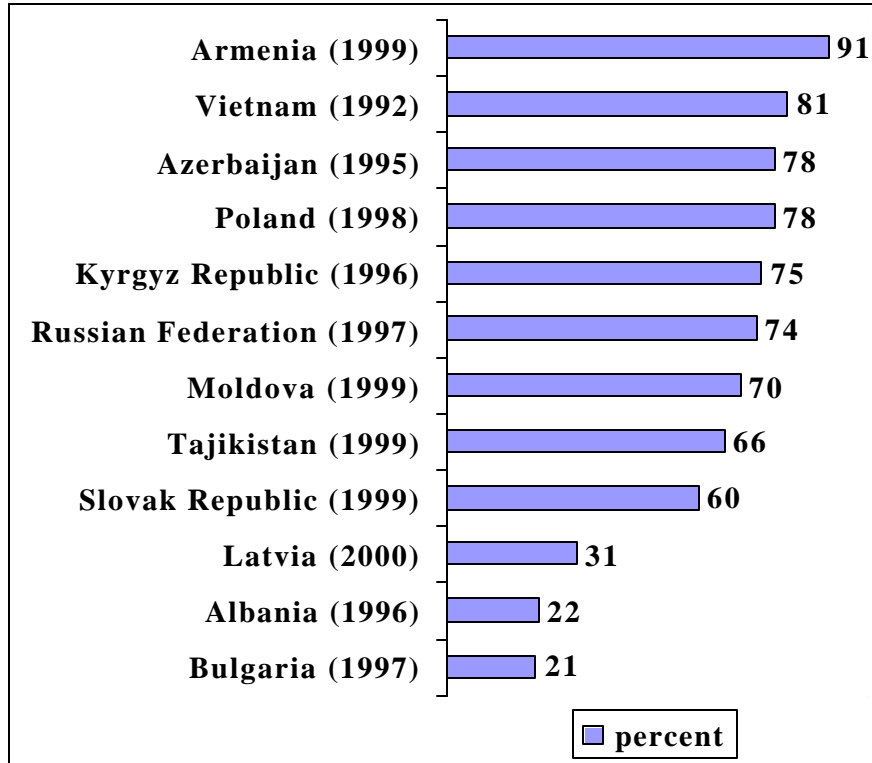
17. An intermediate position is observed in countries like Moldova and the Kyrgyz Republic that adopted broad reforms in their health systems and did not decrease public expenditure on health as abruptly as the other countries. In 1998, in the Kyrgyz Republic private spending was at least as much as public spending (3.1 percent of GDP) increasing the total health spending to about 6 percent of GDP (WHO, 2002). Similar evidence is found in the Kyrgyz Review of Social Expenditures where private spending is estimated on more than a half of total spending (World Bank, 2002). In Moldova most health expenditures are still provided by the government, and the pattern was aggravated when

<sup>7</sup> Between 1998/99 and 2001, however, the relative importance of households decreased compared to donors.

average household expenditures were reduced by almost one half between 1997 and 1999, a period of increased poverty due to the Russian crisis (Signoret, 2002). Between 1998 and 1999, however, public expenditures on health were also drastically cut in Moldova. Finally, public health expenditures in countries with very slow change like Uzbekistan have been somewhat decreasing over time from almost 5 percent of GDP during the early nineties to 3.4 percent in 1998. Despite this decrease, the public sector still represents more than 80 percent of total health expenditures (World Bank, 2002a).

18. The importance of private expenditures is also associated with increased informality of those out-of-pocket payments, even though these were common gifts to providers in the past. Similar to private participation, informal payments in the region are more important in countries with lower public participation. Lewis (2001) discusses the system of informal payments, and shows that for the CIS-7 countries included in the study more than 60 percent of patients reported making some informal payments. In Moldova almost half of 124 doctors interviewed in a study reported requesting informal payments from patients (Stempovscala, 2002). These non-formal payments are extremely common in hospitalization cases in Moldova (more than 91 percent of patients reported paying) and represent almost one third of the hospitalization costs, even when official fees were charged. In Uzbekistan, two thirds of health users reported making informal payments in cash or in-kind for health care (World Bank, 2002a). These payments are part of a vicious circle of low public expenditures, increased OOP, high incidence of informal payments and declining demand for health care as health services have become unaffordable (Shahiri and Belli, 2002).

**Figure 3 Informal Payments in Europe and Central Asia**  
(percent of patients that reported making informal payments)



Source: Lewis (2001)

### Public Expenditures on Health still Reflect the Hospital-Oriented Health Care System

19. Expenditures in hospital care are necessary for a number of interventions such as birth deliveries, and other high-risk interventions, but during the Soviet era, patients were transferred to hospital specialists regardless of the severity of illness. In that context, primary care system was mainly a system of referrals and most of the budget was allocated to hospitals. Before discussing the evidence on primary and secondary health care expenditures, it must be mentioned that any effort to reallocate expenditures must take into account the existing (and potential) productivity of PHC and compare it with the productivity (and/or opportunity cost) of hospital expenditures, including investments. In other words, spending less in hospitals may well leave hospital infrastructure idle unless a better use is planned. In this context, alternative uses of the oversupplied hospital infrastructure may require actions beyond the health sector choices (such as selling the land instead of the usual privatization of hospitals).

20. CIS-7 countries still spend most of their budgets on hospitals reflecting the Soviet hospital-based approach. The limited changes in the share of hospital expenditures in some CIS-7 countries is evidence of the difficulties in moving from historical budgeting allocation based on inputs (doctors and beds). Evidence from Public Expenditure Reviews for selected countries indicates that despite some gradual shift towards primary care spending, most of the health budgets are still concentrated on hospital care. In Armenia, after the initial stages of a reform to strengthen primary care and its funding post 1999, current budget allocations suggest a reversal to the previous hospital-oriented structure. Azerbaijan and Tajikistan are the two countries that have kept the share of

hospital expenditures constant at very high levels. In Tajikistan 75 percent of public resources are directed to hospitals. Only in Moldova there is evidence of a decline in the share of hospital expenses from 75 percent in 1998 to 58 percent in 2001. Notice that these changes capture significant drops in public expenditures on health in Moldova in 1999, due to the significant fiscal crisis stemming from trade shocks, particularly from the CIS countries (Murrugarra and Signoret, 2002). In the Kyrgyz Republic the share of resources going to hospitals has decreased about 5 percentage points from 72 percent in 1997 to 67 percent in 1999, still representing more than two thirds of the public health expenditures.

**Table 3 Public Expenditures in Hospital Care**  
(percent of total public expenditures on health)

	1997	1998	1999	2000	2001
Armenia	60.7	56.6	59	49.1	52.9
Azerbaijan	58.7	59.2	60.9	61.8	
Kyrgyz Republic	72.0	65.0	67.0		
Moldova		75.0	69.0	66.0	58.0
Tajikistan				74.7	75.9

*Sources: Armenia Public Expenditure Review (World Bank, 2002); Azerbaijan: Health for All Database; Kyrgyz Republic: Health for All Database; Tajikistan: Primary Health Care includes Polyclinics and Dental Centers (Amde and Temourov, 2002).*

21. The problems of allocation of funds across primary and secondary health care are not only observed at the final allocation, but start at the budget execution level since those reflect a differentiated treatment regarding arrears. Evidence from Armenia for the 2000 budget clearly shows two marked issues. First, a large fraction of the health budget (40 percent) is carried over as arrears, indicating the vulnerability of the health sector to maintain the planned levels of funding compared to other sectors. Moreover, it reveals the weak capacity of the government to comply with health care providers (which in fact weakens other government health interventions). Second, the relative magnitude of arrears is significantly higher for primary care, compared to hospitals, corroborating the inability or unwillingness to reset the balance between primary and secondary health care allocations in a contracting budgetary environment.

**Table 4 Insufficient Financing and Arrears in Armenia, 2000** (million ADM)

Subgroups of budgetary expenditures operational classification	Annual Adjusted Plan	Financing	Actual Expenditures	Arrears	Financing as % of Adjusted Plan	Arrears as % of Actual Expenditure
Public Administration	187.5	146.7	172.3	25.8	78.2%	<b>14.9%</b>
Hospital Medical Assistance	9,405.8	4,534.2	7,869.5	3,335.3	48.2%	<b>42.4%</b>
Primary medical care	4,350.0	1,729.5	4,440.1	2,710.6	39.8%	<b>61.0%</b>
Hygienic-epidemiological	952.9	682.9	707.5	112.9	71.7%	<b>16.0%</b>
Other medical services	4,787.9	2,570.3	2,829.1	288.3	53.7%	<b>10.2%</b>
<b>TOTAL HEALTH</b>	<b>19,684.1</b>	<b>9,663.7</b>	<b>16,018.6</b>	<b>6,472.8</b>	<b>49.1%</b>	<b>40.4%</b>

Source: Armenia Public Expenditure Review (World Bank, 2002c).

22. The overall pattern of low government expenditures on health, higher incidence of arrears and increased contributions from households (through formal or informal mechanisms) was accompanied by the significant weakening of the public health initiatives in the region. The existing epidemiological and other public health interventions were characterized by antiquated and very expensive technologies. Most importantly, most public health interventions were characterized by a lack of integration with other vertical health risks oriented programs (such as HIV/AIDS;). The fiscal constraints faced after independence put public health interventions in an even weaker position and there are numerous examples of immunization programs collapsing for some years, with corresponding increases in specific morbidities.

23. The limited expenditures, concentrated on curative care (not preventative) and the parallel deterioration of the CIS-7 economies and their social services and infrastructure (water and sanitation, roads) resulted in a somewhat changed morbidity profile for these countries. This is discussed next.

#### **HEALTH STATUS: CHANGING MORBIDITIES AND BIASES IN MEASUREMENT**

24. Morbidity profiles for the CIS-7 countries still reflect the incidence of lifestyle-related diseases such as heart and pulmonary illnesses related to diet, alcohol and smoking characteristics of the Soviet period. The already antiquated and inefficient public health system in some of these countries was also affected by the fiscal crisis.

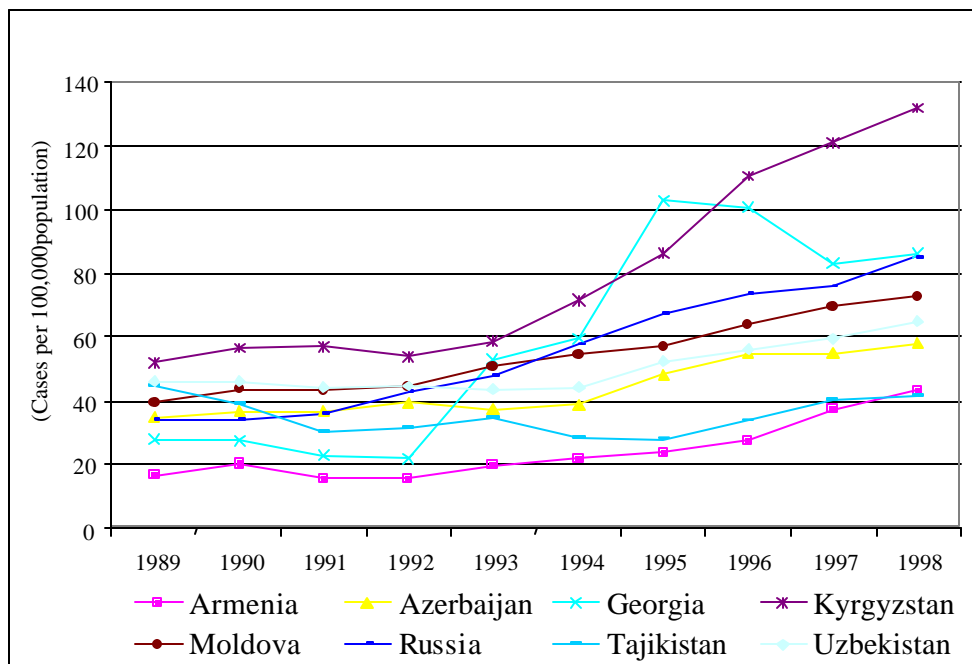
25. The economic collapse and their fiscal implications undermined public health interventions and basic water and sanitation infrastructures, resulting in an increase of communicable diseases during the nineties. Diseases like tuberculosis, measles and AIDS have increased in incidence. One episodic example of a public health failure was the low immunization uptake that led to an outbreak of diphtheria and measles in 1994 in Georgia (Atun et al., 2000). The incidence of measles for CIS-7 countries shows a pattern of increased volatility in incidence between 1993 and 1999. A different type of problem is the use of water from irrigation canals for drinking water in Tajikistan, where



some villages in a qualitative assessment evidenced more than 60 percent of their population with malaria, dysentery, or typhoid (Shahriari, 2001).

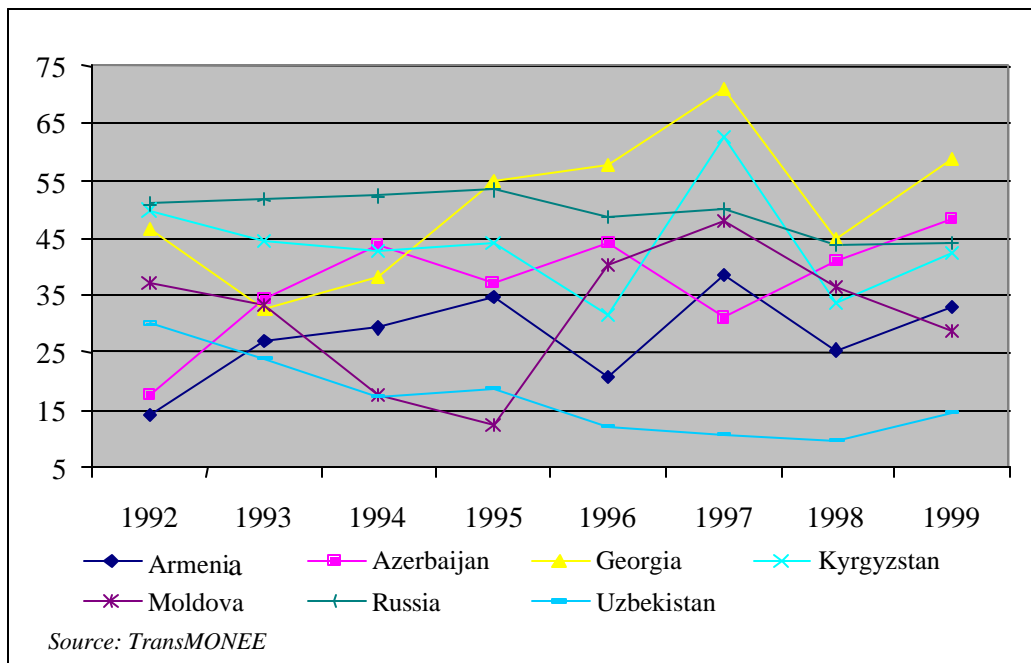
26. The problems raised by the limited government expenditures in public health were aggravated by the persistently high poverty rates in CIS-7 countries. Diseases like TB evidenced a surge reflecting a double vulnerability in the health sector in some CIS-7 countries: low expenditures and poor households. The average TB incidence for CIS-7 countries doubled between 1993 and 1999, but increased four-fold in Georgia and Kyrgyz Republic. Armenia had a sharp increase but still has one of the lowest incidences of TB among the CIS-7 countries.

**Figure 4 Reported Tuberculosis Incidence**



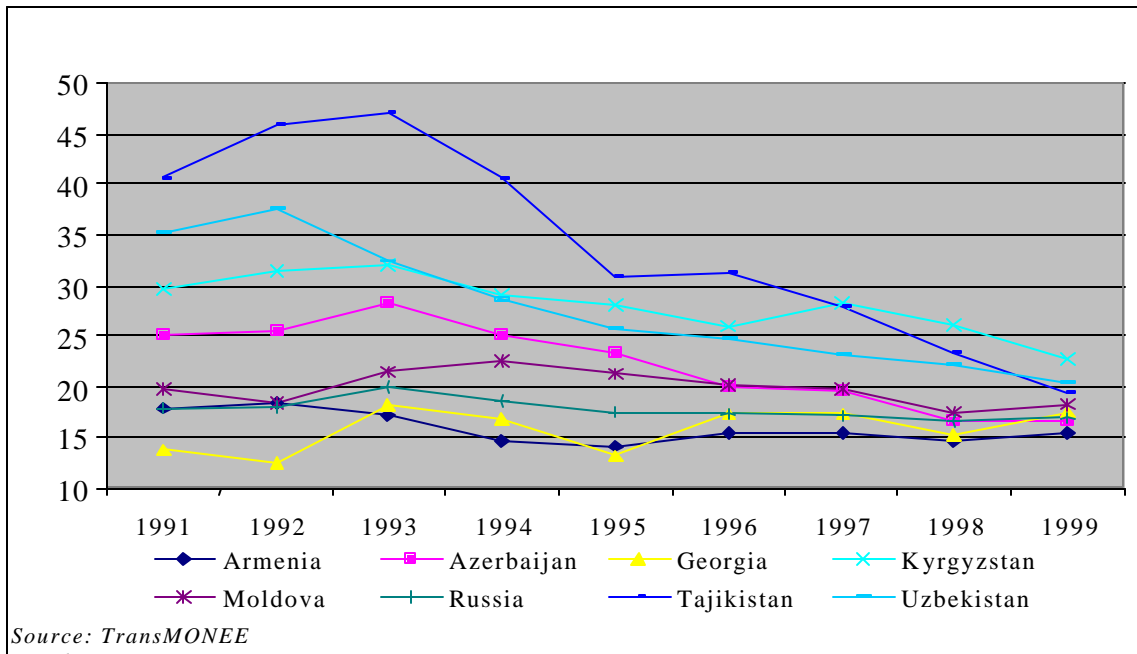
Source: TransMONEE

**Figure 5 Official Maternal Mortality Rates**  
(per 100,000 live births)



27. Other official indicators of health status such as child or maternal mortality rates show mixed results during the decade. Official infant mortality rates in CIS-7 countries have been relatively lower than other developing countries and have shown declines during the nineties for most countries. Maternal mortality rates (MMR) show a mixed picture, where some countries show some increases. In particular, in Georgia and Azerbaijan MMR increased during the late nineties. However, these indicators – including their definitions and data collection methods – have been subject to criticism that brings the validity of the measures into question. This is discussed next.

**Figure 6 Official Infant Mortality Rates**  
(deaths per 1,000 births)



28. A sizeable discrepancy in mortality rates exists between official statistics (based on registrations of births and deaths) and survey estimates. Part of the difference is explained by differences in the definition of a “live birth” between some countries and the international standards (Bos et al., 2002).<sup>8</sup> Only those premature babies that survived seven days would be counted as live births in the Soviet system and hence included in the mortality estimates. In addition, significant changes in the number of births explain part of the discrepancies observed between official and survey data. Table 5 indicates that in some cases infant mortality rates estimated from surveys have been four times higher than the official rates. Estimates for Tajikistan indicate that while the official rate is 20 deaths per 1,000 live births, estimates from the Tajikistan Survey of Living Standards suggest a much higher rate of 82 per 1,000 live births.<sup>9</sup> These discrepancies are observed also for children under 5 years of age (U5MR) and on MMR. According to Bos et al. (2002) these differences in the definitions may reduce over time once countries introduce international standards in vital statistics and improve the accuracy of their methods. Besides these formal factors, other political and social factors may have played a role in explaining these discrepancies. Anecdotal evidence suggests also that since vital registration systems in some countries charge a fee for the registration of a birth and/or death, households are less likely to officially report the birth or death of a child, a problem that may be worse among the poor. In fact, survey estimates at the household and health facility levels in Armenia showed that part of the discrepancies are due to the increased number of deaths at home, the lack of access to registration and negative

<sup>8</sup> Bos, et al. (2002) indicate that in the former Soviet Union deaths of premature babies were classified as late miscarriages if the delivery occurred before 28 weeks of gestation or the baby weighed less than 1,000 grams or was less than 35 centimeters of length.

<sup>9</sup> Personal communication from Adam Wagstaff. Also reported in Falkingham (2001).

incentives to register, particularly in rural areas (Maglouchiants and Ter-Oskanyan, 2002).

**Table 5 Official and Survey Differences in Infant Mortality Rates**  
(IMR measured as number of deaths per 1000 live births)

	Official	Survey Estimates	Year (Survey)
Armenia	15.0	36.1	2000 (DHS)
Azerbaijan	19.9	79.0	1996 (MICS)
Georgia	15.1		
Kyrgyz	28.6	66.2	1996(DHS)
Moldova	17.4	18.5	1999 (EUPHIN)
Tajikistan	19.9	82.4	1999 (TSLs)
Uzbekistan	24.2	49.0	1996 (DHS)

Source: TransMONEE Database, DHS, MICS, TLSS, EUPHIN (European Public Health Information Network).

29. Another source of discrepancies in health measures may arise from the (out) migration and lowered fertility patterns observed during the nineties and the lack of updated population estimates (based on censuses). As many health indicators (the Millennium Development Goals, for instance) are expressed in terms of the overall population, countries that experienced large emigration during the nineties may have their indicators distorted. As recently experienced in Georgia and Armenia, the estimates of the current population in each of these two countries was 20 percent higher than the actual population, as recent censuses have shown.<sup>10</sup> According to official data, the rate of TB cases in Armenia increased from 17 in the early nineties to 43 per 100,000 population in 1999 (MONEE, 2002). If the de facto population (census) number is used, the rate is more than 52 per 100,000 population.

30. The Millennium Development Goals (MDG) define clear targets in terms of health indicators worldwide.<sup>11</sup> CIS-7 countries show significant vulnerability to communicable diseases and outbreaks of immunization-preventable illnesses that may weaken their ability to achieve the MDGs. While the levels of illness prevalence are lower than other developing countries, the rate of increase underscores weaknesses in the health systems and in other factors affecting health (e.g. water and sanitation infrastructure). Moreover, administrative (vital registrations) deficiencies and population projection biases also affect the estimation of some indicators, as discussed above for IMR and TB. The anecdotal evidence on the effects of deteriorated water and sanitation systems also suggests a worsening of the related MDG indicators. In summary, despite an official positive picture regarding the MDGs, the trends and quality of information suggest a more precarious situation than what official data shows. Health status indicators, however, are part of the picture. Lack of access to affordable health care has

<sup>10</sup> The official projected Armenian population by 2001 was more than 3.8 million while the census found only 3 million, or 3.2 if those temporarily absent were included (National Statistical Service, 2002).

<sup>11</sup> The Health indicators for the MDG are: Under-5 Mortality and Infant Mortality Rates (per 1,000 live births); Proportion of 1-year olds immunized against measles; Maternal mortality; Prevalence of HIV, female (age 15-24); Incidence of TB (per 100,000 people); Access to an improved water source (% of population with access); and, proportion of people with access to improved sanitation.

been considered as a qualitative poverty dimension (Narayan et al., 2000). Those changes in utilization are discussed next.

### **CHANGES IN HEALTH CARE UTILIZATION AND RESOURCES**

31. The changes in health care utilization for each country were affected by three interrelated factors. First, the changes in incomes of the overall population, from countries with small drops in GDP (as Uzbekistan) to those that suffered severely (as Georgia and Moldova). Second, the declining public expenditures resulted in lower quality of care, observed in facilities lacking basic infrastructure services such as electricity and heating. Third, the increased incidence of out-of-pocket payments in health care, particularly in those countries where public expenditures decreased the most and where the private sector bears the financial cost of the treatment. Distinguishing these effects is difficult since lower public spending may have required patients to contribute directly to doctors while providing their own drugs and materials.

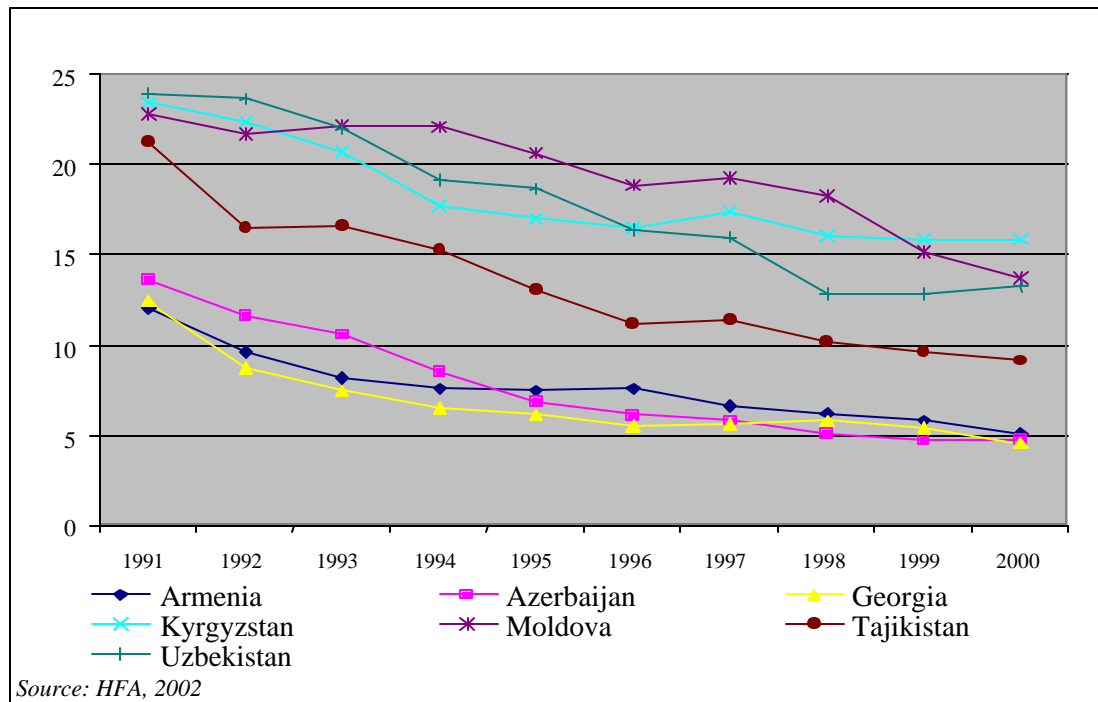
32. A marked decline of more than 26 percent in the average number of outpatient visits is observed between the first and second halves of the nineties across CIS-7 countries. The decline in outpatient visits is more pronounced in Georgia (-75 percent), Armenia (-42 percent), Azerbaijan (-25 percent), and Tajikistan (-35 percent). Kyrgyz Republic and Moldova had reduction of about 10 percent and Uzbekistan saw an increase in primary care utilization of 10 percent. A similar but more pronounced average decline is observed in in-patient admissions, as hospital admissions decreased by 30 percent across the CIS-7 countries.

33. This pattern, however, is not uniform. Countries with lower expenditures and more private payments (both official and un-official) like Georgia and Armenia experienced deeper reductions in primary care utilization than in hospital admissions. In other words, in countries with more limited resources, the demand for the less expensive option (primary care) was more affected than was the demand for hospital care. This may reflect the low quality of the primary care network and its referral role in the system. Patients may have preferred to go directly to the hospital and pay for treatment there (since they would have been sent there anyway). The resulting structure of demand represents a challenge in terms of redirecting part of the demand back to a potentially reformed and more cost-effective PHC for most outpatient services (of course, except those interventions that, as mentioned before, do require hospital care).

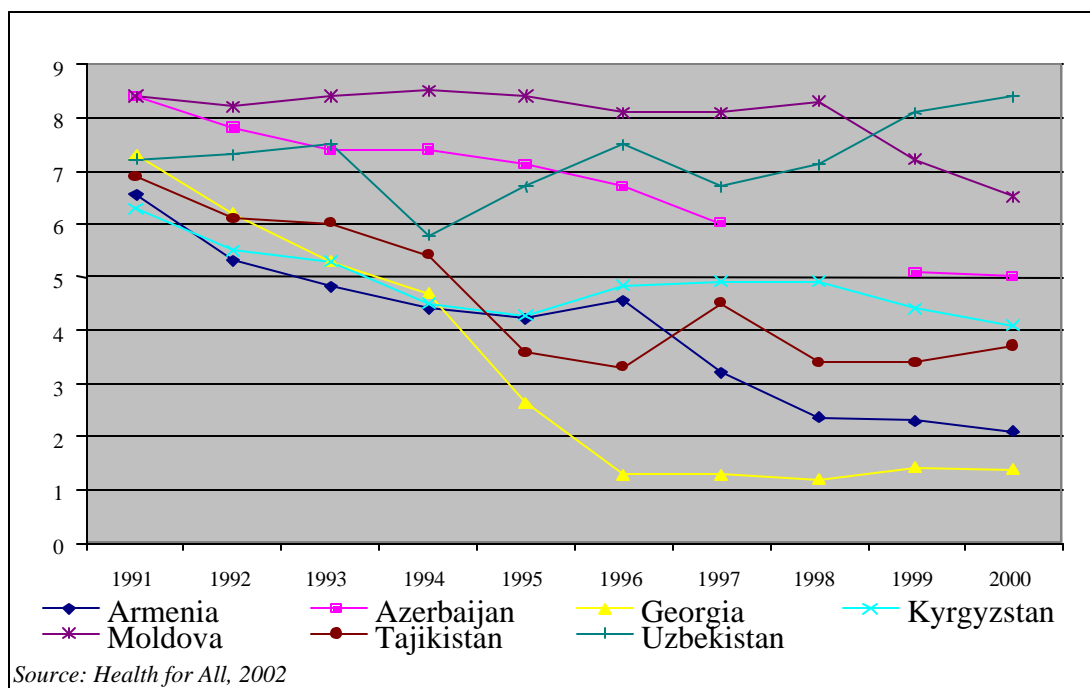
34. Azerbaijan represents a very unusual case. Keeping a low level of expenditures as fraction of GDP (around 2 percent), Azerbaijan slightly increased its share of hospital expenditures during the years of available data (reaching 62 percent in 2000). Despite this, the largest drop in utilization occurred precisely at the hospital level (in fact, Azerbaijan had the largest drop in in-patient admissions among the CIS-7 countries). Declining utilization may reflect the relatively slow economic recovery during the late nineties and is consistent with the overall worsening in health indicators (TB incidence and mortality rates) (Azerbaijan Republic Poverty Assessment - World Bank, 2002d).

35. Kyrgyz Republic, Moldova and Uzbekistan experienced lower drops in utilization, particularly in hospital care. These countries spend more on health as percentage of GDP. Moldova, however, experienced important declines in utilization only in 1999 and 2000, after health budgets were reduced when growth had slowed. The patterns of utilization in these countries suggest that slow GDP growth and the resulting fiscal constraints is strongly correlated with decrease in health care utilization rates where the public sector represents the major financial contributor.

**Figure 7 In-Patient Admissions**  
(admissions per 100,000)



**Figure 8 Out-Patient Contacts**  
(contacts per person per year)



## HEALTH CARE SYSTEM REFORM DURING TRANSITION

36. After independence, CIS-7 countries adopted different measures to adapt their health systems to new economic and political contexts. Some countries have implemented broad reforms in their health sector, others just minor adjustments. However, only a few, as is the case of the Kyrgyz Republic, have been able to obtain important efficiency gains from these reforms.

### Rationale for Health Care Reform

37. Since independence, all CIS-7 countries have embarked – to different degrees – on health sector reforms. This section explains the reasons why these countries embraced those reforms as well as the measures taken; it then assesses whether or not they have succeeded in reaching their goals. A good understanding of the policies and the reasons for their adoption will help guide fiscal policy in the health sector.

38. The discussion above showed how CIS-7 countries were facing the combined effects of lower public funding and inherited bloated health system. Reforms to these systems, been a response to the mismatch between funds and services, have included measures to decrease costs, increase revenues, and strengthen primary health care (PHC). Although all countries have started some form of reform, with few exceptions, there has not been significant progress in increasing the efficiency or effectiveness of the sector.

## Inefficiencies of the System

39. To better understand the reform process in the CIS-7 countries, it is important to understand not only the new circumstances they face (limited resources for health and rising poverty), but also the system they had inherited from Soviet times. The characteristics<sup>12</sup> of the pre-independence health systems can be summarized as follows: (i) management was highly centralized and the health ministries of the republics only implemented the plans and policies sent by Moscow; (ii) health care was funded through general taxation, with basically no cost-sharing arrangements with patients; (iii) the budget for providers was not based on performance, but on strict input norms such as the number of beds and staff working in each facility; (iv) all health care workers were public employees receiving a salary for their services; (v) the provider network was publicly owned and composed of multiple layers of services– (a) health posts (FAPs), polyclinics (SVAs), and hospitals (SUBs) in rural areas, (b) central rayon hospitals, rayon polyclinics, specialized hospitals and dispensaries in the main oblast city, and (c) hospitals for more specialized treatment in the capital city–; (vi) the model of care was hospital-based using outdated clinical protocols that gave very limited responsibilities to primary care facilities; (vii) no general practitioners, as all doctors were specialists, with pediatricians, therapists<sup>13</sup>, dentists, and gynecologists in charge of primary health care; (viii) nurses, midwives and feldshers (staff with basic health training) had very limited skills and were in general underutilized.

40. These systems were very costly to maintain due to the large number of facilities and staff, the inefficiencies in the system, and the over-reliance on hospital care instead of the less expensive primary health care-where most of the patients are treated in the European Union. There were (and still are) more beds, health facilities and in some cases the same number of physicians in the CIS-7 countries than in countries with much higher incomes. For instance, in 1991 there were on average 374 more hospital beds and 34 more physicians per 100,000 people in the CIS-7 countries than in the EU.<sup>14</sup> Finally, the model of care was also inefficient as the long length of hospital stays suggests; for instance, a patient in a CIS-7 country stayed on average 2.2 days more in a hospital than their EU counterparts.

41. In summary, the already existing inefficiencies of the health systems, the marked decrease in health budgets, and the greater health needs of an impoverished population made sector reforms urgent. Fiscal constraints have induced many changes in the health sector geared at increasing funds and reducing costs by changing the model of health care, and by improving the technical and allocative efficiency of the system. Since independence, all seven countries have made changes in their health sectors. Some countries, such as Kyrgyz Republic and Moldova, have developed and implemented a broad reform plan of their systems; others, such as Tajikistan and Azerbaijan, have so far accomplished only minor adjustments. Still, all countries have major health care reforms

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<sup>12</sup> This paragraph borrows from McKee, Healy and Falkingham, 2002.

<sup>13</sup> *Therapists* were in charge of adult health.

<sup>14</sup> All the calculations were done using the Health for All (HFA) data base (WHO, 2001), with the exception of number of physicians in the CIS-7 for which the TransMONEE data base (UNICEF, 2001) was used. Due to lack of data, the average number of physicians per 100,000 people in the CIS-7 does not include Armenia.



on their policy agendas. What follows is an overview of the different reforms these countries have implemented. These reforms were intended to increase resources by diversifying the sources of revenue; and to decrease costs by rationalizing the delivery system, by separating purchasing and provision, by changing incentives through new provider payment mechanisms, and by privatizing some of the health providers.

42. A major challenge in the reform process was to redirect the hospital-based (and more expensive) care towards a reformed and more effective primary health care system. The timing of the different reform actions is crucial to understand the consequences in terms of expenditures, utilization and resulting inequalities. Converting the PHC network from a mainly referral system to an effective ambulatory care service required anticipated planning and careful coordination with hospital care. A separate section discusses the efforts to prioritize and reform PHC, as this policy has many implications that go beyond cost reduction.

### **Actions Implemented in the Reform Process**

43. There were two major directions to proceed in a fiscally constrained situation. Measures were intended to both, increase or generate new revenues that created new funding schemes, and to reduce expenditures that created new financial arrangements for disbursements. In this process, a key strategic element has been the strengthening of the primary health care system in order to reduce the burden on the more expensive hospital system.

#### ***a.- Changes in Funding***

44. In response to the need for additional resources, different degrees of the following two mechanisms were introduced in the CIS-7 countries: (i) service fees as mechanisms of cost sharing; and (ii) Social Health Insurance Funds to manage payroll taxes.

#### **Service Fees**

45. One of the main objectives of the reforms was to find new sources of revenue. All countries have implemented cost-sharing arrangements by charging fees for some of the health services public providers offer. In some cases, the fees are only charged for a very limited number of services, as is the case of Tajikistan<sup>15</sup> (Rahminov et al., 2000). In other countries, virtually all services carry charges, although most (with the exception of Moldova) have fee-waiver and discount programs for some population groups, and exemptions for specific health interventions, such as the treatment of TB. The groups of the population for which the fees are waived are usually those classified as vulnerable during Soviet times: war veterans, disabled, and pensioners; in some cases, children are added to the list. These groups do not always coincide with the poorest groups, though. As a consequence, some countries have tried to improve the targeting of such fee-waiver programs; for instance, in 2001 the fee-waiver program in Armenia was extended to those families receiving a means-tested social assistance benefit (discussed in Section 6).

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<sup>15</sup> The following services are charged: optical services, orthopedics, cosmetic supplies and surgery, and lab tests and X-rays.

46. The introduction of formal payments was not only intended to increase resources, but also to formalize under-the-table payments. Fiscal constraints and the large numbers of health care workers resulted in very low salaries in the sector since budgets were thinly distributed among too many doctors, nurses and other staff. The difficulties in downsizing staff, their low remunerations, exacerbated by large accumulated arrears, brought the emergence and rapid increase in informal payments for health care services, services that were originally free of charge.

47. The formalization of informal payments has been partially achieved in some cases, but, unfortunately, in some places official fees have not eliminated informal payments but exist in parallel. In order for formal (co) payments to crowd-out informal payments the supply for health services needs to be inelastic. The evidence for these countries suggests that a private supply response in the health care market is still very limited, but also that co-payment experiences have not eliminated informal payments. In the pilot project in Chui and Issyk-kul oblasts in the Kyrgyz Republic, for instance, the total payments for services (both formal and informal) remained almost unchanged after formal co-payments were introduced (Kutzin and Chakraborty 2002), supporting the replacement hypothesis. In contrast, in Georgia there is qualitative evidence that suggests that raising the level of formal out-of-pocket payments may increase the incentive to charge informal payments in an environment of poor regulation and supervision of health care providers (World Bank, 2002).

48. The mixed evidence on the replacement hypothesis suggests that other factors, such as household or patient income, may be playing a role in the effects on formal-informal payments. If providers, for instance, can distinguish (and price discriminate) across patients, different levels of formal/informal compositions would be expected, depending on the patient's ability to pay. This way, providers may not be able to charge significant additional informal payments to poor patients, since their ability to pay is limited. But those same providers may charge higher informal fees to better-off patients even when co-payments are introduced. This issue requires further examination to determine the substitution and trade offs between the two types of payments.

### **Social Insurance Funds**

49. Many of the CIS-7 countries have also considered the implementation of health insurance schemes, funded through payroll taxes; these schemes have not significantly increased resources so far. Today only Georgia<sup>16</sup> and the Kyrgyz Republic have health insurance systems, although in all other countries health insurance has been on the agendas of health sector reform. In Armenia, Uzbekistan and Tajikistan laws on health insurance have been drafted and in Moldova a similar law was approved in 1999. The two existing schemes, in Georgia and the Kyrgyz Republic, have not significantly increased the resources available for health. These schemes depend on payroll taxes charged to formal sector workers, but since independence all these economies have suffered from high unemployment rates, low wages, and a large proportion of the

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<sup>16</sup> The payroll taxes in Georgia do not necessarily fund services for those formally employed contributing to the fund, these resources are used to fund a Basic Benefit Package which covers all health services for young children, rural populations and internally displaced people. For the rest of the population it only covers outpatient and emergency care, maternal health services and specific diseases such as TB and cancer (Georgia, PER).

population involved in informal activities, that reduce revenue collection. For instance in 2001, the Mandatory Health Insurance Fund in the Kyrgyz Republic contributed only 8.3% of the total prepaid health funding. However, as this health insurance has worked independently from the rest of the system, it has functioned as a catalyst for other needed changes, such as those related to pooling arrangements for budget funds, provider payment mechanisms and prioritization of primary health care (Kutzin and Chakraborty, 2002).

***b.- Measures to Decrease Costs.***

50. Parallel to revenue generating schemes, CIS-7 countries were forced to reduce expenditures. Among the measures adopted were (i) downsizing of health facilities and staff; (ii) separation of purchaser and provider roles; (iii) introduction of new mechanisms of provider payment (such as capitation for PHC and for health authorities' budgets, and case-base payments for hospitals); and, (iv) privatization or "autonomization" of providers.

**Rationalization and Downsizing of Health Facilities and Staff**

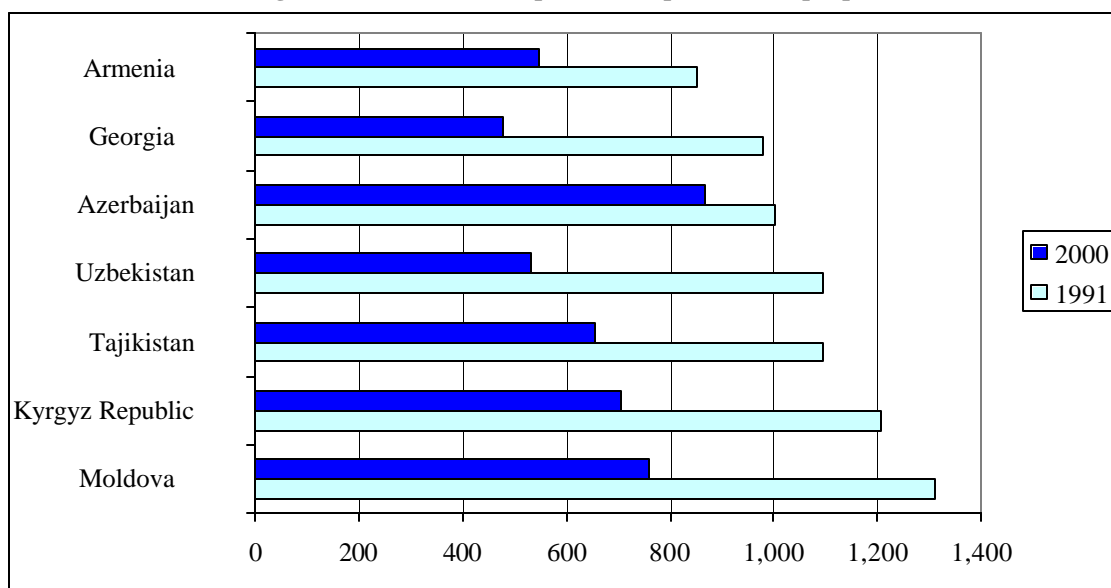
51. The governments' fiscal inability to maintain oversized and overstaffed health systems made rationalization of the health facilities and staff a priority of the health reform programs. All countries inherited systems with large numbers of health care workers and facilities serving overlapping populations. For instance, in capital cities there could be hospitals controlled by the central government, others controlled by the oblast (region) or rayon (district) administrations; in some cases all these hospitals served the same population catchment. Parallel health systems from the Ministries of Interior, Defense and others, only made the oversupply picture worse. There were also specialized hospitals that only offered certain services such as for cardiovascular diseases or dispensaries treating TB. Finally, and as was mentioned before, the number of hospital beds and physicians per 100,000 population in these countries was (and in some cases still is) larger than those in higher income countries.

52. Progress toward the rationalization of the system, or the lack of it, can be observed by looking at the trend in number of hospital beds, facilities and health workers. In the case of hospital beds there has been significant progress. Since the mid 1990s all countries have succeeded in decreasing the total number of hospital beds available (see figure 2). With the exception of Azerbaijan and Armenia, the total number of beds in the year 2000 was less than 60% of the number of beds that existed almost a decade earlier<sup>17</sup>, when there were 374 more hospital beds per 100,000 people in the CIS-7 than in the EU. Today, although there are still more hospital beds per 100,000 in the CIS-7, the difference has declined to 98 hospital beds per 100,000 population.

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<sup>17</sup> Notice that those figures may underestimate health resources (beds and doctors) because of the overestimated population number for a number of countries, similar to the estimates of health status. This problem is particularly important for Georgia and Armenia, and suspected for Moldova.

**Figure 9 Number of Hospital Beds (per 100,000 people)**



Source: HFA (WHO, 2001)

53. However, to obtain major savings in the sector, it is important to change the skill mix of the health care labor force and to reduce or consolidate not only the number of hospital beds, but also the number of health care facilities and overall staff; unfortunately not much progress has been attained in this regard. Only by reducing the number of facilities and therefore reducing costs in staff, utilities and maintenance, can major savings be addressed. Progress in the consolidation and rationalization of health care facilities has been mixed so far. In Uzbekistan, for instance, there was a plan to rationalize the network of health care facilities by replacing rural community hospitals and rural outpatient polyclinics, with rural medical centers. However, the government has constructed new rural medical centers and new emergency facilities at a faster pace than it has eliminated the existing rural polyclinics and medical centers (Ilkhamov, et al., 2001). Moldova has been one of the few countries that significantly reduced the number of hospitals. The process of rationalization started at the Judet level where many ancillary facilities were closed. Between 1998 and 2000, almost 200 hospitals have been eliminated; 154 polyclinics consolidated and more than 670 obstetric clinics have been closed (Cercone, 2002). In Georgia in 1998 a rationalization program was started which identified 12 hospitals to be kept in public hands, with all other facilities to be privatized (World Bank, 2000), but progress has been slow. None of the other countries have shown any major progress in this area.

54. Progress in the rationalization of health care staff has been mixed. The rationalization process included not only a reduction in the number of health workers, but also a change in the skill mix of the health labor force. In countries like Moldova and Georgia there were significant reductions in the number of workers in the sector. The health care labor force in Moldova lost 22,000 workers between 1998 and 2000. In Georgia between 1991 and 1998 the number of physicians decreased by 32% (World Bank, 2000). In the other CIS-7 countries, although there have not been major policy attempts to reduce the health sector work-force, other factors like low remunerations in the sector, have led many workers to leave the system either to change occupations or to

emigrate. Today, on average there are 52 fewer physicians per 100,000 in the CIS-7 than in the EU.<sup>18</sup> In contrast to the changes in the number of staff, not much progress has occurred in the skill mix of the health labor force, as discussed in the section on PHC.

### **Purchaser and Provider Split**

55. To increase the efficiency of the services provided, many countries introduced reforms intended to separate purchasing from provision of health care. At the time of independence, the health system in these countries were integrated and government-owned, with no separation between purchasing and provision. Conceptually, this separation can increase the cost-effectiveness and quality of the services offered by introducing competition among providers to obtain contracts with the purchasing agency. Additionally, if the contracts give the right incentives, through provider payment-mechanism for example, the quality of these services can be enhanced. But for these efficiency gains to be possible, the purchasing agency must have the capacity to monitor outcomes and expenditures of providers; similarly, providers must have managerial capacity and the autonomy to allocate resources.

56. Armenia, Georgia and Kyrgyz have made efforts to separate purchasing from provision of health care services. All three countries have created independent bodies<sup>19</sup> in charge of purchasing services. These efforts to separate purchasing and provision have not always been successful in achieving quality increases and cost reductions. For instance, in Georgia the purchasing agency did not have any capacity to monitor outcomes or to select providers<sup>20</sup>, contracts were not performance-based, and the facilities' expenditures were not monitored; this virtually eliminated the possible advantages that the provider/purchaser split might have brought (World Bank, 2002e). In Armenia, the lack of supervision instruments and the legal status of providers<sup>21</sup> do not allow a direct supervision of expenditures or a direct assessment of treatment costs (World Bank, 2002c). In contrast, the Kyrgyz Republic's Mandatory Health Insurance Fund (MHIF) has since its inception linked its contracting decision to performance indicators and it can only contract with hospitals accredited by the Licensing and Accreditation Commission. It is also important for the success of the reforms that the new contracts between the financing agency and providers clearly specify all benefits, cost-sharing mechanism and population covered; all these were carefully outlined in the Kyrgyz reform. Today the MHIF functions as sole purchaser in four pilot oblasts (Chui, Issik-Kul, Naryn and Talas). In the rest of the country the MHIF only contracts with GPs and hospitals for services offered to the insured population (Kutzin and Chakraborty, 2002).

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<sup>18</sup> All the calculations were done using the Health for All (HFA) database (WHO, 2001), with the exception of number of physicians in the CIS-7 for which the TransMONEE database (UNICEF, 2001) was used. Due to lack of data, the average number of physicians per 100,000 people in the CIS-7 does not include Armenia.

<sup>19</sup> In 1998 the State Health Agency (SHA) was created in Armenia as a body independent from the Ministry of Health to serve as a third party payer. Recently though the SHA was incorporated to the Ministry of Health, losing as such its independence.

<sup>20</sup> The purchasing agency made contracts with all existing providers without any selection.

<sup>21</sup> Joint stock companies such as Hospitals in Armenia operate under the private sector regulations.

## Provider Payment

57. The large number of inputs in the health system and their inefficiencies were in part an outcome of the incentives created by provider-payment mechanisms during the Soviet era. Hospitals and outpatient facilities' budgets were set according to input based norms that created incentives to increase these inputs – but not necessarily to increase the number of patients attended. Also there was no flexibility in the way providers could use the resources available; the facility's management could not change the allocation of resources across the preset budget line items. In the case of health care workers, they were paid a fixed salary that did not vary with the amount of patients attended, seniority or the quality of care provided.

58. With the exception of Azerbaijan, all other countries have experimented with different ways to change the provider-payment mechanism or at least to change the way budgets are allocated to local health authorities. Although Uzbekistan, Tajikistan and Moldova have made some progress in this respect; the countries that have effectively reformed their provider payment-mechanism have been Kyrgyz Republic, Georgia and Armenia. Uzbekistan experimented with a capitation financing system for ambulatory and polyclinic institutions but then stopped the project in 1992 (Langenbrunner et al., 2002). Tajikistan still follows the input based norms for budget setting, but it is developing a weighted capitation formula to allocate health resources to the oblasts; and in the year 2000 Tajikistan was trying to introduce per capita payments for PHC (Rahminov et al., 2000). Moldova has a capitation system for the allocation of health resources among local health authorities (Cerccone, 2002). In Kyrgyz Republic hospital payments are made on a case basis, where payment rates are defined prospectively based on a system similar to the Diagnostic Related Groups (DRGs) but created from Kyrgyz utilization and cost data (Kutzin et al. 2002). The MHIF in Kyrgyzstan pays general practitioners a capitation for the number of people that have voluntarily enrolled with the GP; the rate is based on the size of the MHIF pool for PHC and the capitation formula includes risk adjustments factors to account for sex, age, geographic location and an economic factor<sup>22</sup> (Kutzin et al. 2002). Armenia pays its hospitals and polyclinics on a case-based system (Hovhannisyan, et al., 2001, and World Bank, 2002c).

59. The changes in the provider-payment mechanism were intended to eliminate some of the inefficiencies of the system by eliminating the incentive to increase inputs, by taking into account the needs of the population attended, and by increasing the quality of the services provided; however, they have not always had the results expected. Lack of managerial capacity and experience at the facility level, payments to health care facilities that do not cover the cost incurred, and in some instances the small proportion of public funds with respect to out-of-pocket payments (including informal payments) have reduced the advantages that these new purchaser mechanisms were intended to create.

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<sup>22</sup> Although the formula was set to take into account all these risk factors, they have all been set to one, with the exception of the economic factor that is set to achieve budget neutrality.

## **Privatization**

60. All the countries allow private participation in the health sector. So far the only health care facilities that are now largely in private hands are pharmacies and dental services. Only Georgia<sup>23</sup> and Armenia shown progress in the privatization of hospitals. In Georgia many hospitals were privatized after a reform in 1999 that made hospitals responsible for all their operating costs (Gamkrelidze, 2001). In Armenia all health care facilities are now joint-stock companies and responsible for providing their own resources (charging fees to patients) to finance recurrent costs. The Armenian government contracts those providers to deliver a pre-specified Basic Benefit Package (BBP) for specific population groups.

### ***c.- Primary Health Care Prioritization***

61. The prioritization of primary health care (PHC) has been one of the main objectives of the health reform programs in the CIS-7 countries. This objective has been outlined in major government documents, such as “Health Care Reform in the Republic of Tajikistan for 2001” in 1996, “the General Concept of Health Care Reorientation” in Azerbaijan in 1999, “Georgia National Health Policy” in 1995 and 1999, and the “Manas Health Reform Project” in Kyrgyzstan in 1996.

62. To secure access to basic health services for the poor it is important to reform the outpatient care system to enhance its effectiveness and attain allocative efficiencies from these less expensive services. Even though many countries agree on prioritizing outpatient care reform, with few exceptions, there have been no significant changes in this regard.

63. Government intervention in health care can be justified on the grounds that it can correct market imperfections, such as the presence of externalities, public goods, or the lack of markets for insurance; or on equity grounds to assure that the poor have access to quality health care and that unanticipated risks are pooled. Given the resource constraints of the CIS-7 countries, it is important to assure that at least a basic level of outpatient services is provided, including maternal and child care, family planning services, and control of contagious diseases such as STD and TB. Additionally, many public health services, where government intervention is justified, can also be provided in PHC facilities, as in the cases of immunizations and the spread of information on healthier behaviors (diet, and tobacco and alcohol related). However, it is important to note that PHC prioritization should not be undertaken to the detriment of hospital care quality and accessibility. Mechanisms to assure the financial protection of the poor and vulnerable households in case of illness should be put in place, as some hospital interventions can easily result in catastrophic health expenditure that can force a household into poverty or can force an already poor household into a worse financial situation.

64. At the time of independence, most of the scarce government resources spent on health care went to hospitals, where costs are high and often provide services that can be accomplished on an outpatient basis. In general, more than 60% of government health

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<sup>23</sup> In Uzbekistan close to 1526 hospitals were privatized in 1999, but the definition of privatization sometimes only included whether or not the hospital was able to charge fees for the services offered. (Uzbekistan, HIT)

resources were allocated to hospitals; in countries like Kyrgyz Republic and Tajikistan this percentage was close to 80%<sup>24</sup>, leaving limited resources to public health interventions and to outpatient care. Not only were health budgets biased in favor of hospitals, but also many health interventions that could be treated in PHC facilities more cost-effectively were normally attended to in higher-level facilities. For instance, treatment of STDs and TB (diseases that can normally be effectively treated on an outpatient basis) was provided in specialized TB and STD hospitals.

65. To strengthen PHC it was necessary to change the budget allocations, the mix of health care workers, the outdated clinical protocols that existed during Soviet times, and to increase the autonomy of ambulatory facilities to make them more responsive to the needs of the population served. With the notable exceptions of Moldova and Armenia, there have not been major changes in the way the government budget is divided between primary care and hospital care. In 1998 in Moldova, the expenditure on PHC was only 25% of total public health expenditure, and by 2002 this percentage was 42% (Cercone, 2002). Similarly, in Armenia from 1997 to 2001 the total government health expenditure that went to polyclinics and ambulatories increased from 11.3% to 21.9% (Armenia PER). In contrast, the Kyrgyz Republic, that so far has been a model in successful health reforms in the area, has not changed its budget allocations to reflect their policy of strengthening PHC. In the year 2001, hospital care received more than 70% of the total public health budget, while primary health care only received 10% (Kyrgyz Government Treasury data, 2002 as quoted in Kutzin et al., 2002).

66. At the start of the transition, there were no general practitioners; specialists in polyclinics and nurses and *feldshers* were the health staff in charge of providing primary health care. However, outdated clinical protocols and the low skill of nurses and *feldshers* limited their role in the provision of primary care. In contrast to the limited changes so far in budget allocations, more progress has occurred in varying this mix between medical specialists and general practitioners, and in changing the roles of nurses, midwives and *feldshers*. However, much needs to be done as many of these reforms have only started and thus major changes to the skill mix of workers are yet to be seen. All CIS-7 countries have attempted to restructure the education of health workers. In the case of physicians a major emphasis was put on modernizing the curriculum and preparing new students (and retraining specialists) to become general practitioners. For instance, in Uzbekistan there are new post-graduate programs that offer general practitioner training; in Tajikistan, the therapy and pediatrics faculties were merged to train GPs and a retraining program is being offered to currently practicing physicians (Rahminov et al. 2000 and Ilkhamov et al. 2001). In the case of nurses and *feldshers*, the curricula in many countries have been reformed and in some instances the program was upgraded from vocational training to university level education (as was the case in Tajikistan).

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<sup>24</sup> In 1991 the total inpatient expenditure as percentage of total public health expenditure was 77.8% in Kyrgyz and 77.2 in Tajikistan (HFA [WHO, 2001]).



## Other Risks for the Reforms

67. The relevance of technical issues and the timing of the reform components have been weakened and disrupted by political issues in most countries. The political interactions range from the usual tension between institutions (such as Ministries of Finance and Health) on budgetary allocation issues, to those among parties with direct personal interests (such as doctors, nurses and administrative staff). Political behavior may negatively affect health allocations and spending through several mechanisms.<sup>25</sup> Populist behavior poses incentives in larger and very visible expenditures, such as high-tech specialized centers, to satisfy the (politically driven) expectations of higher-level central government officials. At another level, on the hospital-PHC allocation, doctors and other staff have incentives to keep allocations focused on the former since earnings are higher (including informal ones). The Box on the Kyrgyz Republic describes how a well-organized and sequenced reform can be suddenly weakened by political changes, jeopardizing the process, and most importantly, the critical timing of the different components.<sup>26</sup>

68. Another important risk that undermines the linkages between policies and outcomes and the whole reform process is the *institutional weakness to monitor and manage financial and other resources*. The incidence of corruption -- understood as the extraction of private benefits from the use of public goods and services, or from the power of holding public positions-- has been strongly associated with poorer health and education outcomes in cross-country analysis (Gupta et al., 2000). CIS-7 countries are not the exception since several institutional elements are observed. Health sectors are increasingly heterogeneous in their organizational and ownership structures, due to decentralization, increased autonomy or privatization of some segments of the health sector. At the same time regulatory and supervisory frameworks have not been strengthened or adapted to the new environments.

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<sup>25</sup> The authors thank a personal communication from Rasul Aliaga Bagirov pointing out these issues.

<sup>26</sup> The Box is an input from S. Chakraborty and the health team.

**Box 1 Implementation of the Single-Payer System in the Kyrgyz Republic**

Since 1996, the Kyrgyz Republic has been implementing a comprehensive set of health sector reforms aimed at rightsizing health facilities and staff, strengthening primary care and improving equity in the health system. At the core of the reforms is the implementation of a “single-payer” model where public resources for health care are pooled within the Mandatory Health Insurance Fund and its regional branches. The MHIF uses output-based purchasing to contract with providers. The reforms are being implemented in a phased manner and currently four oblasts are under the single-payer system, with the remaining three oblasts and the capital city (Bishkek) to be brought into the reforms.

The single-payer model, which effectively combines the pooling and purchasing function of the health system, is undoubtedly a technically feasible solution to the problems faced by many CIS-7 countries. However, it is important to reflect on the political and economic challenges inherent in implementing these reforms. First, in many of the countries of the CIS-7, including the Kyrgyz Republic, there are laws that support decentralization. Local governments in many of these countries are becoming more powerful. In this context, the implementation of a single-payer is looked upon -- especially by powerful regions-- as an infringement upon their growing autonomy. There is also the concern that pooling their funds means losing control, and weakens their influence over the health care delivery system, which ultimately has implications for client satisfaction and continued political support from the citizens. Therefore, the implementation of single-payer reforms has to carefully evaluate the decentralization context and the role of local governments. These tensions are naturally exacerbated in a resource constrained environment, such as in the Kyrgyz Republic.

The second concern is with financial sustainability of newly created structures, such as the single-payer system. The national MHIF is dependent on contributions from the Social Fund for employed persons, pensioners, and the unemployed and from the Republican budget for children and persons with social benefits. In a resource-constrained environment where there are fiscal weaknesses, expenditures are tied to implicit (political) rather than explicit policy priorities of the government, the health sector can financially suffer, which undermines health care financing reforms. Strengthening transparency and accountability and holding the State accountable for its policy commitments is critical and can improve the certainty in the flow of funds to health and other sectors. Financial instability can seriously threaten and undermine the health sector reform process, which ultimately has an impact on whether key groups (health personnel and consumers) will support the reforms.

69. On another dimension, the existing tradition of informal payments represented an opportunity to *extend the incidence of informal arrangements*, even beyond the patient-doctor relationship to the staff-manager level. The informal fees are particularly pervasive when imposed on individuals who are supposed to receive free services. In Armenia, the use of public subsidies for the vulnerable population is sometimes diverted to non-eligible groups at the discretion of the health practitioner, usually in an arrangement that benefits both the practitioner and the (non-eligible) patient (Kurchiyan, 2001). These corruption practices generate a general mistrust of the government interventions since resources are so obviously misused.

70. A positive financial stream into the health sector could also turn into a potentially risky factor. Donor funding has been mentioned in the context of Tajikistan and Armenia as a necessary and beneficial factor that requires some budgetary organization though. Other countries face commodity-based future income streams that are subject to sudden changes. Azerbaijan, for example, is expecting to rely on oil-proceeds to fund health expenditure patterns like those of pre-independence. Uzbekistan has been successful to avoid major GDP contractions based on natural resources such as cotton and gold. Moldova's economy (and its health budget in particular) already experienced a significant decline during the regional crisis of 1998 due to its large trade exposure with Russia. Armenia still faces the economic effects of a trade blockade from Azerbaijan and

Turkey (World Bank, 2002f). Funding volatility proved damaging after independence and it is important to assess the existing risks in the current and future health financing.

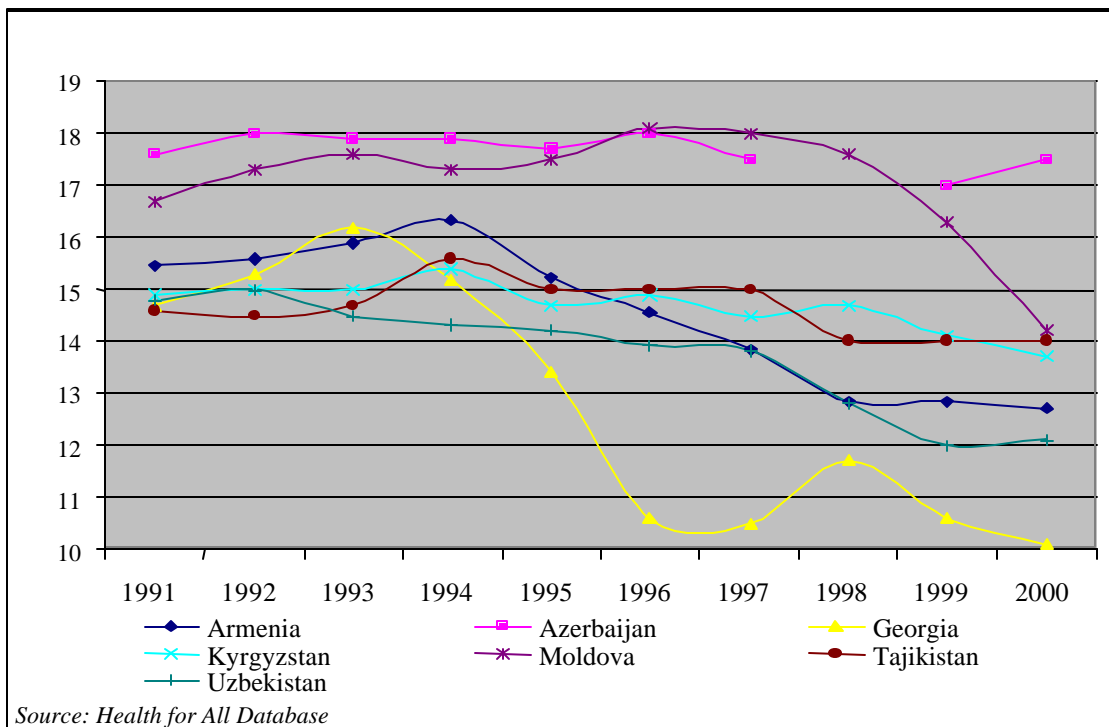
71. The factors described above need to be assessed from an institutional perspective, where the critical factor is strengthening the *stewardship role* of Ministries of Health in CIS-7 countries. Following (Travis, et al, 2002), stewardship must be understood beyond governance of the health system under the government control, but as the set of interventions and regulation that improve health and health care of the entire population.

#### **SOME RESULTS: EFFICIENCY AND EQUITY ON HEALTH CARE UTILIZATION AND SPENDING**

72. This section discusses the observed changes in internal efficiency indicators and contrasts these changes with those in access to health care across socioeconomic groups and the distribution of health expenditures (incidence). Indicators for internal efficiency, such as duration of stay at hospitals, dropped by 10 percent from 15.7 to 14.2 days on average (not weighted) between the first and second half of the nineties. The drop was more dramatic (and earlier in the decade) for countries where patients have to provide most of the cost such as Georgia (-29 percent) and Armenia (-15 percent). In other countries such as Azerbaijan, Kyrgyz Republic, Moldova and Tajikistan, the duration of stay dropped by less than 5 percent. Moldova, however, experienced a 20 percent decline between 1998 and 2000, as a result of the Russian financial crisis and the severe health budget cuts experienced in 1999.

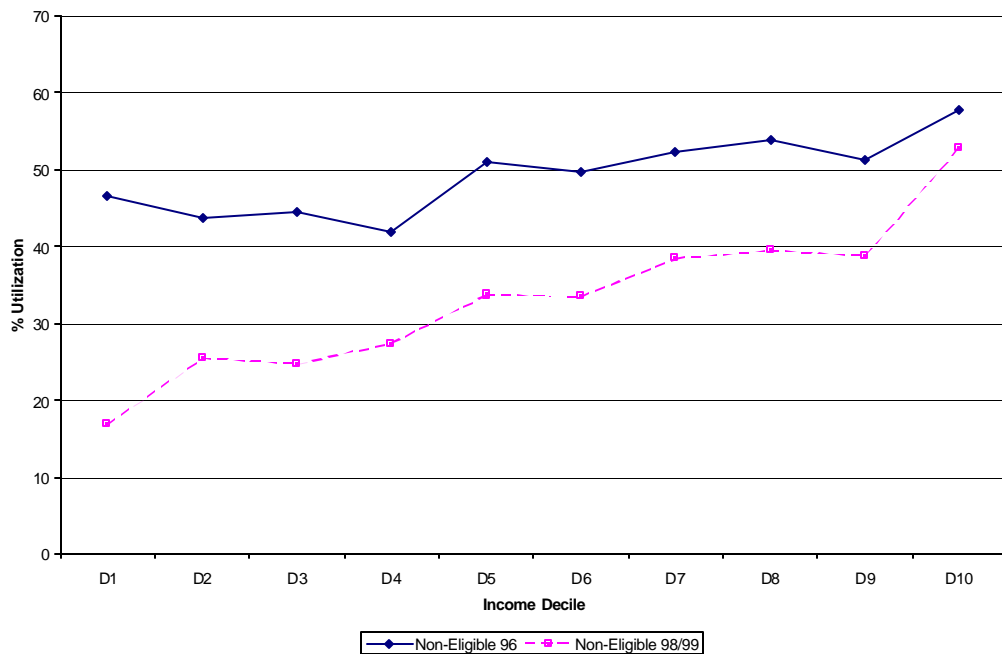
73. Whether these efficiency improvements were due to changes in the system or the natural response from budget constrained households bearing the costs of care, is not an easy issue. In fact, the introduction of fees for services was intended to temper demand, and the shorter duration of stay (coupled with fees for services) suggests the success of the policy. The levels of duration achieved by Georgia (10 days), however, are still above the average for the European Union (9.94 days) and way above the US and the UK at 6 and 5, respectively.

**Figure 10 Duration of Hospital Stay, 1991-2000**  
(average number of days)



**Figure 11 Armenia Health Care Utilization 1996-1998/99**

Armenia Health Care utilization 1996 - 1998/99



74. Those changes in efficiency were not equally distributed across the population. Inequalities in health care utilization arise because of several reasons: relative magnitude of fees to income, access (distance, location) to providers, and quality of services provided. In particular, out-of-pocket payments represent a larger share of the budget among the poor, particularly with catastrophic illness. In Georgia, out-of-pocket payments as a fraction of income is five times larger among the poorest quintile than among the richest quintile (World Bank, 2001), and correspondingly, the utilization rate is 23 percent lower among the poorest. Uzbekistan, a country with a much slower reform process and larger funding, evidences similar inequities in OOP: medical expenses represent about 22 percent of food expenditures among the poorest quintile while it is only 14 percent among the richest quintile (World Bank, 2002a).<sup>27</sup>

75. In addition, there are corresponding differences in utilization across socioeconomic groups. While it is difficult to entirely attribute the observed changes in the patterns of health care utilization to the incidence of OOP, there is evidence of a strong income gradient: poorer households experienced larger drops in utilization rates. Figure 11 shows the fraction of individuals by consumption deciles in Armenia who reported being sick and sought health care in 1996 and 1998/99.<sup>28</sup> The largest drops are observed among those in the poorest deciles (first to third) from about 45 percent utilization to about 20 percent. Factors like education of the household head, access to providers (distance), income sources and household demographic composition may also explain part of these differences across socioeconomic levels. These factors need to be accounted for when examining the link between OOP and their impact on access and utilization of health care. An additional factor that could affect the inequity of OOP is the nature (formal or informal) of out-of-pocket payments since a large incidence in informal payments has been observed in the ECA region. Similar evidence is found in the Kyrgyz Republic. Falkingham et al. (2002) estimate that in 1996 in the Kyrgyz Republic, health care utilization was very similar for the poor and the non-poor (about 55 percent), but in 1998 utilization among the chronic poor was less than 36 percent compared to 45 percent among the non-poor.

76. These inequalities in health care utilization are reflected in *regressive patterns of public expenditures in health*. Public spending on health is distributed far less equally at secondary and higher levels than at the level of primary health care. The survey data show that the top quintile benefits the most from public subsidies in hospitals and other in-patient care.

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<sup>27</sup> Medical expenditures as a share of food expenditures are typically used as a measure for relative incidence (Wagstaff and van Doorslaer, 2001).

<sup>28</sup> The figure shows the rates for the population not eligible for free-care services in order to avoid confounding effects of targeted programs. The waiver system is discussed next.

**Table 6 Incidence of Public Health Expenditures in the CIS -7  
(% of total spending)**

Country	Level	consumption quintiles					Concentration index
		1	2	3	4	5	
<b>Armenia</b> (1999)	Primary	16	18	18	20	28	<b>0.11</b>
	Hospital	13	12	13	18	43	<b>0.26</b>
<b>Azerbaijan</b> (2001)	Primary	..	..	..	..	..	..
	Hospital	17	20	19	21	23	<b>0.04</b>
<b>Georgia</b> (2000)	Primary	18	19	25	19	19	<b>0.01</b>
	Hospital	18	18	22	17	24	<b>0.04</b>
<b>Moldova</b> (2001)	Primary	17	19	22	20	22	<b>0.04</b>
	Hospital	9	20	19	24	28	<b>0.17</b>
<b>Tajikistan</b> (1999)	Primary	18	16	16	19	31	<b>0.12</b>
	Hospital	17	11	19	27	25	<b>0.12</b>
<b>Uzbekistan</b> (2001)	Primary	..	..	..	..	..	..
	Hospital	13	14	17	17	39	<b>0.22</b>

Source: based on the survey data for the years shown in parentheses. ..=Not available.

77. As Table 6 shows, in 1999 in Armenia 43 percent of public subsidies in secondary care benefited the top expenditure quintile while the poorest quintile received just 13 percent. A similar situation was also true in Uzbekistan where in 2001, 39 percent of public spending benefited the top quintile with the poorest quintile receiving just about 13 percent of total subsidies. This incidence of unequal benefits from public spending in secondary care is also captured by high concentration indices in Armenia, Uzbekistan, Moldova and Tajikistan.<sup>29</sup> In the case of Armenia and Tajikistan, the concentration indices were high in primary health care as well.

<sup>29</sup> The concentration index captures the relationship between distributions of different economic (or non economic) variables; for example, between the welfare distribution and public expenditures. It is defined as  $C = - (1 + \frac{1}{N}) + \left( \sum_{i=1}^N ix_i \right)$ , where N is the number of groups used (N=5 quintiles),  $i$  is the group index and,  $x_i$  the mean of the variable to be analyzed corresponding to the  $i^{\text{th}}$  group (expenditures share for the  $i^{\text{th}}$  decile). A fully egalitarian program that transfers the same to each individual has a concentration index equal to zero. The more progressive (regressive) the program, the closer the index to  $-1$  ( $+1$ ). The concentration index is also regarded as a summary statistic of a *generalized Lorenz curve* (Kakwani, 1977).

**Box 2 Incidence of Public Spending: Case of Armenia**

Evidence from Armenia indicates that almost 8 billion out of 20 billion Drams spent on health in 1999 benefited the richest quintile in Armenia. This reflects the higher utilization among better-off households as well as their higher use of the more expensive hospital care, compared to the poor. Concentration indexes corroborate that both primary and secondary health care public expenditures are regressive (proportionally benefit more the better off), in particular in hospital care.

**Armenia: Distribution of public expenditures in health, 1999,**  
(Million Drams received by each quintile)

	Consumption quintiles					Total	Concentration Index
	1	2	3	4	5		
Hospital	1,699	1,548	1,699	2,340	5,435	12,720	0.276
Polyclinic	780	901	894	1,000	1,424	4,999	0.114
Diag. Ctrs. and other	192	527	336	288	1,007	2,349	0.276
Total	2,671	2,976	2,929	3,628	7,866	20,068	0.180

Source: Armenia Public Expenditure Review (2002).

### Health Care Among the Poor

78. Most CIS-7 countries had in place several programs to provide subsidized health services. Given the regressive effects of fees in health care utilization most CIS-7 governments established *waivers* and *exemptions* to protect specific population groups or assure the delivery of specific services.<sup>30</sup> Waivers in health care are intended to ensure that specific population groups are subsidized, which can be determined using a number of criteria such as geographic location, ethnicity, or even poverty indicators. Exemptions, on the other hand, intend to guarantee the free delivery of specific services that, for instance, entail significant externalities (immunization, prenatal care, or even specialized interventions).<sup>31</sup> Countries have used a range of eligibility mechanisms, mostly following the vulnerable categories from the previous Soviet system.<sup>32, 33</sup>

79. Waivers have been in place in most CIS-7 countries for the “vulnerable groups” of the population such as orphans, disabled, or single mothers. Waiver programs are explicitly intended to address the problem of low utilization of health services and, consequentially, should have an impact on health care use among the eligible population. An empirical evaluation of the program in Armenia suggests that the fee-waiver program has had a small impact on utilization while it has represented an indirect income transfer to those who would seek care anyway, such as the disabled (Chaudhury et al., 2002).<sup>34</sup>

<sup>30</sup> See Bitrán and Giedion (2002) for a general discussion of waivers and exemptions.

<sup>31</sup> In practice, individuals that are waiver beneficiaries could also receive exempted services, such as a disabled receiving TB care.

<sup>32</sup> The eligible categories in Uzbekistan are children (examination and treatment) under 17 and ‘teenagers age 17-24’; benefited population groups (people with disabilities of 1st and 2nd categories – who receive disability pensions, orphans, war veterans); military recruits between 18 and 27 years old (‘Draftees’); and, Citizens injured while saving others lives or providing medical assistance in emergencies. See World Bank (2002a).

<sup>33</sup> In Armenia, vulnerable population groups were officially defined as those disabled persons (according to three degrees of disability), war veterans, children under the age of 18 with one parent, orphans under the age of 18, disabled children under the age of 16, families with four or more children under the age of 18, families of war victims, prisoners, children of disabled parents, victims of the Chernobyl disaster, and catastrophe workers.

<sup>34</sup> In fact, most of those seeking care because of the “eligibility” effect were eligible because of disability reasons.

These positive effects, however, have been jeopardized by the informal payments system and the lack of proper funding of these programs. Anecdotal evidence from Armenia indicates that those patients eligible for free health care did not seek health care because of the existing informal payment practice (Kurkchiyan, 1999). Moreover, since the National Health Insurance was not reimbursing the full cost of treatment for those eligible, providers were forced to charge eligible patients to recover the non-funded portion of the cost (World Bank, 2002a).

80. In summary, programs targeted at vulnerable populations or even at the poor, require a sustained and credible financial commitment to reimburse providers. Otherwise, if vulnerable and low income patients will still be required to pay fees, utilization will not increase (given their higher price sensitivity; Gertler et al., 1987). In cases of low utilization among the targeted population, providers will have the ability to use the subsidies to treat non-eligible patients.

81. Given the impoverishment effects of catastrophic illnesses, some countries have been experimenting with alternative funding schemes. Georgia is now experimenting with community health financing, which constitutes a first step, although an insufficient one, to improve access and to financially protect the population in the context of “extreme public sector failure” (Preker et al., 2001). These arrangements are also intended to increase access to health services by the poor and to avoid catastrophic health expenditures in case of illness, but suffer from major weakness such as the low level of resource mobilization in poor communities, the regular exclusion of the poorest, the small pools of risk, the lack of managerial capacity, and the limited benefits community health financing can provide.

## **SUMMARY AND RECOMMENDATIONS**

82. This paper has discussed the health care systems in the CIS-7 countries during transition in order to describe the parallel evolution of health expenditures, outcomes and the ongoing reforms. The transition decade of the nineties represented an opportunity for the CIS-7 countries to move from centralized and overgenerous health care systems towards a more efficient and rational institutional setting. The process, however, went in parallel to the collapse of the Soviet economic system and the associated drop of fiscal resources.

83. These countries followed a generically similar pattern with varying degrees of severity. The generic patterns are as follows. The lack of public resources was reflected in the decrease in quality of health care, the increased incidence of out-of-pocket expenditures and the collapse of the already inefficient public health activities. While health systems worldwide are increasingly relying on organized public and private arrangements (and less on OOP), the CIS-7 countries are increasingly relying on OOP.

84. These factors, in turn, contributed to a decrease in health care utilization, particularly among the poor, which, together with the level of poverty and decaying socioeconomic infrastructure (water and sanitation), changed the morbidity profile. The incidence of some contagious diseases such as TB and AIDS increased, and outbreaks of immunization-preventable diseases (like measles and typhoid) were observed. Mortality



linked to chronic diseases due to lifestyle (diet, alcohol, and smoking) continue to prevail in most countries. Health status and utilization indicators suggest serious difficulties for CIS-7 countries in achieving the MDGs.

85. In general, the evolution of the health sector varied across countries depending on their ability to cope with the economic crisis after independence, the existing financial resources and the speed and sequencing of their health reforms processes. The paper finds four major patterns of evolution during the analyzed period that are roughly represented by their advances in their health reforms and their level of health expenditures. According to public expenditures on health, countries can be separated into “very low” and “low” spenders, measured as percent of GDP or their public budgets. In the first group are Georgia, Armenia, Tajikistan and Azerbaijan, spending less than 2 percent of GDP. In the second, with more than 2 percent, are Uzbekistan, Moldova and the Kyrgyz Republic. Another distinction can be based on the advance of their reforms. While it is difficult to judge the qualitative advances, some countries like Armenia, Georgia, Kyrgyz Republic and Moldova, have advanced significantly in terms of the major components of the reforms, despite the differences in terms of initiation, speed and current status. Other countries like Uzbekistan, Tajikistan and Azerbaijan have made very little progress on reform. This approach helps to roughly group the CIS-7 countries into four categories, as shown in Table 7.

**Table 7 Patterns of Health Sector Spending and Reform**

		Reform activities	
		Advanced	Less or no advance
Public spending on health (% of GDP)	Low > 2%	Kyrgyz Republic  Moldova	Uzbekistan
	Very Low ≤ 2%	Armenia  Georgia	Azerbaijan  Tajikistan

86. The more dramatic evidence of changes is observed in **Armenia and Georgia**. The sequencing of the reforms and budgetary changes (level and allocation), however, resulted in a perverse equilibrium where lower public spending increased out-of-pocket (and informal) expenditures, which also lowered demand for health care and revenue capacity for the sector. The relatively weak primary care system did not provide affordable or effective services during the initial period resulting in decreased or postponed health care use. The decrease has been more marked among the poor, resulting in increased health care inequities. Compared to PHC, demand for hospital care decreased less, despite their antiquated protocols and inefficient practices (but still more effective than PHC). Recent efforts to rationalize the health care system -- including

performance-based contracts with providers, and managerial decentralization – need to be accompanied by increased resources to the health sector.

87. Second, intermediate spending countries but engaged reformers such as **Kyrgyz Republic and Moldova**, are distinguished in the timing of their reform processes. While the Kyrgyz Republic initiated a reform early in the nineties, Moldova only recognized its need when the fiscal situation was unbearable after the Russian financial crisis hit in the late nineties. These countries have the opportunity to keep their relatively higher levels of spending if only they can strengthen their reform processes, so they do not follow the experiences of those in the first group.

88. Third, the very slow reformers such as **Uzbekistan, Azerbaijan and Tajikistan** face very different challenges. While the economies of Azerbaijan and Tajikistan collapsed after independence, Uzbekistan was the only country in this sub-group with the smallest decline in GDP due to its initial stock of natural resources. Tajikistan, affected by internal war, reduced public expenditures on health to less than 1 percent of GDP. Despite the differences in level, public expenditures on health in these countries are highly concentrated in hospital care, an outgrowth of the Soviet-style health system. A major challenge is to strengthen primary care services<sup>35</sup> within the existing budget, in order to improve their quality and provide affordable care for the corresponding illnesses. **Uzbekistan** faces the double challenge (and a unique opportunity) of learning from the experiences of other countries in order to achieve (and fund) a more efficient and more equitable health care system. Most recommendations are common but their relevance also varies according to the level of reform and existing resources.

## **Recommendations**

89. Health sector reforms need to address the funding, efficiency and equity problems in an integrated fashion. Otherwise, the countries face the risk of increasing funding of an inefficient delivery system, or, increasing efficiency but with less equitable outcomes. Following, recommendations are offered to three different stakeholders in the health sectors: providers (supply), government (budget and regulation) and households (demand).

- a. *Enhance efficiency on the supply side:* Given the fiscal constraints that CIS-7 countries face, efficiency gains and other measures to decrease costs are needed to balance quality improvements in the service provision with the resources available. To achieve efficiency and quality gains, the health systems should ensure that: (i) hospitals and outpatient services rely more heavily in evidence-based clinical protocols; (ii) the skill mix of health workers, as well as their training, changes to give more responsibilities to general practitioners and nurses; (iii) the health delivery system relies more heavily in a reformed outpatient care system, where primary health care facilities are not only used as referral services; (iv) the public health delivery system is also strengthened through a broad reform coupled with increased budget allocations; and (v) the managerial capacity of health care providers is

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<sup>35</sup> This, in fact, requires a complex number of interventions such as training and re-training of health professionals, improve managerial abilities, and the introduction of more cost-effective medical protocols.

strengthened. Finally, to obtain savings in the systems (reducing the cost of utilities, staff, and maintenance) the process of rationalization of health care facilities should continue. This process should examine alternative uses of the buildings and land of the facilities identified for rationalization and not just their privatization.

- b. Strengthen the role of the government using *budgetary and regulatory instruments*. First, *public budget management systems need to be improved*. CIS-7 countries require strengthening their budgets as policy tools, making them an inclusive mechanism to strategically allocate resources. Such resource mobilization and allocation must include that of non-government sources, such as donors or OOP, in a transparent way that supports and complements government policies. Moreover, disaggregated budget information at the program level will support monitoring and evaluation of different interventions. Governments need to know how much and where they are spending. Second, CIS-7 countries need to strengthen the supervisory (monitoring) and regulatory role for quality assurance (medical standards and medical training). Countries need to improve the quality of information about health status and care in order to link expenditures and outcomes in an evaluation setting. In this context, it is important to strengthen the coordination across different sectors such as water and sanitation, as well as public health providers out of the scope of the Ministry of Health (such as Defense, Interior and other governmental bodies).
- c. Design and implement *mechanisms to meet demand, particularly among the poor*. The drop in health care utilization requires better financial schemes, and currently, health insurance arrangements based on payroll taxes are not a feasible option. Given these limitations, other pre-payment mechanisms should be explored. In addition, the introduction of co-payments requires a careful design to achieve an increased formalization of the payments and minimize the potentially regressive effects on utilization (this areas are closely linked to improvements in monitoring and budgeting as well). As equity in health status and care is an important aspect of public participation in the health sector, CIS-7 countries need to *improve their programs and insurance protection for the poor*. Programs to the vulnerable or poor population should be strengthened in order to improve their targeting, enhance their impact on utilization and reduce the impoverishing effects of catastrophic health expenditures. These issues, however, lack significant analysis and evaluation in both analytical and operational dimensions, and are crucial for an inclusive and more equitable health care system.

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