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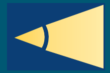

Health Care Systems in Transition

Kyrgyzstan

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Written by
Adilet-Sultan Meimanaliev
Ainoura Ibraimova
Bolot Elebesov
and Bernd Rechel

Edited by
Bernd Rechel
and Martin McKee

Kyrgyzstan

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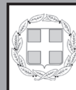

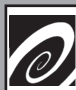

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Foreword

The Health Care Systems in Transition (HiT) profiles are country-based reports that provide an analytical description of a health care system and of reform initiatives in progress or under development. The HiTs are a key element of the work of the European Observatory on Health Systems and Policies.

HiTs seek to provide relevant comparative information to support policy-makers and analysts in the development of health care systems in Europe. The HiT profiles are building blocks that can be used:

- to learn in detail about different approaches to the organization, financing and delivery of health services;
- to describe the process, content and implementation of health care reform programmes;
- to highlight challenges and areas that require more in-depth analysis; and
- to provide a tool for the dissemination of information on health care systems and the exchange of experiences of reform strategies between policy-makers and analysts in different countries.

The HiT profiles are produced by country experts in collaboration with the Observatory's research directors and staff. In order to facilitate comparisons between countries, the profiles are based on a template, which is revised periodically. The template provides the detailed guidelines and specific questions, definitions and examples needed to compile a HiT. This guidance is intended to be flexible to allow authors to take account of their national context.

Compiling the HiT profiles poses a number of methodological problems. In many countries, there is relatively little information available on the health

care system and the impact of reforms. Due to the lack of a uniform data source, quantitative data on health services are based on a number of different sources, including the WHO Regional Office for Europe health for all database, Organisation for Economic Cooperation and Development (OECD) Health Data and data from the World Bank. Data collection methods and definitions sometimes vary, but typically are consistent within each separate series.

The HiT profiles provide a source of descriptive information on health care systems. They can be used to inform policy-makers about experiences in other countries that may be relevant to their own national situation. They can also be used to inform comparative analysis of health care systems. This series is an ongoing initiative: material is updated at regular intervals. Comments and suggestions for the further development and improvement of the HiT profiles are most welcome and can be sent to info@obs.euro.who.int. HiTs, HiT summaries and a glossary of terms used in the HiTs are available on the Observatory's website at www.euro.who.int/observatory.

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The current series of Health Care Systems in Transition profiles has been prepared by the research directors and staff of the European Observatory on Health Systems and Policies. The European Observatory on Health Systems and Policies is a partnership between the WHO Regional Office for Europe, the governments of Belgium, Finland, Greece, Norway, Spain and Sweden, the Veneto Region of Italy, the European Investment Bank, the Open Society Institute, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine.

The Observatory team working on the HiT profiles is led by Josep Figueras, Head of the Secretariat, and research directors Martin McKee, Elias Mossialos and Richard Saltman.

Technical coordination was provided by Susanne Grosse-Tebbe, and production and copy-editing was led by Francine Raveney, with the support of Shirley and Johannes Frederiksen (layout) and Janet Barber (copy-editor). Administrative support for preparing the HiT on Kyrgyzstan was undertaken by Caroline White and Pieter Herroelen.

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This document and the data included reflects the situation at April 2005.

Introduction and historical background

Introductory overview

General information

Kyrgyzstan is a central Asian state that gained its independence following the dissolution of the Union of Soviet Socialist Republics (USSR) in August 1991. The country is bordered to the north by Kazakhstan, to the west by Uzbekistan, to the south by Tajikistan and to the east by China. The territory of the country is 199 900 km^2. The capital is Bishkek, located close to the northern border.

Kyrgyzstan is very mountainous, with almost 90% of the territory 1500 m above sea level. The average altitude is 2750 m, the highest point being 7439 m (Mount Jengish Chokusu) and the lowest point 394 m (in the south-western part of the country). Due to the mountainous relief, the population is concentrated in river valleys and along lakesides. The average population density is 25 people/km^2. The climate is continental with an average annual temperature ranging from 10–13 °C in low altitudes to –8 °C in higher altitudes *(1)*.

At the end of 2003, the population of the country was estimated to be 5.01 million, the majority of which (65%) lives in rural areas. Kyrgyzstan is a multiethnic society. The main ethnic groups are Kyrgyz (67.4%), Uzbek (14.2%) and Russian (10.3%), while the remaining 8.1% include a large number of smaller minority groups *(2)*. Kyrgyz and, since May 2000, Russian are the two official languages of the country. The predominant religion is Sunni Islam, followed by the Russian Orthodox faith, although the state is formally secular.

Fig. 1. Map of Kyrgyzstan

Source: UN Carthographic Section.

Political structure

On 31 August 1991, the Kyrgyz Supreme Soviet voted for independence from the USSR. Six weeks later, Askar Akaev was re-elected as President of the new country. In December 1991, Kyrgyzstan became a member of the Commonwealth of Independent States (CIS). A new constitution was adopted on 5 May 1993, with several amendments since. The constitution defines Kyrgyzstan as a sovereign, unitary, democratic republic built on the principles of a constitutional, secular state.

In January 1995, Akaev was re-elected President for a new 5-year term. Referenda in February 1996 and October 1998 significantly expanded the power of the President and consolidated a presidential style of government. Akaev was re-elected President for a third term in October 2000. A referendum in February 2003 approved constitutional changes and affirmed Akaev's final term in office.

Parliamentary elections in February 2005, that were found to fall short of international standards by the Organization for Security and Co-operation in Europe (OSCE), triggered mass demonstrations, setting in train a sequence of events that led to the resignation of President Akaev in April 2005. New presidential elections were planned for June 2005, but the political situation remained unclear at the time of writing (April 2005).

The parliament (Jogorku Kenesh), constituted after independence, had 350 members. Following a referendum held in 1995, its structure was changed into a bicameral body with a total of 105 seats, consisting of the Assembly of People's Representatives and the Legislative Assembly. The sessional Assembly of People's Representatives numbered 70 elected deputies representing territorial interests, while the full-time Legislative Assembly was a standing body of 35 elected deputies representing the population as a whole. The structure was changed again in 1999. The Assembly of People's Representatives was reduced to 45 members and the number of deputies in the Legislative Assembly increased to 60, 45 of whom were elected directly, while 15 were elected according to party lists. Following parliamentary elections in 2005, the parliament will be unicameral with 75 full-time members elected for 5 years based on single-mandate electoral districts. There are more than 30 registered political parties.

Executive power is represented by the government, which operates through the ministries, state committees and administrative agencies, and by local state administrations. The government is headed by the Prime Minister, who is appointed by the President, and consists of the senior ministers and chairs of state committees. Local state administrations in oblasts (regions) and rayons (districts) are headed by Akims (governors) – all appointed by the President for four years. In 1996 the President established a new Security Council to act as an inner cabinet. Unlike the broader cabinet, it was not accountable to parliament.

The Office of the Procurator General supervises the implementation of legislative acts and is responsible for criminal prosecution in courts. The highest judicial bodies are the Constitutional Court and the Supreme Court. Judges in both are elected by the Jogorku Kenesh on the recommendation of the President and have a 10-year term. Judges in lower courts are appointed by the President for a 7-year term, in consultation with the Jogorku Kenesh. After independence, a new institution, the court of aksakals (elders) emerged in rural areas and was institutionalised in 1995. Aksakals deal with land boundary disputes, divorces and property disputes, domestic violence, livestock thefts and other local disagreements. They operate within the framework of the Kyrgyz legal code and their decisions are subject to appeal to higher courts at the rayon

or city level. Arbitration courts existed until 2003, when their legal status was revoked after a referendum. The Supreme Arbitration Court has become a kollegia (department) of the Supreme Court, which supervises compliance with the Procedural Code on Arbitration and the Law on Bankruptcy (Insolvency). The former local arbitration courts are in the process of being re-established within the general judicial system.

Local self-governing bodies are represented by local keneshs (councils) and local governments (including mayors' offices). Deputies of local keneshs are elected for 5 years; heads of local governments are elected for 4 years. There are three territorial levels of local keneshs: primary (villages and towns), rayon and oblast levels. The local self-governing bodies are responsible for dealing with local matters.

The country is divided into seven oblasts (Batken, Chui, Issyk-Kul, Jalal-Abad, Naryn, Osh and Talas oblasts). The capital, Bishkek, and Osh city are separate administrative regions with a status equivalent to oblasts. The oblasts are divided into 40 rayons.

Kyrgyzstan is a member of the United Nations and several regional organizations: the Commonwealth of Independent States (CIS), the Shanghai Cooperation Organization (SCO), the Eurasian Economic Community (together with the Russian Federation, Belarus, Kazakhstan and Tajikistan) and the Central Asian Economic Community (with Kazakhstan, Uzbekistan and Tajikistan). In October 1998, Kyrgyzstan became the first CIS country to become a member of the World Trade Organization (WTO).

Demography and health

Despite large-scale emigration, the population of Kyrgyzstan grew overall during the 1990s, from 4.46 million in 1991 to 5.01 million in 2003 *(3)*, since birth rates were still much higher than death rates. The country has a young population: 34.5% are children and adolescents, 57% are people of working age and 8.5% are above working age. The reported literacy level of the adult population, at 98.7%, is very high *(2)*.

The last 15 years have seen a declining birth rate, with a decrease of almost a third between 1991 and 2003, from 29.1 to 20.9 per 1000 population. The declining trend started in 1988, most likely as part of the general reaction to the worsening socioeconomic situation seen throughout the Soviet Union. After reaching its lowest point in 2000, the birth rate began to increase in the following years, a trend that is expected to continue, as the girls born in the time of the babyboom of the 1980s are now reaching reproductive age *(2)*. Similar to the

Table 1. Demographic indicators, 1991–2003

Indicators	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Mid-year population (in million)	4.46	4.52	4.51	4.51	4.56	4.63	4.67	4.77	4.84	4.88	4.93	4.97	5.01
Births per 1000 population	29.1	28.6	26.1	24.6	26.0	23.6	22.0	22.2	21.4	19.7	19.8	20.2	20.9
Deaths per 1000 population	6.9	7.2	7.7	8.3	8.2	7.6	7.4	7.4	6.8	6.9	6.6	7.1	7.1

Sources: (4–6).

rest of the former Soviet Union, the death rate had been increasing until 1994, when it peaked at 8.36 per 1000, but has declined since.

An enormous emigration in the early 1990s led to a transient decrease in the population in 1993 and 1994. The peak outflow was in 1993 (121 000), when ethnic Russians, Jews and Germans were leaving the country to seek residence in their respective "kin-states". In the mid-1990s emigration declined, but increased again in 1999 following communal strife in the southern parts of the country. Russians remain the largest group of emigrants (57%), followed by Ukrainians, Germans and Kyrgyz (6–8% each) and Kazakhs, Uzbeks and Tatars (4% each). Over 70% of emigration originates in Chui oblast and Bishkek, which are also the targets of internal migration flows *(2)*.

Table 2. Life expectancy at birth

	1991	1995	1996	1997	1998	1999	2000	2001	2002	2003
Both sexes	68.8	65.9	66.6	66.9	67.1	68.7	68.5	68.7	68.1	68.2
Females	72.7	70.4	70.1	71.4	71.2	72.6	72.4	72.6	72.1	72.5
Males	64.6	61.4	62.3	62.6	63.1	64.9	64.9	65.0	64.4	65.0

Sources: (4,5).

Trends in life expectancy in Kyrgyzstan have followed trajectories very similar to those seen in the former Soviet Union as a whole *(7)*. Life expectancy declined in the years after 1991, showing signs of recovery since 1994. However, life expectancy has still not reached its 1991 level. In 2001 life expectancy was almost 10 years lower than in the European Union (EU), reaching 68.66 years at birth in Kyrgyzstan compared with 78.21 years in the EU *(3)*. As in the rest of the former Soviet Union, there is a substantial gender gap in life expectancy; in 2003, females could expect to live for 72.5 years, while male life expectancy was, at 65 years, 7.5 years lower.

According to official death registration statistics, cardiovascular disease is the main cause of death. In 2003 diseases of the circulatory system constituted 47.1% of recorded mortality, diseases of the respiratory system 12.7%, injuries and poisonings 10.2%, neoplasms (cancer) 8.7%, diseases of the digestive system 5.9%, infectious and parasitic diseases 3.5% and other causes 11.9% *(4)*.

Table 3. Infant mortality rate per 1000 live births

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Official statistics	29.7	31.5	31.9	29.1	28. 1	25.9	28.2	26.1	22.7	22.6	21.7	21.2	20.9
World Bank estimate	–	65.6	–	–	62	–	60	–	–	57	52	–	–

Sources: (3–5,8).

The officially recorded infant mortality has decreased in the past decade, reaching 20.9 per 1000 live births in 2003. However, serious concerns have been raised about the quality of official statistics on infant and child mortality in all central Asian republics. There are three main factors that contribute to the discrepancy between official data and estimates by international organizations: the continued use of the Soviet definition of live birth (despite the official adoption of the definition of live birth established by the World Health Organization); misreporting by medical staff; and failure to report births and deaths of children to the authorities *(9)*. These factors combine to understate the real situation in Kyrgyzstan. For example, calculations based on the 1997 Demographic and Health Survey estimated an infant mortality rate of 61 per 1000 live births for the period 1992–1997, twice the official estimate of 29 for the period 1993–1996. There are notable differences between different population groups. Based on these survey data, infant mortality in the poorest quintile in 1997 was, at 83.3 per 1000 live births, almost twice as high as for the richest quintile, in which it was 45.8 per 1000 live births *(10)*. Table 3 shows how World Bank estimates, based on survey data, have consistently reported higher infant mortality rates than those of official statistics. If World Bank estimates reflect the real situation, life expectancy in Kyrgyzstan would be reduced by two years *(11)*. Following Kyrgyzstan's adoption of the WHO criteria of a live birth in 2004, infant mortality in the first 10 months of 2004 showed an increase of 21% compared to the same period in the previous year (Republican Medical Information Centre preliminary data).

According to official data, the structure of infant mortality is the following: perinatal causes (44.9%), diseases of the respiratory system (29.2%), infectious and parasitic diseases (6.7%), congenital malformations (11.8%) and other

causes (7.4%). However, in view of the underreporting and misreporting of infant deaths, these data should be treated with caution.

Table 4. Maternal mortality

	1991	1995	1996	1997	1998	1999	2000	2001	2002	2003
Maternal mortality per 100 000 live births	76.4	67.4	65.0	76.4	54.7	46.1	46.5	49.9	58.4	53.1

Sources: (4,6).

According to national statistics, maternal mortality has also decreased in the past decade. It is reported at 53.1 per 100 000 live births in 2003 compared with 76.4 per 100 000 live births in 1991, far above the EU average (which is below 10 per 100 000 live births). However, as is the case with infant mortality, actual maternal mortality rates may be much higher. The United Nations Children's Fund (UNICEF) estimated that in 2000 maternal mortality was 110 per 100 000 live births, more than double the official rate for the same year *(12).*

Table 5. Infectious diseases

	1991	1995	1996	1997	1998	1999	2000	2001	2002	2003
Tuberculosis incidence per 100 000 population[a]	56.5	73.3	87.5	112.6	108.9	131.8	150.9	135.1	145.8	138.2
New HIV cases[b]	0	2	2	2	6	10	16	149	160	132
Syphilis per 100 000 population	2.0	73.6	164.7	167.8	144.2	110.8	87.5	60.6	53.8	48.2

Sources: (3–6).
Note: [a] Data on the number of tuberculosis cases have included the penitentiary system since 1999; [b] Data on the number of new HIV cases are from the Republican AIDS Centre and include all cases registered in Kyrgyzstan, of both Kyrgyz nationals and foreigners.

Even though mortality from infectious and parasitic diseases constitutes a comparatively small percentage of overall mortality (3.5%), morbidity has grown dramatically over the last decade. The recorded incidence of tuberculosis more than doubled between 1991 and 2003, from 56.5 to 138.2 per 100 000. Multidrug-resistant tuberculosis is widespread and it is believed that prisons contribute greatly to the spread of the disease *(13).*

The recorded incidence of sexually transmitted infections has also increased dramatically. The recorded incidence of syphilis, for instance, rose from 2.0 per 100 000 in 1991 to 48.2 per 100 000 in 2003, reaching its peak of 167.8

per 100 000 in 1997, although the recent decline may in part be due to under-recording or increased private treatment. Similarly, a decreasing trend in the incidence of gonorrhea (from 55.5 per 100 000 in 1991 to 27.4 per 100 000 in 2003) may not reflect the real situation because of self-treatment and treatment in private and non-medical facilities. The incidence of other sexually transmitted infections such as chlamydiosis and mycoplasmosis is also growing *(14)*.

Although the absolute number of officially registered HIV cases is still comparatively low, an exponential increase has been recorded since 2001. The country is still at an early stage of the HIV/AIDS epidemic, but there are a number of factors in place that create a potential for a dramatic increase: widespread injecting drug use, migration, extensive commercial sex work, marginalization of vulnerable groups and low public awareness of HIV/AIDS *(15)*.

Malaria was rare until 2002, when a dramatic increase was recorded, thought to reflect increased migration from Afghanistan to the southern part of Kyrgyzstan *(6)*. In 2002, there were 2744 registered cases of malaria, although this number declined to 468 in 2003 *(4)*. Viral hepatitis is also a problem, particularly in the southern regions of the country. There is a high prevalence of infection with viral hepatitis B among medical personnel that come into contact with the virus *(16)*.

Recent years have also seen an increase in parasitic diseases. The incidence of brucellosis and echinococcosis doubled, from 14.7 per 100 000 in 1991 to 50.3 per 100 000 in 2003 and from 6.0 per 100 000 in 1992 to 11.6 per 100 000 in 2000, respectively. The increase is thought to be related to economic difficulties and, in particular, weaknesses in the veterinary service *(14)*.

As a land-locked mountainous area, Kyrgyzstan is especially vulnerable to iodine deficiency unless salt is iodized. The rate of iodine deficiency has sharply increased. Sampling studies have shown that 52% of children and adolescents in the northern regions have some evidence of iodine deficiency, while in the southern regions this figure reaches 87% *(16)*. The number of people with recorded iodine deficiency rose from 5260 in 1995 to 109 435 in 2003 *(4)*. As in other parts of central Asia, iron deficiency among women is common, largely due to patriarchal patterns of distribution of food within families. The 1997 Demographic and Health Survey found that over 60% of women (including 90–95% of pregnant women) and 50% of children under three had anaemia. In 2003, the number of registered cases of anaemia was 95 385 *(4)*.

Over the past decade, there has also been an increase in alcohol and drug abuse. In the last five years recorded consumption of alcohol in Kyrgyzstan has increased by 28% and deaths resulting from alcohol intoxication have risen by 130%. The incidence of alcoholic psychosis has increased fourfold *(16)*. There

has also been a dramatic increase in the use of illicit drugs, with an estimated fourfold increase over the past decade *(16)*. Use of opium and, more recently, heroin has increased in comparison with hashish consumption. Unlike in other parts of Asia, an estimated 95% of users inject opium intravenously, a factor associated with a rapid growth of HIV among intravenous drug users in the southern part of the country in 1999 *(16)*.

The extent of violence against women is increasingly recognized. Nearly 30 000 women have turned to the ten crisis centres in the country in the past three years, seeking assistance after suffering various forms of violence. Some sources also describe trafficking in human beings, with an estimate of almost 4000 Kyrgyz women each year becoming victims of the trade in humans *(16)*.

Economy

In Soviet times Kyrgyzstan was heavily subsidized from Moscow, with direct subventions contributing to up to 25% of republican income. Its role in the Soviet division of labour was, like much of central Asia, as a producer of raw materials. With the dissolution of the Soviet Union and the transition from central planning, the country encountered a severe economic recession leading to a period of hyperinflation. In all central Asian republics, real output was lower in 1999 than it had been a decade earlier, and inequality and poverty increased *(17)*. To cope with these economic pressures, Kyrgyzstan has embarked on a resolute course of liberalization, and has since 1994 cooperated closely with the World Bank and the International Monetary Fund.

Table 6. Macroeconomic indicators, 1993–2003

Indicators	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GDP (m som)	5 355	12 019	16 145	23 399	30 686	34 181	48 744	65 358	73 883	75 240	83 421
GDP real growth rate (%)	-15.5	-20.1	-5.4	7.1	9.9	2.1	3.7	5.4	5.3	-0.5	6.7
Inflation (% end of period change in consumer price index)	929.9	62.1	32.1	34.8	13.0	16.8	39.9	9.6	3.7	2.3	5.6
Budget balance (% of GDP)	-7.1	-7.7	-11.5	-5.4	-5.2	-3.	-2.5	-2.0	0.4	-1.0	-0.8
Per capita GDP in US $ (average exchange rate)	234	244	325	392	374	340	255	279	308	315	377

Sources: National Statistical Committee for GDP, inflation and budget balance data. World Bank, 2003 *(18)* for GDP real growth rate, budget balance, and per capita GDP in US $.

Prices and trade were liberalized in 1992–1996 and two rounds of privatization implemented in 1991–1993 and 1994–1995. In 1992 a two-tier banking system was established, with the National Bank working as the Central Bank and the creation of several joint stock commercial banks. The tax system has also been reformed since 1992. The legislation necessary for a functioning market economy has been developed steadily.

The national currency – the Kyrgyz som – was introduced on 10 May 1993. Tight fiscal and monetary policies helped to achieve a relative degree of macroeconomic stabilization. In 1996, the economy started to recover with 7.1% growth of GDP, attributable mainly to the development of a gold-mining Canadian-Kyrgyz joint venture, known as Kumtor. The 1998 economic crisis in the Russian Federation slowed economic growth, revealing the vulnerability of the Kyrgyz economy to external shocks. However, the average annual real growth rate of GDP in 1996–2001 was 5.6%. In 2002, GDP fell by 0.5% due to a recession in the energy sector and an accident at the Kumtor gold mine in July, but resumed again in 2003 with 6.7% growth *(19)*. In spite of this macroeconomic stabilization, however, a large proportion of the population continues to live in poverty.

Kyrgyzstan is the only central Asian country so far to have joined the World Trade Organization, exposing its internal market to direct foreign competition. The country has borrowed heavily from abroad and currently its foreign debt is US $1.73 thousand millions, equivalent to US $345 per capita.

About half of the population works in agriculture, which is the largest sector of the economy, contributing to 35.2% of GDP in 2003. Industry and construction accounted for 22.9% of GDP. The mining industry, especially gold mining, is of particular importance and a major source of exports. Other than gold, however, Kyrgyzstan has few readily exploitable natural resources. Another important branch of the economy is the production of electrical energy, mainly on the basis of hydroelectric power. The country has only a small manufacturing sector. Services contributed to 34.9% of GDP in 2003 *(20).*

On the United Nations Development Programme (UNDP) Human Development Index (a composite measure of life expectancy, adult literacy and educational attainment, and per capita GDP), Kyrgyzstan ranked at 0.701, occupying the 110th place out of 177 countries worldwide in 2002 *(21)*. Poverty increased markedly in the 1990s, although it was not unknown prior to the dissolution of the Soviet Union. Using a national poverty threshold of 75 roubles per month, it has been estimated that in 1989 32.9% of the population in Kyrgyzstan lived in poverty, compared to 11.1% of the overall Soviet population *(17)*. After 1989, poverty increased and so did inequality. The Gini coefficient (a measure of income inequality) increased from 0.26 in 1989 to 0.47 in 2000

(22). In 1998, on the basis of the US $2.15 per day absolute poverty line used by the World Bank, 49.1% of the Kyrgyz population was poor, rising to 84.1%, when using the US $4.30 per day poverty line *(23)*. People living in poverty are concentrated in rural and mountainous regions and many are children. Since 1999, when peak levels of poverty were recorded (64.1% according to the national poverty line), a reduction has been achieved, but in 2003, 40.8% of the population was still living below the national poverty line *(22,24)*.

In May 2001, the Kyrgyz Government approved a Comprehensive Development Framework for the period 2001–2010, setting out a vision of socioeconomic development and poverty alleviation *(25)*. The National Poverty Reduction Strategy 2003–2005 constitutes the first phase in the implementation of the Comprehensive Development Framework. The Strategy was adopted as a medium-term action programme for economic, social and political reforms, developed in close collaboration with the International Monetary Fund, the World Bank and other international organizations *(24)*. Kyrgyzstan has also become one of the member countries of the CIS-7 Initiative, which was launched in April 2002. The Initiative is sponsored by bilateral donors, the International Monetary Fund, the World Bank, the European Bank for Reconstruction and Development and the Asian Development Bank. It aims to promote poverty reduction, growth and debt sustainability. It encompasses seven low-income CIS countries: Armenia, Azerbaijan, Georgia, Kyrgyzstan, the Republic of Moldova, Tajikistan and Uzbekistan *(26)*.

History

The territory that is now Kyrgyzstan has had a fluid relationship with neighbouring states and spheres of influence throughout recorded history. The first reference to the ethnonym Kyrgyz can be found in Chinese manuscripts dating back to the 2nd century BC, referring to peoples who inhabited the higher reaches of the Yenisei River, which flows to the Arctic Ocean through Siberia. It has been subsequently mentioned by Persian and Arab historians. In the 11th century AD, Kyrgyz was listed in Makhmud Kashgari's encyclopaedia Kut Bilim as one of the 22 Turkic tribes.

Historically, present-day Kyrgyzstan lay on the intersection of paths travelled by nomadic and migrating populations between central Asia and Asia Minor, as well as across the steppes to Eastern Europe. It has been a zone of cultural interaction between the central Asian nomadic peoples and settled populations. One of the branches of the Great Silk Route went through the territory of what is now Kyrgyzstan.

The 16th to 19th centuries were a period of almost constant war involving a sequence of invaders: the Kalmak Khanate, Dzhungar Khanate, Kokhand Khanate and Tsin China. In the 18th century Kyrgyz tribes made the first contacts with the Russian Empire, into which they were absorbed by the end of the 19th century.

Many elements of the history and culture of the Kyrgyz people can be found in the national heroic epic Manas. As the Kyrgyz language was unwritten until 1924, the Manas, along with other minor epics, had been passed down from generation to generation by word of mouth. In 1995, Kyrgyzstan celebrated the 1000th anniversary of the epic.

Kyrgyzstan entered the 20th century as part of the Turkestan Krai of the Russian Empire. Punitive operations by the Czarist army against the mass revolt of the central Asian peoples in 1916 and the subsequent Stalinist "collectivization" resulted in migration of many Kyrgyz to China. Initially under Russian influence, the traditionally nomadic Kyrgyz began to settle. As already mentioned this process intensified under the Soviet regime, especially during the "collectivization" and industrialization of the twentieth century.

Following a brief period of independence after the 1917 revolution, in 1918 Kyrgyzstan became part of the Turkestan Autonomous Soviet Socialist Republic within the USSR. In 1924 the territory of present-day Kyrgyzstan became the Kara-Kyrgyz Autonomous Oblast, a constituent part of the USSR. Two years later, in 1926, the official name changed to Kyrgyz Autonomous Soviet Socialist Republic (Kyrgyz ASSR) and in 1936 it was designated as a full republic entitled the Kyrgyz Soviet Socialist Republic (Kyrgyz SSR). The Kyrygz Republic gained its independence in August 1991.

Historical background of health services

In the beginning of the 20th century, the health care system of present-day Kyrgyzstan comprised only a very small number of medical facilities, all located in cities. In 1913, there were only six hospitals (four city and two rural hospitals), nine outpatient facilities and five pharmacies. After present-day Kyrgyzstan was included in the Soviet state, a health care system based on the Semashko model was developed. Nikolai Semashko, the founding father of Soviet health care, announced the principles on which the Soviet health care system was to be based at the Congress of Medical-Sanitary Departments in 1918:

- government responsibility for health care;
- universal access to free health services;
- a preventive approach to diseases.

On the basis of these principles, the Soviet state developed a unified health system, owned and controlled by the state. The main emphasis was placed on the fight against infectious diseases and the establishment of a network of health facilities. In the Kyrgyz Republic, typhus and cholera were the main diseases in the 1920s. The period 1927–1929 was characterized by the extensive and rapid development of a network of health facilities, including hospitals, ambulatories, feldsher points and mobile health facilities.

Specialized health care began to develop in 1925. The first maternity house and children's consultation centre were opened in Frunze (the name of Bishkek in the Soviet era), a venereal ambulatory was reorganized into a venereal dispensary, and venereal points were also opened in Tokmok and the village of Kochkor. In 1928, the first medical college was opened to train middle-level health personnel (midwives, feldshers, nurses, laboratory assistants, X-ray laboratory assistants and technicians). Mobile medical groups to fight tuberculosis, trachoma, syphilis and other skin and venereal diseases started functioning from 1935. Efforts in the field of sanitation and epidemiology also improved. In 1938, the Sanitary-Bacteriological Institute was opened. By 1940, the health care system of the country was able to offer all basic elements of health care, including clinical care, pharmacies, sanitary-epidemiological (san-epid) services and forensic medicine. There was one dispensary for tuberculosis, 11 dermato-venereal dispensaries, 9 san-epid stations, 10 sanatoria and 59 pharmacies. Medical education was provided by the Kyrgyz State Medical Institute (renamed the Kyrgyz State Medical Academy in 1996), established in 1939, and in 5 medical colleges.

Table 7. Development of the health care system, 1913–1940

	1913	1925	1928	1940
Doctors	21	75	155	600
Hospital facilities	6	17	29	112
Outpatient facilities	9	16	45	319
Hospital beds	100	445	955	3 824
Beds per 10 000 population	1.2	–	–	24.1
Women's, children's consultation centres and polyclinics	–	1	7	66
Beds for pregnant and confined women	12	20	142	755
Pharmacies	5	13	–	59
incl. in rural areas	–	6	–	37
Sanatoria	–	–	–	15

Source: (1).

During the Second World War, the Kyrgyz Republic was not directly affected by conflict and expanded its network of health facilities. In the cities the number of beds increased from 2353 in 1940 to 3867 in 1945. The number of inpatient facilities in rural areas grew from 79 in 1940 to 94 in 1945, while the number of beds grew from 1471 to 2073. Thirty-four feldsher points and 26 women's and children's consultation centres were also established.

In the post-war years, hospitals were integrated with outpatient facilities and inpatient facilities for mother and child health, and san-epid services were reorganized. In the 1950s and 1960s, the main focus was on an expansion of the material base of the health care system, i.e. the enlargement of existing facilities and the construction of new ones.

Throughout the period 1923–1970, with the support of the Soviet state and the Russian Society of the Red Cross, over 150 medical expeditions were organized into remote areas. Besides providing medical examinations and treatment to the population, they also trained local health personnel. These efforts contributed to a significant decline of infectious diseases. In 1926, the incidence of malaria was 1000 per 10 000 population, declining to 505 in 1932 and 1.5 in 1955. After 1960 malaria was virtually eradicated, although the disease has re-emerged in recent years.

A number of other serious infections were also eradicated after 1923: cholera (1926), plague (1928), endemic smallpox (1936), relapsing fever (1955), spotted fever (1955), dermal leishmaniasis (1955), pappatacci (sandfly) fever (1956), trachoma (1963), ancylostomiasis (1964) and poliomyelitis (1970). Relative to the pre-revolutionary period, the incidence of pertussis was reduced by 98%, typhoid by 94%, measles by 93% and scarlet fever by 68%. Rabies, diphtheria, anthrax and Q fever were virtually eradicated, with only a few sporadic cases. Considerable successes were also achieved in the control of tuberculosis and venereal diseases.

By 1980 Kyrgyzstan had put in place a comprehensive health care system by Soviet standards, including 267 health facilities, 54 san-epid services and 9 medical colleges. There were also two industrial facilities in Frunze, one for the repair of medical equipment and the other for the production of pharmaceuticals.

Although achieving enormous success in the fight against infectious diseases and the establishment of a network of health facilities, the Soviet system of health care was fraught with weaknesses. Health services were ineffective and, facing growing demands with a worsening health status as well as new opportunities for treatment offered by technological progress, they became financially unsustainable, a situation exacerbated by the diversion of funds into the military-industrial complex from the 1960s onwards. Perverse incentives

Table 8. Development of the health care system, 1940–1980

	1940	1950	1960	1970	1980
Health facilities	112	138	261	273	267
Hospital beds	3 824	7 106	1 627	31 900	43 600
Hospital beds per 10 000 population	24.1	40.3	73.5	106.5	119.4
Doctors of all specialties	600	1 751	3 413	6 223	10 400
Doctors per 10 000 population	3.8	9.9	15.4	20.8	28.5
Middle-level health personnel	2 552	4 765	10 807	21 645	32 700
Middle-level health personnel per 10 000 population	16.1	27.0	48.8	72.3	89.5
Beds for pregnant and confined women	755	1 015	2 589	4 016	4 479
Pharmacies	59	100	–	–	296
in rural areas	6	70	–	–	190
Sanatoria	15	–	–	–	139
beds, in thousands	2.4	–	–	–	35.7

Source: (1).

built into the health financing system contributed to the expansion of physical capacity, without necessarily improving health care. The key element in all areas of planning was the so-called "normative optimum", i.e. the development of "scientifically-based" optimal norms and standards set by elite committees in Moscow. The health sector used norms such as the population's need for health services (e.g. number of beds or doctors per 10 000 population), or the workload for doctors and middle-level health personnel (e.g. visits per hour, number of patients per doctor, approximate norms of rendering physiotherapeutic services, lab tests).

Emphasis was put on infrastructure, not outcomes. In addition, the health care sector was financed on the basis of the so-called "residual" principle, which meant that the health sector received funding only after all other sectors (defence, industry, agriculture, etc.) had been paid for. Salaries for health care personnel were low, resulting in poor motivation and requests for informal payments by clients.

In the late 1980s the health status of the population began to deteriorate. The health care system was no longer able to respond to the health needs of the population. A package of health reforms planned for 1985–1990 was not accomplished, being caught up in the political changes in the USSR. After the

country gained independence, health reforms remained on the agenda of the new state, although economic reforms were given a higher priority.

Organizational structure and management

Organizational structure of the health care system

Before Kyrgyzstan became independent, the health system was highly centralized and controlled from Moscow. The Ministry of Health of the USSR was the principal planning and management body in the Soviet Union. Health care in the 15 Soviet Socialist Republics was supervised by the republican ministries of health, but their role was confined to carrying out supra-Soviet directives of the Ministry of Health of the USSR. This structure was replicated at republican level. Local health facilities at the oblast, city and rayon levels were obliged to follow the orders of the republican ministries of health. Paradoxically, this was viewed by the USSR as an element of decentralization. In the late 1990s this legacy remained one of the major problems facing health management in Kyrgyzstan.

Currently, the government has the following responsibilities in the health sector. It adopts, after approval by the parliament, a health policy, an action plan for its implementation and a strategy of health care development. It also adopts, finances and controls the implementation of national, state and specific programmes on health protection and the development of the state health system. The government reports annually to the parliament on the health of the population and on the execution of the consolidated health care budget.

The Ministry of Health implements the health policy and develops and implements, in cooperation with other agencies and sectors, a State Benefits Programme and other targeted health programmes. It is responsible for the quality of health services and the quality control, safety and effectiveness of pharmaceuticals, medical products and equipment. While it has a supervisory role in relation to all health-related organizations (including medical education), regardless of ownership and administrative level (as had the Ministry of Health

of the USSR), and approves their policy and programme documents, it has direct managerial responsibility only for the small number of specialized republican health facilities and the tertiary level facilities in Bishkek. In addition, the Ministry of Health coordinates and controls territorial health bodies and organizations through coordination commissions on health management. It reports annually to the government on the health of the population.

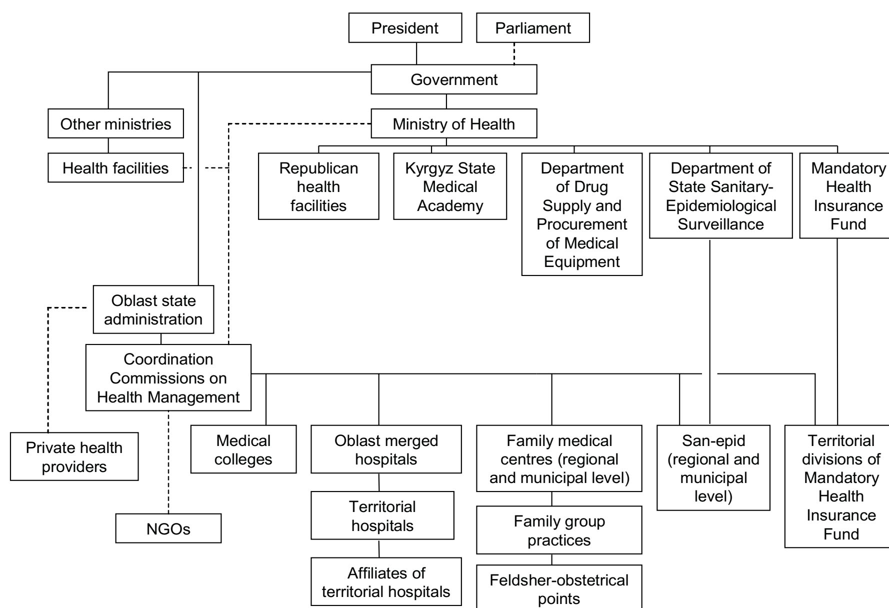
The Department of State Sanitary-Epidemiological Surveillance (DSSES) acts through a separate line of responsibility and is directly accountable to the Ministry of Health, thus creating challenges relating to coordination at the oblast level. It administers the san-epid service, which forms the cornerstone of the public health service. It is headed by the chief sanitary doctor who is also a Deputy Minister of Health. The Department emerged in 1997 from the former Republican Sanitary-Epidemiological Service and the Sanitary-Epidemiological Department of the Ministry of Health.

The Department of Drug Supply and Procurement of Medical Equipment, which is also directly accountable to the Ministry of Health, is in charge of drug policy and the monitoring and evaluation of the quality of drugs. It registers pharmaceuticals and issues licenses to producers and retailers of drugs. The Department is headed by a director-general and was set up in 1997, as the result of a merger between the former Republican Centre on Standardization and Quality Control of Drugs and Medical Equipment, the Ministry of Health Department on Drugs and Medical Equipment and the Ministry of Health Pharmacological Committee.

The Mandatory Health Insurance Fund (MHIF) is the "single payer" in the health sector. It has been given responsibility for pooling funds and purchasing health care services, as well as for budgetary health funding. It also has additional roles in quality assurance and the development of health information systems. It is headed by a director-general who is also a Deputy Minister of Health. The fund operates through its territorial departments, present in each oblast and Bishkek and Osh cities. Initially established as a fund under the government in 1997, it was transferred to the Ministry of Health in 1998. The MHIF is accountable to the Ministry of Finance and local state administrations on the use of budgetary resources and health care financing.

Local state administrations are owners of health facilities providing primary and secondary care, including polyclinics and regional and district hospitals (except those owned by other central government ministries and some enterprises), and are in charge of health care on their respective territories. Through their coordination commissions on health management they implement the national health policy, develop and implement territorial health programmes, and control the implementation of national, state and

Fig. 2. Organizational structure of the health care system



Source: Adapted from *(28).*

targeted health programmes. They draw up the health care budget and ensure its execution and are responsible for strengthening the capacity and improving the working conditions of health personnel. Local state administrations report annually to local keneshs on the population's health.

Parallel health services provided by ministries and agencies other than the Ministry of Health continue to exist. The parallel system includes services provided by seven ministries, five large state-owned joint stock companies, and enterprises and organizations partially funded by the state. In 1998, parallel health services accounted for about 6% of total governmental health care expenditure *(29)*. These health facilities are directly accountable to their respective agencies and funded from the republican budget.

The private health sector has developed since the 1990s. Starting with pharmacies, it later expanded to include the provision of health services. In 2003, the Ministry of Health issued 254 licenses for private medical practices, of which 49 were for legal entities and 205 for individuals. Private health facilities can bid for contracts from the public sector and participate in the State Benefits Programme. So far, this has mainly been seen in relation to drug supply, in the

framework of the additional drug package of the MHIF at the outpatient level (see the section on *Health care delivery system*). Public purchases of health services from private providers also take place. The MHIF, for example, has a contract with a private ophthalmologic hospital.

Nongovernmental organizations (NGOs) have emerged in the health sector mainly in the form of professional associations. They include associations of physicians and pharmacists, nurses, cardiologists, patients with diabetes, and blood donors. The Association of Family Group Practices and the Hospitals Association, both established in 1997, work closely with the Ministry of Health on health reform.

Planning, regulation and management

In Soviet times, planning, regulation and management were under the central control of the Soviet state. Following independence, the Ministry of Health of Kyrgyzstan has assumed a leading role in health planning, regulation and management, but is gradually decentralizing its functions.

The overall management of the health system still largely follows a hierarchical top-down model. Laws, decrees or other regulations are adopted by the Jogorku Kenesh, and the Ministry of Health subsequently issues orders that are compulsory for all government-owned health facilities. The administrations of health facilities, in turn, issue internal orders, with timetables and responsibilities. They are obliged to monitor their implementation and to report the results back to the Ministry of Health.

The Ministry of Health directly administers the republican health facilities, such as the scientific research institutes and national centres. It also manages the Kyrgyz State Medical Academy, even though until recently it was unable to control the number of admissions there. It appoints the heads of state health care organizations and its prior agreement to appointments by local state administrations of heads of municipal health organizations has to be obtained.

The main regulatory functions of the Ministry of Health include: the development of methodical guidelines that are compulsory for all health care providers; the licensing and attestation of health providers; and quality assurance procedures. The Ministry coordinates the activities of donors and distributes humanitarian aid. It also procures centrally drugs and medical equipment for health facilities in the public sector.

The Ministry of Health is also responsible for financial planning and budgetary management. It develops a health budget based on national health

policies and health revenue estimates. In particular, it plans the scope and types of health services needed for the country's population and the financial resources required to provide these services.

The role of the Ministry of Finance is crucial in the budgetary process, as is the role of local finance departments, since both exercise fiscal power over budgetary funds. With the introduction of the single payer system, however, their role in the sector has been basically simplified to revenue collection. The single payer system, including the roles of the Ministry of Finance and other financing bodies, is discussed in more detail in the sections *Health care financing and expenditure* and *Financial resource allocation*.

At subnational level, health planning and regulation are the responsibility of local state administrations. Before a major reform of local governments in 2000, these functions were performed by oblast health departments. Following their abolition, however, these functions were transferred to oblast merged hospitals and then to supervisory councils for health management, which became the coordination commissions on health management in 2003.

The coordination commissions on health management are collegiate bodies composed of the local representatives of central government, as well as representatives of the corresponding kenesh (council), local health organizations and social protection bodies, the oblast finance department, educational bodies, the veterinary service, trade unions and nongovernmental organizations. A coordination commission is chaired by the head of the oblast administration (mayors in Bishkek and Osh cities), who forms and appoints members the commission. The chair of the commission has two deputies: a head of an oblast health facility and a head of the territorial department of the MHIF. The commission meets as needed, but not less than once a quarter. The decisions of coordination commissions are mandatory for all local health facilities. The coordination commissions are accountable to the corresponding oblast state administration and the Ministry of Health *(28)*.

At the facility level, the authority for health planning, regulation and management is vested in the administration, which has financial and managerial autonomy. The head of a state or municipal health facility is required to have higher professional education in medicine, economics or public administration and to undergo attestation and registration in health management.

The regulation of private health providers, including healers (practitioners of traditional medicine), is based on licensing. Private health providers have to maintain and submit all necessary files and statistics. Interaction between private and public health providers, including participation in the implementation of the State Benefits Programme, is based on contracts.

The involvement of citizens in health planning has remained limited. Nevertheless, in regions designated as pilot areas, the population's feedback has been used for future planning. Various surveys, by means of interviews and the use of focus groups and participatory rural appraisal studies, have been conducted with the aim of learning about people's experience of the reforms and their general expectations of the health care system (Box 1).

Box 1. People's attitudes towards co-payments: findings of a participatory rural appraisal study

Following the introduction of co-payments in Issyk-Kul and Chui oblasts in 2001, a rapid assessment using participatory rural appraisal tools was carried out in these regions. The findings of these studies helped to identify drawbacks of the policy and make necessary corrections. Respondents identified both positive and negative aspects of the new policy.

Positive	Negative
Patients contribute one half of the treatment costs, the Government the other half. That's fair. Health is worth co-payments Good for those who are insured Expenditures for surgery treatment were previously 3–5 times higher No need to search for drugs in various pharmacies when admitted to hospital. Treatment is provided immediately following admission. Good attitude of health personnel (seem to be more attentive) Trust in qualification of maternity personnel No more requests for informal payments and/or gifts	Amount of co-payment fee is too much for the services provided Co-payment for deliveries is much too high Co-payment erects a barrier for access to hospital treatment for many people, especially the unemployed, the low income groups and the uninsured. People may go to hospitals later, when things have become more complicated. Drugs are not regularly supplied, which prolongs hospital stays Drugs included in the Essential Drugs List are less expensive, and may be less effective Lack of information on co-payment policy No telephones at many hospitals, which makes communication with the family expensive, as regular travel is needed Poor conditions of maternity wards (no water supply, non-working laundries, no soap/detergents, no diapers provided, poor quality of food)

Source: Schüth, 2001 *(30).*

Decentralization of the health care system

As mentioned previously, the Ministry of Health is responsible for developing national health policies and establishing clinical standards. However, these are actually implemented by local health authorities and providers.

Prior to recent reforms, the health care system was fragmented into four levels of government administration: republican, oblast, city and rayon, serving overlapping populations. Furthermore, many national programmes, such as immunization schemes, were operated through separate vertical systems. The fragmentation of health care budgets was one of the major challenges to the reform of health care financing and of the health care delivery system. One of the key elements in the reform of health financing in the initial pilot oblasts (Chui and Issyk-Kul in 2001, and now extended nationally) was the centralization of financing at the oblast level to enable better risk-pooling and to break the integration of finance and provision that contributed to excess physical capacity. A complementary reform was the granting of more autonomy to health facilities to manage their budgets. With the introduction of new provider payment methods, especially co-payments by patients, health facilities have been given greater flexibility in the internal allocation of resources.

Local governments are involved in health management at the oblast level through:

- participation in coordination commissions on health management;
- budget transfers by oblast finance departments to territorial departments of the MHIF;
- rationalization of health facilities;
- health personnel policy;
- social protection of vulnerable citizens by issuing of “social passports” and financing the provision of health care to patients exempted from co-payments.

In recent years, some of the functions of the Ministry of Health have been transferred to NGOs. In particular, accreditation of health facilities has been delegated to the Medical Accreditation Commission. The Association of Family Group Practices and the Hospitals Association contribute to monitoring the quality of health services and participate in the development of clinical protocols.

The private sector is still comparatively small and comprises mainly ambulatory care and pharmacies. Privatization in the health sector started in the pharmaceutical sector. In the communist system, drugs used to be procured centrally and sold at fixed, state-regulated prices. In 1992, local pharmaceutical

companies were merged into the conglomerate Galenical Drugs Business Project, which was controlled by the state and headed by the state combine Kyrgyzpharmindustria. Following the second wave of privatization in 1994–1995, however, the companies were transformed into joint-stock companies or companies with limited liability. The monopoly state company, Kyrgyz Pharmacia, which was responsible for the procurement and distribution of drugs, was privatized in 1994. By 1996 pharmacies were almost fully privatized, with the exception of a few municipal pharmacies.

Privatization of other sectors of health care has remained much more limited. The programme of privatization for 2001–2003 prohibited the privatization of health facilities as well as other elements of the social infrastructure, with the exception of unused buildings and dental clinics. Private providers, however, are allowed to construct new private health facilities.

Health care financing and expenditure

Main system of financing and coverage

Historical background

Health planning and financing in the Soviet era was highly centralized and placed an emphasis on maintaining and expanding the existing network of health facilities rather than improving the quality and efficiency of health services. Soviet planning was generally based on five-year state plans. Every state plan on health care included six components:

1) development of the network of health facilities;
2) human resources development (need estimates, medical education and post-graduate training);
3) human resources management;
4) capital investments (construction and maintenance of facilities);
5) material and technical supplies (including furniture, equipment, laboratory supplies, drugs and clothing of personnel);
6) budget.

The planning of the network of health facilities was based on the performance of health facilities, demographic and health indicators (population size, age and sex distribution, urban/rural distribution, morbidity and mortality) and pre-set norms of health services (number and distribution of hospital beds and health staff).

Human resources were planned on the basis of specialties, and according to planning norms such as the ratio of specialists per population. Planning of the workforce was based on indicators such as the number of workers, the number of positions occupied, average wages and the salary pool.

The building of health care facilities was mainly financed through centralized budgets, while resorts, spas and sanatoria were mainly financed through the funds provided by trade unions, enterprises and collective farms.

The budget of the USSR consisted of the Union budget and the budgets of the republics. The republican budgets consisted of the national and local (territory, oblast, city, rayon, and village) budgets. Budget classification was very important. It strictly tied expenditures to certain sections, paragraphs and chapters of the budget, with no flexibility of shifting funds between different budget lines. Health care was assigned to section "203", consisting of 22 paragraphs corresponding to programmes or types of health facilities. The paragraphs ranged from paragraph 1 (hospitals and dispensaries in cities, towns and villages) to paragraph 22 (other facilities and activities). For each paragraph, there were 18 chapters (i.e. line items), starting with chapter 1 (salary) and ending with chapter 18 (other expenses).

The budgets of health facilities usually consisted of three main sections: plan or network indicators; staff and contingents; and chapters and their calculations. The funding for inpatient facilities was based on infrastructure, i.e. the number of beds, average annual bed occupancy and expected bed-days, resulting in the perverse incentive for hospitals to use as many beds as possible for as long as possible. For outpatient facilities, the network indicator was the number of visits, resulting in an incentive not to treat patients but to refer them to higher levels of care. The "staff and contingents" section was used to calculate the salary pool. The average monthly wage was determined according to annual "tarification" in each health care facility. "Tarification" defined the annual salary pool of each health facility, taking into account the qualifications of staff, their length of service, place of work, position occupied and special conditions of labour.

In addition to budgetary funds, health facilities were allowed (as were all facilities financed by state budgets) to have special funds, the sources for which were approved by the council of ministers of the republics. In the health sector, funds from the following services existed:

- prosthetic dentistry;
- paid services of departments of preventive disinfection and deratization (the elimination of rats);
- auxiliary farms belonging to health care facilities;
- production workshops belonging to facilities for tuberculosis or mental health;
- collection of placental blood;
- sanatoria and physiotherapeutic care;
- other services.

Current situation

Currently, the Kyrgyz health sector is financed from the following main sources of funds:

- general budget revenues (republican and local);
- contributions to the MHIF;
- the Public Investment Programme;
- out-of-pocket payments.

According to the 2004 Public Expenditure Review of the World Bank, private out-of-pocket payments constitute the main source of health financing, contributing to almost half of total health financing. General budget revenues (of the republican and local governments) constitute 44%. The Public Investment Programme, which is financed by loans from the World Bank and the Asian Development Bank, constitutes 0.9% of health financing, while social insurance contributions contribute 4% to total health financing. Of the general budget revenues, 32% come from the republican budget and 68% from local governments *(31)*.

Since 1997, the funds of local governments include "categorical grants", which are transfers from the republican budget to oblasts to provide basic services in health and education. The size of categorical grants allocated to each region was meant to be determined on a weighted per capita basis, but so far they have only been used to fill gaps in the local budgets for salaries.

Government health spending decreased from 4.0% of GDP in 1995 to 1.8% in 2003. The decline occurred both because overall public spending declined and because the share of the state budget allocated to health fell from 13.6% in 1995 to 9.0% in 2003 *(32)*. It is likely that this decline in government health spending has caused an increase in the share of private out-of-pocket payments, both formal and informal, in recent years.

Complementary sources of finance

Mandatory health insurance

The MHIF was established in 1996 and has received insurance premiums since 1 January 1997. The MHIF manages an extrabudgetary fund for insured persons which is separate from the budget of the Ministry of Health. At oblast level, the Fund is administered through the territorial departments of the MHIF. Voluntary health insurance was legalized in 1992, but remains virtually non-existent.

The health insurance system is compulsory and opting out is not permitted. Funding sources for the MHIF vary according to different population groups,

as shown in Table 9. The MHIF is not a source of funds; it receives transfers from the Social Fund and the republican budget on behalf of defined categories of "insured" persons. The Social Fund collects revenues covering employees and contributions for farmers. Contributions for children, social beneficiaries, pensioners and the military are transferred from the republican budget. The insurance status of a person is identified by social security identification, pensioner's identification or mandatory health insurance policy.

Table 9. Funding and coverage of the Mandatory Health Insurance Fund

Population group	Funding source
Employees, including employees in the formal sector	2% payroll contribution by employer
Civil servants and public enterprises	2% payroll contribution by employer (i.e. the Government) to Social Fund
Self-employed	Voluntary purchase of mandatory health insurance policies
Private farmers	6% of the basic rate of land tax
Personnel of the Ministry of Defence, National Guard, and forces of the Ministry of Interior	Value of 1.5 x minimum salary from the republican budget
Children under 16; enrolled school children under 18; and enrolled students of basic, secondary and higher professional education institutions (except part-time and evening students) under 21	Value of 1.5 x minimum salary from the republican budget
People with disabilities since childhood and persons receiving social and state benefits	
Pensioners	
Registered unemployed	

Sources: (33,34).

Note: Until 2003, the value of 1.5 x minimum salary for pensioners and registered unemployed was collected and paid by the Social Fund; for children and social beneficiaries there were lump-sum transfers from the republican budget. However, de facto no funding has been appropriated for the registered unemployed.

The role of the MHIF in health financing increased substantially with the introduction of the "single payer" system in Chui and Issyk-Kul oblasts in 2001, whereby the MHIF pooled all local (i.e. rayon, city and oblast) budget revenues for health, creating a single pool of funds at the oblast level. It also purchased services from these funds for the entire oblast population using the same methods as used nationally for insured persons, thus becoming the single purchaser of health care in the oblast. By mid-2002, the single payer system had been extended to two more oblasts (Naryn and Talas), covering 50% of the territory and 33% of the population of the country at the time. By 2004, the whole country was covered by the single payer system.

Within the single payer framework, the MHIF took over the management of local budget funds for health. The new system of financial planning is based on new "norms" according to which purchases are to be made on the basis of final outcomes or population needs (number of treated hospital cases for inpatient care and total number of persons enrolled in primary care; area population for providers of outpatient and san-epid services) rather than financing the capacity (beds and staff) of health facilities. In addition, it aims to overcome regional disparities through coefficients in the allocation of funds that take account of the population, remoteness and economic characteristics of regions. The new system has the following main characteristics and aims:

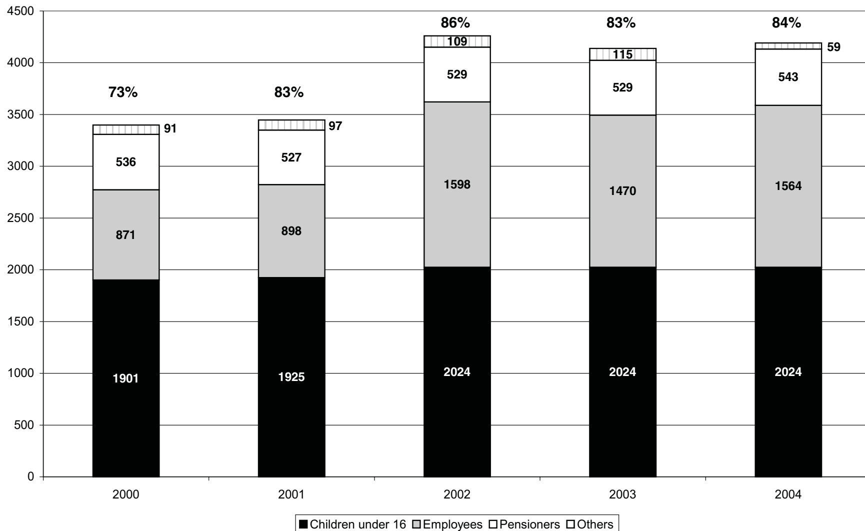
- a commitment to provide health care to 100% of the population within the State Benefits Programme;
- a purchaser-provider split with the MHIF acting as the sole purchaser (the "single payer") of health services;
- the consolidation of the sources of health funding (budgetary and MHIF funds and out-of-pocket payments);
- the pooling of budgetary funds at the oblast level;
- the replacement of unofficial out-of-pocket payments by more transparent official co-payments;
- resource allocation irrespective of chapters and budget lines;
- streamlining the referral system and building it into the health care system, from primary to higher levels of care.

More details on this reform are provided below.

Figure 3 shows how coverage of the population by the MHIF has increased since 2000. In 2002, the inclusion of farmers increased coverage to 86.2% of the population. By 2004, coverage had decreased to 83.6%, following changes in the number of employed. In 2004, the staff of the Ministry of Defence, Ministry of Interior and the National Guard were included, as were refugees.

While the separation of collection and pooling responsibilities between the Social Fund and the MHIF are well defined, the amounts allocated to the MHIF have always been less than the amounts that should have been transferred. As shown in Table 10, the transfers from the Social Fund to the MHIF have been consistently lower than planned or collected revenues. In 2002 only 54.8% of premiums paid to the Social Fund by employers were transferred to the MHIF. Rates of transfer for pensioners were even lower and, in 2002, none of the planned transfers took place. The reasons for this non-transfer of revenues by the Social Fund lie in its own financial problems. As a result, the money meant for the MHIF was effectively cross-subsidizing other sectors, particularly pensions. This situation might change in the future as, since 2004, contributions

Fig. 3. Population coverage by the Mandatory Health Insurance Fund, in thousands and %, 2000–2004



Source: (35) and Mandatory Health Insurance Fund data.

Note: The percentages over each column show the extent of population coverage by the MHIF; Others include unemployed, self-insured and social benefits.

for pensioners have been expected to come from general budget revenues, i.e. the republican budget.

However, there have also been problems with the transfer of funds from the republican budget. Although the percentage of transfers has been higher than the percentage of transfers from the Social Fund, in 2002, only 64% of planned transfers from the republican budget were actually carried out. This shortfall has affected vulnerable groups. In 2003, budget execution for children was only 33%.

Since January 2003, Social Fund transfers to the MHIF have vastly improved and the Social Fund is no longer allowed to build up arrears to the MHIF. This new regulation has been included by the International Monetary Fund as a condition in the agreement on the new Poverty Reduction and Growth Facility (the International Monetary Fund lending facility for low-income countries that comprises national poverty reduction strategies). In fact, in 2003–2004 the Social Fund has repaid 109.9 million som of its debt to the MHIF, both in cash and via clearings.

Table 10. Revenue transfers to the Mandatory Health Insurance Fund, in million som and %, 1997–2003

	1997	1998	1999	2000	2001	2002	2003
Transfers from Social Fund[a]							
Employees							
MHIF premiums collected by Social Fund	41.0	82.8	117.1	138.3	166.6	184.9	198.5
Revenues transferred to MHIF	9.2	30.9	73.1	89.4	80.5	102.1	145.9
Percentage of collections transferred	22.4%	37.3%	62.4%	64.6%	48.3%	54.8%	73.5%
Pensioners							
Planned revenues for pensioners	15.0	38.0	48.0	48.0	80.0	80.0	284.2
Revenues transferred for pensioners	0.0	9.8	14.5	12.5	7.8	0.0	145.9[b]
Percentage of planned transferred	0.0%	25.8%	30.2%	26.1%	9.8%	0.0%	51.3%
Unemployed							
Planned revenues for unemployed	0.0	8.5	9.0	9.0	9.0	9.0	9.0
Revenues transferred for unemployed	0.0	1.3	6.0	3.1	2.5	0.5	1.0
Percentage of planned transferred		15.3%	66.7%	34.4%	27.8%	5.9%	11.1%
Social Fund total							
Total planned/collected revenues by Social Fund	56.0	129.3	174.1	195.3	255.6	275.3	293.2
Revenues actually transferred by Social Fund	9.2	42.0	93.6	105.0	90.8	102.6	146.9
Percentage of planned/collected transferred by Social Fund	16.4%	32.5%	53.8%	53.8%	35.5%	37.3%	50.1%
Transfers from republican budget							
Children							
Planned transfers				35.0	46.5	56.4	35.0
Actual transfers				25.5	24.7	46.3	29.0
Percentage of planned transferred				72.9%	53.1%	63.9%	82.9%
Social beneficiaries							
Planned transfers for social beneficiaries				5.0	3.8	5.1	5.0
Actual transfers for social beneficiaries				4.2	2.3	5.0	1.1
Percentage of planned transferred				84.0%	60.5%	98.0%	22%
Republican budget total							
Republican budget planned transfers				40.0	50.3	61.5	40.0
Republican budget actual transfers				29.7	27.0	51.3	30.1
Percentage of budget actually transferred				74.3%	53.7%	83.4%	75.3%
Total MHIF revenues							
Total planned MHIF revenues	56.0	129.3	174.1	235.3	305.9	336.8	333.2
Total actual MHIF revenues	9.2	42.0	93.6	134.7	117.8	153.9	191.2[b]
Percentage of actual revenues	16.4%	32.5%	53.8%	57.2%	38.5%	45.7%	57.4%

Source: Mandatory Health Insurance Fund.

Note: [a] Data do not include clearing payments by the Social Fund.
[b] Including the repayment of 14.2 million som of the Social Fund debts for 2002.

Out-of-pocket payments

The level of out-of-pocket payments has been significant and they continue to be a major source of revenue for the health system. In 1994 nearly 70% of patients paid for outpatient care and 86% paid for hospital care *(36)*. In 2001 the proportion of patients paying for outpatient care declined to 22%, but the proportion of those paying for hospital care remained high at 87% *(37)*. Household survey data from 2001 allow for an overall estimate that in 2001 public funding (including state budget and MHIF expenditures) accounted for only 48.7% of health financing, with private out-of-pocket payments accounting for 51.3% *(37,38)*.

There are four types of out-of-pocket payments in the health sector:

- informal under-the-counter payments in cash or kind for services and goods in public health facilities that are meant to be provided without payment;
- purchase of goods and services from private suppliers, mainly outpatient drugs from private pharmacies and bazaars (markets), but also private health care;
- official user fees;
- official co-payments by patients to health facilities included in the single payer system.

Unofficial out-of-pocket payments include under-the-table payments to health personnel, purchase of drugs and medical supplies needed for care in public facilities, and own provision of food and other non-medical inputs in hospitals. Under-the-table payments to health personnel are common, with patient survey data from the period prior to the implementation of the single payer reform indicating that such payments were made in about 60% of cases. Approximately 80% of patients either paid for or contributed drugs and medical supplies, and 93% of patients had friends or family members provide food for them. While payments for drugs and medical supplies were both the most frequent form of payment and absorbed the greatest share of patient spending in hospitals (about 65%), payments to specialists were quite high, especially for surgery *(38)*. Informal payments can have a significant impact on access to health care services, and particularly affect the poor.

Official user fees were permitted in 1993 as “paid medical services”. Currently, they are regulated by the Law on Non-Budgetary Activity of Public Health Facilities. Prices of health services must be approved by the State Commission on Anti-Monopoly Policy under the Government. User fees are charged in both outpatient and hospital care facilities. Official user fees are captured in health budgets as “special means”. Since 2001, when co-payments were introduced in the two oblasts that had implemented the first phase of the

single payer reform, most user fees have been incorporated into the system of official co-payments. Currently, special means include non-medical services (e.g. rent, transportation, health-unrelated chemical and laboratory tests), medical services to foreign citizens, dental care (except services included in the State Benefits Programme) and medical services rendered upon individual request (e.g. cosmetology, abortions, anonymous treatment).

Official co-payments for drugs, meals and certain types of health services provided as part of the State Benefits Package form an integral part of the single payer system. Co-payments have been introduced in outpatient care facilities and in hospitals. The level of co-payments is fixed, but varies across patients exempt from co-payment, insured patients and uninsured patients, as well as across types of medical intervention (therapeutic or surgical in hospitals; and costly or regular tests in outpatient facilities). It was hoped that co-payments would replace unofficial out-of-pocket payments. Evidence from the first year of implementation in the pilot regions suggests that unofficial payments have indeed declined, although further research is needed to determine whether these achievements are to be sustained. A threat to the sustainability of this early success has been the continued reduction in local budget allocations to the health sector *(38)*.

As one part of the comprehensive set of reforms in pooling and purchasing embodied by the single payer system, the State Benefits Package has been a first attempt to clarify the responsibilities of the state in the provision of health care and to replace unofficial out-of-pocket payments by a system of transparent and official co-payments. While initial success has been achieved, longer term success in terms of replacing informal by formal payments (and eventually lowering such payments) depends on maintaining or increasing government health spending while implementing cost-saving measures for the restructuring of the health service delivery system.

External sources of funding

External sources of funding include humanitarian aid, technical assistance, grants and credits. The amount of foreign aid in the 1990s has been significant. The National Health Accounts (NHA) database collected for 1998–2000 from the facility level shows that the level of foreign aid was as high as 10% of total health expenditure. However, there were considerable year-to-year variations, as some projects were phased out and others started.

The main donors that have been particularly active in supporting the health reform process have been the World Bank, WHO, the United States Agency for International Development (USAID), the United Kingdom Department for

International Development (DFID), and the Swiss Agency for Development and Cooperation (SDC). In early 2003, the Global Fund to Fight AIDS, Tuberculosis and Malaria approved a grant of US $17 million for HIV/AIDS and US $1.1 million for tuberculosis.

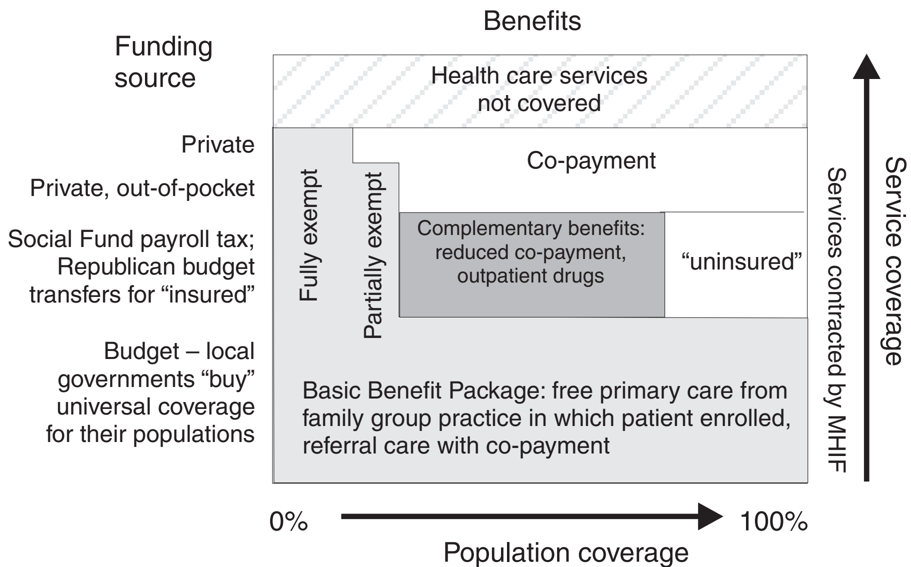
The Department of Health Care Reform, MANAS, which administers the MANAS Health Care Reform Programme and is accountable to the Ministry of Health, has coordinated donors' activities in the health sector. Many donors have supported the implementation of vertical programmes, for example on tuberculosis, HIV/AIDS, sexually transmitted diseases, acute respiratory infection, family planning and reproductive health, vaccination and procurement of drugs. The USAID-funded ZdravReform (later ZdravPlus) Project supported the initial pilot project in comprehensive health care reform begun in Issyk-Kul oblast in 1994, and WHO initiated support of the national MANAS Health Care Reform Programme. Two World Bank-funded health sector reform projects (World Bank Health-I, 1996–2000, and World Bank Health-II, 2001–2005) aimed at structural changes in the health sector and supported integrated activities, including renovation and equipment of health facilities, strengthening of health information systems and health financing reform. The Asian Development Bank has supported similar activities in the southern parts of the country. The Swiss Agency for Development and Cooperation, through its contractor, the Swiss Red Cross, has supported the restructuring of health care in Naryn oblast as well as primary care development, which has included a new emphasis on community action for health and health promotion.

Health care benefits and rationing

A clearly defined package of health care benefits was first developed by the Government and piloted in Issyk-Kul and Chui oblasts in 2001 in the form of a State Benefits Package, entitled Programme of State Guarantees on the Provision of Citizens of the Kyrgyz Republic with Medical-Sanitary Care. A crucial part of the single payer reform, the package specifies the benefits, cost-sharing obligations and coverage of the population. Primarily based on the approved planned amounts of health financing from the state budget and from MHIF fees, the State Benefits Package may be expanded according to external humanitarian aid and grants, and other additional resources mobilized by local state administrations. The State Benefits Package is annually approved by the Government on the basis of expected revenues of the oblast and the national pools of funds managed by the MHIF, and according to projected levels of utilization and other parameters.

Fig. 4 shows how the coverage of the State Benefits Package, both in terms of population and health care services, links to funding sources. The basic benefits package for the entire population is funded through the contributions by local governments to territorial departments of the MHIF. The package consists of free primary care from the contracted family group practice in which the person is enrolled, and inpatient care on referral, for which a co-payment is required. The basic benefits package also provides for free or nearly free referral care for certain categories of the population. Exemptions from co-payments are funded from the oblast pool through the payment of a higher base rate to hospitals. For insured persons, contributions made on their behalf to the national MHIF pool of funds entitle them to reduced co-payments for inpatient care and outpatient specialist services, and also provide access to an outpatient drug benefits package. Being “insured” in the Kyrgyz context is thus akin to having a voluntary “Medigap” policy in the United States or a “mutuelle” in France. Coverage is complementary to that funded from general revenues *(38).*

Fig. 4. Funding and coverage of the State Benefits Package in the single payer system



The State Benefits Package for 2004 included:

- free-of-charge primary care services from feldsher-obstetrical points, family group practices and family medicine centres in which patients are enrolled, and from ambulance departments and stations;
- specialized outpatient care services from family medicine centres and outpatient-diagnostic departments of hospitals, subject to co-payments;
- hospital care services, including surgery, subject to co-payments;
- dental care – free and paid services;
- optical and hearing aids for a limited number of categories;
- san-epid services.

Originally comprising some 40 categories with different exemption levels for co-payments in 2001, the State Benefits Programme included 52 categories in 2004. Forty-four categories are entitled to full exemption from co-payments: 18 categories are for different groups of the population and 28 categories are for medical conditions.

Population categories

1. Participants of the Great Patriotic War
2. People handicapped in the Second World War and the Batken War
3. Former prisoners of concentration camps
4. “Labour warriors” later rehabilitated
5. “Heroes of the USSR” and holders of the order “Honour” of third degree
6. “Heroes of socialist labour”
7. Holders of the highest distinction “Baatyr of the Kyrgyz Republic”, holders of the order of “Manas” of first degree
8. Participants of military operations on the territory of other countries
9. Survivors of the Chernobyl nuclear disaster
10. People with disabilities inflicted during military service
11. People with disabilities of disability groups I and II
12. People with disabilities with eyesight and hearing problems
13. People with disabilities since childhood of disability groups I and II
14. Children with disabilities under 16 years of age
15. Children under 1 year of age
16. Orphans living in public child homes, family child homes, boarding schools for orphans and children without parental guardianship

17. People living in hospices and boarding schools
18. Children under 16 years of age from families with more than 3 minors

Medical conditions

1. Acute cardiac infarction (in the first 2 months)
2. Tuberculosis
3. Bronchial asthma
4. Oncological diseases in the terminal phase
5. Congenital syphilis, syphilis under 18 years of age
6. Mental diseases (paranoid schizophrenia, affective disorders of different genesis)
7. Epilepsy
8. Diabetes mellitus
9. Diabetes insipidus
10. Leukaemia
11. Haemophilia
12. Aplastic anaemia
13. Leprosy
14. Post-vaccinal complications
15. Plague patients and exposed persons
16. Cholera patients and exposed persons
17. Typhoid patients and exposed persons
18. Paratyphoid patients and exposed persons
19. Anthrax patients and exposed persons
20. Hydrophobia
21. Meningitis
22. Diphtheria
23. Acute brucellosis (hospitalization for primary treatment)
24. Women registered as pregnant and subject to consulting at the outpatient level
25. Women coming to hospitals with pregnancy pathologies
26. Conscript soldiers sent by military-medical commissions
27. Servicemen of a fixed-term service with an emergency condition and in cases when it is impossible to render qualified health services in agencies' health facilities

28. Individuals in detention or serving a sentence, with an emergency condition, in cases when it is impossible to render health services in penitentiary health facilities.

Categories 1–4, 6–9 and 11 are also entitled to the free provision of drugs at the outpatient level.

There are eight categories which are entitled to partial exemptions from co-payments. In hospitals, the following categories of patients are exempted from 85–90% of the average cost of treatment:

1. Women coming for deliveries
2. Patients with acute brucellosis coming for their continuous treatment
3. Pensioners with pensions of less than 480 som (for Bishkek pensioners with pensions of less than 960 som)
4. Beneficiaries of social benefits
5. Patients with malaria
6. Patients with severe forms of viral hepatitis.

Pupils and students under 21 years of age are exempted from 60% of the average cost of treatment. They are also entitled to a 50% exemption of diagnostic costs in outpatient facilities.

The insured categories (see Table 9) are exempt from co-payments to 60–66% of the average cost of treatment in hospitals, and to 50% of diagnostic costs in outpatient facilities. In addition, the MHIF provides an additional drug benefits package at the outpatient level for the insured which includes drugs and medical products from the Essential Drugs List.

The uninsured categories (21% of the population in 2003) are entitled to free primary care, but have to pay the full cost of specialized outpatient treatment and 51–60% of the average cost of treatment in hospitals.

If, regardless of their exemption status, patients are self-referred, i.e. are without a referral from a lower level health facility, they have to pay the full cost of specialized outpatient treatment and the full amount of the average cost of treatment in hospitals.

Women in childbirth have been exempt from co-payments in hospitals since November 2001. Before then, most women of reproductive age were not covered, because of the characteristics of statutory insurance. Although about two-thirds of all patients discharged from hospitals in February 2001 were insured, about 80% of maternity cases were not insured *(39)*. Until 2001, most delivering mothers faced a very high fee, often much higher than previous informal payments, particularly in rural hospitals. Official co-payments for deliveries have now been set at a lower rate (200 som).

Urgent hospital care (accident and emergency care) is rendered free of charge. However, once the emergency stage has passed, patients have to contribute co-payments to their hospital care.

It should also be noted that, if the actual cost of treatment is three times higher than the average cost of treatment in hospitals, the treatment-controlling commission of the health facility is required to charge patients the costs of drugs for further treatment, irrespective of their exemption status.

Table 11. State Benefits Package at the outpatient level

	Self-referred	Exempt[a]	Insured	Uninsured
		Basic tests[b]		
Co-payment	100%			
MHIF			50%	
Budget		100%	50%	100%
Total	100%	100%	100%	100%
		Other tests		
Co-payment	100%		50%	100%
MHIF			25%	
Budget		100%	25%	
Total	100%	100%	100%	100%
		Costly tests and procedures		
Co-payment	100%		100%	100%
MHIF				
Budget		100%		
Total	100%	100%	100%	100%

Notes: [a] The exempted categories of patients are covered by a reserve fund.
[b] Basic tests include the 10 tests most usually performed.

Table 12. State Benefits Package at the hospital level (covering the average cost of treatment)

	Self-referred	Fully exempt	Partially exempt	Insured	Uninsured[a]
Co-payment	100%		10–40%	34–40%	51–60%
Mandatory health insurance				17–26%	
Budget		100%	60–90%	40–49%	40–49%
Total	100%	100%	100%	100%	100%

Note: [a] Uninsured patients from poor households are paid for from the reserve funds of hospitals. In 2004, 7800 people were treated from the reserve funds of hospitals, for an amount of 6 million som.

Tables 11 and 12 show the structure of the State Benefits Programme by population categories and funding sources at the outpatient and hospital levels.

The State Benefits Package was initially publicized by an information, education and communication campaign to inform the public about official co-payments. Surveys showed that these efforts improved people's knowledge of their financial obligations in the event of hospitalization *(40)*. The State Benefits Package was fully institutionalized with the adoption of the Law on the Single Payer System in Health Care Financing of the Kyrgyz Republic of July 2003, the Law on Health Care Organizations in the Kyrgyz Republic of 13 August 2004, and the Law on Protection of People's Health of 5 January 2005.

Health care expenditure

Private health spending

Information on private health spending is scarce and there are no reliable estimates of private health spending prior to 2000. A survey funded by the United Kingdom Department for International Development and undertaken by the National Statistical Committee in March 2001 allows for estimates to be made for 2000 and 2001. By combining survey data with data on public sector health spending, it is possible to estimate total national health spending (excluding donor funds) and its distribution by source of funds (Table 13).

According to these calculations, in 2000 and 2001 private health expenditure constituted 51–52% of total health spending. The estimates exclude the cost of travel to health facilities. If these costs were included, private spending would rise to 305 som per capita in 2000 and 320 som in 2001, increasing the overall private share to 52.9% in 2000 and 52.5% in 2001. Total health spending as a percentage of GDP would rise to 4.34% in 2000 and 4.09% of GDP in 2001 *(38)*.

The survey data indicate that most private out-of-pocket spending was for ambulatory care, in particular the purchase of drugs, with outpatient drugs constituting 56% of total private health spending (Table 14). Most of this expenditure is not in health facilities, but rather the private purchase of prescribed and non-prescribed goods from private suppliers (pharmacies, bazaars, etc.). When given a prescription at the outpatient level, 90% of patients included in the survey managed to purchase the prescribed drugs. The survey suggests that about 10% of households buy some drugs without prescription *(37)*.

Table 13. Health expenditure indicators, 2000–2001

	2000		2001	
Total health spending as percentage of GDP	4.23%		4.00%	
Budget	1.88%		1.78%	
Mandatory Health Insurance Fund	0.16%		0.16%	
Private out-of-pocket spending	2.19%		2.05%	
Per capita health spending	**Som**	**US $**	**Som**	**US $**
Budget	250.4	5.2	265.8	5.5
Mandatory Health Insurance Fund	21.3	0.4	24.3	0.5
Private out-of-pocket spending	290.7	6.1	305.6	6.3
Total	562.5	11.8	595.7	12.3
Percentage of total health spending				
Budget	44.5%		44.6%	
Mandatory Health Insurance Fund	3.8%		4.1%	
Private out-of-pocket spending	51.7%		51.3%	

Source: (38).
Note: Expenditures are measured in terms of the source of funds. “Budget” reflects all health expenditures coming from budgetary sources, including expenditures made by the MHIF with funds transferred from the republican budget. “Mandatory Health Insurance Fund” reflects only those expenditures transferred to the MHIF from the Social Fund, which thus understates the role of the MHIF in the health system. Calculation of US $ and percentages of GDP are based on data from the National Statistical Committee.

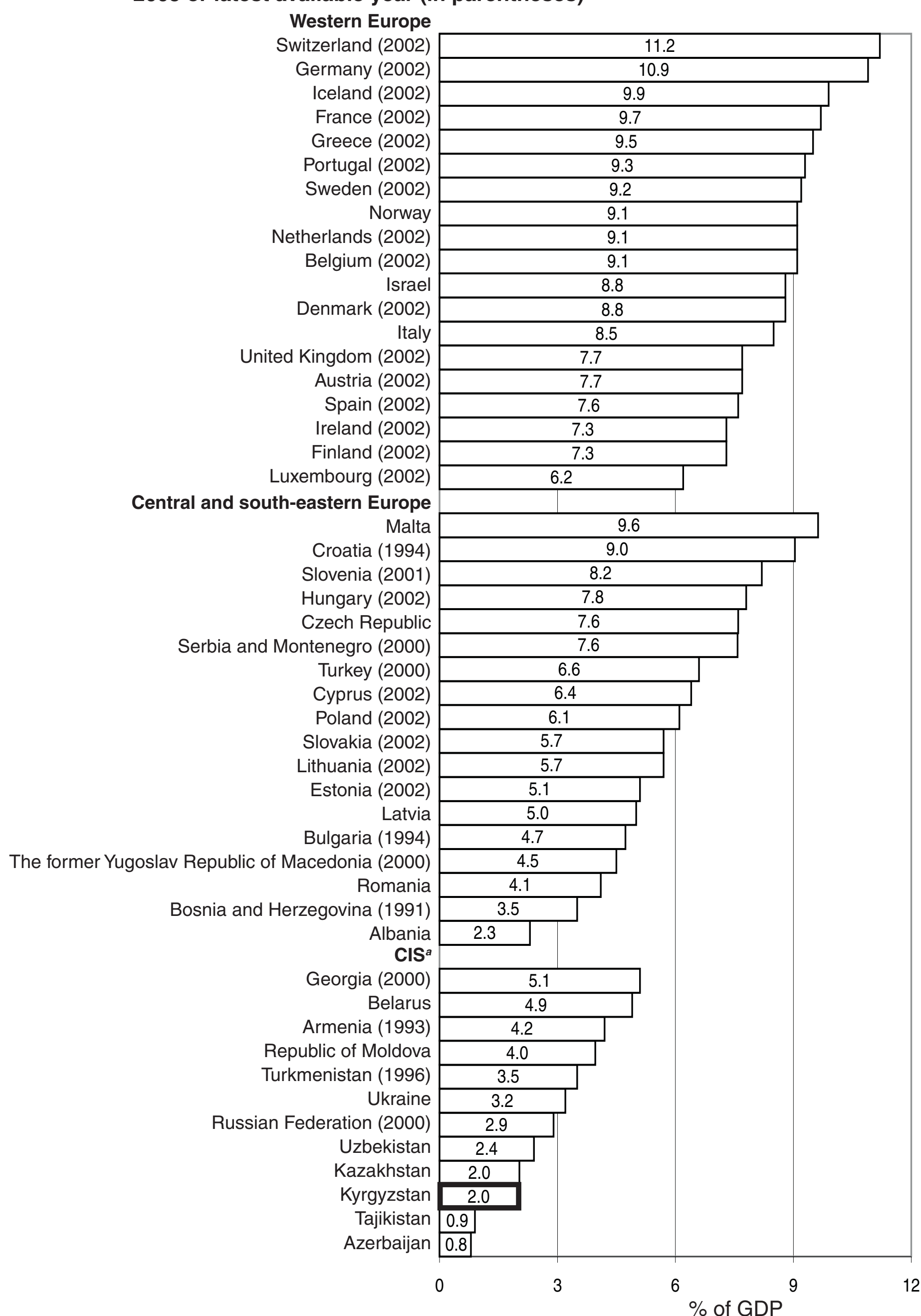
Table 14. Distribution of private health spending by item of expenditure

Inpatient care	28%
Ambulatory care	
Consultation	12%
Drugs	56%
Other	4%
Total ambulatory care	72%

Source: Analysis of data from February 2001 household survey *(37)*. If travel costs to consultation were included, ambulatory care would rise to 73% of total private health spending.

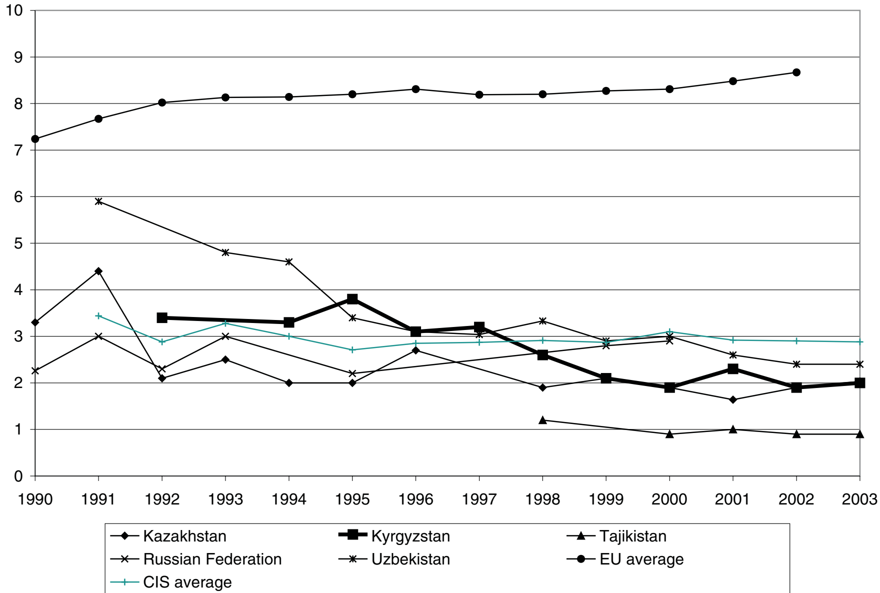
A large part of private out-of-pocket spending does not enter official statistics on total health expenditure, as reported to the WHO Regional Office for Europe health for all database (Fig. 5–Fig. 8). As a result, total health expenditure, both as a percentage of GDP (Fig. 5 and Fig. 6) and in per capita terms (Fig. 7), is considerably underestimated. Likewise, health expenditure from public sources as a percentage of total health expenditure (Fig. 8) is overestimated.

Fig. 5. Total expenditure on health as a % of GDP in the WHO European Region, 2003 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, January 2005.
Note: [a] Commonwealth of independent states; countries without data not included.

Fig. 6. **Trends in total expenditure on health as % of GDP in Kyrgyzstan and selected countries, 1990–2003**



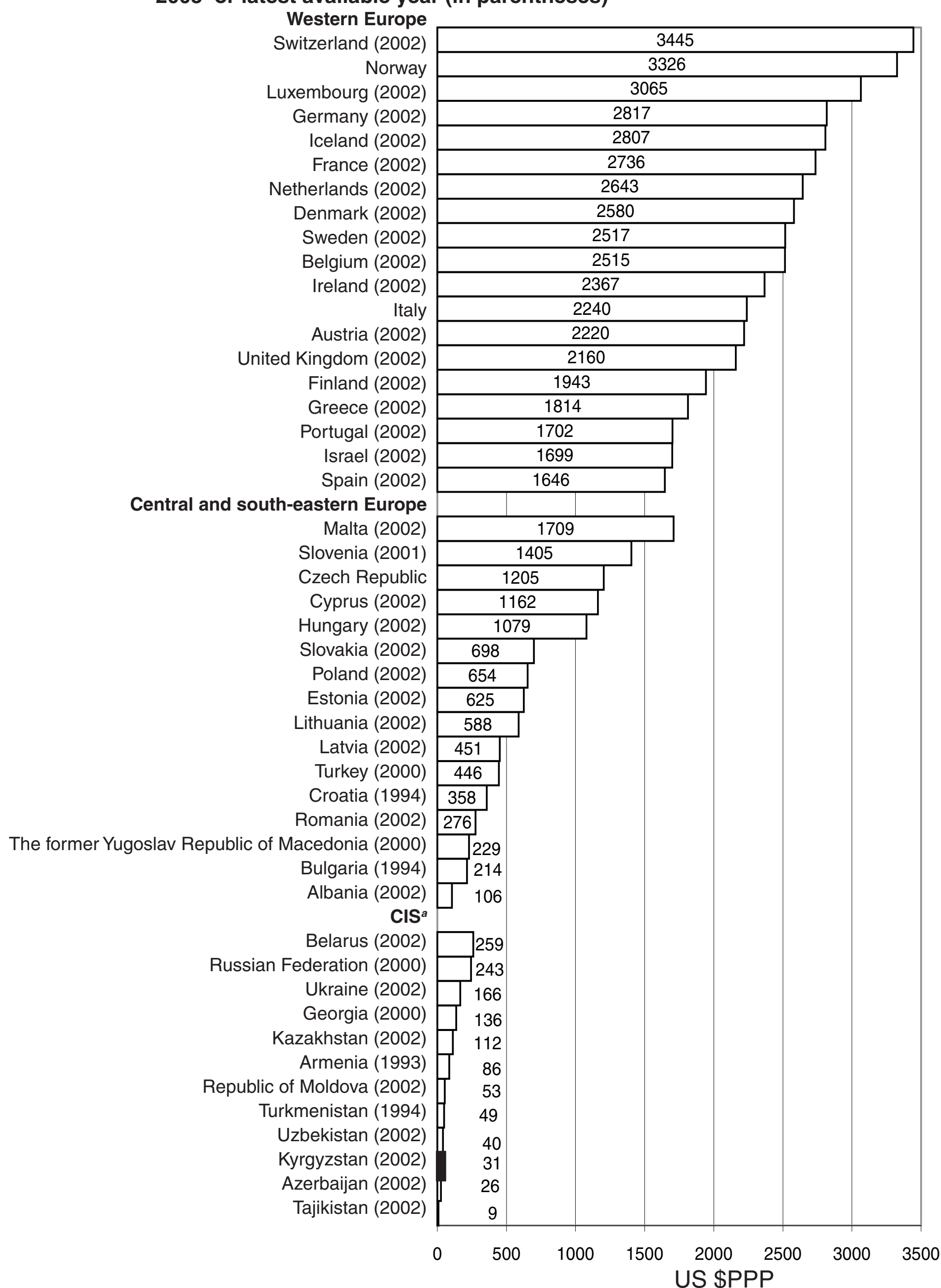
Source: WHO Regional Office for Europe health for all database, January 2005.
Note: CIS: Commonwealth of independent states; EU: European Union.

Public health spending

More detailed information is available on public health spending. Government health spending as a share of GDP in Kyrgyzstan has decreased from 4% in 1995 to 2.2% in 2003. As shown in Table 16, there has been a steady increase in spending in nominal and in local currency terms since 1995, while there has been a steady decline when spending is measured in US dollars. The substantial drop in dollar terms between 1998 and 1999 was mainly due to the rapid depreciation of the som, which lost about half its value to the dollar in this period. In real terms, per capita spending from the budget declined every year until 2001, when it grew for the first time, laying the foundation for two years of consecutive growth. The stabilization in 2001 was primarily due to reduced inflation. Since the MHIF was introduced in 1997, the nominal level of health expenditures made by the MHIF from the funds transferred from the Social Fund has continuously increased.

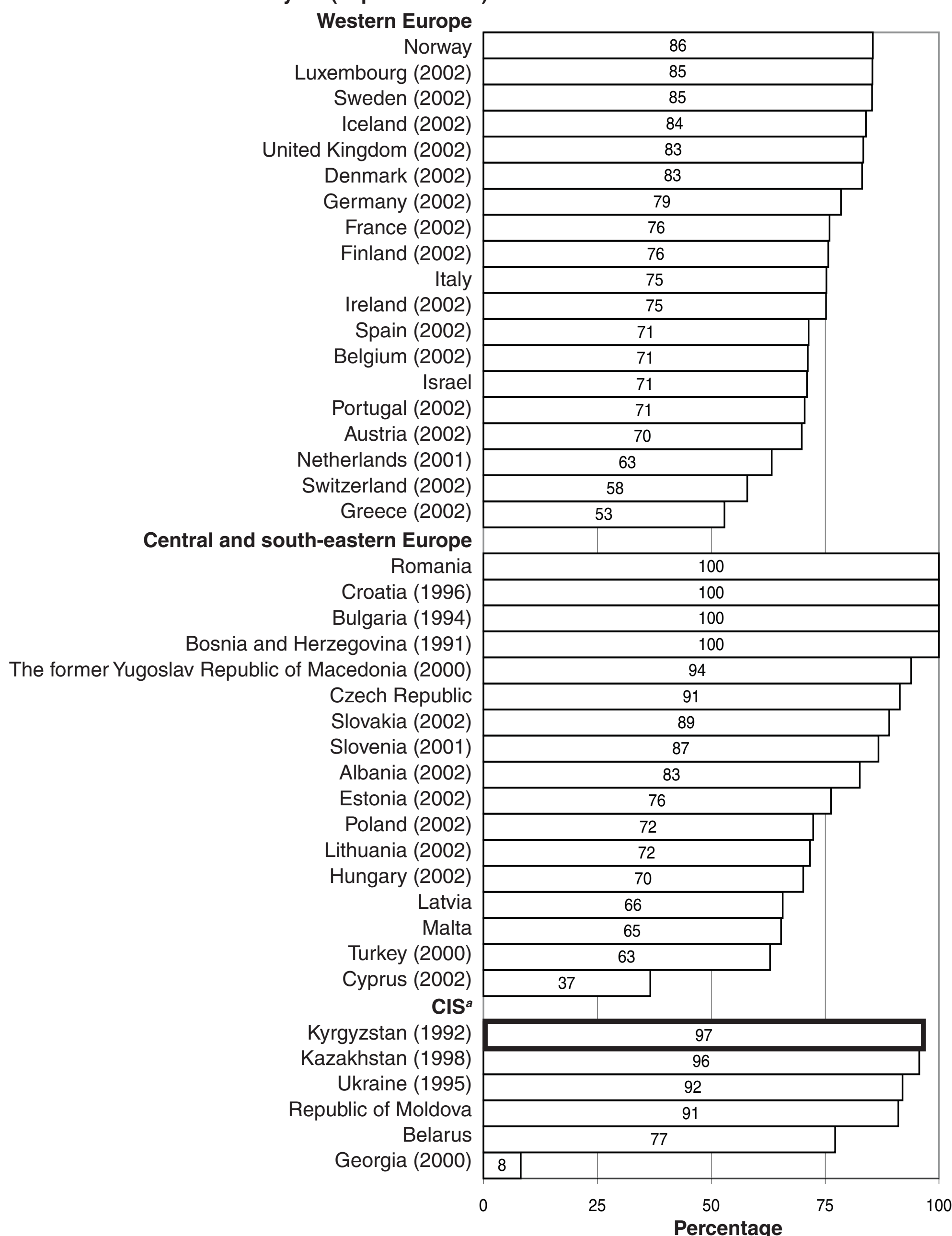
Table 17 shows the allocation of state budget funds (consolidated republican budget and local budget health spending, including categorical grants) across

Fig. 7. Health care expenditure in US $PPP per capita in the WHO European Region, 2003 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, January 2005.
Note: [a] Commonwealth of independent states; countries without data not included.

Fig. 8. Health care expenditure from public sources as a percentage of total health care expenditure in countries in the WHO European Region, 2003 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, January 2005.

Note: [a] Commonwealth of independent states; countries without data not included.

broad programme areas in recent years. The country's epidemiological situation and its official health policies demand a shift in resource allocation from specialized and inpatient services to primary care and public health services. However, the allocation of budgetary funds across programme areas has changed very little since 1995. Hospitals continue to receive 70–73% of total state budget health spending, while the share of ambulatory care and public health has stagnated or decreased. This suggests that, as of 2001, there had been little effective action to reprioritize the spending patterns of state budget funds *(38)*.

The Treasury data also allow for an analysis of resource allocation from the state budget by line item or chapter (Table 18). Of particular concern is the large percentage of spending that is tied up in fixed costs, namely personnel and utilities. Utility expenditures (including heating and electricity) reached over 20% of total spending in 2000 and 2001, reflecting increased electricity costs and an attempt by the Government to reduce the debt owed by health facilities to utility companies. Despite this increase of budgetary spending on utilities, however, many health facilities remain in debt, and that debt is growing.

The share devoted to treatment-related items, such as drugs and medical supplies, and to equipment and materials, is low, although an increase occurred in 2003. This pattern of expenditure, dominated by fixed costs, highlights the need for restructuring the health care delivery system. Some gains in this respect were made in 2001 as a consequence of the health financing reforms introduced in Chui and Issyk-Kul. Also of concern in the expenditure patterns is the low percentage of spending on capital investment. It reflects an increased dependence of the health system on donor funds for the upgrading and renewal of buildings and equipment *(38)*.

Table 15. Trends in public sector health spending, 1995–2003

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total as % of GDP	4.0	3.1	2.8	2.8	2.4	2.0	1.9	2.2	2.2
Total spending (million som)	640	720	845	957	1 170	1 336	1 437	1 613	1 861
Ministry of Health	616	684	794	860	1 016	1 159	1 247	1 459	1 528
Other agencies	24	36	46	55	55	72	70	37	93
MHIF			5	42	99	105	120	117	240

Sources: The Central Treasury for consolidated budgetary health expenditures, excluding special means. The Mandatory Health Insurance Fund for expenditures under the MHIF, excluding transfers from the state budget. The state budget expenditure on medical education is included in Ministry of Health spending.

Table 16. Nominal and real public sector health spending, 1995–2003

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Nominal health expenditure									
State budget health spending per capita (som)	140.5	155.6	178.9	191.7	221.2	244.4	260.4	283.4	303.4
Special means per capita (som)		5.2	12.2	18.4	17.8	18.2	19.2	19.6	20.6
MHIF spending per capita (som)			1.0	8.8	20.4	21.3	24.3	23.5	47.7
Total expenditures per capita (som)	140.3	160.9	192.1	219.0	259.4	289.9	309.3	336.8	371.6
Exchange rate som to US$1	10.8	12.8	17.4	20.8	39.0	47.7	48.4	46.9	43.7
Total expenditures per capita (US $)	13.0	12.5	11.1	10.5	6.6	6.1	6.4	7.2	8.5
Real health expenditure (1995, in som)									
Increase in health care component of consumer price index	38.8%	20.6%	21.1%	13.0%	25.5%	20.5%	5.1%	8.1%	5.6%
Real state budget spending per capita	140.3	129.1	122.6	116.2	106.9	100.4	101.4	109.6	115.8
Real special means per capita		4.3	8.3	11.2	8.6	7.3	7.3	7.3	7.9
Real MHIF spending per capita			0.7	5.3	9.8	8.5	9.3	8.8	18.2
Total expenditures per capita	140.3	133.4	131.6	132.7	125.3	116.2	117.9	125.7	141.8

Sources: The National Statistical Committee for data on population, price index, and exchange rate. The Treasury for health expenditures from state budget and special means. The Mandatory Health Insurance Fund for MHIF expenditures from revenues received from the Social Fund.

Note: State budget health spending includes all health expenditures coming from the republican and local levels, but excludes transfers from the republican budget to the MHIF and special means (official user fees). Categorical grants for health have been included as part of local budget expenditures. MHIF spending includes revenues transferred from the Social Fund and transfers from the republican budget.

Table 17. Distribution of state budget health spending by programme, in %, 1995–2001

	1995	1996	1997	1998	1999	2000	2001
Multiprofile hospitals for children and adults	53.3	52.3	48.6	49.1	47.6	51.0	50.2
Specialty hospitals	14.5	15.6	18.2	19.7	21.3	19.9	19.8
Maternity hospitals	3.8	3.1	3.0	3.4	3.2	2.5	2.0
Rehabilitation hospitals	0.0	0.0	0.1	0.0	0.0	0.0	0.2
Other hospitals	0.2	0.3	0.2	0.2	0.2	0.2	0.1
Hospital subtotal	71.7	71.3	70.2	72.5	72.3	73.6	72.3
General polyclinics and outpatient departments of general hospitals	7.9	8.0	7.5	7.3	8.0	7.7	7.9
Specialty polyclinics and specialty physicians	0.2	0.2	0.2	0.2	0.3	0.1	0.0
Dental polyclinics	1.2	1.3	1.1	1.1	1.1	1.1	1.0
Ambulance stations	1.0	1.1	0.9	1.0	1.1	1.0	1.1
Ambulatory care subtotal	10.3	10.6	9.7	9.5	10.5	10.0	10.1
Public health, including san-epid stations	7.1	6.8	6.5	5.7	6.1	5.7	5.6
Health research institutes	0.7	0.6	0.6	0.7	0.8	0.6	0.7
Administration and accounting	0.7	0.6	0.7	0.8	0.9	0.7	0.7
Central maintenance services	0.9	1.3	0.0	0.1	0.1	0.1	0.2
Capital investments	4.4	5.	3.5	1.7	1.6	1.6	2.2
Education of health professionals	1.9	1.5	1.8	1.5	1.4	1.1	1.3
Other services not included in other categories[a]	2.4	2.1	7.0	7.5	6.3	6.6	7.0
Consolidated budgetary health spending	100	100	100	100	100	100	100

Source: Treasury data. Data include spending from the Ministry of Health and other sources. Percentages exclude special means and transfers to the MHIF. From 1999, centralized utility costs for the republican level have been attributed to national hospitals and research institutes proportionally to their other costs.

Notes: [a] Includes the Department of Drug Supply and Medical Equipment (since 1997), the Republican Immuno-Prophylaxis Centre, the Republican Medical Information Centre, and other centralized units of the Ministry of Health.

Table 18. Distribution of state budget health spending by chapter line item, in %[a]

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total recurrent expenditure	91.0	90.9	91.7	93.7	94.9	94.1	94.6	94.8	94.0
Personnel-related expenditures[b]	56.1	51.4	52.1	51.5	56.1	50.1	52.3	52.8	53.5
of which categorical grants	0.0	0.0	31.1	31.4	31.0	24.8	32.5	54.0	31.0
Travel expenses	0.2	0.2	0.2	0.3	0.3	0.4	0.2	0.3	0.3
Pharmaceuticals and supplies	8.4	9.8	12.7	12.0	12.0	9.3	9.4	10.1	13.6
Food	8.3	9.0	8.3	10.0	8.5	9.0	9.1	8.7	9.2
Utility costs (heat, electricity, gas, phone)	12.4	15.5	13.7	15.4	14.0	21.3	20.2	19.8	14.3
Hiring and maintenance of vehicles	2.5	2.0	1.8	1.8	2.0	2.2	1.9	1.9	2.2
Other purchases and services	3.1	2.9	2.9	2.7	2.0	1.8	1.4	1.6	1.2
Total capital investment	9.0	9.1	8.3	6.3	5.1	5.9	5.4	5.2	6.0
Equipment and materials	2.1	2.1	2.0	1.7	1.5	1.5	0.9	1.6	2.5
Buildings, facilities, other civil works	4.4	4.8	3.4	1.7	1.5	1.5	2.1	0.8	0.9
Capital renovation	2.5	2.2	2.8	2.9	2.0	2.9	2.4	2.8	2.6
Total expenditures from budget	100	100	100	100	100	100	100	100	100

Notes: [a] The percentage distribution across line items excludes expenditures from special means and transfers to the MHIF; [b] Personnel-related expenditures include salaries and Social Fund contributions.

Health care delivery system

The organizational structure of the health care system in Kyrgyzstan followed the model established in the USSR, similar to other countries of the former Soviet Union. The country has inherited the extensive Soviet network of health facilities and is now faced with the task of maintaining and reforming an expensive and inefficient system, with very limited resources.

Services are organized differently in rural and urban areas. In rural areas, health services were rendered in the USSR by feldsher-obstetrical points, rural doctor ambulatories and rural district hospitals, all accountable to the central rayon hospitals. In cities, health providers included general profile and specialized polyclinics, as well as city hospitals and maternity houses. Narrowly specialized hospitals, dispensaries, centres and republican health facilities provided specialized care. A widely developed network of san-epid facilities at the republican, oblast, city and rayon levels and anti-plague and disinfection stations provided public health services.

Health facilities had been built according to the Soviet nomenclature, which described in detail staffing, equipment, health services and population coverage. The nomenclature of health facilities changed during the years of independence. As part of health reforms, the rationalization of the network of health facilities has begun. New facilities have been formed on the premises of old ones, health facilities have been merged and some inefficient facilities have been closed down. The number of health facilities in 2003 is shown in Table 19.

The private health providers that emerged during the years of transition are mainly located in large cities (Bishkek and oblast capitals). They are independent and work on a for-profit, mainly fee-for-service, basis. Private providers usually render narrowly specialized outpatient services (dental care, cosmetic services, anonymous treatment of sexually transmitted diseases, herbal and traditional medicine, physiotherapy, dentistry, ophthalmologic services, etc.) and serve

Table 19. Number of health facilities, 2003

Nomenclature	Ministry of Health system	Other public agencies, 2002	Private sector
Family group practice	668	2	
Feldsher-obstetrical point	866	20	
Family medicine centre	87	2	
Polyclinic		16	
Stomatological (dental) polyclinic	33		
Rural district hospital	31		
Territorial hospital	45		
City territorial hospital	14	13	
City children's hospital	2		
Children's republican hospital	1		
Maternity house	3		
Child home	3	1	
Oblast merged hospital (incl. National Hospital)	8	5	
Tuberculosis hospital	11		
Hospital for infectious diseases	1		
Psychiatric and narcological hospital	2		
Other hospital	6		
Tuberculosis dispensary	16		
Skin-venereal dispensary	2		
Psychoneurological dispensary	2		
Oncological dispensary	2		
San-epid station	63		
Scientific research institute, national centre	9		
Sanatorium	6		
Health point (Zdravpunkt)		53	
Total	1 879	114	49
Health personnel			205
Doctors	12 902	763	
Middle-level health personnel	31 557	1 208	

Sources: (5) for the Ministry of Health system and private providers; the National Statistical Committee for other public agencies; the Ministry of Health Licensing Department for private providers.

Notes: There is no breakdown of private health facilities by type of facility, as they do not necessarily correspond to the public nomenclature of health facilities. Family group practices include 31 practices registered as autonomous juridical entities. A health point is usually a medical ward staffed by a doctor and nurse to provide basic medical care to workers of an organization/enterprise at their place of work.

the middle-income and high-income contingents of the population. Of the total number of private health facilities, less than 10% render inpatient services. In 2002, there were 12 private hospitals with a capacity of 3–50 beds *(4)*. Recent health legislation has given private providers the right to participate in the State Benefits Programme.

Primary health care and public health services

Primary care, defined as the first point of contact with the health care system, is provided by feldsher-obstetrical points (FAPs), family group practices (FGPs), family medicine centrers (FMCs) and ambulance and emergency care services.

Feldsher-obstetrical points

Feldsher-obstetrical points and family group practices are the first points of contact with the health care system for patients in rural areas. Feldsher-obstetrical points were established in the Soviet period to serve small villages and remote localities with populations between 500 and 2000. They are staffed by at least one health worker, called a feldsher, who is a paramedic. In larger villages, they are also staffed by a midwife and a nurse. Services rendered by feldsher-obstetrical points are limited to very basic curative, antenatal and postnatal care, immunization and health promotion. Deliveries are referred to the nearest hospital. Formerly subordinate to central rayon hospitals, currently feldsher-obstetrical points report to either the family group practices or family medicine centres of their rayon.

Family group practices

Family group practices have been formed in recent years on the basis of pre-existing health facilities (feldsher-obstetrical points, rural doctor ambulatories, polyclinics and rural district hospitals). Family group practices are staffed by at least one physician, in addition to nurses and midwives, and serve villages with a population of more than 2000 inhabitants. The number of staff depends on the size of the village. Piloted in Issyk-Kul oblast in 1995, with the support of the USAID-funded ZdravReform (now ZdravPlus) project, the model of family group practices has been gradually introduced throughout the country (Chui oblast and Bishkek in 1996 and 1997, Osh and Jalal-Abad oblasts in 1999, and the rest of the country subsequently). Family group practices are responsible

for providing comprehensive primary care to their enrolled population. With the introduction of family group practices, the principles of family medicine were introduced in the health sector. In the Soviet health system, all primary care providers were specialists. When family group practices were established, an extensive retraining programme offered a first training in family practice to specialists. To guarantee quality of care while family doctors are trained, family group practices usually consist of doctors representing the three specialties of internal medicine, paediatrics and obstetrics/gynaecology, as well as midwives and nurses. The advantage of such an organizational unit is that it enables the provision of integrated primary health services to the whole family, whereas such services were previously provided in separate health facilities for adults, children and women (women's reproductive health care). Following the initial USAID support referred to above, family group practices have been supported by the World Bank, the Asian Development Bank, USAID and the Swiss Agency for Development and Cooperation. This support has included the renovation of buildings and the provision of equipment and training.

Rural doctor ambulatories

Rural doctor ambulatories were Soviet-era health facilities with the capacity to serve populations of 6000–10 000 in rural areas. These facilities were staffed by a specialist for internal medicine ("therapist"), a paediatrician, an obstetrician-gynaecologist, a dentist, midwives and nurses. Rural doctor ambulatories could render a wider range of services than smaller health facilities in rural areas, but they were still limited to general medical care. As rural health facilities, both feldsher-obstetrical points and rural doctor ambulatories were accountable to the central rayon hospital, which was in turn accountable to the rayon authority, as well as responsible for collecting health statistics for the rayon. By 2002, the remaining rural doctor ambulatories had been closed or transformed into family group practices.

Family medicine centres

Family medicine centres are the largest outpatient health facilities and are situated in the main settlement in the rayon. They combine primary care and secondary outpatient care services, ranging from general medical care to specialized care and diagnostics (including X-ray and ultrasound). Family medicine centres provide care for children, minor surgery, rehabilitation, family planning, obstetric care, perinatal care, first aid, pharmaceutical prescriptions, certification, home visits, and preventive and health promotion services. Health personnel in family medicine centres usually comprise 10–20 specialists.

One family medicine centre has been established in every rayon, replacing polyclinics. Family medicine centres are also responsible for all family group practices and feldsher-obstetrical points in their rayon, although there are some family group practices that are independent juridical entities . For some time the value of family medicine centres has been questioned. In particular, the extensive provision of specialist services in close proximity to territorial hospitals does not seem to be justified in the resource-poor setting of the country. Attempts are under way to define the outpatient department of territorial hospitals as the place of specialized outpatient care *(42)*.

Polyclinics

During the Soviet period, polyclinics were specialized, and separate polyclinics existed for adults, children, students, women and dental care. There were also polyclinics for special groups of the population, e.g. polyclinics of the Ministry of Interior for militiamen or polyclinics for construction workers. Organizationally, polyclinics were set up both as separate health facilities and as polyclinics accountable to the central rayon, city or oblast hospitals. As part of the restructuring of the health delivery system, different types of polyclinics (excluding stomatological polyclinics and those owned by other public agencies) were merged into comprehensive polyclinics. Initially, family group practices were formed as structural subdivisions of polyclinics. By 2002, merged polyclinics had been reorganized into family medicine centres.

Other services

Stomatological polyclinics, situated in rayon centres, were the first health facilities to operate on a fee-for-service basis. Currently, free dental care in public stomatological polyclinics is provided only to pensioners, people with disabilities and children.

Ambulance services are the first point of contact with the health care system for patients in an emergency. They are meant to be available to the population 24 hours a day, but in reality their material base (vehicle fleet and medical equipment) is obsolete and financial resources for purchases of spare parts and gasoline are very limited, impeding access to emergency services. It is hoped that new provider payment methods and internal resource allocation will improve the material base and availability of public ambulance services. Organizationally, ambulance services were a part of large hospitals (city ambulance hospitals and territorial hospitals/central rayon hospitals in rural areas). In 2004, a number of ambulance services (ambulance departments) were transferred from territorial hospitals to family medicine centres and this process will continue.

In 2003, there were 6 ambulance stations and 86 ambulance departments, which had 126 general profile brigades, 252 feldsher brigades and 70 specialized brigades *(4)*. In Bishkek, there is also a private ambulance service available 24 hours on call. This recent service is well-equipped, but is accessible only to the richest segments of the population.

Primary care issues

A high level of self-referred hospitalizations in recent years has indicated that the population was forgoing primary care in seeking health services. To solve this problem, family group practices are expected to function as gatekeepers by referring patients to higher levels of health care according to clinical protocols. Under the single payer system, incentives to encourage the use of the referral system have been designed and built into the State Benefits Package. Without a referral from a family group practice, patients have to pay higher levels of co-payment.

The population enjoys the formal right to choose a family group practice. A mass information and education campaign was carried out in Chui oblast and Bishkek in 1999 to encourage enrolment in family group practices. Actual choice exists in some urban parts of the country, whereas elsewhere people are effectively assigned to family group practices according to their place of residence.

Household survey data indicate that in 2001 the majority (73%) of people consulting a health professional turned to state doctors and only 2% consulted private doctors and 1% healers *(37)*. The rest consulted dentists (8%), nurses (6%), midwives (4%), feldshers (4%) and pharmacists (1%). Nearly a third of all consultations took place at the family group practice in which the patient was enrolled (Figure 9).

The distribution of urban and rural primary care facilities in 2003 is shown in Table 20.

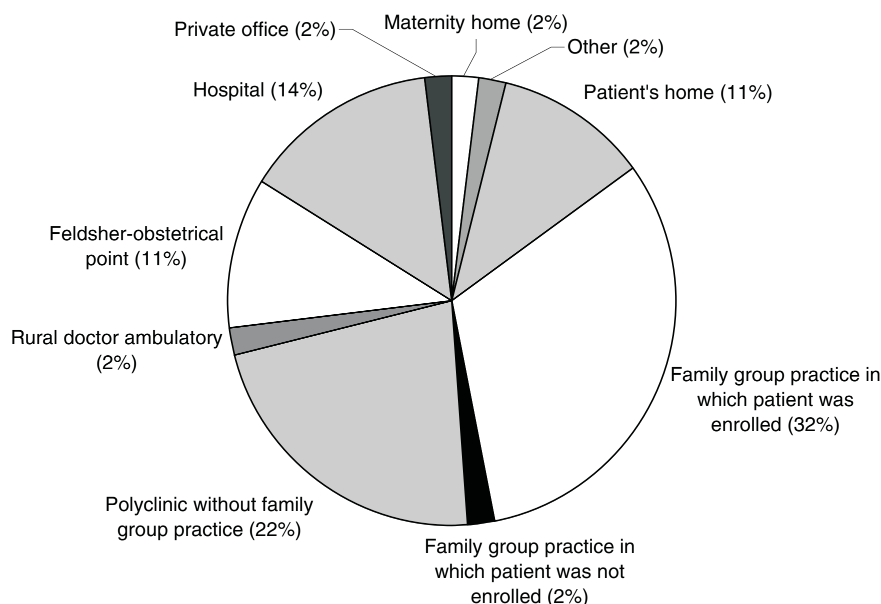
Table 20. Distribution of urban and rural primary care facilities, 2003

Nomenclature	Urban	Rural[a]
Family group practice	193	475
Feldsher-obstetrical point	14	852
Family medicine centre	38	49

Source: (4).

Note: [a] The numbers of health facilities at the rayon level are used as a proxy for rural health facilities.

Fig. 9. Location of consultation



The reorganization of primary care is still being carried out. Family group practices are taking on more and more responsibilities in the health care system. In particular, they are now responsible for carrying out screening interventions, immunization and social patronage (including antenatal care). An increasing amount of time is also being spent on administration and paper work. Because small family group practices began to encounter difficulties in rendering services, given their limited capacity, since 2001, small family group practices have started to merge in order to create economies of scale. As a result, between 2000 and 2003, the number of family group practices decreased from 800 to 668. Further decisions on the status of family group practices still have to be made in the context of the ongoing restructuring of the health delivery system.

Public health services

Public health services are provided by the san-epid service and health promotion centres. The san-epid service is responsible for health protection, while the health promotion centres are responsible for health promotion.

Health promotion as a task has been transferred from the san-epid service to the newly established Republican Centre for Health Promotion with the aim of liberating the health promotion service from the propaganda and control approach that traditionally dominated the san-epid service and to enable it to develop modern health promotion concepts. The health promotion service consists of the Republican Centre for Health Promotion, city health promotion centres in Bishkek and Osh, oblast health promotion centres, and health promotion units at the rayon level. The rayon level units are being piloted in Naryn oblast (supported by the Swiss Red Cross in a project funded by the Swiss Agency for Development and Cooperation) and it is envisaged that they will be established throughout the country from 2005 onwards. A health promotion concept based on the principles of the Ottawa Charter for Health Promotion (a charter adopted in 1986 at the First International Conference on Health Promotion) has been developed. Health promotion activities in Kyrgyzstan have been carried out with financial and technical assistance from international donors, particularly the Swiss Red Cross. Community action for health has been developed as the strategy for health promotion in rural areas, and has produced notable results in addressing certain health problems, such as iodine deficiency and brucellosis. The purpose of the health promotion units in rayons is to support the community action for health strategy and to act as the link between the health system and community organizations working on health issues. Since 2003 WHO has provided assistance in developing a National Population Health and Development Programme, which envisages an intersectoral strategy of health promotion.

The san-epid system operates at the national, oblast, city and rayon levels. In addition to the national office of the Department of State Sanitary-Epidemiological Surveillance, there are seven oblast centres and 50 rayon and city centres. Apart from the Department of State Sanitary-Epidemiological Surveillance, established in 1997, the san-epid system includes the san-epid services of other ministries and agencies, the Republican Centre of Immunoprophylaxis under the Ministry of Health, the Republican Centre of Quarantine and Extremely Dangerous Infections under the Ministry of Health, the AIDS Republican Union and seven oblast AIDS centres, and the Preventative Medicine Union.

Historically the san-epid system has had the function of "protecting the health of the healthy". It has been responsible for:

- development of sanitary norms and rules (SanPiN) and participation in the development of state standards (GOST), sectoral standards (OST) and construction norms and rules (SNiP);

- prevention of environmental pollution;
- prevention of transmission and spread of infectious and parasitic diseases;
- prevention of poisonings and alimentary diseases;
- improvement of occupational health in industries and agriculture (including industries with radioactive and ionizing emanations), and prevention of professional morbidity;
- health promotion and education *(43)*.

The Department of State Sanitary-Epidemiological Surveillance is the main actor of the san-epid service. It is staffed by sanitary doctors, epidemiologists and assistants (sanitary feldshers). In addition, there are engineers, physicists, biologists, entomologists and technicians. The san-epid service has two departments: a sanitary department dealing with hygiene of children and adolescents, occupational health, alimentation and local hygiene; and an epidemiological department dealing with disinfection and parasitic, immunological and epidemiological matters. Laboratories (usually bacteriological and sanitary) serve both departments.

The Department of State Sanitary-Epidemiological Surveillance has implemented a number of activities in the framework of health laws and state and national programmes, including the State Programme for a Healthy Nation, the National Programme on Prevention of HIV/AIDS and STDs (1997–2000), the National Tuberculosis Programme (1996–2000) and the National Immunoprophylaxis Programme (1994–2000). A number of other activities are being implemented with regard to drinking water, radiation safety, prevention of iodine-deficiency diseases and prevention of communicable diseases and malaria. The closest cooperation of the public health service with primary services has been achieved in the implementation of the DOTS strategy for the control of tuberculosis and in immunization activities.

Coordinated by the Republican Centre for Immunoprophylaxis since 1994, vaccination activities have been largely effective. The technical assistance and financial support provided by international donors (UNICEF, WHO and the Centers for Disease Control and Prevention) have been crucial to achieving high immunization rates (Table 21).

As Table 21 indicates, in some years, immunization coverage for certain communicable diseases was provided at low levels or not at all, due to a lack of financing from the republican budget. As a result of a combination of donor support and expenditure from the republican health budget, immunization coverage was expanded in 2002 and 2003 with the introduction of the triple vaccination for measles, mumps and rubella and the extension of the vaccination for hepatitis B.

Table 21. Immunization rates for children for selected infections, 1992–2003

Infections	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Tuberculosis (BCG)	96.5	95.0	97.4	96.4	99.8	97.1	94.4	98.9	98.3	98.9	99.1	99.4
Diphtheria, pertussis, tetanus	84.4	64.4	82.0	93.1	97.7	98.1	97.4	99.2	98.7	98.6	98.6	98.7
Oral poliomyelitis	91.4	69.3	83.5	96.2	94.2	99.1	97.4	99.3	98.7	98.6	98.6	98.7
Viral hepatitis B	–	–	–	–	–	–	–	10.4	43.7	57.4	98.9	98.7
Measles, mumps, rubella	–	–	–	–	–	–	–	–	–	–	87.8	99.6
Measles	94.0	92.9	88.3	97.1	98.0	98.0	98.0	97.5	97.8	98.9	11.5	–
Mumps	79.4	56.6	15.7	0.01	94.3	94.3	98.9	94.9	92.0	7.6	–	–

Source: Republican Centre for Immunoprophylaxis.

The physical infrastructure of the san-epid system is weak. Many laboratories and their equipment are obsolete and need renewal. The Department of State Sanitary-Epidemiological Surveillance has its own vertical reporting system on the epidemiological situation in the country, with information flows from the rayon to the oblast and to the national level. Its information system is not computerized and is separate from the health information system run by the MHIF.

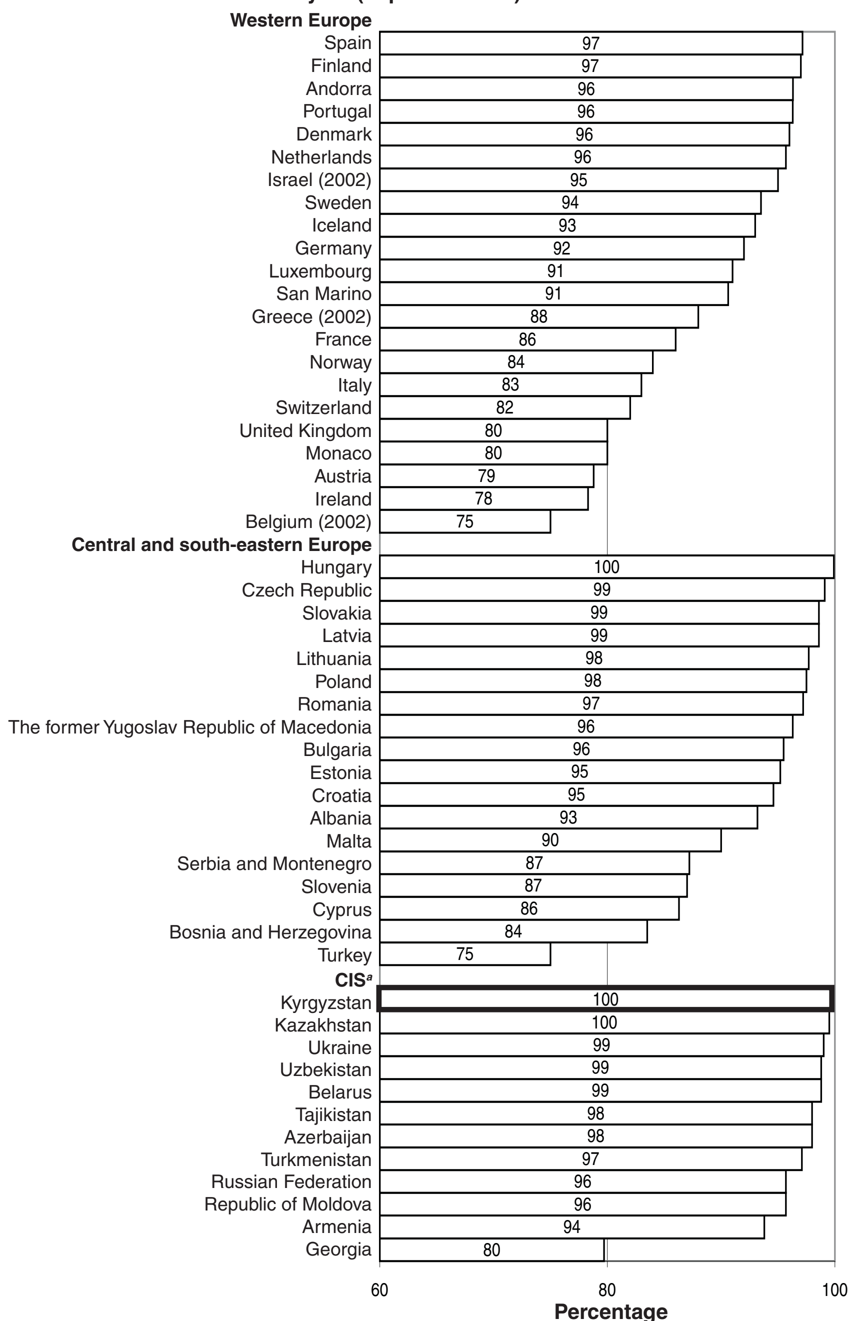
The Department has undergone some reorganization since 1990. In 2004, financing of the san-epid services was changed. Nevertheless, this part of the health system is lagging behind the reform process in the rest of the health sector in terms of restructuring, financing reform and human resource training. The envisaged reform of the san-epid system entails integrating some of the Department's current services into family group practices and rationalizing the san-epid surveillance network. Its information system will be integrated into the health information system of the MHIF. A detailed plan for reforming public health services is included in the public health component of the Second Health Reform Project funded by the World Bank.

Secondary and tertiary care

Secondary care

Secondary care is provided at specialized outpatient and general hospital levels and differs in rural and urban areas. Family medicine centres and outpatient departments of general hospitals are health providers at the specialized outpatient level. Currently, health providers at the general inpatient level include a number of different facilities: territorial (city and rayon) hospitals, affiliates of

Fig. 10. Levels of immunization for measles in the WHO European Region, 2003 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, January 2005.

Note: [a] Commonwealth of independent states; countries without data not included.

territorial hospitals, rural district hospitals, city children's hospitals, maternity houses and oblast merged hospitals.

Rural district hospitals are the main facilities rendering hospital care in remote rural areas. They are staffed by up to four categories of doctors: paediatricians, physicians, gynaecologists and in some cases dentists. Rural district hospitals are the smallest hospital facilities. Designed to have 25–30 beds, they also provide outpatient care in addition to general inpatient services. In general, rural district hospitals work inefficiently because their main role is to ensure physical access to very basic care for relatively small populations living in remote areas. Many do not have electricity or running water. Obsolete and insufficient medical equipment limits the scope to provide care. A number of rural district hospitals have been closed down or transformed into family group practices, family medicine centres or affiliates of territorial hospitals. Restructuring plans envisage further reorganization of rural district hospitals into outpatient facilities or affiliates of territorial hospitals.

Rayon hospitals had provided general hospital care at the rayon level up to 2004. They had been large health facilities situated in the rayon centre (the largest town or village of the rayon), designed to serve the needs of the whole rayon in hospital care. They used to have a much wider scope of specialists and medical equipment and supplies and usually housed a family medicine centre and ambulance service. Traditionally, rayon hospitals had played a key role in health management at the rayon level. They were responsible for health care in the rayon, and for minor health facilities, such as rural district hospitals, rural doctor ambulatories and feldsher-obstetrical points. They also managed centralized accounting and medical statistics. The financial arrangements under the single payer system required a new organization of health care facilities, and in 2002 rayon hospitals began to be transformed into "territorial hospitals" or affiliates of territorial hospitals (including territorial city hospitals). By 2004, this process was complete. The reorganization has resulted in greater centralization at the rayon level, as the director of a territorial hospital determines the structure of its affiliates. It is hoped that the new organizational setting facilitates the restructuring of hospitals, while at the same time enabling stronger territorial hospitals to cross-subsidize financially weak affiliates in remote and geographically isolated settlements.

City hospitals of all types, including adults' and children's hospitals and maternity houses/gynaecological hospitals, provide general hospital care in cities. These facilities were separate from polyclinics, unlike in rural areas. As a result of the restructuring, city hospitals have been transformed into territorial (city) hospitals through mergers of health facilities situated in the same city and the closure of inefficient facilities or their transformation into family group practices or family medicine centres.

Oblast merged hospitals provide specialized outpatient and general and specialized hospital care at the oblast level. With the exception of the republican facilities, these providers have the largest capacity throughout their respective oblasts and are usually situated in oblast capitals. Oblast merged hospitals are the result of the restructuring in 2000, when oblast health departments were abolished. As an interim measure, the administrative functions of oblast health departments were transferred to oblast merged hospitals. These hospitals incorporated general, specialized and paraclinical health facilities, such as dispensaries, tuberculosis hospitals, transfusion stations and forensic medicine. Restructuring plans envisage further mergers of specialized health facilities with oblast merged hospitals, and the gradual improvement of infrastructure and services through optimization of structures and economies of scale.

Tertiary care

Tertiary care is provided by the republican health facilities at national level (national hospitals, centres and scientific research institutes) and specialized dispensaries and hospitals at subnational levels. These facilities are narrowly specialized and cover cardiology, tuberculosis, oncology and radiology, obstetrics and paediatrics, treatment of infectious diseases and treatment of mental illnesses. All tertiary care facilities can render specialized outpatient and general and specialized hospital care, while secondary facilities can render primary and specialized outpatient care.

Republican facilities usually have the best equipment and staff in the health sector, and they often act as teaching and research hospitals. In 2003, republican facilities employed 3269 doctors and 2742 middle-level health personnel *(4)*. Almost all republican facilities are situated in Bishkek. They are intended to provide tertiary care to the whole population regardless of where they live in the country, but, in practice, the majority of patients are from Chui oblast and Bishkek, while most of the services provided constitute secondary rather than tertiary care. The concentration of health facilities in Bishkek results in a huge disparity between Bishkek and the rest of the country in terms of per capita government health spending. In 2001 532 som were spent in Bishkek compared to a national average of 267 som *(38)*. Re-structuring of health facilities in Bishkek, including the republican facilities, had been planned under the MANAS health care reforms since 1996, but up to 2002 no re-structuring had been achieved, as no political consensus could be reached on this issue. By 2004, the republican children's clinical hospital and the Scientific Research Institute of Obstetrics and Paediatrics had been merged into the National Centre of Paediatrics and Child Surgery, with some departments becoming structural divisions of the National Hospital.

Three large private hospitals also provide tertiary care. They have up-to-date facilities and equipment and highly qualified personnel, and they also act as clinical bases for teaching and research. Highly specialized, these clinics (narcological, eye microsurgery and maternity) serve high-income contingents, including foreign citizens.

Secondary and tertiary care issues

The Ministry of Health has recognized that the hospital sector had excessive capacity and the rationalization of hospitals has become an important aim of health policy. Throughout the country, the number of hospital beds has been drastically reduced.

Table 22. Number of hospital beds and average length of stay, 1990–2003

	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hospital beds	52 600	38 703	38 197	38 332	37 441	36 108	34 412	30 313	27 447	26 594
Hospital beds per 10 000 population	119.8	85.7	84.1	83.3	81.3	74.6	70.4	61.9	55.3	52.8
Average length of stay in days	14.9	14.7	15.0	14.5	14.6	14.1	13.7	13.3	13.0	12.5
Average bed turnover rate	–	–	19.6	21.0	20.3	21.6	22.3	22.9	22.9	–
Hospital beds in republican health facilities	5 405	6 020	6 105	7 766	7 824	7 685	7 681	7 114	6 829	6 658
Average length of stay in republican health facilities	23.5	23.6	22.3	22.5	23.3	21.8	21.7	21.1	20.5	19.8

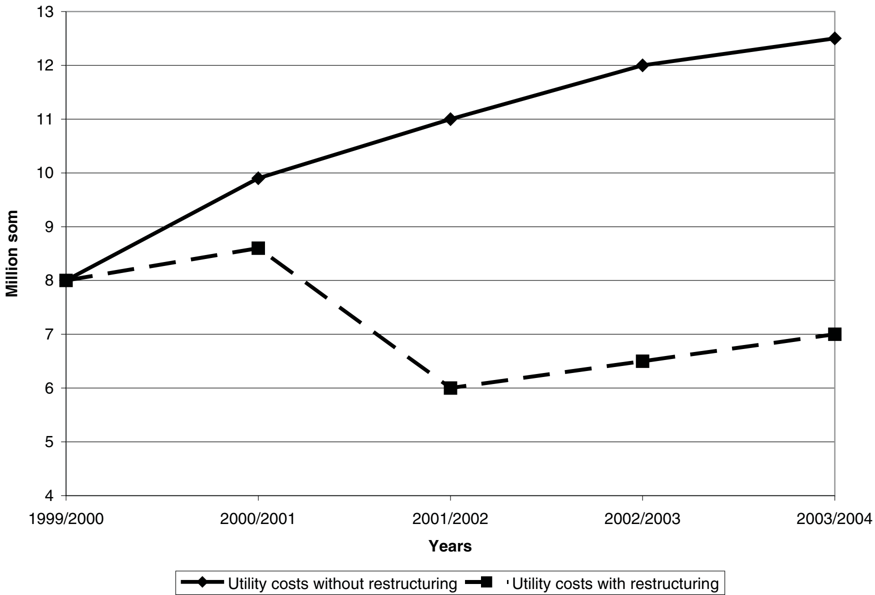
Source: (4)

A greater economic effect, however, is expected from the rationalization of buildings, although potential gains risk being undermined by rising energy tariffs that have occurred as a result of the deregulation and privatization of public utilities.

Figure 11 illustrates the gains in utility costs following a restructuring of hospitals as a result of the introduction of the single payer reforms.

Few data are so far available on patient satisfaction with hospital services. In the Exit Patients Survey, conducted among patients hospitalized in public sector hospitals in February 2001, 56% of respondents said that the quality of hospital services was “good” or “very good”, 41.2% found the quality “satisfactory”, and only 2.7% said that the quality of care was “poor” or “very poor” *(45).*

Fig. 11. Comparison of utility costs with and without restructuring in 8 investigated hospitals, (in million som), 1999–2004



Source: (44).

Improvements in health management have been achieved so far through the introduction of a quality management system in the mandatory health insurance scheme, and the development of a health information system and of evidence-based clinical protocols. The "Concept of improving the quality of health services in 2004–2008", which was developed in 2004, aims to address the following strategic areas:

- Qualification upgrade of health personnel
- Creation of incentives for health personnel to render quality health services
- Improvement of health personnel's access to resources and information to provide quality services
- Involvement of the population and improvement of their access to health care resources and information regarding health protection and promotion
- Measures to improve the quality of health services
- Development and improvement of regulatory mechanisms in the field of quality improvement.

The Concept specifies the roles of different stakeholders in the health sector with regard to health management, including the Ministry of Health, the MHIF, the Department of Drug Supply and Procurement of Medical Equipment, health providers and professional associations.

Social care

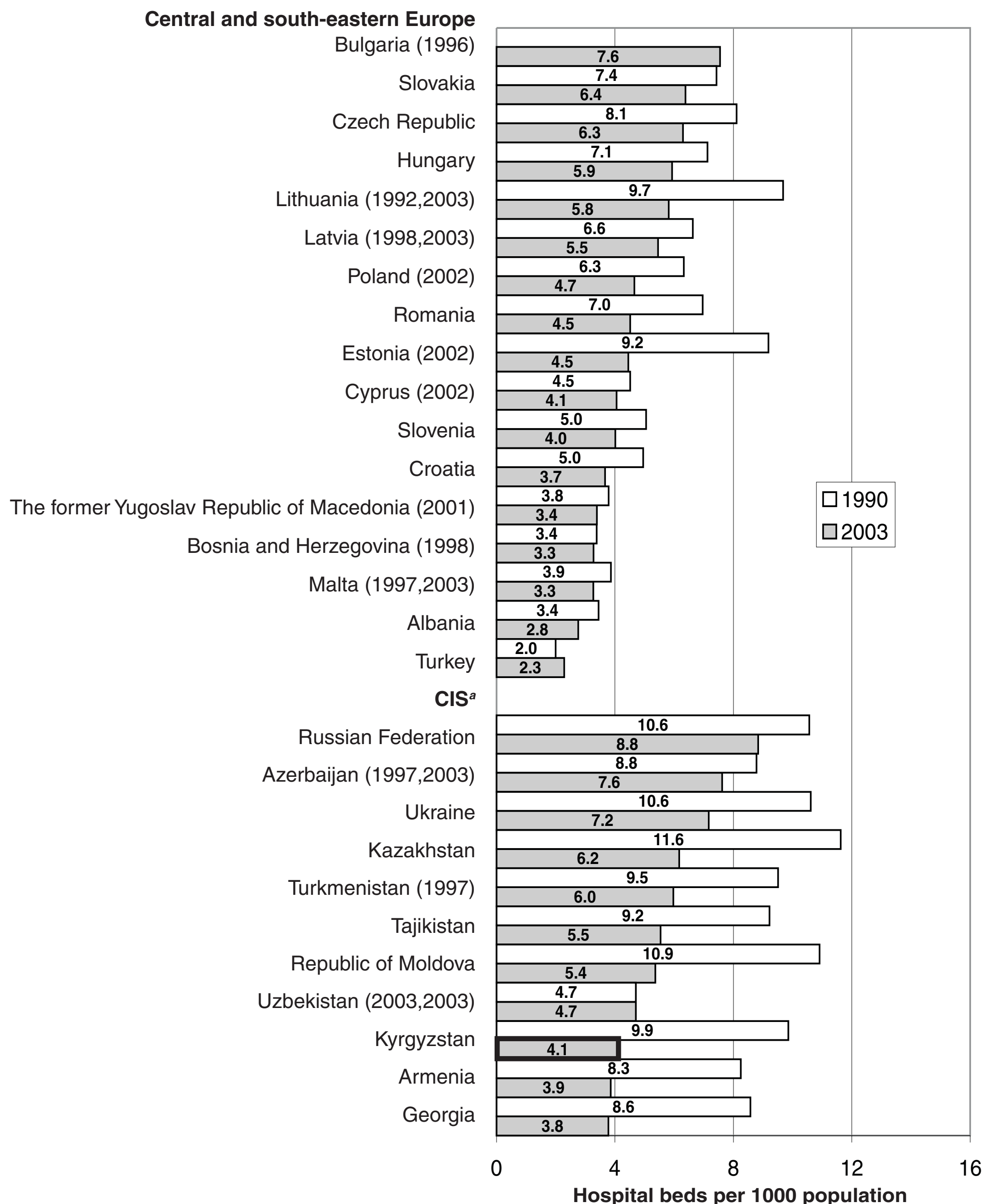
In Kyrgyzstan, social services are the responsibility of the Ministry of Labour and Social Protection, which provides social benefits and benefits for drugs to vulnerable groups of the population (see the section on *Health care financing and coverage – health care benefits and rationing*). However, there are few links between the health and social welfare sectors, and families remain the most important providers of social care. What social care the state does provide, is mainly in institutions. The Ministry of Labour and Social Protection manages 13 boarding houses, in which about 2000 elderly people, chronically ill and people with mental or physical handicaps (adults and children) live permanently. The Ministry also runs a rehabilitation centre that produces tools and equipment for those with mental or physical handicaps, serving over 6000 people. The system of technical-vocational schools managed by the Ministry provides educational services to orphans, people with mental or physical handicaps, young persons in corrective institutions and the unemployed *(46)*.

Countrywide, there are 57 departments for the provision of social care at home, which serve over 10 000 people with mental or physical handicaps and elderly people per year. About 30 territorial day centres provide various free services in addition to social and psychological support. Over 800 social workers provide assistance and services to single pensioners and people with handicaps, such as going shopping, paying the bills and making minor repairs.

The Ministry of Education and Culture is responsible for the care of children with learning disabilities. It administers 19 schools for children with severe sight and hearing disabilities. Health care for patients with chronic diseases and mental illnesses, including alcohol and drug addiction, is the responsibility of the Ministry of Health. Social benefits are provided according to the integrated method and some social care services have been incorporated into the State Benefits Package under the single payer system.

The leading health facility on mental diseases is the National Centre of Mental Health, which is accountable to the Ministry of Health. In addition to the centre, there are four other health facilities that provide short-term and long-term care to the mentally ill: one psychiatric hospital and one hospital for the treatment of drug addiction (both republican health facilities), one

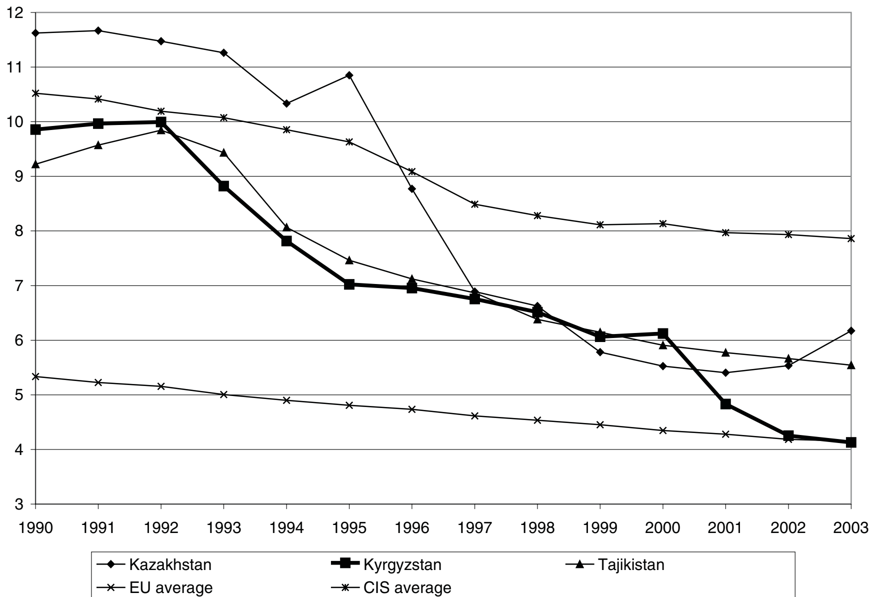
Fig. 12. Hospital beds in acute hospitals per 1000 population in central and south-eastern Europe and CIS countries, 1990 and 2003 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, January 2005.

Note: [a] Commonwealth of independent states; countries without data not included.

Fig. 13. Acute beds per 1000 population in Kyrgyzstan and selected countries, 1990–2003



Source: WHO Regional Office for Europe health for all database, January 2005.

Notes: CIS: Commonwealth of independent states; EU: European Union; countries without data not included.

psychoneurological dispensary and one dispensary for the treatment of drug addiction. There are 2328 psychiatric beds (including 130 beds for children), 297 beds for the treatment of drug addiction, 1108 neurological beds and 15 psychosomatic beds *(4)*. A National Programme on Mental Health was approved in 2000, following the adoption of the Law on Psychiatric Aid and Guarantees of Citizens' Rights in 1999.

The social safety net inherited by Kyrgyzstan from Soviet times is sophisticated but inefficient. With the assistance of the World Bank and other aid agencies, the Government is trying to make the social safety net better targeted and more affordable. International and local NGOs have supported the provision of social care at home and the development of community care. The Red Crescent Society of Kyrgyzstan has a network of social workers and nurses who provide home nursing and social services to dependent and socially isolated elderly people, the disabled and refugees. The services include the purchase of food, payment of public utility bills, help at home, provision of meals and counselling. The Red Crescent Society also runs two medical centres that

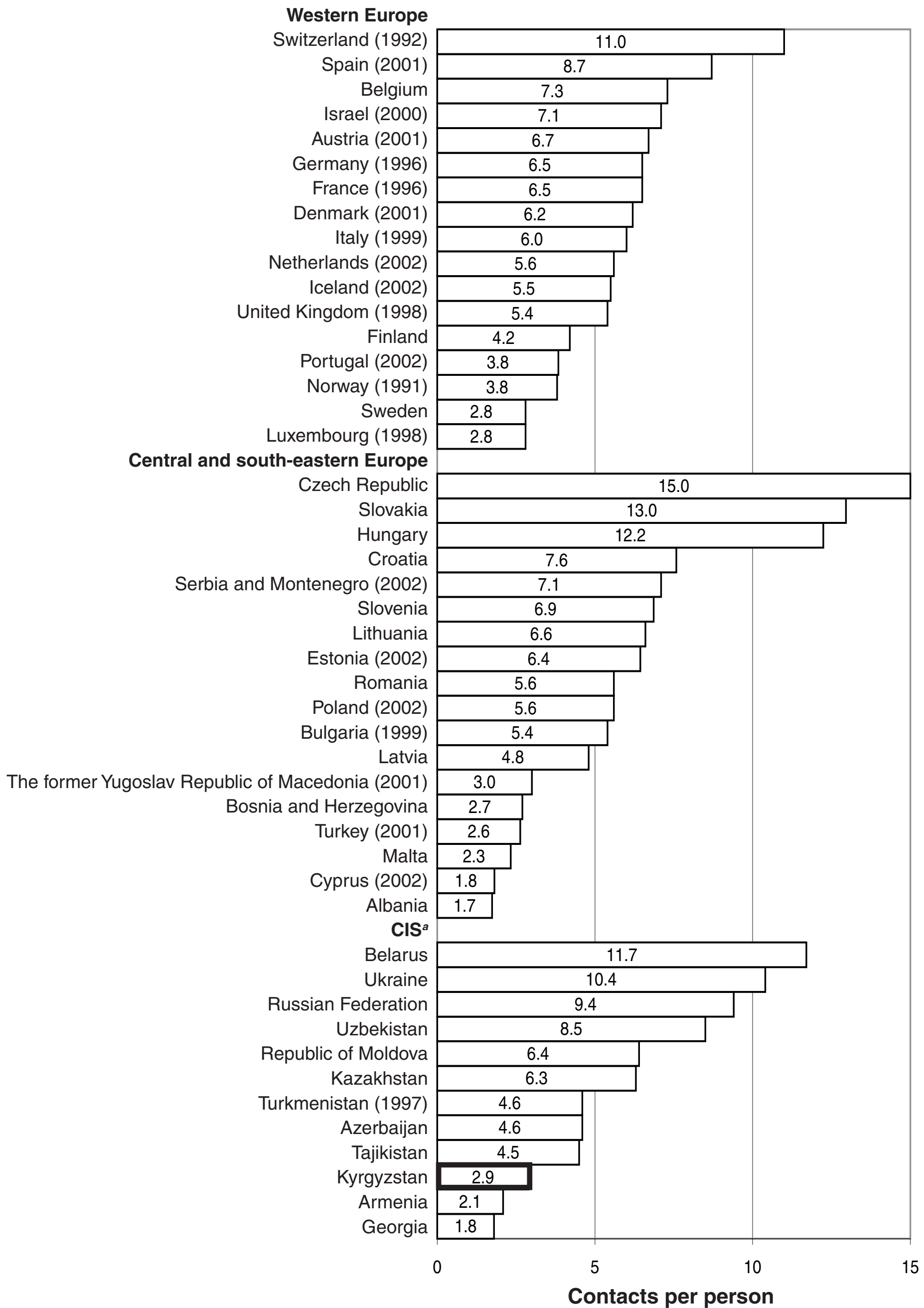
Table 23. Inpatient utilization and performance in acute hospitals in the WHO European Region, 2003 or latest available year

	Hospital beds per 1000 population	Admissions per 100 population	Average length of stay in days	Occupancy rate (%)
Western Europe				
Andorra	2.5	10.2	6.7[d]	70.0[d]
Austria	6.0	28.8	6.4	76.2
Belgium	5.8[b]	16.9[d]	8.0[d]	79.9[e]
Denmark	3.4[a]	17.8[b]	3.6	83.5[c]
Finland	2.3	19.9	4.3	74.0[h]
France	3.9[a]	20.4[d]	5.5[d]	77.4[d]
Germany	6.2[a]	20.7[a]	8.6[a]	79.4[a]
Greece	3.9[f]	15.0[e]	6.4[e]	66.6[e]
Iceland	3.7[g]	17.2[a]	3.7[a]	–
Ireland	3.0	14.1	6.5	84.2
Israel	2.1	17.5	4.2	96.0
Italy	3.6	15.2[a]	6.8[a]	76.9[a]
Luxembourg	5.5	18.4[i]	7.7[e]	74.3[i]
Monaco	15.5[h]	–	–	–
Netherlands	3.1[a]	8.8[b]	7.4[b]	58.4[b]
Norway	3.1	17.1	5.4	88.5
Portugal	3.2[b]	11.7[e]	7.3[e]	75.5[e]
Spain	2.8[b]	11.8[b]	7.0[b]	77.2[b]
Sweden	2.2	15.0	6.2	77.5[g]
Switzerland	4.0[b]	16.3[e]	9.2[a]	84.6[a]
United Kingdom	2.4[e]	21.4[g]	5.0[g]	80.8[e]
Central and south-eastern Europe				
Albania	2.8	–	–	–
Bosnia and Herzegovina	3.3[e]	7.2[e]	9.8[e]	62.6[d]
Bulgaria	7.6[g]	14.8[g]	10.7[g]	64.1[g]
Croatia	3.7	14.4	8.4	90.7
Cyprus	4.1[a]	8.0[a]	5.8[a]	73.5[a]
Czech Republic	6.3	20.4	8.4	74.1
Estonia	4.5[a]	17.2[a]	6.9[a]	64.6[a]
Hungary	5.9	23.2	6.7	77.2
Latvia	5.5	18.3	–	–
Lithuania	5.8	21.5	7.9	73.6
Malta	3.3	10.8	4.6	83.4
Poland	4.7[a]	–	–	–
Romania	4.5	–	–	–
Serbia and Montenegro	–	–	9.7[a]	–
Slovakia	6.4	17.7	8.5	64.8
Slovenia	4.0	16.2	6.1	68.1
The former Yugoslav Republic of Macedonia	3.4[b]	8.2[b]	8.0[b]	53.7[b]
Turkey	2.3	8.1	5.6	61.9
CIS				
Armenia	3.9	6.5	8.7	40.7
Azerbaijan	7.6	4.8	15.8	26.1
Belarus	–	–	–	88.7[i]
Georgia	3.8	4.8	7.4	89.5
Kazakhstan	6.2	16.4	10.8	84.6
Kyrgyzstan	4.1	12.3	10.0	87.6
Republic of Moldova	5.4	16.0	9.1	74.8
Russian Federation	8.8	22.0	12.6	86.0
Tajikistan	5.5	9.2	12.0	83.3
Turkmenistan	6.0[f]	12.4[f]	11.1[f]	72.1[f]
Ukraine	7.2	19.6	12.1	90.4
Uzbekistan	4.7	13.8	–	82.0

Source: WHO Regional Office for Europe health for all database, January 2005.

Notes: [a] 2002; [b] 2001; [c] 2000; [d] 1999; [e] 1998; [f] 1997; [g] 1996; [h] 1995; [i] 1994; CIS: Commonwealth of independent states; countries without data not included.

Fig. 14. Outpatient contacts per person in the WHO European Region, 2003 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, January 2005.

Note: [a] Commonwealth of independent states; countries without data not included.

provide primary care to refugees from Tajikistan. It assists 175 rural hospitals in the purchase of pharmaceuticals and since 1998 has assisted nurse/feldsher posts in Osh oblast. It also runs a residential home for 40 elderly people and a residential home for abandoned children *(29).*

The United Nations Development Programme and other donors have supported community development projects, such as groups for mutual self-help. These projects aim primarily at the development of community savings to start microcredit schemes. Besides the economic development of communities, these projects aim to foster community thinking and the development of community care.

The United Nations Population Fund has supported a social patronage project in the southern regions of the country. Three hundred social patronage workers are based in the premises of health facilities and render social and health care and counselling to vulnerable families. Their primary function, however, is to provide counselling on reproductive health matters.

The international charity Meerim has supported institutions for children and constructed and maintained a huge complex for abandoned children called “children’s village”. It is currently supporting the construction of a children’s rehabilitation centre in Issyk-Kul oblast.

Human resources and training

In 2003, the Ministry of Health system employed 12 902 doctors (25.6 per 10 000 population) and 31 557 middle-level health personnel (62.6 per 10 000 population). Of those, 10 737 were active doctors and 25 332 active middle-level health personnel. The number of personnel working in the Ministry of Health system is shown in Table 24.

Human resources in the health sector are distributed unevenly (Table 25). The northern regions are better staffed than the southern regions, where physicians are lacking. In addition, there is a countrywide excess of physicians in cities and a shortage in rural areas. In Bishkek there are almost twice as many physicians as in the oblasts of Jalal-Abad and Batken. There are several reasons for this uneven distribution of human resources. The previous system whereby graduating health personnel were compulsorily assigned to rural areas has been discontinued in the years of transition. Efforts by the Ministry of Health to re-establish mandatory postings to rural areas have so far been unsuccessful. Another reason for the concentration of physicians in urban areas is the concentration of health facilities in the capital and oblast centres.

Table 24. Health personnel in the Ministry of Health system, 1991–2003

	1991	1995	1996	1997	1998	1999	2000	2001	2002	2003
Doctors of all specialties	15 354	14 377	14 963	14 354	14 252	14 113	13 799	13 379	12 909	12 908
Doctors per 10 000 population	34.1	31.7	32.9	31.2	30.5	29.1	28.2	27.2	26.0	25.6
Active doctors	-	9 453	9 632	9 380	10 241	9 173	9 062	8 849	10 317	10 737
Stomatologists	1 285	1 082	1 128	1 263	1 279	1 257	1 120	1 077	1 053	992
Stomatologists per 10 000 population	2.9	2.5	2.5	2.4	2.7	2.6	2.3	2.2	2.1	2.0
Dentists	269	216	208	211	204	186	191	155	131	141
Dentists per 10 000 population	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.3	0.3	0.3
Middle-level health personnel (nurses)	42 448	41 042	39 881	37 780	37 354	37 416	35 935	33 698	32 214	31 557
Middle-level health personnel (nurses) per 10 000 population	94.7	90.9	87.7	82.0	80.0	77.4	73.5	68.4	64.9	62.6
Active middle-level health personnel (nurses)	–	33 149	32 078	30 026	30 151	30 270	29 310	27 037	26 152	25 332
Doctors graduating	756	780	777	723	752	631	657	584	754	777
Middle-level health personnel graduating	3 107	2 834	2 115	2 175	2 535	2 569	1 551	2 817	2 955	2 888

Source: (4).

Rural health facilities, in contrast, are often poorly equipped and supplied, and living conditions in rural areas tend to be worse. Irregular payment of salaries is also more common and contributes to the reluctance of health professionals to work in rural areas.

Besides being paid irregularly, the salaries in the health sector are very low. According to official statistics, the average monthly wage of health personnel was 92% of the national average of all occupations in 1994 and fell to 49.2% in 2003 *(47,48)*. Many well-qualified health workers have left for the private sector or changed their occupation to economic activities that offer higher incomes. Low salaries in the health sector also lead to poor motivation, poor quality of care and the request for informal payments. It is hoped that incentives under the single payer system will change this situation for the better (see the section on *Financial resource allocation – payment of physicians*).

Table 25. Geographical distribution of health personnel per 10 000 population in 2003

Region	Doctors of all specialties	Middle-level health personnel
Bishkek[a]	30.1	32.8
Osh city	25.2	52.1
Issyk-Kul oblast	20.2	50.4
Naryn oblast	20.2	75.5
Talas oblast	18.7	61.9
Chui oblast	18.2	42.0
Osh oblast	14.9	71.5
Jalal-Abad oblast	15.4	66.4
Batken oblast	15.4	80.4
Total	25.6	62.6

Source: (4).

Note: [a] The number of health personnel working in Bishkek is higher than indicated, as the data do not include staff working in republican health facilities.

The qualification of health personnel, particularly in remote areas, is very low, due to limited access to up-to-date medical literature and the lack of financial resources for continuous medical education, which is scheduled to take place every five years. In the regions, health personnel still use methodological recommendations and clinical treatment schemes developed during Soviet times. Existing job descriptions of health personnel are also outdated.

It is hoped that the planned rationalization of the health delivery system will result in a more rational use of human resources in the health sector. To manage this process and build the foundation for a future system of planning human resources for health, the Ministry of Health has established a database on health personnel employed in health facilities in the public sector. Even though there is a provision for the number and type of specialists needed in the health system in the Law on Protection of People's Health, a comprehensive system of human resource planning in the health sector still needs to be established.

A certification committee of the Ministry of Health licenses physicians. The committee includes representatives from the Government, the State Medical Academy, professional associations and experts from particular specialties. Certification criteria include exam results, length of work experience, completion of retraining courses and assessment of the past three years of work.

Training

Medical education has undergone some changes through a reform of the National Programme on Medical Education, but much more needs to be done. Systems of on-the-job training and retraining of health personnel are fragmented and mainly

oriented towards inpatient care. There is also a need for better cooperation among different institutions providing medical education. Existing curricula have so far not been brought in line with the planned restructuring of the health delivery system; nursing education, in particular, needs further reform.

The training of doctors is provided by the Kyrgyz State Medical Academy in Bishkek and the medical schools of the Kyrgyz-Russian Slavic University (KRSU), Osh State University (OSU), Jalal-Abad State University (JASU), Kyrgyz-Uzbek University (KUU), Kyrgyz-Turkish MANAS University (KTU MANAS) and the private Jalal-Abad University of the Peoples' Friendship named after A. Batyrov (JAUPF). The training of middle-level health personnel is provided by 10 medical colleges and a School of Nursing which is accountable to the Kyrgyz State Medical Academy. Since 1997, the State Medical Academy and the International University of Kyrgyzstan (IUK) have jointly run the School of Health Management, which offers education to future health managers in the framework of a two-year Master's programme. The State Medical Institute of Retraining and Postgraduate Education and six training centres for family medicine at the oblast level provide training in family medicine and general practice.

The State Medical Academy is the leading institution providing medical education in the country. The Kyrgyz-Russian Slavic University, Osh State University, Jalal-Abad State University, Kyrgyz-Uzbek University, Kyrgyz-Turkish MANAS University and Jalal-Abad University of the People's Friendship medical schools were established in the mid- and late 1990s.

The training of doctors consists of 6 years full-time education after 11 years of high school, followed by a 2-year "internatura" specialization (one year before 1998), during which medical graduates practice in health facilities. Those who want to specialize further enter "aspirantura", a 2-year clinical residence in a scientific research institute or national centre. Aspirantura graduates can practice as narrow specialists. They can start working on a candidate thesis to obtain the academic degree of Candidate of Medical Sciences. Candidates of Medical Sciences can embark on writing a doctoral thesis to obtain the academic degree of Doctor of Medical Sciences. In the public sector, an academic degree is used as a coefficient that significantly increases salaries.

Postgraduate training includes regular short refresher courses for physicians, which are usually provided at scientific research institutes or national centres. These courses are very important, because they determine qualifications and salary levels in the public sector.

The training of middle-level health personnel consists of 3 years full-time education after 11 years of high school (2 years after 9 years of secondary school before 1998). The School of Nursing of the State Medical Academy provides

higher education for nurses. The Association of Nurses is an active member of the European Nursing Association and has developed guidelines on standard practices for nurses, which have been approved by the Ministry of Health.

The State Medical Institute of Retraining and Postgraduate Education and the Family Medicine Training Centre provide three-month courses in family medicine to district doctors and nurses. Short refresher courses are provided locally to health workers who have completed retraining. Thirty percent of all family group practice workers, including 43.7% of family group practice doctors and 20.6% of family group practice nurses, have so far been retrained. The State Medical Institute of Retraining and Postgraduate Education also provides a one-year course to trainers in family medicine. Graduates of this course are now working in oblast training centres for family medicine. The Institute has been supported by USAID and the Health-I project of the World Bank.

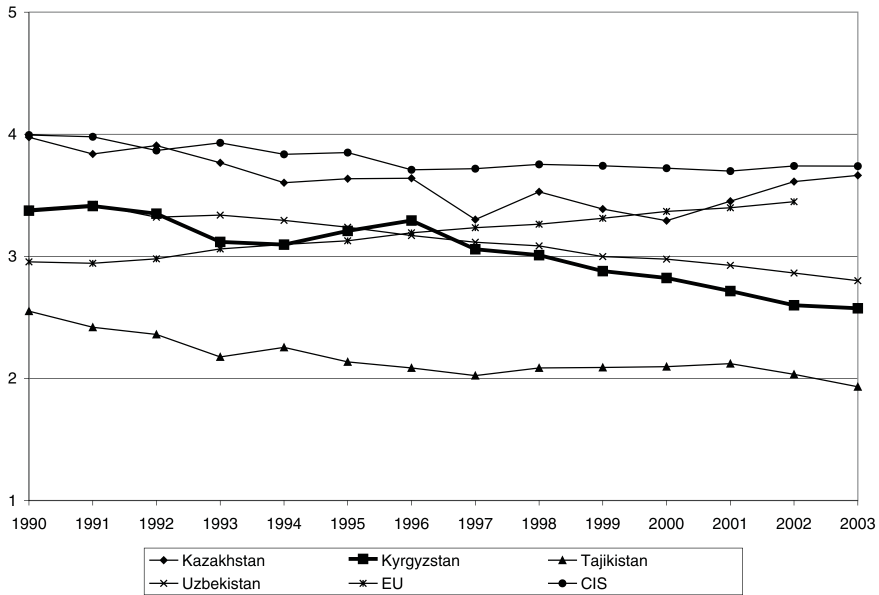
The number of admissions to the State Medical Academy, medical schools of the Kyrgyz-Russian Slavic University, Osh State University and Kyrgyz-Turkish MANAS University and medical colleges has not been fully regulated by the Government in recent years. Besides planned admissions which are free to students and covered by the state budget, these institutions have allowed additional admissions for which they charge fees. Recognizing that this may result in an oversupply of health personnel in the country, the Ministry of Health has started to regulate all admissions to the State Medical Academy. In 1999, the Ministry initiated a tripartite arrangement between students, the medical academy and the Ministry, which envisaged that upon graduation, students would have to work three years in a region determined by the Ministry of Health. This arrangement has not, however, been successful, as 90% of students failed to comply with their contracts and stayed to practice in Bishkek. Nevertheless, similar measures are anticipated for other medical institutions. They will require the cooperation of the Ministry of Education and Culture, which has been reticent to institute controls over private elements of higher education.

Pharmaceuticals and health care technology assessment

Pharmaceuticals

In Soviet times, pharmaceuticals and health care technology were supplied according to state plans. A monopoly state agency, Kyrgyz Pharmacia, imported and distributed drugs throughout the country. The network of public pharmacies distributed drugs to the population at fixed retail prices. With the

Figure 15. Physicians per 1000 population in Kyrgyzstan and selected countries, 1990–2003



Source: WHO Regional Office for Europe health for all database, January 2005.

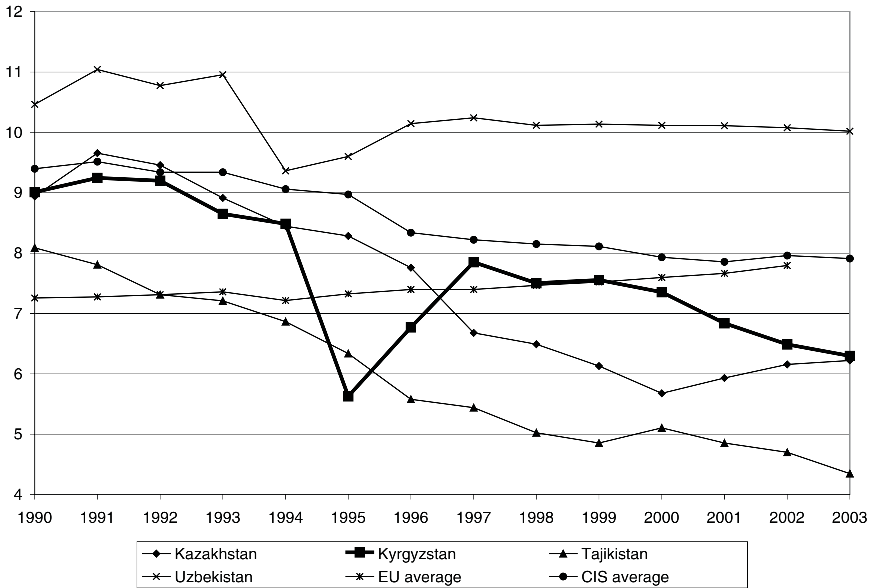
Note: CIS: Commonwealth of independent states; EU: European Union.

Table 26. Health care personnel, 1980–2002 (per 100 000 population)

	1980	1985	1990	1993	1999	2002
Active physicians	260.2	303.9	337.4	311.8	287.9	260.0
Active dentists	15.3	21.7	28.6	28.5	26.0	21.2
Certified nurses	701.2	795.1	900.9	864.9	755.5	648.8
Midwives	90.1	91.5	93.9	76.6	68.7	55.9
Active pharmacists	14.9	18.9	27.9	25.6	5.6	3.3
Physicians graduating	14.2	15.6	11.4	15.7	18.4	15.2
Nurses graduating	66.8	70.2	67.9	79.5	55.1	59.5

Source: WHO Regional Office for Europe health for all database.

Figure 16. Nurses per 1000 population in Kyrgyzstan and selected countries, 1990–2003



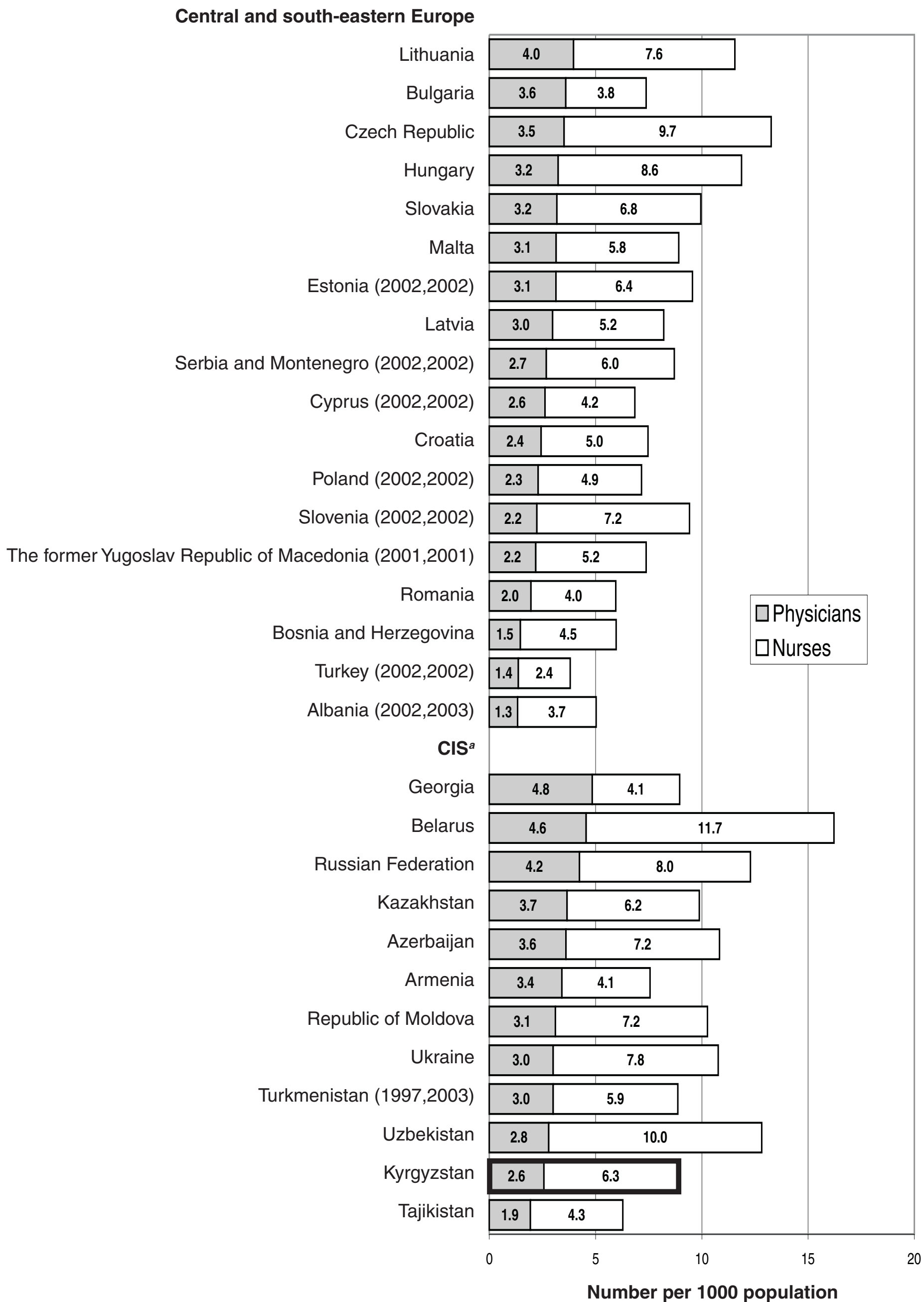
Source: WHO Regional Office for Europe health for all database, January 2005.
Note: CIS: Commonwealth of independent states; EU: European Union.

break-up of the Soviet Union in 1991 and the independence of Kyrgyzstan, drug supply dramatically worsened and the country encountered a drugs shortage. The situation improved with the privatization of the pharmaceutical sector. In the early 1990s Kyrgyz Pharmacia was turned into a joint stock company. Pharmaceutical retailing has been privatized since 1996. Only a few municipal pharmacies are still in public hands.

The local pharmaceutical industry consists of 27 enterprises, the Bishkek antibiotics plant Aidan Pharma being the largest. The Kyrgyz-Chinese joint venture Golden Water produces solutions for infusions. There are also plans to build a pharmaceutical plant jointly with the Indian company Adjanta-Pharma. The output of local producers of pharmaceuticals remains low, while the assortment of products is limited to 70 types of drugs, including tablets, unguents, galenicals and herbal raw materials.

Ninety-seven percent of drugs are imported, mainly from the Commonwealth of Independent States *(49)*. In 2003, the imports of pharmaceuticals and medical supplies amounted to 1149 million som, three times the value of imports in

Fig. 17. Number of physicians and nurses per 1000 population in central and south-eastern Europe and CIS, 2003 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database, January 2005.

Note: [a] Commonwealth of independent states; countries without data not included.

2002. The number of licenses issued for pharmacist activities has also grown by 70% compared to 2002. This tremendous growth is likely to be the result of the cancellation of 20% value-added tax on drugs in January 2003.

Compared to 2000, the number of retail pharmacies has grown by 26%. In 2003, there were 1806 pharmacist facilities in the country: 41 were involved in production activities, 169 were warehouses, 656 were pharmacies, 812 were pharmacist points and kiosks, and 34 were departments of optical and stomatological products. There were 94 pharmacies in public hands, of which 86 were hospital pharmacies and 8 charitable pharmacist facilities. Of the total of 1468 pharmacies and pharmacist points, 67% were situated in urban areas, 18% in rayon centres and 15% in rural areas. They employed 1095 specialists with higher and 1223 with secondary pharmacist education *(50)*.

The Department of Drug Supply and Medical Equipment, established under the Ministry of Health in 1997, is the key regulatory agency in the pharmaceutical sector. It is responsible for implementing the national drugs policy, the registration and licensing of locally produced and imported drugs, vaccines and medical products, the quality assurance of drugs and the monitoring of drug use. The Department has a subsidiary department in Osh city.

The Department of Drug Supply and Medical Equipment administers the Central Analytical Control Laboratory, which was created in 1996 to examine the quality of drugs. There are also two functioning accredited laboratories: an analytical laboratory of Kyrgyz Pharmacia and a laboratory of the Department of State Sanitary-Epidemiological Surveillance. In addition, a multisectoral system for the control of drug production and trafficking has been set up, consisting of the Ministry of Health, the Ministry of Finance, the Ministry of Interior and the National Security Service.

To achieve economies of scale, pharmaceuticals for health facilities in the public sector are centrally procured following competitive bidding, as set out in the Law on State Purchases. Health facilities can also purchase their own drugs, based on the Essential Drugs Formulary that promotes the use of generics. They can use funds from the mandatory health insurance to purchase drugs that are not included in the Essential Drugs List, but this purchase is limited to 10% of total procurement costs. The co-payments as a new funding source seem to have improved the provision of drugs to patients.

The first list of essential drugs was developed in Kyrgyzstan in 1996, based on WHO guidelines. It was revised in 1998, 2001 and 2003. A national drugs policy was adopted by government decree in December 1998. WHO provided technical assistance in the development of the essential drugs list and the essential drugs formularies. Since 1998, it has also supported the Drug Information Centre of the Department of Drug Supply and Medical Equipment.

The Drug Information Centre monitors the side-effects of drugs and issues a bulletin on rational drug use. Rational drug use has been promoted at all levels of health care. The development of 154 clinical protocols according to the principles of evidence-based medicine should enhance rational drug use.

Table 27. Expenditures on drugs in health facilities (including budgetary and MHIF funds and official co-payments)

	Million som	Million US $	Average exchange rate: som/US $
1996	67.5	5.3	12.7
1997	100.2	5.8	17.3
1998	132.5	6.3	20.8
1999	177.3	4.5	38.9
2000	179.9	3.8	47.7
2001	203.0	4.3	47.7

Source: (49).

In 2000, the MHIF introduced an additional drugs package on a pilot basis in three polyclinics in Bishkek and the Alamudun rayon of Chui oblast. As from the second half of 2001, it covered all family group practices of Chui and Issyk-Kul oblasts, the family group practices of Bakai-Ata rayon of Talas oblast and Bishkek. In 2002 the additional drugs package was introduced in all oblasts working under the single payer system, and, by April 2003, it was functioning in all rayons of the country except two in Osh oblast. As of 1 October 2004, there were 703 family group practices and 612 pharmacies working under the additional drugs package scheme. The additional drugs package forms part of the State Benefits Package (see the section *Health care financing and expenditure – health care benefits and rationing*).

In 2004, the additional drugs package consisted of 53 generic (including syringes) and about 250 trade names, based on the essential drugs list. Pharmacies that conclude a contract with the MHIF sell the specified drugs to insured patients at lower prices. The MHIF reimburses pharmacies in arrears using a reference price system and a computer-processed prescription form. The average reimbursement rate is 50% of the price.

Even though the issue of physical access to 70 types of drugs, including tablets, unguents, galenicals and herbal raw materials, has largely been solved, their affordability remains a major problem. Budgets of health facilities are limited and a large proportion of the population lives in poverty and cannot afford necessary drugs. Access has been gradually improved: 10% customs duty on drugs was removed in 2001 and 20% value-added tax on drugs was cancelled in 2003. These measures, especially the removal of value-added tax,

have resulted in a decrease of prices in the retail network, amounting to 21.7% in late 2003.

Foreign aid has been very important for the pharmaceutical sector. When the supply of drugs was interrupted after independence, foreign loans and grants were used to import emergency drugs, and additional drugs were donated as humanitarian aid. A special warehouse for storing the drugs received was established.

Health care technology assessment

In 1999, the Ministry of Health set up a database on medical equipment to assess needs for new purchases and identify sources of funding. In May 2002, the Fund for High Technologies and Costly Health Services was established by the Ministry of Health. This body will be involved with the Department of Drug Supply and Medical Equipment in the decision-making on purchases of medical equipment and expensive high technologies.

Private sector providers are free in their purchasing decisions, but health care technologies need to be licensed by the Ministry of Health. New technologies must also be patented in the State Agency on Science and Intellectual Property.

As mentioned above, capital investment from domestic sources has been very low and new equipment and technologies have been mainly financed by external donors.

Financial resource allocation

Third-party budget setting and resource allocation

Historical background

Prior to the implementation of the single payer system, the size of the health care budget was determined by inherited Soviet norms. On the basis of capacity norms such as the number of health personnel and beds, line item budget drafts were prepared at facility level and then aggregated at the rayon, oblast and national levels. After approval of the budget by parliament, the budget became a law and funds were distributed by the Ministry of Finance. Oblast and rayon finance departments decided on the allocation of resources to different sectors in their territories.

The allocation of budgetary funds to health facilities was done according to budgetary classification by chapters. All adjustments at both the republican and local levels were made by line items, not programmes. The reallocation of funds in health facilities from one chapter item to another was very complicated and not encouraged by finance departments. Therefore, health providers had virtually no financial managerial autonomy. Even "special means" were made part of the budgetary process, i.e. were required to go through the Treasury system before they could be used by facilities. The Ministry of Finance and oblast finance departments therefore played a key role in controlling budgetary discipline in the health sector.

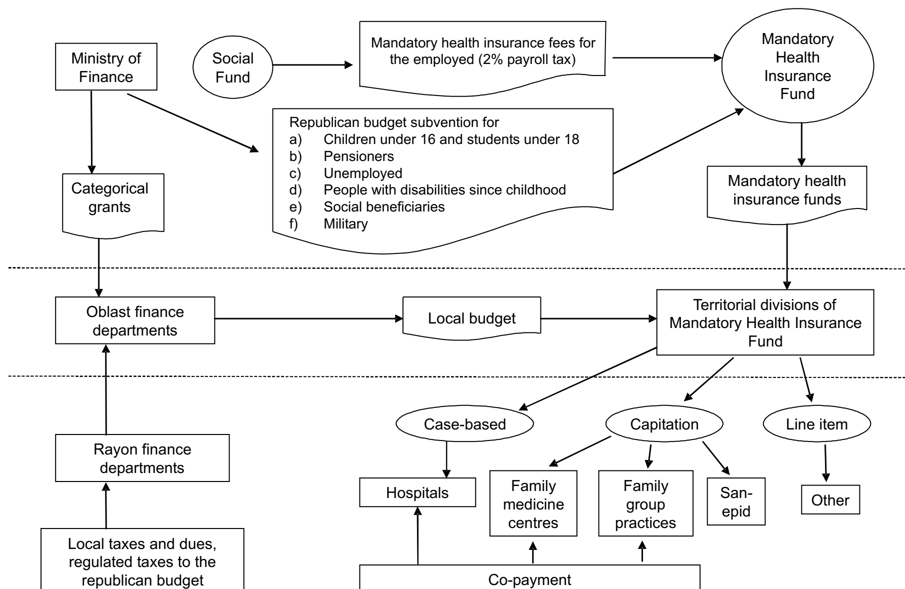
In the context of limited resources, a policy of so-called "protected" items was pursued, which entailed priority financing for salary, social tax, drugs and food needs before other needs were met. Personnel remuneration was based on "tarification" (see the section *Health care financing and expenditure – main system of financing and coverage*), and thus depended on the basic rate and bonuses rather than on efficiency and productivity of work.

Thus, the financing of health care was characterized by high fragmentation, distorted incentives and rigidity. Since 1997, the Mandatory Health Insurance Fund has elaborated and tested new ways of health financing . Firstly, the Fund allocated its money to health facilities on a contractual basis, specifying the conditions that those health facilities had to meet to join the scheme and what services they had to provide. This has introduced a purchaser-provider split in the health system. Secondly, the resources of the MHIF, including both insurance fees and transfers from the republican budget, were pooled at national level and the MHIF allocated money to its territorial departments from this single pool. Thirdly, it introduced innovative provider payment methods that did not emphasize capacity norms (i.e. financing inputs), but results-oriented norms (i.e. buying outputs). Piloted in 2001 in Chui and Issyk-Kul oblasts, the single payer system had covered the whole country by 2004.

Current situation

At present, health care budgeting and resource allocation take place in the single payer system, which means that budgetary and mandatory health insurance funds for health care are consolidated in one pool and the resources are subsequently allocated to health providers through a single channel. Fig. 18 shows how revenues for health care are collected, pooled and allocated to providers.

Fig. 18. Financial flows in the single payer system



Mandatory health insurance fees are collected by the Social Fund and then transferred to the MHIF at national level. Transfers are annually approved by the Law on the Social Fund Budget. In reality, however, they depend on the collections by the Social Fund and its compliance with the law, and the actual levels to be received by the MHIF are therefore difficult to forecast. Transfers from the republican budget to the MHIF are approved each year by the Law on the Republican Budget.

At the local level, health spending in the local budget is determined on the basis of the contribution rates adopted by the keneshs of oblasts and Bishkek and Osh cities. Regional finance departments prepare a forecast of local budgetary health financing, categorical grants and grants from the republican budget. Given these expected volumes of budgetary financing, the territorial departments of the MHIF prepare a budget in accordance with the budget classification. The Ministry of Finance and regional finance departments transfer the collected revenues to territorial departments of the MHIF in line with the adopted budgets. The territorial departments of the MHIF allocate these resources to the health providers of their territories on a contractual basis using new provider payment methods.

The budgets of health facilities are then planned on the basis of the State Benefits Programme and the following new financing norms:

- the number of ambulance brigades for ambulance and emergency care providers;
- the size of the enrolled population for family group practices;
- the size of the population of the service area for specialized outpatient care providers, including outpatient departments of hospitals, and for san-epid services providers;
- the average cost of treatment for hospitals.

These new norms apply equally to budgetary and mandatory health insurance funding; the only differences are in base rates and calculation formulas. Hospitals providing extended periods of inpatient care and providers of rehabilitation and some other forms of care are exempt from these norms, and they continue to plan their budgets according to the old budget classification methods.

Co-payment was introduced as part of the single payer system. The levels of co-payment are determined by the State Benefits Package, which is calculated each year (see the section on *Health care financing and expenditure – health care benefits and rationing*). At the outpatient level, the co-payment levels depend on the prices of diagnostic tests and procedures, which are developed by the Ministry of Health and approved by the Anti-Monopoly Commission. At the hospital level, the co-payment depends on the average cost of treatment – a projected indicator of spending per treated patient from budgetary and

mandatory health insurance funds and co-payments. Co-payment is administered directly by health facilities and regulated by the Statute "On the population's co-payment for drugs, meals and certain types of health services provided by public health facilities working in the single payer system". In 2004, 206.3 million som were collected as co-payments.

The collected co-payments are allocated in health facilities in the following way: 20% are used to increase salaries, including social contributions; 60% are allocated to the purchase of drugs, medical supplies, and laboratory and diagnostic tests; and 20% are used for the purchase of additional food, disinfectants and detergents, paper forms, bank fees and other support services.

The mandatory health insurance funds are allocated in health facilities as follows: in hospitals, 25% are used to increase salaries, including social contributions; 70% are used for the purchase of drugs and medical supplies, and diagnostic and laboratory tests (covering no more than 35% of laboratory needs); and 5% are used for other purchases, repairs and technical support, paper forms, bank fees and other support services, and travel expenses in the framework of the contract with the territorial department of the MHIF.

In family group practices and family medicine centres, 35% of mandatory health insurance funds (30% in Bishkek) are used for additional salary and social contributions, accrued monthly on the basis of the size of the enrolled population; 12% (10% in Bishkek) are used for the purchase of basic and laboratory equipment, drugs and medical supplies; 43% (50% in Bishkek) are used for drug provision under the additional programme of mandatory health insurance; and 10% are used for repairs, technical support, paper forms, bank fees and other support services.

Health facilities maintain separate reporting for funds coming from the state budget, the MHIF and co-payments. Funds received from these three sources are not subject to taxation or inclusion in the state budget.

Payment of providers

Hospitals

For both budgetary and mandatory health insurance funding, hospitals are paid on the basis of the number of cases treated. Cases are categorized according to clinical expenditure groups, which are a version of diagnosis-related groups, based on Kyrgyz hospital utilization and cost data. Co-payments are paid directly to the hospital's cash desk.

Outpatient facilities

Outpatient facilities (outpatient departments of hospitals and family medicine centres) are paid from both budgetary and mandatory health insurance funds according to a capitation method. They receive funds per person living in the service area. Like hospitals, they administer co-payments, which are paid directly to their cash desk.

Primary care

The allocation of funds to family group practices is also based on a capitation method and applies to both budgetary and mandatory health insurance funds. Family group practices receive funds for each person enrolled with them.

Providers of ambulance and emergency care are paid on the basis of a maintenance norm per ambulance brigade. In 2004, one ambulance brigade was estimated to serve on average 12 500 people.

Sanitary-epidemiological facilities

Since 1 March 2004, providers of san-epid services have been paid on a capitation basis, according to the number of people living in the service area.

Other facilities

The payment of other health care providers, including long-stay and specialized hospitals and medical and non-medical facilities, continues to be based on the old norms for budget allocations.

Payment of physicians

During the entire period of 1993 to 2003, the average salary in the health sector was lower than the average salary in all sectors combined. While in 1992 the average salary in the health sector was 92% of the national average, by 2003 it had declined to only 49%. The average salary in the health sector is now the third lowest of all economic sectors, after forestry and agriculture (48).

Public sector employees in the health sector have been paid according to a national pay scale for public employees, under the system of "tarification" (see the section on *Health care financing and expenditure – main system of financing and coverage*). Since 1993, their salaries have been supplemented by

Table 28. Average monthly salaries in the health sector (in som), 1993–2003

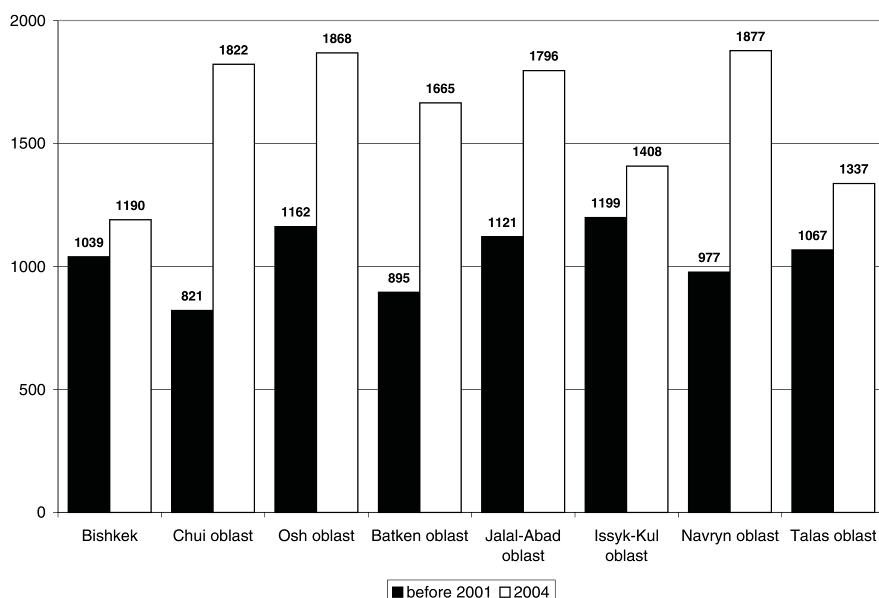
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Average in all sectors combined	84	233	368	491	680	789	1050	1227	1455	1684	1916
Health sector	52	215	292	326	385	467	516	579	693	780	943
Health sector as % of average	62	92	79	66	57	59	49	47	48	47	49

Source: (48).

official premiums from paid services. Physicians have also charged or accepted unofficial under-the-table payments from patients. Since the introduction of the mandatory health insurance system, physicians have received additional salaries from the mandatory health insurance funding. Since the introduction of the single payer reform, salaries have improved considerably (Figure 19).

The remuneration of health personnel was significantly revised following the adoption of the "Concept of salary reform in the Kyrgyz Republic for 2003–2010" in December 2002 and the Government's resolution "On remuneration of personnel in health care facilities of the Kyrgyz Republic" in February 2004. The resolution regulates remuneration in all health care facilities and the

Fig. 19. Increases in average salaries of health care personnel (in som), by oblast



Source: Mandatory Health Insurance Fund.

remuneration of those working in the single payer system, including san-epid facilities. It stipulates the use of new payment methods in all health facilities regardless of subordination level.

Although still based on the tarification system, the groups and grades used to calculate various additions and bonuses have been revised. One of the most prominent changes is that the groups used to calculate the bonuses of managers of health facilities are now tied to output, such as the number of treated cases per year for hospitals, the enrolled population for family medicine centres, the service area population for providers of ambulance and emergency care, the amount of plasma per year for transfusion facilities, and the amount of milk portions per day for dairy kitchens.

In the single payer system, health care facilities form a consolidated salary pool from four sources: budgetary means, special means, mandatory health insurance funds and co-payments. Budgetary means and special means are determined according to planned budget limits, while mandatory health insurance funds and co-payments are determined according to rates set by the Ministry of Health (25–35% and 20%, respectively, in 2004). No less than 85% of the consolidated salary pool is used for health personnel and no more than 15% for management, administrative and support staff.

The salary in the single payer system consists of two components: the guaranteed salary and the additional salary. While the guaranteed salary is calculated according to tarification, in accordance with the regulations applying to remuneration in health care facilities, the additional salary is calculated according to the guaranteed salary and two coefficients: the additional salary coefficient and the labour participation coefficient. The labour participation coefficient is calculated by expert commissions in health facilities, taking account of the staff workload. Recommended workload norms and labour participation coefficients, including a detailed methodology, have been developed by the Ministry of Health.

The salary pool of providers of san-epid services includes budgetary means and special means. Thirty-five percent of the salary pool is used for laboratory personnel and 65% for other personnel. Here, too, the salary consists of the guaranteed and the additional salary. The additional salary is calculated differently for laboratory and other staff. For laboratory personnel, the formula is the same as that applying to health care facilities operating in the single payer system. For other staff, there is no labour participation coefficient in the formula. As for health care facilities, the Ministry of Health has developed recommended workload norms and coefficients for the san-epid services.

Health care reforms

Aims and objectives

Since independence in 1991, Kyrgyzstan has undergone dramatic economic and political change, transforming itself from a Soviet republic with a command economy into an independent state with a more democratic and market-oriented system. The country witnessed a severe recession and poverty increased markedly. These fundamental changes led to reforms in all sectors of society in order to adjust to the changing environment and to manage the challenges of transition. The drastic contraction of funding for health had a negative impact on the quality of health services, which is likely to have contributed to the deterioration of the health status of the population. This macroeconomic context has driven health care reform in Kyrgyzstan.

In 1994, the Ministry of Health requested technical assistance from the WHO Regional Office for Europe in the development and implementation of a comprehensive health care reform programme. Approved by the Government in November 1996, the national MANAS Health Care Reform Programme (the MANAS Programme) aimed to achieve the following four policy goals:

- improvement in the health status of the population;
- improving equity in the availability of health services by eliminating differences in health indicators in different regions and between urban and rural areas and by guaranteeing patients' rights and access to existing health services;
- making more effective and efficient use of health resources;
- improvement in the quality of health services.

Also in 1994, USAID began its support of the initial Issyk-Kul health reform pilot project through its ZdravReform project. This project was aligned with the

national MANAS Programme, and many of the specific measures implemented in Issyk-Kul became a part of that Programme in 1996. Because of the active participation of numerous donors, the MANAS Programme has also become an umbrella project for international and bilateral organizations working in the health sector of Kyrgyzstan.

Content of reforms and legislation

The master plan of the MANAS Health Care Reform Programme defined three implementation phases over a period of ten years: the short-term (1996–1997), mid-term (1998–2000) and long-term (2001–2006) phases.

The short-term phase anticipated the following activities for 1996–1997:

- a restructuring of health delivery (rationalization of hospital services and strengthening of primary care);
- general taxes as the main source and paid services as supplementary sources of funding for health care;
- development of a State Benefits Package.

The mid-term phase of the MANAS Programme anticipated the following activities for 1998–2000:

- continuation of the restructuring of health delivery;
- introduction of earmarked taxes on alcohol and tobacco as supplementary sources of funding;
- introduction of a new mechanism for the equitable allocation of resources among regions;
- improving the management of facilities by replacing line item financing by a system of provider payments (global budgets in hospitals and capitation in primary care);
- development of human resources for health by establishing an Institute of Public Health for the training of health managers and for the retraining of physicians and paediatricians as general practitioners;
- quality assurance, with the aim of improving the physical infrastructure and modernizing the health information system;
- review of the health planning and management system.

The long-term phase for 2001–2006 anticipated the implementation of the following measures:

- general taxes, paid services and earmarked taxes will be supplemented by social insurance as a source of funding for health care;

- a purchaser-provider split will be established in the health system through the introduction of contracts between purchaser and providers and between health providers of primary, secondary and tertiary care.

Some of the envisaged activities have been carried out later than planned, while other measures have been implemented earlier. Although strengthened, primary care will need to undergo further changes in line with the restructuring in the hospital sector and in the san-epid service. So far, rationalization of the hospital sector has resulted mainly in a reduction in the number of beds and almost no mergers or closures of hospitals or other steps to reorganize hospitals have taken place. The restructuring of health care delivery, which was planned to be completed in the mid-term phase (by 2000), was begun only in late 2000, when the government stipulated that no penalties would be imposed for reduced capacity and when it prepared to introduce the single payer system. The State Benefits Package, planned to be developed by 1997, began as a pilot project only in 2001.

Other activities envisaged by the master plan have not been implemented at all. Earmarked taxes for health care have not been introduced in the mid-term phase and it is very unlikely that such taxes will be approved in the near future. A purchaser-provider split was established earlier than envisaged, following the introduction of social insurance in 1997. A new mechanism for the equitable allocation of resources to oblasts and new provider payments were introduced in the mid-term phase, but only partially. The introduction of new provider payments was initially confined to the allocation of MHIF revenues until these were extended to the budget revenues managed by the MHIF under the single payer system.

A list of key health policy events and legislation is provided in the appendix.

Health for all policy

The State Programme for a Healthy Nation, which was approved by the government in 1994, was the first comprehensive national health policy of Kyrgyzstan. It defined five priority areas addressed through 13 programmes:

- family health
- maternal and child health
- protection of the environment
- safe drinking water
- healthy lifestyles.

Targets were identified in terms of performance indicators for 1994–2000.

In 2000, the country developed a new national health policy for 2000–2020. This policy, called "Health Care of Kyrgyzstan in the 21st Century", was developed in accordance with the principles of the WHO Health-21 Strategy. Experts representing 9 ministries, 11 state agencies and a number of NGOs participated in 15 working groups in the development of the policy document.

The new national health policy also aims to achieve the primary objectives of the Comprehensive Development Framework , which has been developed in close collaboration with the International Monetary Fund, the World Bank and other international organizations, and which was approved by the government in 2001. Health care has been included as one of the priority sectors in the Development Framework, and particular emphasis has been given to improved population health and the provision of accessible and high quality health care. As mentioned in the introductory section, the National Poverty Reduction Strategy, 2003–2005 is the first phase in the implementation of the Comprehensive Development Framework *(24,25)*.

A number of new laws and programme documents that address different aspects of health care system development have been adopted (see the appendix). The reform process has required the adoption of many legislative and normative amendments in order to institutionalize the necessary changes and provide the legal basis for further development and improvements.

Reform implementation

Developed and implemented in the context of transition, the health care reform in Kyrgyzstan has depended heavily on domestic political support and the assistance of external donors. The Kyrgyz government has provided the necessary institutional arrangements, while international organizations have provided technical expertise and financial assistance. The step-by-step approach to health reform has proved to be beneficial. Innovations were first tested in pilot regions, with the support of external donors. Successful experiences were then rolled out to the rest of the country, provided that they were compatible with the existing infrastructure, capacities and resources.

The effective coordination of the activities of donors in the health sector and continuity in health reform management have also been important factors in the successful implementation of health care reform. Originally, the Department of Health Care Reform coordinated donors' activities, but the Ministry of Health subsequently took over this function. Continuity in the management

of health reform has been partly due to the fact that little rotation in the top management of the Ministry of Health has taken place, in spite of a change of health minister in 2002.

The main successes and failures, risks and future plans of health reform are discussed below in a breakdown of the four key elements of health reform: health delivery restructuring; health care finance reform; medical education and human resources; and drug policy and quality assurance.

Health delivery restructuring

Considerable progress has been made in the restructuring of outpatient care services. Family group practices, which totalled 668 in 2003, have been formed throughout the country on the basis of pre-existing health facilities. Practices have been gradually equipped, buildings renovated and staff retrained as family doctors and nurses. Different types of polyclinics were first reorganized into merged polyclinics, and then into family medicine centres, totalling 87 in 2003 (including those formed on the basis of rural district hospitals). Principles of family medicine have been introduced into outpatient care. Future plans for primary care include:

- completing the formation of family medicine centres and family group practices on the basis of former subdivisions of central rayon hospitals;
- review of the organizational structure of outpatient care services;
- rationalization of the san-epid service and integration of some of its functions into primary care;
- further training and retraining of family doctors and nurses.

The first mechanism to rationalize hospitals was instituted in 2000, when the resolutions on reinvestment and the abolition of oblast health departments were approved by the parliament. These resolutions specified that any resources freed as a result of greater efficiency of health facilities would be kept by the facilities themselves, with no “penalizing” decreases of funding from the state budget. Specialized facilities at oblast level were merged into oblast merged hospitals. A breakthrough was achieved with the introduction of the single payer system. In 2002, the single payer system resulted in the rationalization of 881 rayon hospital buildings. However, these were mainly site-specific rationalizations, involving closures of buildings on the premises of hospitals or mergers of departments in the remaining buildings in an effort to reduce energy costs.

Rayon hospitals have been reorganized into territorial hospitals, affiliates of territorial hospitals or outpatient facilities. In cities, too, a territorial organization of the hospital system has been established to ensure a faster rationalization, with the directors of territorial hospitals empowered to determine the structure

of affiliates. Outpatient-diagnostic departments of wide-profile hospitals have become separate structures within hospitals.

Rationalization of the republican facilities has proved to be the most difficult reform to implement, and immense political resistance delayed its initiation until 2003. However, the inclusion of these facilities in the single payer system with its new economic instruments should facilitate their rationalization.

Future plans for hospitals include:

- completion of the reorganization of the hospitals network based on the territorial principle, i.e. reorganization of local wide-profile hospitals into affiliates of territorial hospitals or outpatient care facilities;
- continuation of mergers of oblast specialized facilities with oblast merged hospitals and internal optimization and improvement of infrastructure and resources;
- rationalization of the republican facilities based on the territorial principle;
- internal optimization of the remaining health facilities to improve the use of available resources.

Hospital rationalization, however, will not be easy, and the Ministry of Health will have to overcome the resistance of hospitals to mergers or closures, the resistance of communities to closing down health facilities at local level, and political resistance at the republican level.

The san-epid service has undergone only limited reform. The republican anti-plague and disinfection stations have been merged into the Republican Centre of Quarantine and Extremely Dangerous Infections. Some rayon and city san-epid services have been merged into oblast san-epid services. Future plans for public health include:

- development of a public health concept;
- revision of the roles of government agencies (State Inspection, Standardization and Metrology, Customs Inspection and Department of State Sanitary-Epidemiological Surveillance) in the surveillance and control of imported and exported products;
- integration of some san-epid services into primary care;
- integration of the san-epid information system into a single health information system.

The government approved a “Concept of privatization of state property in Kyrgyzstan for 2001–2003”, which stipulates that funds from the privatization of health facilities need to be reinvested in the health sector. However, as mentioned, the scope for privatization of health facilities is very limited.

Health care finance reform

The reform of health financing has culminated in the single payer system which united and combined all previous positive developments. The single payer system provides for:

- introduction of a State Benefits Package;
- a purchaser-provider split in the health care system;
- coordination of the main sources of health funding (budgetary and MHIF funds and out-of-pocket payments) for the purchase and provision of the State Benefits Package to the population;
- pooling of budgetary funds at the oblast level, overcoming the formerly fragmented pooling arrangements;
- replacement of unofficial out-of-pocket payments by transparent official co-payments;
- allocation of resources to providers according to output rather than capacity norms.

Future plans for health finance reforms include:

- ensuring uninterrupted and sustainable financing of health care from the state budget to provide quality health services and reduce co-payment levels;
- equitable redistribution of financial resources across the country and among health facilities;
- development of coefficients for rural providers based on geographical, socioeconomic, and age-gender characteristics, and the devising of bonuses to motivate providers that achieve improvements in the health indicators of their population;
- development of new provider payment methods for specialized and paraclinical health facilities and public health providers.

There are a number of major risks and challenges facing the single payer system. Incomplete, interrupted or otherwise compromised financing from either the local or republican budget or the Social Fund to the MHIF will immediately result in subsequent delays in the payment of health providers, which will lead to unofficial out-of-pocket payments on top of co-payments demanded by health providers, thus undermining the trust of the public in the health care system. In addition, the economic disparity of regions might result in different levels of co-payments across oblasts. Another risk is that health delivery rationalization is slower than the rise of utility tariffs. Finally, legislative initiatives in the provision of health care must be supported by corresponding increases in financial allocations; otherwise, the single payer system will be unsustainable and will fail.

Medical education and human resources

In 1999, the Ministry of Health began to develop a new concept on human resources in health within the "Health Human Resources" project supported by DFID and USAID. A database on health human resources employed in the public sector has been established for 2000–2001.

The main developments in the field of medical education are the reorganization of departments of the Kyrgyz State Medical Academy and the revision of curricula in the light of ongoing changes in the health system; the establishment of the Medical Institute of Retraining and Postgraduate Education as an institution that provides training in family medicine and post-graduate training; and, in 1999, the accreditation and certification of the School of Health Management. The Ministry of Health has taken control of admissions to the Kyrgyz State Medical Academy. Uncontrolled admissions to other medical education institutions and the growing number of institutions that provide medical education pose a major threat for the future, both in terms of costs and quality. It will be a priority to implement the provision of the Law on Protection of People's Health that relates to the regulation of health specialists.

Drug policy and quality assurance

The pharmaceutical sector has been almost fully privatized. The Ministry of Health has developed a significant legislative and regulative base that emphasizes the use of generics. An essential drugs list was developed in 1996 and revised in 1998, 2000 and 2003. An essential drugs formulary has been developed and distributed to health facilities. The removal of barriers to imports of drugs and of the 20% value-added tax has significantly improved both the physical and the financial accessibility of drugs to the population. The additional drugs package of the MHIF at the outpatient level has become another means of improving drug provision and rational drug use.

The most important achievements in the field of quality assurance are the development of a comprehensive computerized health information system and the introduction of a quality assurance system within the mandatory health insurance scheme. So far, 154 clinical protocols based on the principles of evidence-based medicine have been developed for providers of all levels of care, covering the most widespread nosologies. The development of a comprehensive concept of quality management in the health sector will be one of the future tasks of the Ministry of Health.

Lessons learnt

Health care reform in Kyrgyzstan provides important lessons relevant to other health care systems in transition. The key lessons of the Kyrgyz experience are the following:

- Development of the health sector depends to a large degree on the economic and democratic development of the whole society.
- Health financing reforms are extremely difficult if they are not embedded in a reform of the financial system of the country.
- Successes in health sector reform should not be punished by decreased levels of financing. All attempts to introduce mechanisms to ensure the more efficient use of resources while financing levels are declining risk losing public trust in the reforms.
- Restructuring of the health care delivery system is impossible to achieve without strong political commitment and new economic instruments, just as such restructuring is impossible to achieve solely through administrative methods.
- Coordination of donors' activities is crucial to the successful implementation of reforms.
- There has to be a professional and committed team of reformers who understand the essence of the reforms and are guided by the same vision.
- One of the main obstacles to successful health care reform can be the health personnel. It is therefore essential to ensure that health care workers are extensively educated and informed. These measures should be combined with financial and other incentives to enhance the motivation of health personnel, improve the quality of care and reduce demands for under-the-table payments.
- It is also essential to raise awareness of the population and civil society about the content of the reforms.
- It is very difficult to develop a new legislative framework at an early stage of programme development. Laws therefore tend to lag behind the reform process.
- New reform elements should be piloted and then rolled out to the whole country.
- A system of monitoring and evaluation is crucial to controlling and correcting the reform process.

Conclusions

Health care reform in Kyrgyzstan has taken place in the difficult context of political and economic transition and severe economic pressures. In 1996, the country, with the support of external donors, embarked on a comprehensive 10-year health sector reform programme, which has now entered its final phase. The country has managed to accomplish a number of the tasks that it had set itself in 1996 and has become a regional leader in health reform. A mandatory health insurance system has been introduced, followed by new provider payment methods and contract arrangements. The single payer system, which unites all previous achievements of health reform and serves as a catalyst for reform, has also been introduced. Primary care has been restructured and strengthened.

Nevertheless, more remains to be done. The restructuring of health care delivery needs to be continued, with an emphasis on the hospital sector and the san-epid service. It is also necessary to develop the concept of quality assurance. Activities to stop the spread of communicable diseases, in particular tuberculosis, malaria, and HIV/AIDS, must be continued and strengthened, and the population should be encouraged to take greater responsibility with regard to its own health. Although life expectancy has improved again in recent years, it is still lower than it was in 1991, and infant and maternal mortality continue to be very high.

The government has acknowledged the threat to equity in the availability of health care services that resulted from a breakdown of the Soviet system of free health care for all. It has developed a State Benefits Package and an essential drugs list. In spite of these reforms, about half of health financing comes from private out-of-pocket payments, many of them unofficial under-the-table payments. Although informal payments have to some extent been replaced by official co-payments through the introduction of the single payer system, people with lower incomes continue to face difficulties in accessing

health care and drugs. While Kyrgyzstan has a lower share of out-of-pocket spending than many other CIS countries for which good evidence exists, the need for patients to pay for their care remains a serious burden. The high levels of patient spending are related to the low levels of government spending and the overall fragility of the Kyrgyz economy. Significant increases in public spending are therefore unlikely in the near future.

Despite restructuring plans, there has been no change in the share of government allocations to hospitals. In the single payer scheme, new financing mechanisms for secondary and tertiary care institutions have been introduced in most health facilities, based on outputs rather than the capacity norms of the Soviet era. The rationalization of the hospital sector, however, has so far been limited to a reduction of bed numbers and on-site rationalizations. To achieve more substantial gains in the use of the country's limited resources, it will be crucial to overcome the resistance to hospital closures, including the closure of republican facilities. This will allow a shift of resources to preventive interventions in the areas of noncommunicable diseases and the promotion of healthier lifestyles.

There has been some progress in the reform of medical education. Training and retraining programmes in family medicine have been set up, a school of health management established and curricula of the State Medical Academy revised. What is lacking so far is a comprehensive system of human resources management. At present, human resources are very unevenly distributed, with an oversupply in northern and urban areas of the country and a lack in southern and rural parts. The salaries of health care workers are still low, even though they have improved under the single payer system.

The successes of the Kyrgyz health reform process to date have been achieved through domestic political support, the effective coordination of donors' efforts, continuity in health reform management and a step-by-step approach, linking pilot projects to national health reform. It will be necessary to ensure the continued support of all stakeholders for the implementation of further reforms. The country is facing the challenge of achieving a good performance in the health sector in the context of a difficult macroeconomic and political situation.

The MANAS Health Care Reform Programme will finish in 2006, and the Ministry of Health is currently developing its continuation. The new MANAS Programme will address the institutionalization of reforms, the integration of vertical programmes into the general health care system and the development of intersectoral strategies of health promotion.

Appendix

Chronology of events and legislation

August 1991	Declaration of independence of Kyrgyzstan
June 1992	Law on Protection of People's Health in Kyrgyzstan Law on Donation of Blood and its Components in Kyrgyzstan Law on Health Insurance in Kyrgyzstan Law on Sanitation in Kyrgyzstan
1993	Introduction of user fees
1994	State Programme for a Healthy Nation (1994–2000) (Health for all policy)
March 1994	Memorandum of Understanding between the WHO Regional Office for Europe and the Ministry of Health of the Krygyz Republic to undertake the MANAS Health Care Reform Programme Ministry of Health requests technical assistance from USAID for a health insurance demonstration project in Issyk-Kul oblast
August 1994	National Health Policy developed and approved by the government
December 1995	National Tuberculosis Programme for 1996–2000 developed and approved by the government
1995–1996	Model of family group practices piloted in Issyk-Kul oblast
1996	Family group practices enrolment campaign in Issyk-Kul oblast
1996	Rationalization of polyclinics in urban areas by merging adults', children's and women's polyclinics into merged polyclinics
1996	Development and approval of the essential drugs list
November 1996	Government approves MANAS Health Care Reform Programme World Bank-funded Health-I Project (1996–2000) started in Kyrgyzstan (Bishkek and Chui region)
December 1996	Law on AIDS Prevention in Kyrgyzstan
January 1997	Introduction of the mandatory health insurance system in Kyrgyzstan
March 1997	Law on Drugs

April 1997	Agreement between the Ministry of Health, the World Bank and the MHIF on the “jointly used systems” arrangement
Spring 1997	Licensing and accreditation process started; establishment of the Association of Family Group Practices and the Hospitals Association
July 1997	Mandatory Health Insurance Fund introduces case-based payment to hospitals Demonstration sites chosen in Chui oblast and Bishkek city for testing primary health care clinical information and financial systems
1997–1998	Rolling out of primary health care reforms to Chui, Jalal-Abad and Osh oblasts and Bishkek
May 1998	Implementation of hospital rationalization plan in Bishkek and oblasts Law on Protection of People from Tuberculosis Law on Narcotic Substances, Psychotropic Substances and Precursors
June 1998	Introduction of partial fundholding in 14 family group practices in Karakol city, Issyk-Kul oblast
December 1998	Approval of the National Drugs Policy; revision of essential drugs list Mandatory Health Insurance Fund is brought under the Ministry of Health Government decree on Reinvestment of Saved Resources in the Health Sector
November 1998 –March 1999	Family group practices enrolment campaign in Chui oblast and Bishkek
January 1999	Pooling of health funding in Bishkek and introduction of the capitation payment to family group practices in Bishkek
April 1999	About 55 hospitals and 290 family group practices have entered contracts with the Mandatory Health Insurance Fund Introduction of case-based payment from budgetary funds to selected hospitals in Bishkek
June 1999	Law on Psychiatric Care and Citizens’ Rights to Receive It
Summer 1999	State Programme for Health Care in Kyrgyzstan in the 21st Century (new health for all policy)
November 1999	State action plan “On environmental hygiene of Kyrgyzstan” developed and approved by the government
2000	Abolition of oblast health departments; establishment of oblast merged hospitals
January 2000	Law on Natural Rehabilitative Resources, Localities and Resorts Law on Transplantation of Human Organs and/or Tissues Law on Medical Insurance in Kyrgyzstan Law on Reproductive Rights of Citizens Government decree on Changes in the Financing of Health Facilities of Kyrgyzstan
February 2000	Law on Prevention of Iodine Deficiency Diseases
March 2000	Government decree on Matters of Further Reforming the Health Care System of Kyrgyzstan
April 2000	State Programme for Reform of Higher Medical and Pharmaceutical Education in Kyrgyzstan, 2000–2004

October 2000	Law on Oncological Care of the Population
June 2000	Law on Sanitary-Epidemiological Well-being of the Population Law on Immunoprophylaxis of Infectious Diseases
December 2000	Law on Interpretation of Paragraph 3, Chapter 19 and Item "e" of the Law on Basics of Budgetary Law in Kyrgyzstan Law on Interpretation of Paragraph 2, Chapter 57 of the Law on Local Governance and Local State Administrations in Kyrgyzstan These amendments laid the foundations for the single payer system: a) the pooling of rayon/city funds to finance health care is allowed at higher levels; b) the term "co-payment" is introduced in the health system; it is separate from the budgetary process and not subject to taxation
January 2001	Government decree on Introduction of a New Health Care Financing Mechanism in Health Facilities of Kyrgyzstan since 2001 Government decree on Programme of State Guarantees on Provision of Free and Exempt Health Care to Citizens of Issyk-Kul and Chui Oblasts in 2001 Government decree on Population's Co-Payment for Drugs, Meals and Certain Types of Health Services Rendered by Health Facilities besides the Programme of State Guarantees on Provision of Free and Exempt Health Care to Citizens of Issyk-Kul and Chui Oblasts in 2001
June 2001	Tuberculosis-II National Programme (2001–2005)
August 2001	Piloting the additional drug package of the Mandatory Health Insurance Fund at the outpatient level in Bishkek
September 2001	National Programme for Immunization (2001–2005) developed and approved by the government
2nd half of 2001	World Bank Health-II (2001–2005) in Kyrgyzstan
October 2001	Transfer to chapterless financing in Issyk-Kul and Chui oblasts Revision of State Drugs Policy
February 2002	Government decree on Provision of Health Care to Citizens of Kyrgyzstan under the State Benefits Package in 2002
March 2002	Naryn and Talas oblasts join the single payer system
May 2002	Government decree on Establishment of the High Technology and (Costly) Health Services Fund under the Ministry of Health
October 2002	State Drugs Policy for 2002–2005 adopted
February 2003	Round table on Implementation and Prospects of Health Sector Reform in Kyrgyzstan with the participation of the President of Kyrgyzstan and donor organizations, expressing commitment to continue and enhance the health reforms
March 2003	Batken, Jalal-Abad and Osh oblasts join the single payer system
April 2003	Additional drug package introduced nationwide
November 2003	Republican facilities join the single payer system
February 2004	Adoption of the first State Benefits Programme covering the whole country
March 2004	Providers of sanitary-epidemiological services are paid on a per capita basis

June 2004	Adoption of the National Programme for People's Health Promotion in the Kyrgyz Republic for 2004–2010
July 2004	Law on the Single Payer System in Health Care Financing in the Kyrgyz Republic
August 2004	Law on Health Organizations in the Kyrgyz Republic
January 2005	Law on Protection of People's Health

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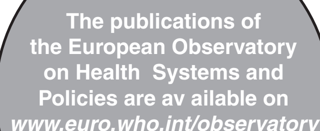

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