

# Health Systems in Transition

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## **Kyrgyzstan** Health system review

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# Health Systems in Transition

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## Kyrgyzstan:

### Health System Review 2011



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## Preface

The Health Systems in Transition (HiT) profiles are country-based reports that provide a detailed description of a health system and of reform and policy initiatives in progress or under development in a specific country. Each profile is produced by country experts in collaboration with the Observatory's staff. In order to facilitate comparisons between countries, the profiles are based on a template, which is revised periodically. The template provides detailed guidelines and specific questions, definitions and examples needed to compile a profile.

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

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

Compiling the profiles poses a number of methodological problems. In many countries, there is relatively little information available on the health 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 World Health Organization (WHO) Regional Office for Europe's European Health for All database, national statistical offices, Eurostat, the Organisation for Economic Co-operation and Development (OECD) Health Data, the International Monetary Fund (IMF), the World Bank and any other relevant sources considered useful by the authors. Data collection methods and definitions sometimes vary, but typically are consistent within each separate series.

A standardized profile has certain disadvantages because the financing and delivery of health care differs across countries. However, it also offers advantages, because it raises similar issues and questions. The HiT profiles 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 systems. This series is an ongoing initiative and material is updated at regular intervals.

Comments and suggestions for the further development and improvement of the HiT series are most welcome and can be sent to [info@obs.euro.who.int](mailto:info@obs.euro.who.int).

HiT profiles and HiT summaries are available on the Observatory's web site at <http://www.healthobservatory.eu>.



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This HiT was written using some basic materials from the previous HiT on Kyrgyzstan (2005) and the *Manas Taalimi* strategy document, which was developed by the team led by Ainura Ibraimova (when she was Kyrgyz Deputy Minister of Health and Director of the Mandatory Health Insurance Fund (MHIF)).

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The current series of HiT profiles has been prepared by the 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, Ireland, the Netherlands, Norway, Slovenia, Spain, Sweden and the Veneto Region of Italy, the European Commission, the European Investment Bank, the World Bank, UNCAM (French National Union of Health Insurance Funds), 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, Director, and Elias Mossialos, Co-Director, and heads of the research hubs, Martin McKee, Reinhard Busse and Richard Saltman. The production and copy-editing process was coordinated by Jonathan North, with the support of Caroline White, Jane Ward (copy-editing), Mathew Chambers (typesetting) and Aki Hedigan (proofreading).

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## List of abbreviations

AIDS	Acquired immunodeficiency syndrome
CARK	Central Asian republics (Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan) and Kazakhstan
CIS	Commonwealth of Independent States
DFID	United Kingdom Department for International Development
DOTS	Directly observed treatment, short-course
EU	European Union
EU15	Countries constituting the EU before May 2004
FAP	<i>Feldsher</i> -midwifery post
FGP	Family group practice
FMC	Family medicine centre
GDP	Gross domestic product
GPC	General practice centre
HIV	Human immunodeficiency virus
IMF	International Monetary Fund
MDG	Millennium Development Goal
MHIF	Mandatory Health Insurance Fund
NGO	Nongovernmental organization
OECD	Organisation for Economic Co-operation and Development
PPP	Purchasing power parity
SGBP	State-guaranteed benefit package
SSES	State sanitary-epidemiological surveillance
SWAp	Sector-wide approach
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization



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## Abstract

**K**yrgyzstan has undertaken wide-ranging reforms of its health system in a challenging socioeconomic and political context. The country has developed two major health reform programmes after becoming independent: *Manas* (1996–2006) and *Manas Taalimi* (2006–2010). These reforms introduced comprehensive structural changes to the health care delivery system with the aim of strengthening primary health care, developing family medicine and restructuring the hospital sector.

Major service delivery improvements have included the introduction of new clinical practice guidelines, improvements in the provision and use of pharmaceuticals, quality improvements in the priority programmes for mother and child health, cardiovascular diseases, tuberculosis and HIV/AIDS, strengthening of public health and improvements in medical education. A Community Action for Health programme was introduced through new village health committees, enhancing health promotion and allowing individuals and communities to take more responsibility for their own health.

Health financing reform consisted of the introduction of a purchaser–provider split and the establishment of a “single payer” for health services under the state-guaranteed benefit package (SGBP). Responsibility for purchasing health services has been consolidated under the Mandatory Health Insurance Fund (MHIF), which pools general revenue and health insurance funding. Funds have been pooled at national level since 2006, replacing the previous pooling at *oblast* level. The transition from *oblast*-based pooling of funds to pooling at the national level allowed the MHIF to distribute funds more equitably for the SGBP and the Additional Drug Package. Although utilization of both primary care and hospital services declined during the 1990s and early 2000s, it is increasing again. There is increasing equality of access across regions, improved financial protection and a decline in informal payments, but more efforts will be required in these areas in the future.





# Executive summary

## Introduction

**K**yrgyzstan is a landlocked country in central Asia about twice the size of countries such as Hungary or Portugal. Kyrgyzstan is extremely mountainous, with almost 90% of its territory being 1500 m above sea level. In 2009, it had a population of 5.3 million, 64% of which living in rural areas. The population is young, with 29% aged 14 years or younger. Kyrgyzstan gained its independence with the dissolution of the USSR in 1991. The early 1990s were characterized by a severe economic contraction, but economic growth resumed in the 2000s. Poverty levels are declining but still stood at 27% in 2007, when using the poverty threshold of US\$ 2.15 per day. Kyrgyzstan witnessed the “tulip revolution” in 2005, which led to the ousting of President Akaev. Renewed public dissatisfaction led to the overthrow of President Bakiev in April 2010 and civil strife in south Kyrgyzstan, with an interim government taking charge; this led to the introduction of a parliamentary system. As regards the population’s health status, cardiovascular diseases are the main cause of death, but Kyrgyzstan also faces very high infant and maternal mortality rates, as well as high rates of tuberculosis and an increasing incidence of HIV/AIDS.

## Organization and governance

The Ministry of Health is responsible for developing national health policies and administers the “high-tech” programme, including tertiary care facilities. It is also responsible for mental health care, and tuberculosis and oncology services that are not part of the single payer system. Prior to recent reforms, the health system was fragmented into four levels of government administration serving overlapping populations: republican, *oblast* (region), *rayon* (district)/city and *ayilokmottu* (rural). Each of the four levels carried out core functions of health systems: collection of revenues, pooling of funds, purchase of health services

and provision of care. One of the key elements of reforming health financing was to pool funds at *oblast* level to enable better risk pooling, overcome duplication across levels and break the integration of finance and provision that had contributed to excess physical capacity.

The MHIF is the “single payer” agency in the health sector, with responsibility for pooling health funds and purchasing health services. Since 2009, the MHIF has separated from the Ministry of Health and is subordinated directly to the Kyrgyz Government. The MHIF administers the SGBP and the Additional Drug Package. In addition, it is responsible for the quality management of health services and the development of health information systems. Local state administrations are in charge of overall health care within their respective territories, according to the Law “On Health Protection of the Citizens of the Kyrgyz Republic” (hereafter, 2005 Health Protection Law). The Ministry of Health coordinates and controls them through coordination commissions on health management. Parallel health services provided by ministries and agencies other than the Ministry of Health – a legacy of the Soviet period – continue to exist. Several health information systems were inherited from the Soviet period, but have now been transformed into a unified health information system.

## Financing

Financing of the Kyrgyz health system comes from three principal sources: the public sector (general taxation and mandatory health insurance), private households (mainly in the form of out-of-pocket payments) and external funds from international development agencies. In 2008, private expenditure accounted for the bulk (53.8%) of total health expenditure, followed by funding from the state budget (32.7%), external funding (9.5%) and mandatory health insurance (4%). Total expenditure on health accounted for 6.4% of gross domestic product (GDP) in 2008 and 46.6 current US\$/capita in 2007. Health financing reform consisted of the introduction of a purchaser–provider split and the establishment of a “single payer” for health services under the SGBP. Responsibility for purchasing health services has been consolidated under the MHIF, which acts as the single payer in the state-run health system, incorporating both general revenue and health insurance funding. Funds have been pooled at national level since 2006, replacing the previous pooling at *oblast* level. The transition from *oblast*-based pooling of funds to pooling at the national level allowed the MHIF to distribute funds more equitably for the

SGBP and the Additional Drug Package. The SGBP was introduced in pilot *oblasts* in 2001 and subsequently rolled out nationally. The introduction of a specified budget for the SGBP, in conjunction with the MHIF, has made it possible to improve access to health services for the most vulnerable groups of the population, and to increase the efficiency and transparency of health care provision. The systems of paying providers were changed from input- to output-based systems, with capitation payments for primary care and case-based payments for hospitals.

## Physical and human resources

In order to align the health care infrastructure to the needs of the population and to available financial resources, the first stage of health reforms included a major restructuring of health facilities. In combination with changed financial incentives, this resulted in a considerable reduction of the hospital sector and an expansion of family medicine-based primary health care. There have also been reductions in the average length of stay in acute care hospitals, while bed occupancy rates in acute hospitals have increased.

The number of health workers per population has declined significantly since the early 1990s, with levels far below the averages for the central Asian republics and Kazakhstan (CARK), the Commonwealth of Independent States (CIS) and the EU15 (countries constituting the EU before May 2004), in particular with regard to nurses. One of the critical challenges for human resources in Kyrgyzstan is their uneven regional distribution. Urban regions are better staffed than rural ones, where the shortage of physicians is sometimes critical. Compared with other sectors, salaries of health workers remain quite low, leading to poor motivation and quality of care, as well as to requests for informal payments. They also make the profession unattractive for school leavers and graduates, leading to an ageing of the health workforce. Increasingly, health workers are migrating within Kyrgyzstan or to other countries.

## Provision of services

Public health services are currently being reformed with the aim of integrating health promotion, disease prevention and control. While a Republican Health Promotion Centre has been established, the traditional state sanitary-epidemiological surveillance (SSES) has taken the lead on reforming public

health services. In primary health care, family group practices (FGPs), family medicine centres (FMCs) and a limited number of general practice centres (GPCs) provide most health services; however, in small villages and remote areas with populations between 500 and 2000 people, primary health services are provided by *feldsher*-midwifery posts (FAPs). The hospital sector has been restructured and reduced. Efforts to strengthen emergency care include a review of the location of ambulance stations and removing ambulance units from inpatient facilities and transferring them to FMCs. A state drugs policy has been adopted, as well as an Essential Drugs List. In 2000, the MHIF introduced the Additional Drug Package on a pilot basis. Under this package, pharmacies that have concluded a contract with the MHIF sell specified drugs at lower prices to patients insured by the MHIF. Mental health care has changed little since the Soviet period and still relies on hospitalization and outdated methods of treatment.

## Principal health reforms

Kyrgyzstan developed two major health reform programmes after the country's independence: *Manas* (1996–2006) and *Manas Taalimi* (2006–2010). The *Manas* programme launched comprehensive structural changes of health care delivery, financing and stewardship. It included reforms of the health care delivery system with the aim of strengthening primary health care, developing family medicine and restructuring the hospital sector. Major health service delivery improvements included the introduction of new clinical practice guidelines, improvements in the provision and use of pharmaceuticals, quality improvements in the priority programmes for mother and child health, cardiovascular diseases, tuberculosis and HIV/AIDS, the strengthening of public health and improvements in medical education. The *Manas* programme also introduced fundamental changes to health financing. In 1997, mandatory health insurance was introduced with the aim of attracting additional sources of funding to the health sector and improving the social protection of the population. The MHIF was created to administer the health insurance system, which laid the foundation for the introduction of a purchaser–provider split and the development of a contracting strategy. In 2001–2004, the single payer system was developed, with the MHIF and its territorial departments becoming the single payer in the state-run health system. This implied a shift from an administratively fragmented financing system to the pooling of local budget funds at the *oblast* level. In addition to new financing methods, the SGBP and official patient co-payments were introduced.

In December 2006, the Ministry of Health launched the *Manas Taalimi* reform programme. It aimed to build on the results achieved under the *Manas* programme while ensuring a more active involvement of the population in the process. The programme was intended to solidify the health financing reforms, increase the effectiveness of primary health care, improve access to specialized care, improve the quality of health services, strengthen public health and improve the quality of graduate, postgraduate and continuous education. The midterm review in May 2008 indicated strong progress in the implementation of *Manas Taalimi*.

## Assessment of the health system

Health reforms have achieved improvements in several key aspects of health system performance. Financial protection is a major challenge. Patient expenditure on outpatient medicines increased rapidly in the early 2000s, and out-of-pocket payments stood at an all-time high in 2004. To address this, the *Manas Taalimi* programme placed particular emphasis on reducing the financial burden for patients. Between 2003 and 2009, the financial burden for the poorest 40% of the population declined significantly. Furthermore, the mean co-payment level relative to the mean salary in the country declined from 30.8% in 2004 to 13% in 2007. Expenditure for the Additional Drug Package became more equally distributed across *oblasts* between 2005 and 2007.

There were also improvements in terms of access and equality in the utilization of health services. Utilization of both primary care and hospital services declined during the 1990s and early 2000s. Reasons included rising costs of care and a change of clinical practice, away from the unnecessary and lengthy hospitalizations typical of the Soviet period. As a result of the *Manas Taalimi* reform programme, access to care and equality in access are improving again. Household surveys report reduced financial and geographical barriers to access and increased utilization of FGPs and hospital services. According to the Kyrgyz Integrated Household Surveys between 2000 and 2006, the proportion of the population that reported that they needed health care but did not seek it because it was too expensive or too far away has fallen significantly, from 11.2% in 2000 to 4.1% in 2009. However, the human resource situation remains a concern, particularly in rural areas, and migration of health workers is resulting in an increased workload for primary health care doctors.

Efficiency gains were a major concern in the *Manas* reform programme. The excess hospital capacity of the health system inherited from the Soviet period absorbed an increasing share of declining government resources. The second aspect of inefficiency concerned the very small share of health spending allocated to primary care relative to hospital care. The *Manas* reforms were successful in achieving efficiency gains along both of these dimensions. Hospital capacity was reduced by 40%, while primary care began to receive an increasing share of funding. In the *Manas Taalimi* programme, these two aspects of efficiency continue to be monitored to ensure that previous gains are not reversed.

In terms of transparency, the share of patients making informal payments has declined since the launch of the single payer reforms in 2001, from 70% of patients making informal payments to medical personnel in 2001 to 52% in 2006; the decline in informal payments for drugs and medical supplies is more pronounced. Population awareness was found to be the highest in relation to entitlements for hospital care. Over 66% of household heads correctly noted in a 2006 survey that a hospitalized patient does not have to make payments to medical personnel, and 49% were aware of the fact that a hospitalized patient does not have to pay for medicines once they have paid the official co-payment.

Quality of care remains another challenge in Kyrgyzstan, at both the primary and hospital level. However, quality improvement programmes are showing the first results, aided by the involvement of local communities and nongovernmental organizations (NGOs). The introduction of continuous quality improvement programmes for the management of hypertension in 1318 primary care facilities led to significant improvements in key indicators of quality of care between 2006 and 2007. Although the proportion of pregnant women who are anaemic at delivery remains high at 43.8% in 2007 despite efforts to strengthen the early identification and treatment of iron-deficiency anaemia, other improvements have been seen with regard to safe motherhood.

# 1. Introduction

## 1.1 Geography and sociodemography

**K**yrgyzstan is a relatively young state, formed as a result of the dissolution of the USSR in 1991. It borders China to the east, Kazakhstan to the north, Uzbekistan to the west and Tajikistan to the south (Fig. 1.1). Kyrgyzstan is a small landlocked country with a total territory of 199 900 km<sup>2</sup>, which is more than twice the size of countries such as Hungary or Portugal. It is also extremely mountainous, with almost 90% of its territory being 1500 m

**Fig. 1.1**

Map of Kyrgyzstan



Source: United Nations, 2004.

above sea level, leading to a low average population density (26/km<sup>2</sup>) but with high concentrations in river valleys and along lakesides (National Statistical Committee, 2009). The rough terrain impacts not only on population settlement patterns but also on the ability to deliver services to particularly remote rural areas. The capital city is Bishkek (called Frunze in the Soviet era), located close to the northern border in Chui valley.

According to the latest census, conducted in 2009, the population of the country was 5 276 000 (National Statistical Committee, 2009). The population is concentrated in small areas in the north and southwest in the Chui (north-central), Fergana (southwestern) and Talas (northwestern) valleys. About two-thirds of the population live in rural areas (Table 1.1).

Kyrgyzstan is a multi-ethnic society. According to the 2009 census, the main ethnic groups are Kyrgyz (69.6%), Uzbek (14.5%) and Russians (8.4%), while the remaining 7.6% include a number of other minority groups (National Statistical Committee, 2009). Unlike most other countries of the former USSR, Kyrgyzstan has retained Russian as the second official language, Kyrgyz being the first. Kyrgyzstan is a secular state, although traditionally Kyrgyz consider themselves to be Sunni Muslims.

**Table 1.1**

Population/demographic indicators, 1990–2009 (selected years)

	1990	2000	2005	2006	2007	2008	2009
Total population (millions)	4.42	4.92	5.14	5.19	5.23	5.28	5.32
Female (% of total)	51	51	51	51	51	51	51
Aged 0–14 years (% of total)	38	35	31	31	30	30	29
Aged 65 years and over (% of total)	5	5	6	6	6	5	5
Average annual population growth rate (%)	2	1	1	1	1	1	1
Population density (per km <sup>2</sup> )	–	26	27	27	27	28	–
Fertility rate, total (births per woman)	4	2	3	3	3	3	–
Birth rate, crude (per 1 000 people)	29	20	21	23	24	24	–
Death rate, crude (per 1 000 people)	7	7	7	7	7	7	–
Age dependency ratio <sup>a</sup>	74	68	59	57	56	54	53
Rural population (% of total)	62	65	64	64	64	64	64
Enrolment in upper secondary education (% of population aged 15–18 years) <sup>b</sup>	86	41	51	50	49	47	–

Sources: UNICEF, 2010; World Bank, 2011.

Notes: <sup>a</sup> Ratio of the population aged 0–14 years and 65+ years to the population aged 15–64 years; <sup>b</sup> From UNICEF data.



In 2008, 30% of the population was 14 years of age or younger, and 5% was 65 years or older. The crude birth rate was 24 births per 1000 population in 2008, and the crude death rate was 7 per 1000. Enrolment in upper secondary education declined from 86% in 1990 to 41% in 2000, but has since increased to 47% in 2008 (Table 1.1).

## 1.2 Economic context

Prior to 1991, Kyrgyzstan's economy was highly dependent on the economy of the USSR. Becoming an independent country and losing the main Soviet inputs and subsidies caused severe economic contraction in the early 1990s and required substantial restructuring. The market reform programme pursued in the 1990s has been partly abandoned, as the state assumed a greater planning role in the late 1990s and early 2000s (US Country Studies Program, 2007). Agriculture and services are the most important sectors, as industry remains concentrated in few regions and outputs. In the early 2000s, workers even moved from industry to subsistence agriculture, as industrial enterprises failed. A Comprehensive Development Framework has set economic goals for 2001–2010, with strong guidance from the IMF and the World Bank. As much as 50% of GDP, however, is generated in the informal sector (Government of Kyrgyz Republic, 2009). The government launched two major programmes to privatize state enterprises. By 2003, these programmes had shifted about 7000 enterprises from the public to the private sector, but domestic opposition and low foreign investment have slowed the rate of privatization since then.

GDP per capita fell from US\$ 1808 in 1990 (current international purchasing power parity (PPP)) to US\$ 1328 in 2000 and has since increased to US\$ 2283 in 2009 (Table 1.2). In the early 2000s, operations in the Kumtor Gold Mine, Kyrgyzstan's single most productive asset, contributed 7% of GDP (Government of the Kyrgyz Republic, 2007).

Kyrgyzstan falls into the category of low-income countries (Kutzin, 2001; Government of the Kyrgyz Republic, 2007). In the early 1990s, the country experienced a drastic socioeconomic decline, leading to a significant decrease of living standards, growing unemployment and increasing levels of poverty. However, economic growth has resumed since the turn of the century and poverty levels showed a declining trend, at least prior to the impact of the current global financial and economic crisis (Government of the Kyrgyz Republic, 2007; International Crisis Group, 2008).

**Table 1.2**

Macroeconomic indicators, 1990–2009 (selected years)

	1990	2000	2005	2006	2007	2008	2009
GDP (billion, current US\$)	2.7	1.4	2.5	2.8	3.8	5.1	4.6
GDP, PPP (billion, current international \$)	8.0	6.5	8.9	9.5	10.6	11.8	12.2
GDP per capita, PPP (constant 2005 international \$)	2505	1501	1728	1765	1900	2043	2073
GDP per capita, PPP (current international \$)	1808	1328	1728	1822	2029	2229	2283
GDP growth (annual %)	6	5	0	3	9	8	2
Cash surplus/deficit (% GDP)	–	–3	–	–1	–2	0	–
Tax revenue (% GDP)	–	12	–	14	16	17	–
Value added in industry (% GDP)	35	31	22	20	19	19	–
Value added in agriculture (% GDP)	34	37	32	33	31	29	–
Value added in services (% GDP)	31	32	46	47	50	51	–
Labour force, total (millions)	1.8	2.1	2.3	2.4	2.4	2.5	–
Unemployment, total (% labour force)	–	–	8	8	–	–	–
Official exchange rate (LCU per US\$, period average)	–	48	41	40	37	37	–
Real interest rate (%)	–	19	18	13	9	–1	21
GINI index	–	–	–	–	33	–	–
Poverty head count at \$2 a day (PPP) (% population)	–	–	–	–	27	–	–
HDI <sup>a</sup>	–	0.68	0.69	0.69	0.71	–	–

Sources: <sup>a</sup>WHO Regional Office for Europe, 2011; World Bank, 2011.

Notes: LCU: local currency unit (som); HDI: Human Development Index of the United Nations Development Programme.

### 1.3 Political context

In the early years of its independence, Kyrgyzstan was generally perceived as one of the politically more open countries in central Asia, with a vibrant civil society. According to the constitution it adopted in May 1993, Kyrgyzstan was a unitary state built on the principles of secularism and democracy. The constitution provided for the concentration of power in the office of the president, but also defined the roles of legislative and judicial branches of the government with the aim of creating a system of “checks and balances” (Kuchukeeva & O’Loughlin, 2003).

The legislative branch was represented by the Kyrgyz Parliament (*Jogorku Kenesh*<sup>1</sup>), which was unicameral with 90 full-time members elected for four years on a party-based mandate. There were more than 30 registered political parties, 3 of which were represented in the parliament (OSCE/ODIHR, 2008).

Executive power was represented by the government, which operated through the ministries, state committees and administrative agencies, and by

<sup>1</sup> *Jogorku Kenesh* literally means Supreme Council.

local state administrations. The government consisted of ministers and chairs of state committees; it was headed by a prime minister, who was appointed by the president. Local state administrations in *oblasts* (regions) and *rayons* (districts)<sup>2</sup> were 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 the parliament.

The Office of the Prosecutor General supervised the implementation of legislative acts and was responsible for criminal prosecution in courts. The highest judicial bodies were the Constitutional Court and the Supreme Court. Judges in both were elected by the parliament on the recommendation of the president and had a 10-year term. Judges in lower courts were appointed by the president for a seven-year term, in consultation with the parliament. After independence, a new institution, the court of *aksakals* (elders) emerged in rural areas and was institutionalized in 1995. *Aksakals* dealt with land boundary disputes, divorces and property disputes, domestic violence, livestock thefts and other local disagreements. They operated within the framework of the Kyrgyz legal code and their decisions were subject to appeal to higher courts at the *rayon* or city level.

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

According to the World Bank *Joint Country Support Strategy* for 2007–2010, in the 15 years between Kyrgyzstan's independence in 1991 and 2005, 11 governments had been appointed and forced to resign; there were 10 prime ministers, and the average duration of cabinets was just over a year (World Bank, 2007). Surprisingly, however, regardless of these frequent changes of government, some important social and economic reforms continued in a fairly consistent manner and the country was able to make considerable progress in some areas, particularly the health sector. Still, progress was mixed. The unstable economic growth, persistently high poverty rates, lack of tangible impact from economic reforms and high levels of corruption contributed to the general public dissatisfaction that led to the ousting of President Akaev in March 2005 (World Bank, 2007).

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<sup>2</sup> The *oblast* and *rayon* (Russian terms) are administrative units inherited from the USSR. *Oblast* is equal in meaning to a province or region; *rayon* is a minor administrative territory equal to a district.

Following the forced resignation of President Akaev through what has been described as the “tulip revolution”, presidential elections were held in July 2005 that were won overwhelmingly by Kurmanbek Bakiev, the former prime minister who had joined the opposition. Since then, there have been continuous constitutional debates, as members of the opposition demanded constitutional reforms that reinstate the balance between the three branches of the government.

In December 2006, a new Kyrgyz Constitution was adopted, but it was again abolished in September 2007 and a new version was approved by referendum in October 2007. In July 2009, Bakiev won new presidential elections, although there were concerns about whether the official results reflected what the population had voted for. In April 2010, President Bakiev and his government were overthrown amid widespread allegations of corruption, nepotism and being responsible for the worsening economic situation in the country. An interim government under the former Foreign Minister Roza Otunbayeva came to power and initiated adoption of a new Constitution that envisaged change in the political structure of the country from a presidential to a parliamentary republic. However, because of the weakness of the interim government and the continued influence of Bakiev supporters, violence and ethnic clashes erupted in June 2010 in the south of the country, leading to hundreds of deaths. An estimated 375 000 people were reported to have fled the conflict, including 75 000 crossing the border to Uzbekistan. By July 2010, all refugees and the majority of internally displaced people had returned home (WHO, UNICEF & UNFPA, 2010). The conflict negatively affected access to health services, leading to an increase in home deliveries, deliveries in rural hospitals, pre-term deliveries and late admissions to hospitals. The conflict also interrupted the supply of drugs to patients with chronic diseases, but there was only limited damage to health facilities (WHO, UNICEF & UNFPA, 2010). New parliamentary elections took place in October 2010 and a coalition government was formed in December 2010. The next presidential election is planned for November 2011.

The country is divided into seven *oblasts*: Batken, Chui, Issyk-Kul, Jalal-Abad, Naryn, Osh and Talas. The capital, Bishkek, and the city of Osh are separate administrative regions with a status equivalent to *oblasts*. The *oblasts* are divided into 40 *rayons* and 14 towns (National Statistical Committee, 2009).

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

## 1.4 Health status

Life expectancy at birth was estimated at 67 years in 2008, with a life expectancy of 72 years for females and 63 years for males (Table 1.3).

**Table 1.3**

Mortality indicators (World Bank estimates), 1980–2009 (selected years)

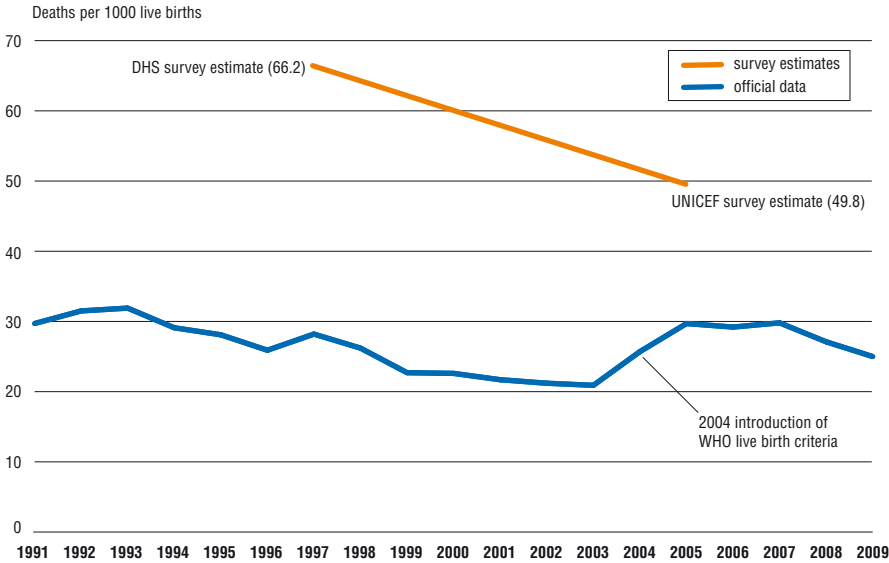
	1980	1990	2000	2008	2009
Life expectancy at birth, total (years)	65	68	69	67	–
Life expectancy at birth, female (years)	70	73	72	72	–
Life expectancy at birth, male (years)	61	64	65	63	–
Mortality rate, adult female (per 1000 female adults)	131	143	137	125	–
Mortality rate, adult male (per 1000 male adults)	296	291	288	262	–
Mortality rate, infant (per 1000 live births)	89	63	44	33	32
Mortality rate, under 5 years (per 1000 children under 5 years)	109	75	51	38	37

Source: World Bank, 2011.

Both official data and survey data on infant and child mortality show a declining trend. Official figures have been influenced by the introduction in 2004 of the definition of live births recommended by WHO and improvements in death registration. According to official data, the infant mortality rate increased from 25.7 per 1000 live births in 2004 to 29.7 in 2005, following the introduction of the new live birth criteria; it then remained at around 30 per 1000 live births in 2005–2007, before declining in 2008 and 2009 (National Statistical Committee, 2009). The mortality rate for children under 5 years shows a similar picture, with an increase from 31.2 per 1000 live births in 2004 to 35.2 in 2005, a stagnation around 35–36 per 1000 live births during 2005–2007 and a decline in 2008–2009. The two most recent survey estimates of infant mortality, the 1997 *Demographic and Health Survey* and the 2005 *Multiple Indicator Cluster Survey* (of the United Nations Children’s Fund (UNICEF)), indicate a 25% reduction in infant mortality, declining from 66 per 1000 live births in 1997 to 50 in 2005 (MEASURE DHS, 1998; UNICEF, 2006; Ministry of Health, 2008). It seems that official data and survey estimates are beginning to converge (Fig. 1.2). This is partly a result of improved registration of infant deaths, which has been facilitated by a change in the attitude of policy-makers surrounding this issue.

**Fig. 1.2**

Infant mortality rate (per 1000 live births), 1991–2009



Sources: UNICEF, 2006; MEASURE DHS, 1998; National Statistical Committee, 2009.

A disconcerting aspect of infant and child mortality is that 30% of children under the age of 1 year die on the first day of hospitalization and over 50% of children aged 1–2 years die at home (Bhutta & Khan, 2009; Ibraimov et al., 2009). This suggests late hospitalization for serious medical conditions, something that might partly reflect poor awareness of parents about symptoms requiring urgent medical attention.

According to official figures, maternal mortality stood at 69.8 deaths per 100 000 live births in 2009 (WHO Regional Office for Europe, 2011), while estimates suggest a mortality rate of 81 maternal deaths per 100 000 live births in 2008 (World Bank, 2011). Increases in officially recorded maternal mortality in recent years may reflect improved death registration. The main causes of maternal deaths in 2008 were hypertensive disorders during pregnancy (22.4%), obstetric bleeding (52.2%) and septic complications (10.4%) (Republican Medical Information Centre, 2010).

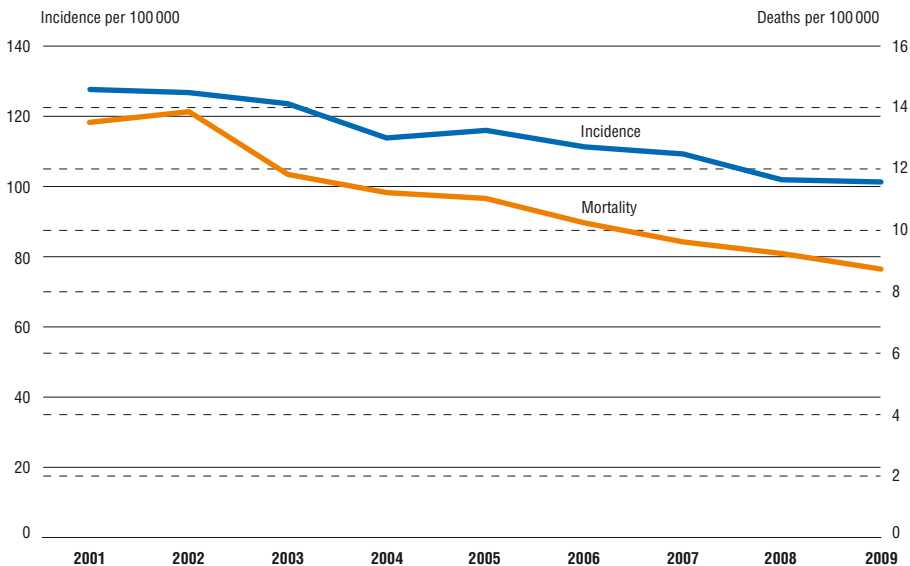
Although maternal and child health outcomes are hard to interpret, there are encouraging indicators that are expected to improve mortality rates over time (Ministry of Health, 2008; Bhutta & Khan, 2009; Ibraimov et al., 2009). These include economic, social and cultural aspects and the state of the public health system, as well as the demographic structure and behaviour of the population.

Many international studies consider infant mortality to be one of the most sensitive indicators for the level of poverty and socioeconomic and human development of a given country (Bhutta & Khan, 2009). Improvements in these aspects can be expected to drive infant mortality down, but the Ministry of Health has also undertaken a variety of targeted interventions to decrease mortality rates.

As in many other countries of the former USSR, including the countries in central Asia, tuberculosis rates in Kyrgyzstan are very high. However, there has been progress in recent years in terms of both incidence and mortality (Fig. 1.3). The incidence of tuberculosis decreased from 116 per 100 000 inhabitants in 2005 to 101 in 2009 (Republican Medical Information Centre, 2010), with improvements in most *oblasts* except Chui and Bishkek, where a slight increase has been registered. Tuberculosis mortality declined from 11 per 100 000 in 2005 to 8.7 in 2009, with Bishkek city being the only *oblast* with increasing mortality (Republican Medical Information Centre, 2010).

**Fig. 1.3**

Tuberculosis incidence and mortality (per 100 000 population), 2001–2009



Source: Republican Medical Information Centre, 2010.

Leading causes of death are cardiovascular diseases, diseases of the respiratory system and malignant neoplasms (cancer) (Table 1.4).

**Table 1.4**

Main causes of death, standardized death rates at all ages per 100 000 population, 1990–2009 (selected years)

	1990	1995	2000	2006	2007	2008	2009
Diseases of the circulatory system	537	675	673	733	720	706	693
Diseases of the respiratory system	160	187	152	133	116	110	97
Malignant neoplasms (cancer)	142	120	117	114	108	109	120
Diseases of the digestive system	49	69	69	86	85	82	78
External cause, injury and poison	112	132	91	94	89	88	81
Infectious and parasitic diseases	25	37	41	29	26	23	22
Mental disorders and diseases of the nervous system and sense organs	11	20	16	15	15	15	14

Source: WHO Regional Office for Europe, 2011.

The current health reform programme, *Manas Taalimi*, aims for a significant reduction in cardiovascular mortality, including in the age groups 30–39 and 40–59 (Jakab, Lundeen & Akkazieva, 2007). However, mortality in both age groups has changed little overall from the 2004 baseline (Table 1.5). A major reason for the high cardiovascular mortality rates in these age groups is the high prevalence of hypertension. In 2007, the first nationally representative survey on hypertension prevalence found that 30% of the population over 17 years of age had elevated blood pressure. Other risk factors, such as smoking, a diet rich in saturated fats, excessive alcohol consumption and psychosocial stress, also contribute to a high burden of cardiovascular diseases. The uneven quality of care at the hospital level is another factor contributing to cardiovascular mortality (Akunov et al., 2007; Jakab, Lundeen & Akkazieva, 2007).

**Table 1.5**

Mortality from cardiovascular diseases among working age adults per 100 000 population, 2004–2009

Age group (years)	2004	2005	2006	2007	2008	2009
30–39	50	56	56	56	54	52
40–59	307	312	334	333	329	310

Source: Republican Medical Information Centre, 2010.

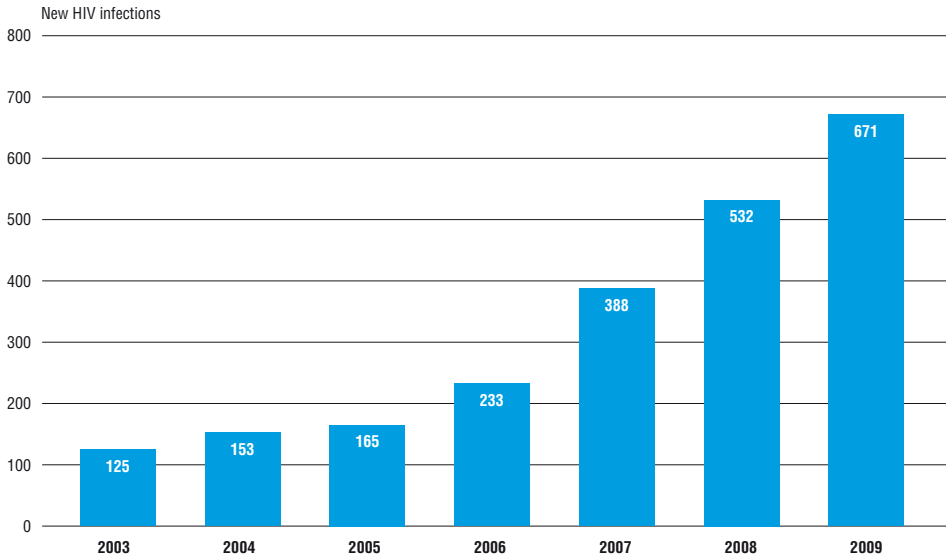


One positive finding of the survey on hypertension was that blood pressure was routinely measured in patients consulting primary health care facilities, with 72% of survey respondents aged 18 years or older having their blood pressure measured when visiting a primary care provider in the past 30 days, regardless of the reasons for their visit (Akunov et al., 2007). As the number of outpatient consultations is increasing (see section 5.3), it can be expected that an increasing number of patients will have their blood pressure measured. A challenge for improving early detection of hypertension still further is to increase awareness of those who do not visit their primary care provider.

A continuous quality improvement process was introduced in selected FGPs and FAPs and evaluated after a year. The evaluation found clear improvements with regard to the various standards of care (such as the percentage of doctors correctly measuring blood pressure or the percentage of patients receiving the correct treatment for high blood pressure), and health workers were highly satisfied with the quality improvement process and its results so far. The Family Group Practice Association conducted external audits in selected facilities to assess the impact of this continuous quality improvement project on patient blood pressure. The average reductions in systolic and diastolic blood pressure over the one-year project period were 23.3 and 8.3 mmHg respectively (Akunov et al., 2007; Jakab, Lundeen & Akkazieva, 2007).

Despite a number of HIV prevention activities, the number of newly registered HIV infections has risen rapidly in recent years (see Fig. 1.4 overleaf). An HIV outbreak in children's hospitals in Osh *oblast* in 2007, caused by hospital-acquired infection, significantly contributed to the growth in officially recorded HIV cases. In 51 cases (including 42 children), infections were traced back to hospitals (Ministry of Health, 2008). However, as in other countries of the region, the epidemic is mainly driven by injecting drug use (Rechel, 2010; Thorne et al., 2010).

**Fig. 1.4**  
Newly registered HIV cases, 2003–2009



Source: Republican Medical Information Centre, 2010

## 2. Organization and governance

### 2.1 Overview of the health system

The dramatic decline in government revenue and expenditure that followed the break-up of the USSR led to a dramatic growth of informal out-of-pocket payments in almost all countries of the former USSR, with resulting inequities in accessing health care (Sargaldakova et al., 2000; Meimanaliev et al., 2005; Rechel & McKee, 2009). As in other countries of the region (Ahmedov et al., 2007; Kulzhanov & Rechel, 2007; Khodjamurodov & Rechel, 2010; Rechel et al., 2011), these developments forced the Kyrgyz Government to look for ways to cut costs in the public health system (Jakab & Manjjeva, 2008). Apart from the overall fall in public health expenditure, the government faced the challenge of reducing pronounced regional disparities in the allocation of resources and maintaining the oversized and overspecialized network of health care providers and hospitals inherited from the Soviet period.

In order to address these structural problems and maintain basic entitlements to health care for the population, the Ministry of Health initiated a comprehensive reform process in the mid-1990s that encompassed strengthening primary health care and changes to clinical practice, as well as new forms of organization and financing. The reforms were supported by a number of international financial institutions and development agencies (Meimanaliev et al., 2005).

One reform element was the move away from the state monopoly on health care provision and financing, introducing a market economy and allowing the privatization of some health care providers. In 1992, the Law “On Health Protection of the Citizens of the Kyrgyz Republic” (hereafter, 1992 Health Protection Law) acknowledged that health services in the country should be provided by both the private and the public sector (Meimanaliev et al., 2005).

Another element of the reform was recognizing the necessity for rationing health services, which limited the services provided free of charge, while guaranteeing a basic package of services to the entire population. The 1992

Health Protection Law recognized that the state cannot provide all types of health services to the population, but guaranteed the provision of accessible and free-of-charge health services at a level to be specified in other pieces of legislation. The 2005 revision of the Health Protection Law recognized that social fairness, equity and accessibility to health services are the main principles of the state policy in the health sector.

Current legislation defines the Kyrgyz health system in the following ways (Government of the Kyrgyz Republic, 2006).

- The health care infrastructure should correspond to the needs of the population, as well as to the financial resources available in the public sector.
- The health financing system combines social health insurance with a system financed by general taxes and pools resources at the national level; a single payer purchases medical services on behalf of the entire population.
- The SGBP ensures access to a defined set of health services for the entire population.
- Health care management has been decentralized, and health care providers assume more administrative and financial autonomy.
- Health services should be oriented towards prevention rather than cure.
- Public and private health care providers coexist.

In order to align the health care infrastructure with the needs of the population and the available financial resources, the first stage of reforms included a major restructuring of health facilities. In combination with changed financial incentives, this resulted in a considerable reduction of the hospital sector and an expansion of family medicine-based primary health care (see section 4.1 and Chapter 5).

Health financing reform consisted of the introduction of a purchaser–provider split in health care financing and the establishment of a single payer for health services under the SGBP. Responsibility for purchasing health services has been consolidated under the MHIF, which acts as the single payer in the state-run health system. Funds have been pooled at national level since 2006, replacing the previous pooling at *oblast* level. Under these financing arrangements, different sources of financing (from national and local budgets as well as payroll taxes) are pooled under the MHIF. The MHIF acts as a strategic purchaser of health services by entering into contracts with providers, such as hospitals and FGPs.

The systems of paying providers were changed from input- to output-based systems, with capitation payments for primary care and case-based payments for hospitals. The case-based payment system for hospitals was a critical part of efforts to improve hospital efficiency. It contributed substantially to downsizing the hospital infrastructure and improving the technical and allocative efficiency of hospital spending. The financing of state health services and some tertiary care institutes at the republican level is managed by the Ministry of Health. Under the *Manas Taalimi* health reform programme that was launched in 2006, streamlining of financing for tertiary care and teaching hospitals, as well as for state health services, is envisaged for the years to come (see Chapter 3).

The SGBP was introduced in pilot *oblasts* in 2001 and subsequently rolled out nationally, in combination with the new methods of financing mentioned above. The SGBP is approved annually by the government. It consists of two parts: a universal package of services provided to the entire population and an additional package of services for persons covered by the social health insurance system. The introduction of a specified budget for the SGBP, in conjunction with MHIF funds, has made it possible to improve access to health services for the most vulnerable categories of the population, and to increase the efficiency and transparency of health care provision (see Chapter 3 and Chapter 7).

As a result of health financing reforms, health care providers have received considerable financial autonomy. Financial and administrative autonomy of health care providers was envisaged in the 2004 Law “On Health Care Organizations in the Kyrgyz Republic”. However, this law has not yet come into full force, owing to unresolved issues of taxation, in particular with regard to exempting health services and basic items procured by health organizations from value added tax.

The preventive orientation of health care is anticipated by the 2005 Health Protection Law. Significant changes in the content of clinical practice are envisaged through the introduction of evidence-based medicine, new clinical practice guidelines and facility-level quality improvement practices. The development of the public health function of the health system and its integration at the primary care level are expected to strengthen the preventive aspect of health services (see Chapter 5).

## 2.2 Historical background

The foundation of the current health system in Kyrgyzstan, similar to other former Soviet countries of the region, was laid during the early years of the USSR. Details of the health system that was put in place in the USSR are described in previous HiT profiles on Kyrgyzstan as well as other central Asian countries (Meimanaliev et al., 2005; Ahmedov et al., 2007; Kulzhanov & Rechel, 2007; Khodjamurodov & Rechel, 2010).

In the beginning of the twentieth century, the health 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 system based on the Semashko model was developed. It was 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 (Meimanaliev et al., 2005).

Specialized health care began to develop in 1925. The first maternity house and children's consultation centre were opened in Frunze (the name of the capital Bishkek in the Soviet era); a venereal ambulatory centre 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 mid-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 system of the country was able to offer all basic elements of health care, including clinical care, pharmacies, SSES services and forensic medicine. There was 1 dispensary for tuberculosis, 11 dermato-venereal dispensaries, 9 SSES 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 five medical colleges (Sargaldakova et al., 2000).

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. In addition, 34 *feldsher* points and 26 consultation centres for women and children were established.

In the post-war years, hospitals were integrated with outpatient facilities, as well as inpatient facilities for mother and child health, and sanitary-epidemiological services were reorganized. In the 1950s and 1960s, the main focus was on an expansion of the material base of the health system, that is, the enlargement of existing facilities and the construction of new ones.

Between 1923 and 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. In addition to providing medical examinations and treatment to the population, they also trained local health personnel. These efforts contributed to a significant decline in 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-Soviet 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 (Sargaldakova et al., 2000).

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

Considering the starting point, the Soviet health system made tangible progress in providing universal access to basic health services, with significant improvements in health service utilization and coverage, as well as health outcomes. Although achieving enormous success in the fight against infectious

diseases and the establishment of a network of health facilities, the Soviet health system was fraught with several weaknesses. The system was inefficient, with heavy emphasis on a large network of providers, a preference of hospital over primary care and a focus on curative rather than preventive services. Perverse incentives built into the health financing system contributed to the expansion of physical capacity, without necessarily improving health care (Rechel & McKee, 2009).

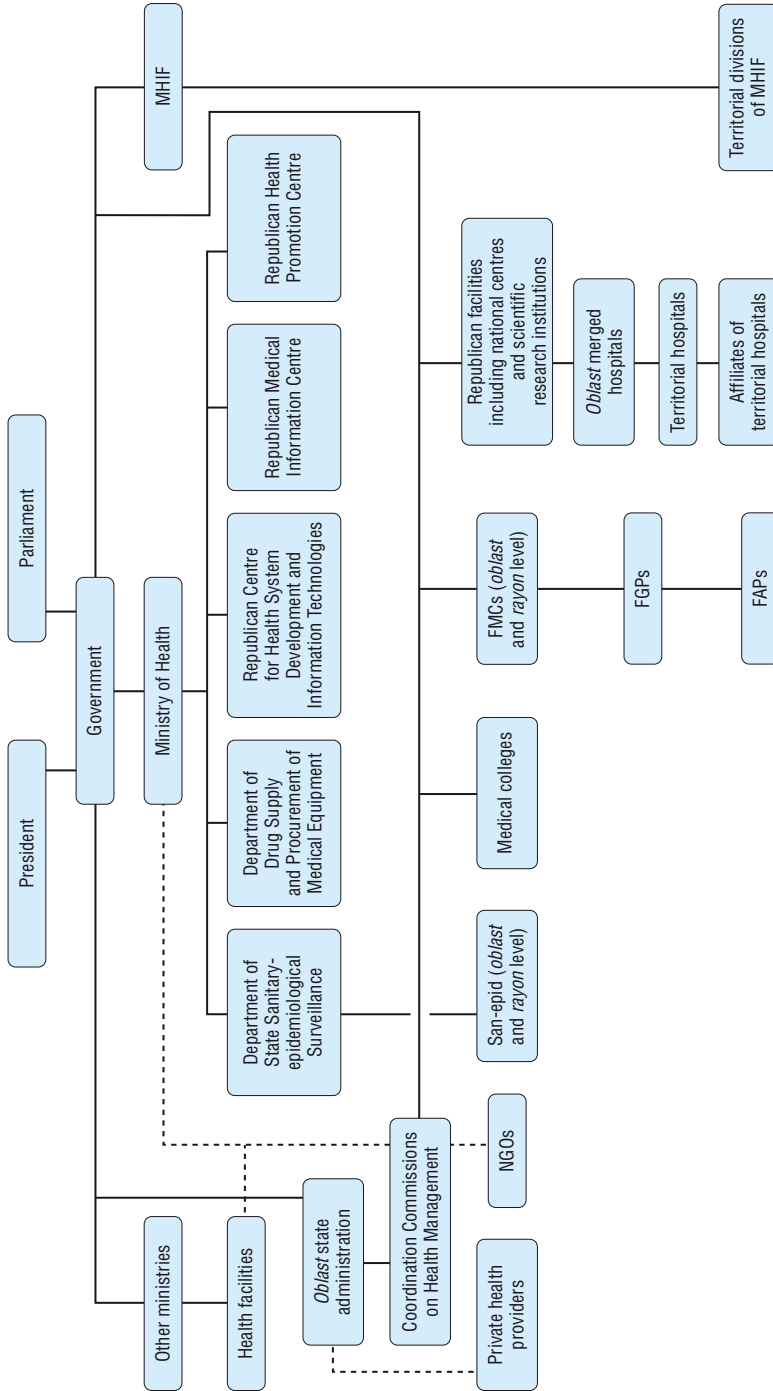
The health sector was centrally managed, with no discretion allowed to local managers. The key element in all areas of planning was the so-called “normative optimum”: the development of “scientifically based” optimal norms and standards set by elite committees in Moscow. The health sector used norms such as the population’s need for health services (e.g. number of beds or doctors per population) or the workload for doctors and mid-level health personnel (e.g. visits per hour, number of patients per doctor, approximate norms of rendering physiotherapeutic services, laboratory tests). The distribution of resources followed the planning norms developed by the All-Union Semashko Research Institute of Social Hygiene and Public Health. These norms set high standards for the number of hospital beds and physicians. The envisaged number of physicians per 1000 population in 1989, for example, was 3.2, which compared with the average of 2.1 in member countries of the OECD (Atun, 2005). The input-based financing system encouraged further inefficiency, as health facilities did not have any incentives to use their space, equipment or human resources more efficiently. In addition, several line ministries, such as the Ministry of Defence or the Ministry of Interior, had their own separate health systems that existed in parallel to the general health system.

## 2.3 Organizational overview

The organizational structure of the Kyrgyz health system has evolved in the years of independence as a result of fundamental health reforms, and it continues to change within the framework of the ongoing *Manas Taalimi* programme. The health system is currently based on three main laws: the 2005 Health Protection Law, the Law “On Health Care Organizations in the Kyrgyz Republic” (adopted 13 August 2004), and the Law “On the Single Payer System in Health Care Financing” (adopted 30 July 2003). The organizational structure of Kyrgyzstan’s health system is shown in Fig. 2.1.



**Fig. 2.1**  
Organizational structure of the health system



Source: Adapted from Meimanaliev et al., 2005.  
Note: san-epid: Sanitary-epidemiological surveillance.

### 2.3.1 Parliament

According to the country's legislation, the parliament (*Jogorku Kenesh*) is responsible for considering and accepting legislative acts concerning the health system. Legislation can be brought to the parliament's consideration by members of parliament, the government, the president or a popular initiative with the support of at least 300 000 voters (according to Article 64 of the 2007 Constitution).

### 2.3.2 Government

In the area of health protection, the government is responsible for the following activities:

- ensuring the constitutional rights of citizens;
- approving a uniform state policy and monitoring its implementation;
- developing a health sector strategy in agreement with the parliament;
- approving, financing and controlling the implementation of national health programmes;
- coordinating and managing the activities of state authorities; and
- reporting annually (by the Minister of Health to the parliament) about the health status of the population, the sanitary and epidemiological situation, and the execution of the consolidated health budget.

At the government level, activities are coordinated by the vice prime minister, who is responsible for supervising social affairs. In order to take coordinated decisions, various supervisory boards and commissions within the government have been established.

### 2.3.3 Ministry of Health

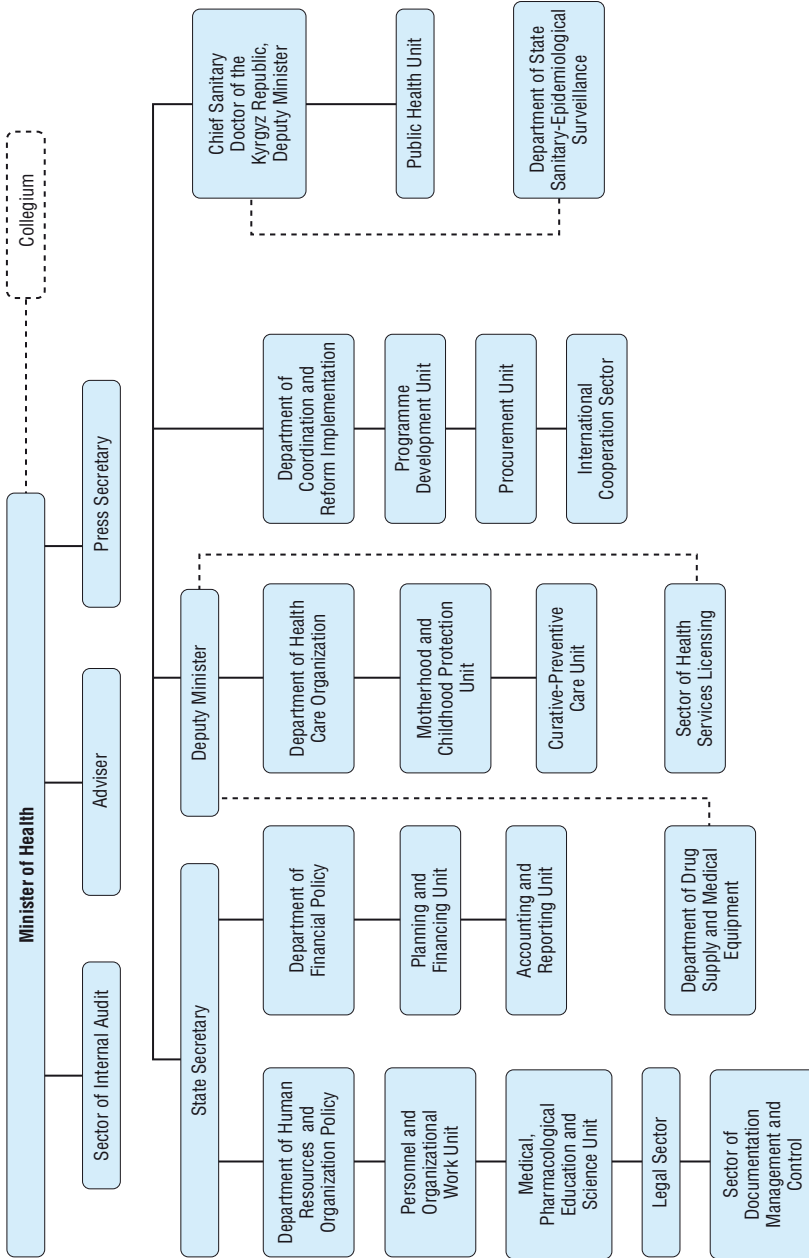
According to the 2005 Health Protection Law and Ministry of Health regulations, the Ministry of Health has the following responsibilities:

- preparing and implementing legislative acts, including laws and Ministry of Health decrees;
- developing and implementing national programmes to improve the health of the population;
- arranging the delivery of health services and restructuring and optimizing the health system to meet the population's need for health services;

- developing and implementing measures for improving access to health services for socially vulnerable population groups, including access to expensive and high-technology treatment; and developing and implementing activities for the quality management of health services;
- ensuring the national registration of health professionals and selecting managers for health care organizations;
- licensing medical and pharmaceutical activities and overseeing the accreditation of health care organizations;
- developing regulatory mechanisms for health financing, SSES, public health services and the pricing of health services, pharmaceuticals and medical products;
- regulating, coordinating and controlling the performance of both public and private organizations in the health system, including health care providers, SSES services, research institutes and institutions of higher education;
- monitoring and evaluating the health status of the population, implementing health programmes and reforms, and achieving the health-related Millennium Development Goals (MDGs); and
- collaborating with other governments and international organizations, and implementing intergovernmental and international agreements related to health.

The Minister of Health is appointed by the president. The minister has one state secretary and three deputy ministers, who are appointed by the prime minister. Until December 2009, each deputy minister was responsible for one of the following three areas: (1) general coordination of the provision of individual health services, (2) public health services and (3) the MHIF. Fig. 2.2 shows the new structure of the Ministry of Health, which has been in place since January 2010.

**Fig. 2.2**  
Organizational structure of the Ministry of Health, 2010



Source: Ministry of Health, personal communication, 2010

Currently, the Department of State Sanitary-Epidemiological Surveillance and the Department of Drug Supply and Medical Equipment are independent legal bodies directly accountable to the chief sanitary doctor and deputy minister respectively. The Ministry of Health is also in charge of the Republican Centre for Health System Development and Information Technologies, the Republican Medical Information Centre, the national centres and scientific research institutions, and institutions of medical and pharmaceutical education.

Infectious disease surveillance and sanitary inspection and control are carried out by the Department of State Sanitary-Epidemiological Surveillance, which is headed by a director-general and a first deputy director-general. The department is subdivided into Divisions of State Epidemiological Surveillance, State Sanitary Inspection and Control, and Laboratory Examinations. In addition, the SSES services contain several legally independent bodies such as the Republican AIDS Association, the Republican Centre for Immunoprophylaxis, the Republican Centre for Quarantine and Dangerous Infections, the Republican Health Promotion Centre and the Research Institute for Preventive Medicine; these are directly accountable to the deputy minister, who is also the chief sanitary doctor. The Department of State Sanitary-Epidemiological Surveillance was created in 1997 from the Republican Sanitary-Epidemiological Station and the Sanitary-Epidemiological Department of the Ministry of Health; until recently, it was the main organization responsible for public health in the country. However, the existence of a single agency for public health led to conflicts of interest in the development and implementation of policy, norms and standards. For these reasons, a unit of public health was established within the structure of the Ministry of Health in 2006 and this is now responsible for developing public health policy.

The Department of Drug Supply and Medical Equipment is in charge of drug policy and the monitoring and evaluation of the quality of drugs. It registers pharmaceuticals, issues licences to producers and retailers of drugs, and monitors the supply of medical equipment to state-owned health care providers. The department is headed by a director-general and was set up in 1997 by merging 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 Centre for Health System Development was established by the Ministry of Health on 11 November 2005 in accordance with planned institutional changes envisioned by the *Manas Taalimi* programme. In 2009, it was

renamed Republican Centre for Health System Development and Information Technologies. The Republican Centre was intended to contribute to the strengthening of the health system by promoting evidence-based medicine, improving library services, further developing a unified health information system, training health managers, financial staff and public health service representatives, and assisting the Ministry of Health in monitoring, evaluating and analysing health reforms. However, on 17 July 2009, the function of monitoring, evaluating and analysing health reforms was transferred to the Health Policy Analysis Center, a public foundation that had been for the previous nine years supported technically and financially by the United Kingdom Department for International Development (DFID) and the WHO Regional Office for Europe.

The Republican Medical Information Centre is responsible for the collection and analysis of medical and statistical information, and for sharing it with other actors in the health system, including the National Statistical Committee, the Ministry of Health, the MHIF, health facilities, international organizations and other users of medical and statistical information. Data collection at *oblast* level is undertaken by *oblast* and city medical information centres and, at *rayon* level, by medical information units located in FMCs.

### 2.3.4 MHIF

The MHIF is the “single payer” in the health sector, with responsibility for pooling health funds and purchasing health services under the SGBP. Using a programme budgeting approach, the MHIF administers two of the five Ministry of Health programmes: the SGBP and the Additional Drug Package. The Ministry of Health administers the other programmes: public health, the High Tech Fund and areas such as the vertical systems, education, science and administration. The MHIF is responsible for the quality management of health services and the development of health information systems. The MHIF operates through its territorial departments, which are present in each *oblast*, as well as in Bishkek. The MHIF was initially established in 1997 as a fund directly accountable to the government; it was transferred to the Ministry of Health in 1998. The MHIF is accountable to the Ministry of Finance for the use of budgetary funds and for other health financing issues. In December 2009, the MHIF was separated from the Ministry of Health and became directly subordinated to the government.

### 2.3.5 Local administrations

Local state administrations are in charge of health care within their respective territories according to the 2005 Health Protection Law. The Ministry of Health coordinates and controls them through coordination commissions on health management. These commissions are responsible for implementing national health policies and programmes and for developing and implementing territorial health programmes. Local state administrations report annually about the population's health to local councils (*keneshs*).

### 2.3.6 Parallel health services

Parallel health services provided by ministries and agencies other than the Ministry of Health – a legacy of the Soviet period – continue to exist. The parallel system includes health facilities provided by the Ministry of Internal Affairs (3), the Ministry of Justice (19), the Ministry of Emergency Situations and the Ministry of Labour and Migration (1), the Ministry of Education (10), the Ministry of Defence (19), the National Security Service (2), the National Guard Service (1) and large state-owned joint stock companies (7). In 2008, parallel health services accounted for about 5% of total government health expenditure (Ministry of Health, 2009a). These health facilities are directly accountable to their respective agencies and funded from the republican budget.

### 2.3.7 Private sector

The private health sector has developed gradually since the country's independence. Starting with pharmacies, it later expanded to include the provision of other health services. In 2008, more than 2500 pharmacies and 40 private organizations were licensed to operate in the pharmaceutical sector (National Statistical Committee, 2009). In 2008, 231 private pharmaceutical companies had contracts with the MHIF under the Additional Drug Package at primary health care level (see Chapter 5).

In 2007, more than 600 medical doctors and about 230 legal entities carried out private medical practice (Checheybaev et al., 2008). The private sector included about 350 beds at secondary care level, more than half of which were located in Bishkek. Gynaecology, neurology and dermato-venereology are some of the main specialized services that are provided privately. In addition to providing services to patients on a fee-for-service basis, private medical facilities can also provide services to public facilities on a contractual basis and participate in MHIF programmes. Furthermore, basic health services are

provided in 13 boarding schools, 7 nurseries, 31 sanatoria, 2147 schools, 112 technical colleges, 78 institutions of secondary education and 51 institutions of higher education.

Private health insurance has not yet been developed in the country. There are a few small companies providing private health insurance services, but only for those people who travel abroad.

### **2.3.8 Unions, professional associations and civil society**

Many NGOs have emerged in the health sector, mainly in the form of professional associations. More than 100 health-related NGOs were operating in Kyrgyzstan in 2010. They included associations of physicians, pharmacists, nurses, cardiologists, patients with diabetes, patients with mental health disorders, blood donors and public health.

The Association of Family Group Practices and the Hospital Association, both established in 1997, work closely with the Ministry of Health on reforming the health sector. This takes mainly the form of large-scale training of health workers, disseminating information (through their web sites, information bulletins and other periodical publications), and organizing workshops and conferences. In addition, both associations support health facilities in receiving grants and humanitarian aid (in the form of medical equipment and pharmaceuticals). They also work in close collaboration with the Ministry of Health in reviewing the legislative and regulatory basis of the health system, and they participate in various advisory and working bodies. In January 2003, the Association of Family Group Practices became a member of the World Association of Family Practitioners. The Hospital Association has established a partnership with the French Hospital Federation and Kyrgyzstan has been elected a Board Member of the International Hospital Federation.

In recent years, civil society has been strengthened, becoming very active in supervising the activities of the Ministry of Health. A coalition of NGOs has been created that should play an important role in future health policies.

### **2.3.9 International development partners**

The comprehensive health reforms in Kyrgyzstan have relied on a very successful collaboration of international development partners. The World Bank, WHO and the United States Agency for International Development (USAID)/ ZdravPlus projects initiated a health financing collaboration in 1995 that worked to the comparative advantages of each organization. The collaboration



was initiated as an informal sector-wide approach (SWAp) and carried forward into a formal SWAp, incorporating a number of other development partners along the way (see section 3.1).

## 2.4 Decentralization and centralization

As in the other countries of central Asia (Rechel et al., 2011), prior to recent reforms, the health system was fragmented into four levels of government administration serving overlapping populations: republican, *oblast*, *rayon*/city and *ayilokmottu* (rural) (Meimanaliev, 2003). Furthermore, many national programmes, such as immunization schemes, were operated through separate vertical systems. The fragmentation of health budgets was one of the major challenges to reforming health financing and health service delivery.

One of the key elements of reforming health financing was to pool funds at *oblast* level to enable better risk pooling and to break the integration of finance and provision that had contributed to excess physical capacity (Meimanaliev, 2003). A complementary reform, in line with the introduction of new provider payment methods, was to grant health facilities more administrative and financial autonomy.

Local governments are involved in health management at *oblast* level (Meimanaliev et al., 2005) through:

- participation in coordination commissions on health management;
- human resources policy; and
- social protection of vulnerable citizens through issuing “social passports” and financing the provision of health care to patients exempted from co-payments.

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 institutions, the veterinary service, trade unions and NGOs (Meimanaliev et al., 2005). A coordination commission is chaired by the head of the *oblast* administration (mayors in Bishkek and Osh cities), who appoints members of the commission. The chair of the commission has two deputies: the head of an *oblast* health facility and the 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* administration and the Ministry of Health. The main functions of coordination commissions on health management are:

- to consider issues related to health management in the corresponding region and agree on joint actions;
- to monitor implementation of health legislation;
- to implement health reforms and restructure health care organizations accordingly;
- to plan and coordinate activities on health promotion and protection;
- to monitor implementation of national health programmes, as well as provision of the SGBP, with the aim of ensuring access to and quality of health services;
- to consider how to use material and financial resources more effectively and to monitor the timely and complete transfer of funds for the health sector; and
- to ensure timely interdepartmental and interregional communication.

There is a need to further strengthen the responsibility of local state administrations and governments for the health of the population living in their respective region. The *Manas Taalimi* programme envisages the passing of some administrative authority in the health sector from central to local governments and increasing the efficiency of the coordination commissions on health management.

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 Hospital Association contribute to monitoring the quality of health services and participate in the development of clinical protocols. Since 2007, the authority for attestation of medical specialists has been delegated to some professional medical associations.

## 2.5 Planning

Health planning and management are undertaken by the Ministry of Health, the MHIF and health care providers. The Ministry of Health is the main body for drawing up health policies. It enacts strategic documents for the health sector for a period of 5–10 years, which are accompanied by action plans for implementation. To implement the *Manas Taalimi* programme, an action plan up to 2010 has been prepared and approved by the Ministry of Health, covering each of the components of the programme (see Chapter 6).

Each year, the Ministry of Health develops an outline of activities for the forthcoming year. This process takes account of demographic and health indicators, the activities of health care providers and studies carried out by the Health Policy Analysis Unit of the Ministry of Health.

The departments under the Ministry of Health develop more specific annual plans, such as the draft health budget (based on national policies and estimated funds for health), procurement plans or quota for institutions of higher medical education. The MHIF develops annual plans covering the funds that should be allocated under the SGBP and the Additional Drug Package.

Health care providers plan their activities according to the financial and administrative autonomy they have. Health facilities that are financed within the single payer system sign annual contracts with the MHIF for providing specified health services.

The involvement of patients in health planning has remained limited so far. Nevertheless, in some pilot regions, feedback from the population has been used for planning purposes. Various surveys, using interviews or focus groups, and participatory rural appraisal studies have been conducted with the aim of learning about patients' experience of health reforms and their expectations of the health system (see Chapter 7).

## 2.6 Health information systems

According to the 2007 Law “On State Statistics”, data on mortality, disease incidence and births are collected by the National Statistical Committee through its regional units. However, the same data are produced by the Republican Medical Information Centre. These two datasets differ slightly because of

different denominators used when calculating indicators. This occurs because demographic data on the size of the population are produced by the two agencies separately.

The Ministry of Health runs a health information system that is composed of a number of subsystems related to the different institutions that collect data. These subsystems include the Republican Medical Information Centre, the Department of State Sanitary-Epidemiological Surveillance and the MHIF. In addition, health information is collected by several republican centres (including the Tuberculosis Centre, the HIV/AIDS Centre, the Centre for Mother and Child Health and the Narcology Centre), which are engaged in vertical health programmes. These centres submit data to the Republican Medical Information Centre, which issues an annual statistical yearbook, the *Health of the Population in the Kyrgyz Republic*. These yearbooks contain a large volume of statistical information, including data on health system indicators by *oblasts* and *rayons*.

The existence of several health information systems inherited from the Soviet period created a number of problems. One was the use of different data collection tools, which resulted in an increased workload for health care providers. Furthermore, there were incompatibilities between the different software packages used, which complicated the exchange of data between different institutions.

In response to these problems, the Ministry of Health developed the Concept of Developing a Unified Health Information System for 2001–2010. This document required the establishment of a unified health information system at three levels (national, *oblast* and *rayon/city*), run by the Ministry of Health and accompanied by a central information portal (see section 4.1.4 *Information technology*). Adoption of this concept was followed by the revision and standardization of all reporting formats collected from health facilities. At present, all reporting by health facilities is submitted to the Republican Medical Information Centre, with subsequent approval by the National Statistical Committee.

Significant investments have been made to create a unified health information system. In 2002, the Ministry of Health created medical information units at FMCs at *oblast* and *rayon* levels, which are subordinated to the Republican Medical Information Centre. These units gather primary data on health indicators and forward them to the Republican Medical Information Centre. In addition, the units undertake the primary input of data needed for drug supply, quality assurance of health services and exchange of information with health services at the *oblast* level.

The MHIF has developed an information system that includes comprehensive data on discharged patients and the quality assurance of health services. It also generates financial reports from all health facilities included in the single payer system. The territorial departments of the MHIF at *oblast* level gather primary data on financing and forward it to the MHIF for compilation at the national level.

Under the Republican Centre for Health System Development and Information Technologies, an information technology unit was created that is responsible for the establishment of a unified health information system all over the country. This includes the installation of software in each health facility for the process of gathering data and transferring them to the central level.

Because of the separation of the MHIF from the Ministry of Health, negotiations for establishing a separate legal body, the Information Technology Centre, are currently ongoing. The new Information Technology Centre will be directly subordinated to the Ministry of Health and the MHIF. It is envisaged to be central to efforts to avoid duplication of data-processing functions and to achieve a more effective use of computer and communication equipment.

## 2.7 Regulation

The *Manas Taalimi* reform programme envisages the transition from a management system based on central command and administration to a system based on cooperation, clear division of functions, the introduction of result-oriented management methods and an atmosphere that allows criticism and constructive feedback.

Regulation and planning have become particularly important in the context of introducing a purchaser–provider split in health services, granting more financial and administrative autonomy to health care providers, promoting private sector involvement and attempting to strengthen regulatory mechanisms. These are changes that depend on the country's overall governance structure (Government of the Kyrgyz Republic, 2006).

The management of the health system still largely follows a hierarchical top-down model. Laws are adopted by the parliament and decrees or other regulations by the government. 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, although it was until recently unable to control the number of admissions. The Ministry of Health also appoints the heads of tertiary level health facilities. The directors of scientific research institutions are appointed by the scientific councils of these institutions. Heads of municipal health organizations are appointed by local state administrations, subject to the prior agreement by the Ministry of Health (Government of the Kyrgyz Republic, 2006).

The main regulatory functions of the Ministry of Health include the development of regulations and guidelines, which are compulsory for all health care providers, the licensing and attestation of providers and the development and implementation of quality assurance procedures. The Ministry of Health also coordinates the activities of donors, distributes humanitarian aid and procures drugs and medical equipment centrally for health facilities in the public sector. Nowadays, some of the functions of the Ministry of Health related to the certification of health workers have been transferred to professional organizations, although these are still at an early stage of development.

The role of the Ministry of Finance is crucial in the budgetary process since it exercises fiscal power over budgetary funds. With the introduction of the single payer system, the role of the Ministry of Finance has been realigned to revenue collection and defining budget ceilings for the Ministry of Health and the MHIF, but it still plays a key role in health financing (see Chapter 3).

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

At the facility level, the authority for health planning, regulation and management is vested in the administration, which has financial and managerial autonomy. The heads of state or municipal health facilities are 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 care providers, including healers (practitioners of traditional medicine), is based on licensing. Private health care providers have to maintain and submit all necessary files and statistics. Interaction between private and public health care providers, including participation in the implementation of the SGBP, is based on contracts.

## 2.8 Patient empowerment

### 2.8.1 Patient rights

Patient rights are regulated by Chapter 9 of the 2005 Health Protection Law, which entitles patients to:

- receive medical care of high quality by public and private health care providers;
- have a choice of physician at both outpatient and inpatient health facilities;
- receive medical, pharmaceutical, orthopaedic and other health services within the package of services defined by the government;
- receive respectful and humane treatment by health workers;
- receive health services (including examination, prevention, treatment and rehabilitation) in facilities that meet sanitary and hygienic standards;
- participate in scientific and medical experiments only with written consent;
- receive assistance from lawyers or other legislative representatives to protect their rights;
- be attended by religious leaders while in hospital and be granted conditions for religious ceremonies, including, where possible, provision of separate premises; and
- refuse the participation of medical students during diagnostics and treatments.

### 2.8.2 Patient information

According to the Law “On Guarantees and Free Access to Information” (amended 28 December 2006), each state agency is obliged to provide relevant information to citizens and NGOs within a period of two weeks. This right is

now widely used by NGOs and they regularly submit enquiries to the Ministry of Health, the MHIF, the Department of State Sanitary-Epidemiological Surveillance and the Department of Drug Provision and Medical Equipment.

Information about patient rights in the health sector is accessible on the web sites of the Ministry of Health and the MHIF. Moreover, the MHIF has carried out public awareness campaigns, including the dissemination of information leaflets, the publication of articles in newspapers and broadcasts on national television and radio.

Telephone hotlines are available at the central MHIF agency and all its regional departments. Any citizen can get information regarding health services and patient rights through these hotlines. However, the general population still has insufficient knowledge of their patient rights (see Chapter 7).

### **2.8.3 Complaint procedures**

Although a wide range of patient rights are included in the Health Protection Law, some of them are not implemented. Many of the problems with implementation stem from the underfinancing of the health sector, resulting in patients failing to receive the full range of services to which they are entitled by law.

There are several mechanisms for patients or the population in general to provide feedback in the health sector, such as (Ibraimova & Kutzin, 2002):

- writing letters of complaint to the Ministry of Health and subordinated agencies;
- attending regularly available personal appointments with the Minister of Health or his/her deputies, the heads of departments of the Ministry of Health and the heads of subordinated agencies;
- airing complaints in the mass media in special sections or at particular times (such as “questions and answers”, hotlines, or “you ask – we answer”); and
- using “trust” phones.

In situations where patient rights are violated, patients can address their complaints to the manager or other staff of the health facility where they received health services, to the appropriate professional association or to a civil court. All complaints are registered and in some cases further investigated by a specially established commission. Following the work of the commission, the manager of the respective health facility is informed about the outcome of the investigation. Where infringements of patient rights have been established, the



manager of the health facility imposes a legally defined penalty on the member of staff who has violated patient rights. Any informal payments received by staff have to be returned to the patient.

If the commission concludes that the treatment was of poor quality, the regional department of the MHIF imposes penalties on the respective health facility, according to the Law “On Health Insurance of the Citizens of the Kyrgyz Republic” (adopted 18 October 1999), which regulates the management and quality assurance of medical services. Where irregularities in the use of earmarked health care funds are found in the regular check-ups of health facilities by the regional departments of the MHIF, the case is handed over to the Ministry of Health.

The MHIF bears the primary responsibility for protecting patient rights to health care. It has a central unit as well as regional (*oblast*) units whose main function is to work directly with patients for the protection of their rights (Government of the Kyrgyz Republic, 2006).

Specifically, each regional unit has the following tasks:

- to operate a hotline;
- to investigate complaints and ensure corrective measures are taken;
- to conduct information and awareness campaigns on patient rights;
- to work with civil society organizations on issues related to patient rights, particularly in the area of HIV/AIDS;
- to liaise with the broader quality assurance system; and
- to carry out regular patient satisfaction surveys.

A telephone hotline number is prominently displayed in all health facilities. In addition, it is regularly advertised in local newspapers and sometimes distributed directly to the population as part of a calendar or other promotional items. The purpose of the hotline is to receive calls from patients concerning under-the-table payments, negligence, low quality of services and refusal of service on discriminatory grounds, such as having certain diseases or inability to pay. When a call is received, a unit specialist registers the call in a database for further action, such as a visit to the facility in question by the unit’s staff. If the enquiry by the unit shows that the complaint is justified, the MHIF formally requests the facility to take specific corrective actions within a certain time period. The case is open until the MHIF confirms that the required actions have been taken. Failure to follow MHIF’s initial recommendations leads to further interventions by the MHIF.

The hotline number is free, but lack of telephone lines in some rural areas still limits access to it. The central unit receives approximately 8–10 calls per day and has eight full-time staff to provide follow-up (Ministry of Health, 2010b). At the *oblast* level, approximately three or four calls are received each day and each unit has three or four members of staff.

In addition to responding to specific complaints, experts from each regional unit visit randomly selected facilities to check the quality of health services, review the volume and use of formal co-payments and observe the patient–health worker interaction to ensure that patients are treated with respect. Violations of approved clinical protocols and patient rights are recorded and followed by a formal letter to the facility manager, who is required to respond in a given time frame providing evidence of corrective measures that have been taken. These random checks are carried out on a quarterly basis.

## 3. Financing

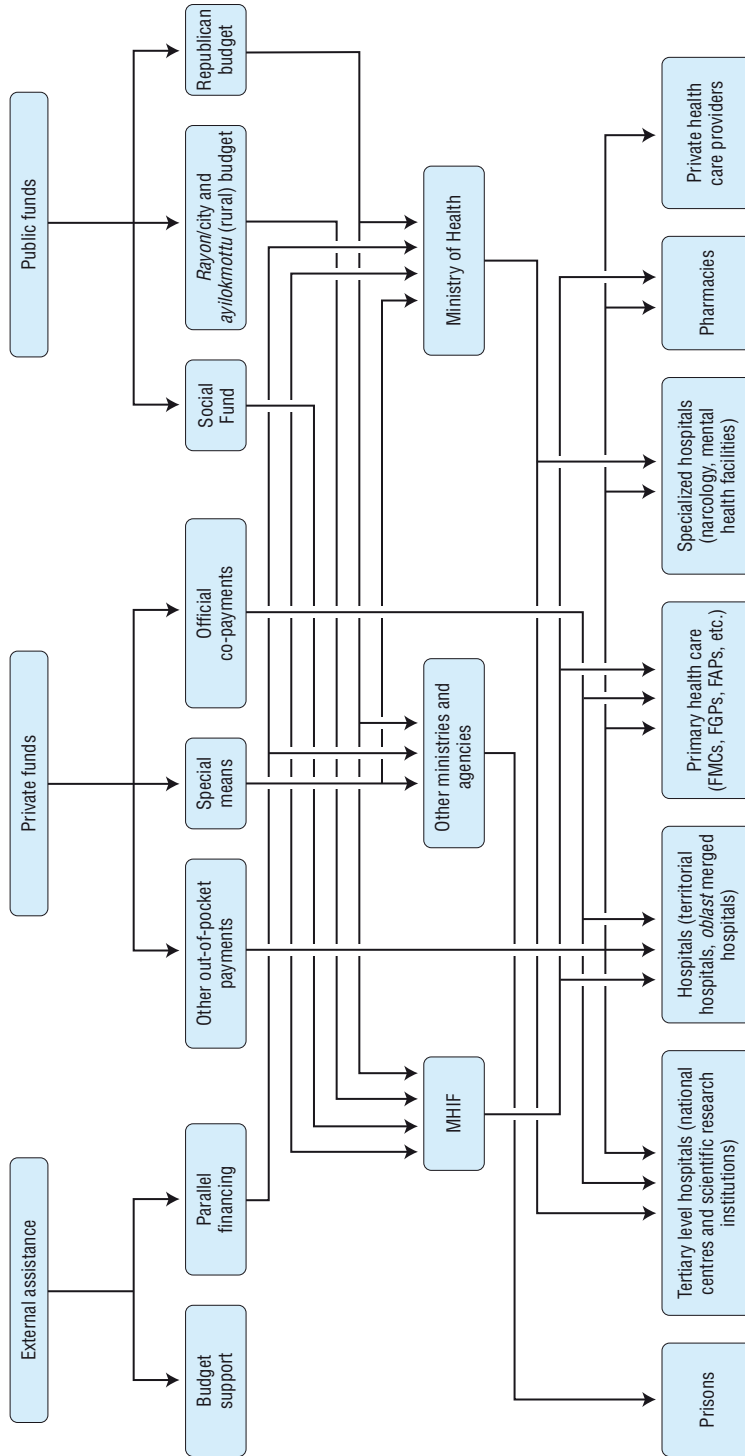
### 3.1 Flow of funds

Financing of the Kyrgyz health system comes from three principal sources: the public sector, private funds and external funds (Temirov & Akkazieva, 2007). Public sources include the state budget funds (based on general tax revenues) and mandatory health insurance funds (based on payroll-tax revenues). Private funds include private out-of-pocket payments. External funds comprise funds from international organizations and donors. Fig. 3.1 illustrates the flow of funds in the Kyrgyz health system.

From the republican budget, funds flow to the Ministry of Health, the MHIF and other ministries and agencies. The Ministry of Health finances tertiary care facilities and the SSES services and institutions. The MHIF accumulates funds at the republican level, including revenues from the mandatory health insurance system and the Social Fund, and distributes them to the regions to finance provision of the SGBP in health facilities at the primary and secondary level. The other ministries and agencies finance health facilities of their respective parallel health system, such as the military hospital of the Ministry of Defence (Temirov & Akkazieva, 2007).

In contrast to Kazakhstan, Tajikistan and Uzbekistan, where most official health financing is raised and spent at the subnational (*oblast* and *rayon*) level (Rechel et al., 2011), in Kyrgyzstan almost no health funding comes from local budgets (including *rayon/city* and rural (*ayilokmottu*) funds). This is a result of the passage of the Law “On Financial and Economic Foundations of Local Self-Government” (adopted 25 September 2003). This law led to the transformation of budgetary funding from a four-level system (republican, *oblast*, *rayon/city* and rural) to a two-level system (national and local) by 2006. In the context of implementing this law, and after a series of negotiations and consultations, the Ministry of Health and the Ministry of Finance agreed to transfer health funds from the regional/local (*oblast*, *rayon/city* and rural) to the republican level. The remaining exception is Bishkek city, where health

**Fig. 3.1**  
Financial flows in the health system



Source: Adapted from Temirov & Akkazieva, 2007.

financing from the local budget still exists as it is a local self-governance entity. In 2008, the Ministry of Finance decided to change to a three-level system, comprising the national, local (*rayon/city*) and rural (*ayilokmottu*) levels.

Revenues collected from insurance premiums for mandatory health insurance are transferred to the MHIF and spent on implementation of the SGBP, as well as the Additional Drug Package for the insured population.

Private health expenditure mainly takes the form of direct out-of-pocket payments for primary, secondary and tertiary care, and for pharmaceuticals. These payments can be formal (official co-payments or payments for nonmedical services) and informal. The largest share of private payments is used for the procurement of outpatient drugs (Temirov & Akkazieva, 2007).

Since 2001, when official co-payments were introduced on a pilot basis, most user fees have been incorporated into the system of official co-payments. “Special means” include nonmedical services (e.g. rent, transportation), medical services to foreign citizens, dental care (except services included in the SGBP) and medical services outside the SGBP (such as abortions, certain laboratory tests, cosmetic surgery or anonymous treatment) (Meimanaliev et al., 2005).

Since 2006, some of the funds from international development agencies for the Kyrgyz health system have been allocated within the framework of a SWAp. These funds have been integrated into the general state budget of the country. External organizations co-financing the SWAp have included the World Bank, DFID, the German Development Bank, the Swiss Agency for Development and Cooperation and the Swedish International Development Cooperation Agency. The remaining external funds for the country’s health system take the form of parallel financing for implementation of various projects and come from a variety of international organizations, including DFID, USAID, the German Development Bank, the Swiss Agency for Development and Cooperation, WHO, the United Nations Population Fund (UNFPA), UNICEF, Médecins sans Frontières, the International Committee of the Red Cross and the Central Asia AIDS Control Project (financed by the World Bank).

## 3.2 Health expenditure

As in most other countries of the former USSR, health expenditure in Kyrgyzstan declined dramatically in the first years after independence. In Kyrgyzstan, the main reasons for this decline were a decrease in GDP, an overall decrease in public expenditure as a percentage of GDP and a decrease of republican and local spending on health. Between 1995 and 2000, public revenues fluctuated between 17.5% and 21.3% of GDP. However, apart from an increase in 1998, public expenditure had steadily declined as a percentage of GDP, reflecting both an inability to collect revenues and the government's efforts to obtain fiscal balance between revenues and expenditure. An important reason for the decline in government health spending in the 1990s was, therefore, the decline in government spending more generally. State health expenditure began to increase again after 2000, in line with reforms of the health financing system (see Chapter 6).

Total health expenditure, including public, private and external sources of funding, increased from 2.9 to 12.5 billion soms (in October 2010, US\$ 1 was equivalent to 46.4 soms) in the period from 2000 to 2009, a fourfold growth in nominal terms (Temirov & Narmanbetov, 2010). In real terms (adjusting for inflation), expenditure grew in this period 2.3 times. Total expenditure on health increased from 4.4% of GDP in 2000 to 6.4% in 2009 (Table 3.1).

**Table 3.1**

Breakdown of total health expenditure, 2000–2009 (selected years)

	2000	2004	2005	2006	2007	2008	2009
<i>In nominal terms</i>							
<b>Total health expenditure (in million som)</b>							
Budget	1 248.2	1 809.0	2 147.6	2 421.0	2 966.9	3 873.0	4 809.1
MHIF	105.1	338.2	254.5	466.9	704.5	476.8	682.6
Private	1 521.4	3 090.6	3 490.7	3 921.9	4 398.4	4 823.2	5 356.6
External joint financing (SWAp)	n/a	n/a	n/a	252.6	529.7	409.1	943.2
External parallel financing	n/a	n/a	n/a	n/a	519.8	709.0	683.4
<b>Total</b>	<b>2 874.7</b>	<b>5 237.8</b>	<b>5 892.8</b>	<b>7 062.4</b>	<b>9 119.2</b>	<b>10 291.2</b>	<b>12 474.8</b>
<b>Per capita health expenditure (in som)</b>							
Budget	255.0	353.3	419.4	472.8	579.4	756.3	939.1
MHIF	21.5	66.0	49.7	91.2	137.6	93.1	133.3
Private	310.8	603.6	681.7	765.9	858.9	941.9	1 046.1
External joint financing (SWAp)	n/a	n/a	n/a	49.3	103.4	79.9	184.2
External parallel financing	n/a	n/a	n/a	n/a	101.5	138.5	133.5
<b>Total</b>	<b>587.3</b>	<b>1 022.9</b>	<b>1 150.8</b>	<b>1 379.2</b>	<b>1 780.9</b>	<b>2 009.7</b>	<b>2 436.2</b>
<b>As a share of total government expenditure (%)</b>							
Budget	43.4	34.5	36.4	34.3	32.5	37.6	38.6
MHIF	3.7	6.5	4.3	6.6	7.7	4.6	5.5
Private	52.9	59.0	59.2	55.5	48.2	46.9	42.9
External joint financing (SWAp)	n/a	n/a	n/a	3.6	5.8	4.0	7.6
External parallel financing	n/a	n/a	n/a	n/a	5.7	6.9	5.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>As a share of GDP (%)</b>							
Budget	1.9	1.9	2.1	2.1	2.1	2.1	2.4
MHIF	0.2	0.4	0.3	0.4	0.5	0.3	0.3
Private	2.3	3.3	3.5	3.5	3.1	2.6	2.7
External joint financing (SWAp)	n/a	n/a	n/a	0.2	0.4	0.2	0.5
External parallel financing	n/a	n/a	n/a	n/a	0.4	0.4	0.3
<b>Total</b>	<b>4.4</b>	<b>5.6</b>	<b>5.9</b>	<b>6.2</b>	<b>6.5</b>	<b>5.6</b>	<b>6.4</b>
<i>In real terms (in prices of 2000)<sup>a</sup></i>							
<b>Total health expenditure (in million som)</b>							
Budget	1 248.2	1 544.3	1 757.7	1 876.5	2 086.7	2 187.9	2 543.8
MHIF	105.1	288.7	208.3	361.9	495.5	269.3	361.0
Private	1 521.4	2 638.3	2 857.0	3 039.7	3 093.5	2 724.7	2 833.4
External joint financing (SWAp)	n/a	n/a	n/a	195.8	372.6	231.1	498.9
External parallel financing	n/a	n/a	n/a	n/a	365.6	400.6	361.5
<b>Total</b>	<b>2 874.7</b>	<b>4 471.4</b>	<b>4 823.1</b>	<b>5 473.8</b>	<b>6 413.8</b>	<b>5 813.7</b>	<b>6 598.6</b>
<b>Per capita health expenditure (in som)</b>							
Budget	255.0	301.6	342.0	361.6	399.4	414.7	472.9
MHIF	21.5	56.4	40.5	69.7	94.8	51.0	67.1
Private	310.8	515.2	556.0	585.7	592.2	516.4	526.8
External joint financing (SWAp)	n/a	n/a	n/a	37.7	71.3	43.8	92.8
External parallel financing	n/a	n/a	n/a	n/a	70.0	75.9	67.2
<b>Total</b>	<b>587.3</b>	<b>873.2</b>	<b>938.5</b>	<b>1 054.7</b>	<b>1 157.8</b>	<b>1 026.0</b>	<b>1 159.6</b>

Source: Temirov &amp; Narmanbetov, 2010.

Notes: <sup>a</sup>The Consumer Price Index (100 in 2000) was used to calculate health expenditure in real terms; n/a: Not available.

In 2009, state financing (including the MHIF) made up 2.7% of GDP, compared with 2.1% in 2000; private funds increased in the same period from 2.3% to 2.7%, and external funds accounted for 0.8% of GDP in 2008 (Table 3.1). Total health expenditure per capita increased from 587 soms in 2000 to 2436 soms in 2009 in nominal terms, and to 1160 soms in real terms when accounting for inflation. It should be noted that health expenditure in real terms decreased slightly between 2007 and 2008, which was caused by high inflation in 2008 (24.5%). However, over the whole period 2000–2009, total health expenditure more than doubled in real terms. Despite this progress, health reforms still suffered from a lack of funding for the health sector, which limited their potential impact on the health status and financial protection of the population.

The increase in public expenditure since the beginning of the *Manas Taalimi* health reform programme and SWAp implementation is hoped to improve health system performance in such key aspects as equity and population health status. One of the key conditions of external development agencies for disbursing funds within the SWAp framework is an annual increase of 0.6% in the state health budget as a percentage of total state expenditure. The latest Joint Review Mission in July 2010 found that this condition has been met over the years.

Government expenditure on health as a share of total government expenditure increased from 8.6% in 2003 to 9.8% in 2007. The vast majority of private expenditure on health takes the form of out-of-pocket expenditure (Table 3.2).

**Table 3.2**

Trends in health expenditure, 2003–2007

	2003	2004	2005	2006	2007
Total per capita (current US\$)	20.4	24.6	28.4	35.9	46.4
Public expenditure (% government expenditure)	8.6	8.2	8.4	10.2	9.8
Out-of-pocket expenditure (% private expenditure)	93.0	94.6	95.0	93.8	91.9

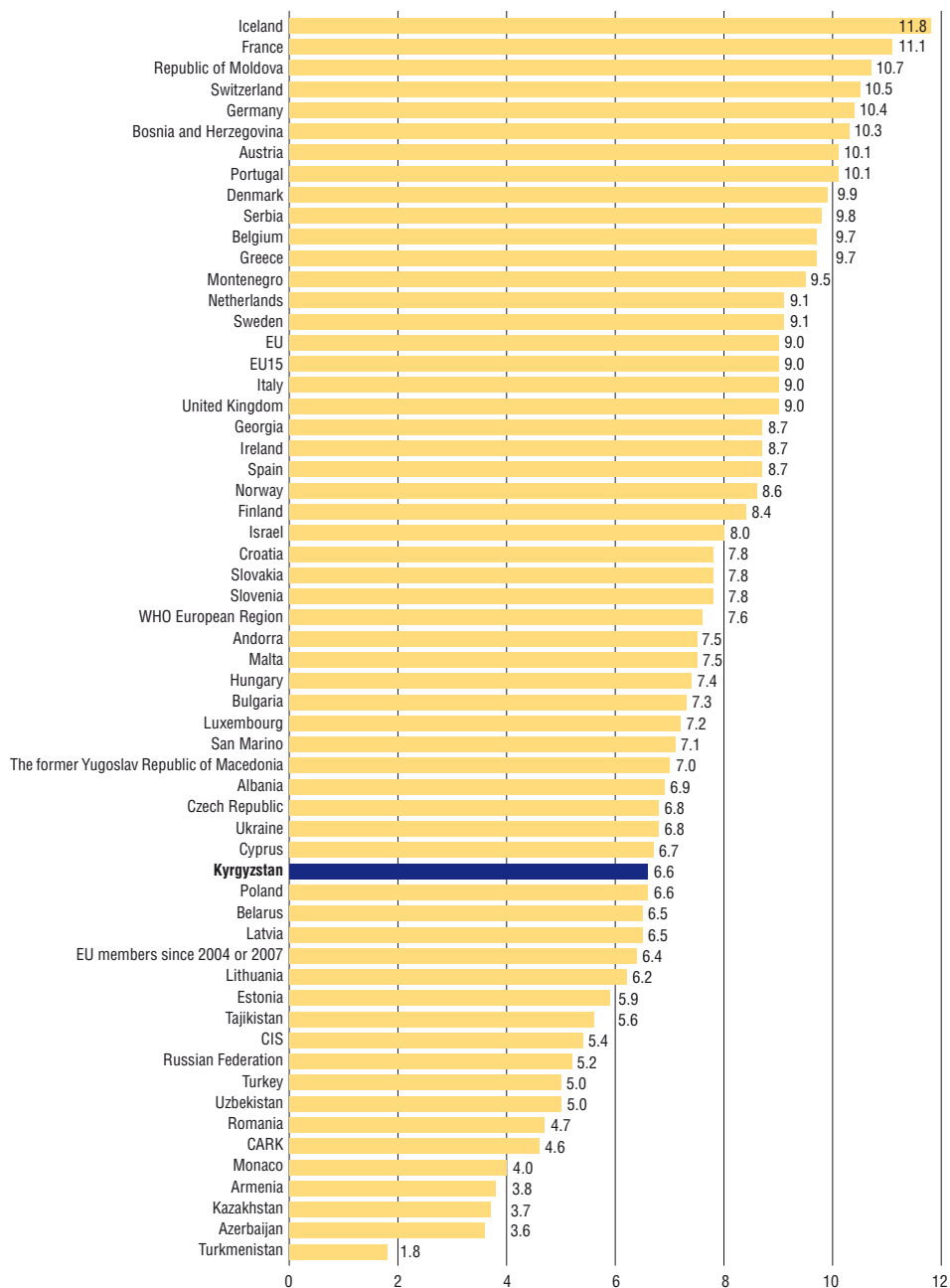
Source: World Bank, 2011.

When seen in the context of the WHO European Region (Fig. 3.2), as well as trends in CIS and CARK (Fig. 3.3), it becomes apparent that Kyrgyzstan is spending a higher share of GDP on health than many other countries of the former USSR. This is particularly noteworthy, as GDP per capita in Kyrgyzstan is among the lowest of the WHO European Region (WHO Regional Office for Europe, 2011). As a consequence, total health expenditure per capita is still very low compared with other countries of the WHO European Region (Fig. 3.4). Furthermore, despite increases in government health expenditure in recent years, private sources account for more than half of total health expenditure (Fig. 3.5).



**Fig. 3.2**

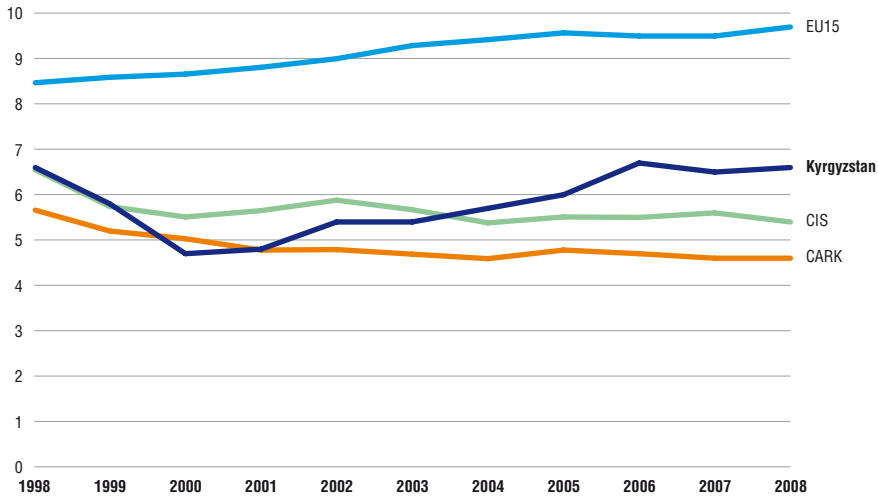
Total health expenditure as a percentage of GDP in the WHO European Region, 2008  
(WHO estimates)



Source: WHO Regional Office for Europe, 2011.

**Fig. 3.3**

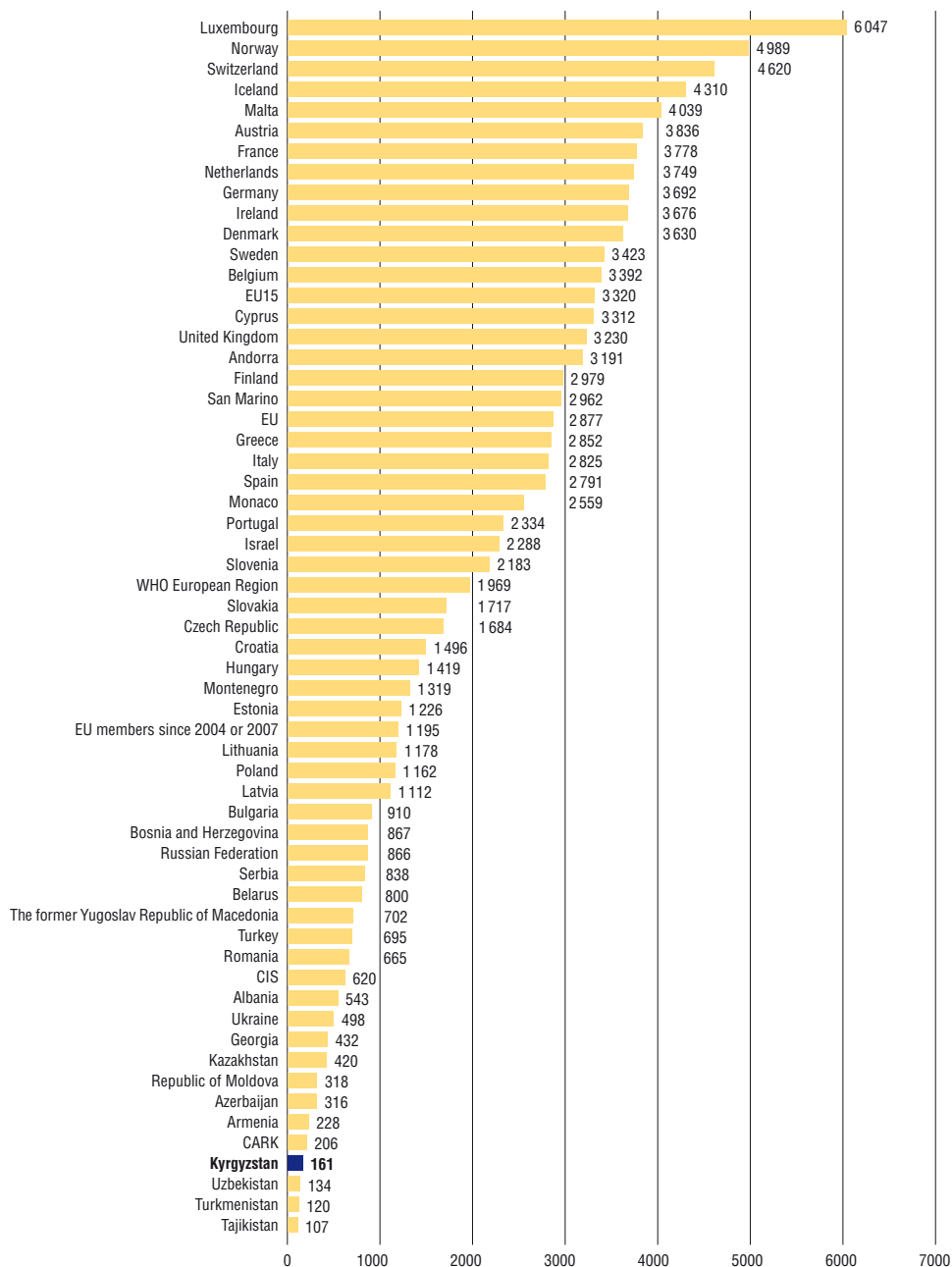
Trends in total health expenditure as a percentage of GDP in Kyrgyzstan, CARK, CIS and EU15, 1998–2008 (WHO estimates)



Source: WHO Regional Office for Europe, 2011.

**Fig. 3.4**

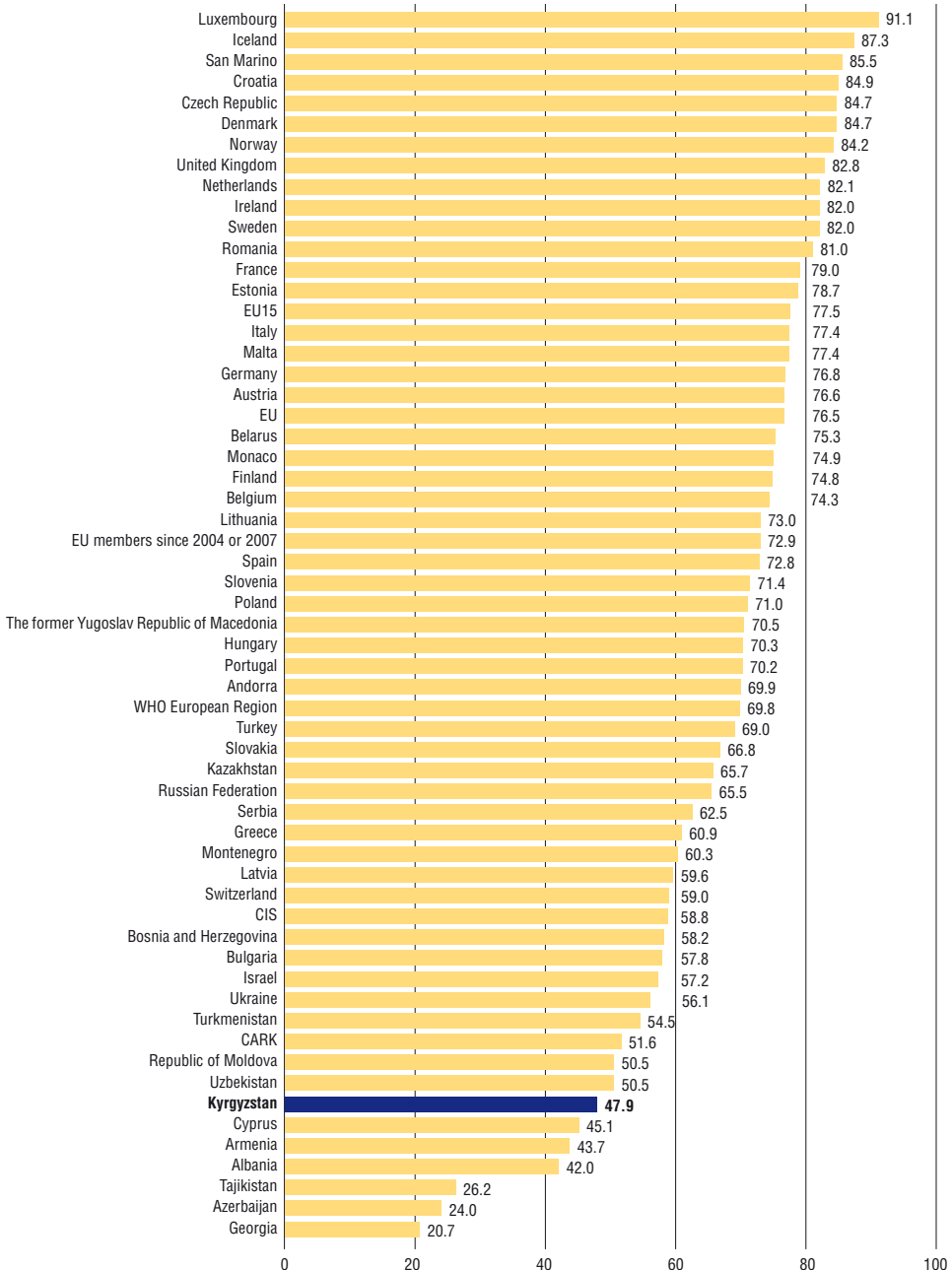
Total health expenditure in US\$ PPP per capita in the WHO European Region, 2008  
(WHO estimates)



Source: WHO Regional Office for Europe, 2011.

**Fig. 3.5**

Public sector health expenditure as a percentage of total health expenditure in the WHO European Region, 2008 (WHO estimates)



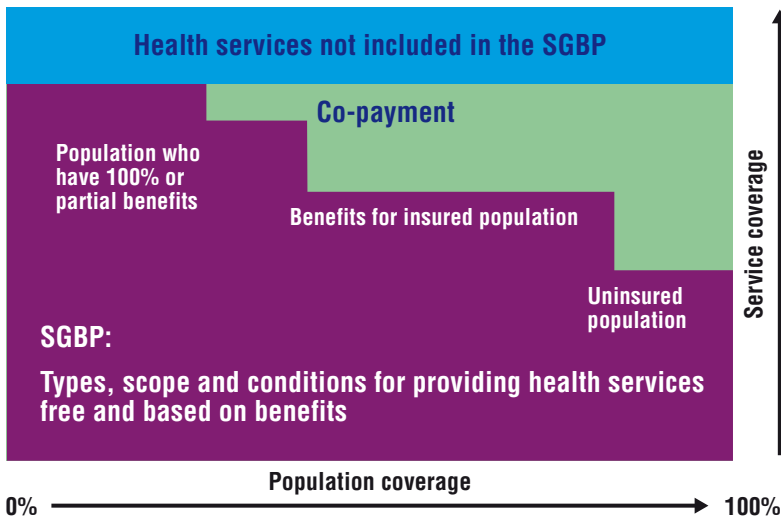
Source: WHO Regional Office for Europe, 2011.

### 3.3 Population coverage and basis for entitlement

The entitlement of the population to health services is defined by the SGBP (Government of the Kyrgyz Republic, 2006; Jakab & Manjjeva, 2008). This benefit package entitles all patients to free primary health care services, regardless of their insurance status and enrolment with primary care providers. Certain laboratory and diagnostic tests require patient co-payments, as do outpatient specialist and hospital care, with the exception of certain categories of patients. The patient co-payment is a flat fee payable on admission. It varies with insurance status, exemption category, intervention type (such as delivery, surgery or medicine), and whether the patient has a written referral from a primary care physician. Exemption categories were drawn up on the basis of social considerations and disease types, with the aim of protecting vulnerable groups of the population and those with the highest expected use of health services. Health care providers receive a higher payment for treating patients exempted from co-payments in order to prevent an adverse selection of patients (Government of the Kyrgyz Republic, 2006). Fig. 3.6 illustrates population coverage under the SGBP.

**Fig. 3.6**

Population coverage under the SGBP



Source: Kutzin et al., 2002.

In the process of implementing the SGBP, there has been a considerable increase in the population categories entitled to various forms of exemption, from 29 categories in 2001 to 72 in 2009. This increase in the number of exempt categories was accompanied by an increase in the number of patients entitled to exemptions. The share of patients treated in hospitals eligible for either complete exemption from co-payments or reduced co-payments because of their socioeconomic status increased from 8.8% in 2003 to more than 50% in 2008. In 2008, 33.3% of patients in hospitals did not make any official payments, while 11.1% made reduced co-payments, resulting in a total of 44.4% exempt patients (MHIF, 2010).

The increase in exemption categories was made possible by the increase of state funding for the health sector, particularly the SGBP. In order to ensure that increased state commitments correspond to available financing, an inventory of legislative documents regulating exemptions was envisaged. However, unfunded mandates have increasingly become a concern; parliament for example mandated the Ministry of Health that all care for deliveries should be free.

Patients who fall below the poverty line but are not entitled to exemptions can receive basic health services paid for by the reserve fund of health organizations. These are mostly men and women, except pregnant women, who are of working age. However, at present the mechanisms for this exemption are not well defined. While there is a national poverty threshold and some households receive certain social benefits based on falling below this threshold, most poor are not registered as such. This means that the provision of health services on the basis of reserve funds is largely done at the discretion of individual health facilities.

National roll-out of the Additional Drug Package, initially introduced on a pilot basis in 2001, has improved access to essential drugs and increased the use of evidence-based medicine. This has resulted in improved performance of primary care providers, evidenced by reductions in the number of complications of such conditions as hypertension, stomach ulcer, duodenal ulcer and bronchial asthma.

The Ministry of Health finances the health organizations at the republican level that do not provide health services under the SGBP. These include providers of public health services, tertiary care facilities offering individual services to the population and health organizations implementing priority and vertical programmes.

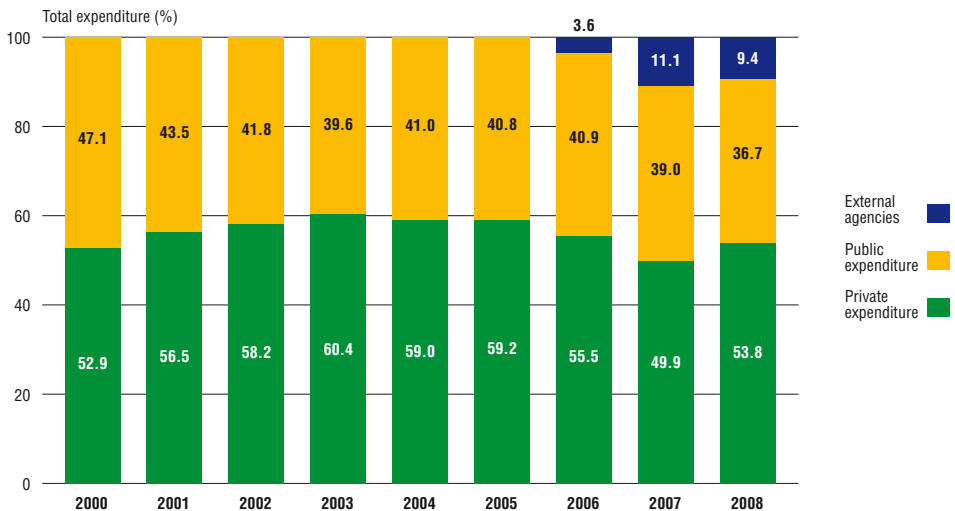
### 3.4 Revenue collection/sources of funds

The health system does not collect revenues itself but depends on allocations from republican and local budgets, and the timely transfer of mandatory health insurance fees from the Social Fund. In addition, two nongovernmental sources contribute to health financing: private out-of-pocket spending (official co-payments and unofficial payments) and external funds (see section 3.2).

As mentioned above, private out-of-pocket spending dominates total health expenditure. During the period 2000–2005, private out-of-pocket spending increased from 52.9% of total health expenditure to 59.2% (Fig. 3.7). One of the reasons for this was that private expenditure in this period increased much faster than public expenditure, on average by 15.4% per year between 2000 and 2003, compared with 4.3% for public expenditure. Since 2005, the share of private expenditure started to decrease, falling to 49.9% of total health expenditure in 2007, but increased again to 53.8% in 2008. In general, the increase in private expenditure correlates with the general economic climate, such as significant inflation in 2008. The decrease of the share of private expenditure since 2005 can be explained by the increase of funding from external agencies and an increase of public expenditure that exceeded that of private expenditure.

**Fig. 3.7**

Structure of total health expenditure, 2000–2008



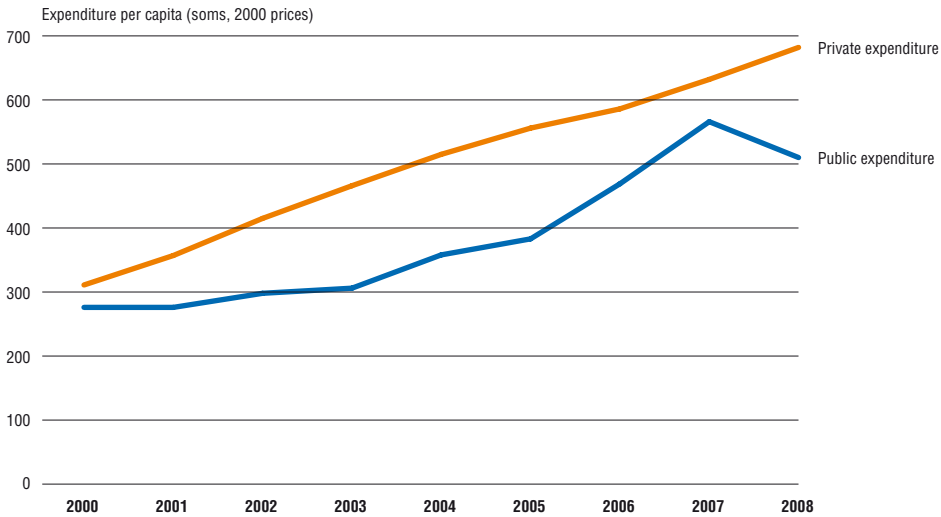
Source: Temirov & Narmanbetov, 2010.

Note: The data on funding from external agencies in 2006 only includes funding within the SWAp, while the data for 2007 and 2008 includes both SWAp funding and parallel funding from external agencies.

The trends of public and private health expenditure per capita for the period 2000–2008 are shown in Fig. 3.8. It illustrates how the gap between public and private expenditure per capita increased during 2000–2005, declined in 2006–2007 and increased again in 2008.

**Fig. 3.8**

Public and private health expenditure per capita, 2000–2008



Source: Temirov & Narmanbetov, 2010.

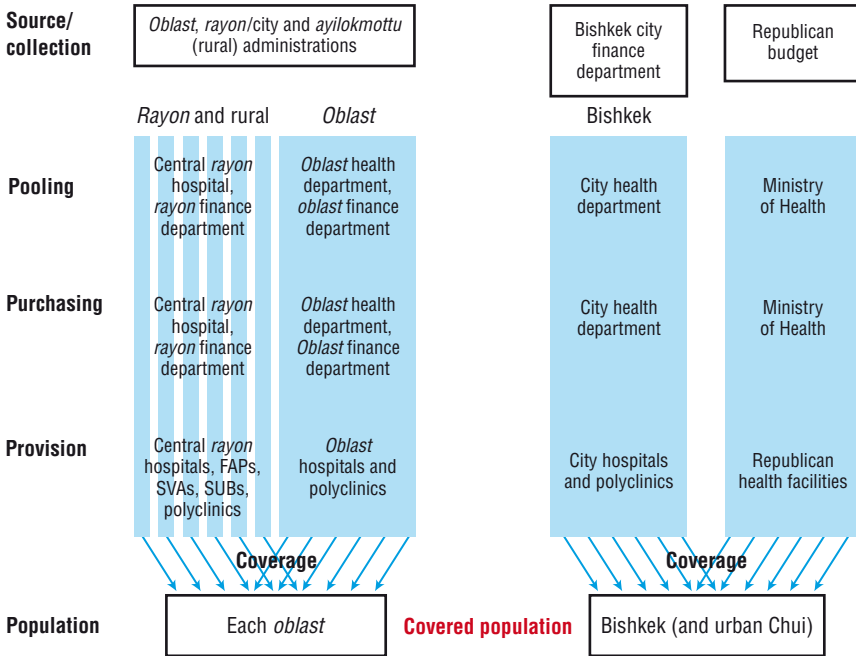
Note: Public expenditure includes expenditure from the state budget, MHIF and external budgetary support.

### 3.5 Pooling of funds

The health system Kyrgyzstan inherited from the USSR was fragmented. There were four government levels (republican, *oblast*, *rayon/city* and rural) and each had its own vertically integrated health system (Fig. 3.9). Each level carried out core functions of health systems: the collection of revenues, the pooling of funds, the purchase of health services and the provision of care. Within each *oblast*, these functions were implemented by each *oblast*, *rayon/city* and *ayilokmottu* (rural) government. In the capital, Bishkek, these functions were implemented by the Ministry of Health and the city health department. This organization of the health system resulted in the duplication of functional responsibilities and overlapping population coverage.



**Fig. 3.9**  
Pooling of funds and population coverage, 1991



Source: Kutzin et al., 2002.  
Notes: SVA: Rural ambulatory care clinic; SUB: Rural hospital.

Budgets for each level of government were funded from separate revenue sources: republican level institutes were funded from republican level taxes, *oblast* facilities were funded from *oblast* taxes, *rayon/city* facilities were funded from *rayon/city* taxes and village facilities (FAPs) were funded from *ayilokmottu* (rural) taxes. Therefore, legally and administratively, providers functioned as departments of the respective government level that funded them: that is, they were budgetary units of republican, *oblast*, *rayon/city* or *ayilokmottu* (rural) health and finance departments. Directors of health facilities had no autonomy over personnel, pay scales or financial management (Health Policy Analysis Project, 2002; Ibrahimova & Kutzin, 2002).

In 1997, a number of reforms were launched that affected the organization of the health system. In particular, the MHIF was established, together with new resource allocation mechanisms for the health sector. While still integrating pooling and purchasing, as in the previous budget-funded health system, the MHIF established a split between purchasing and provision, which was largely realized by the introduction of new output-based provider payment systems.

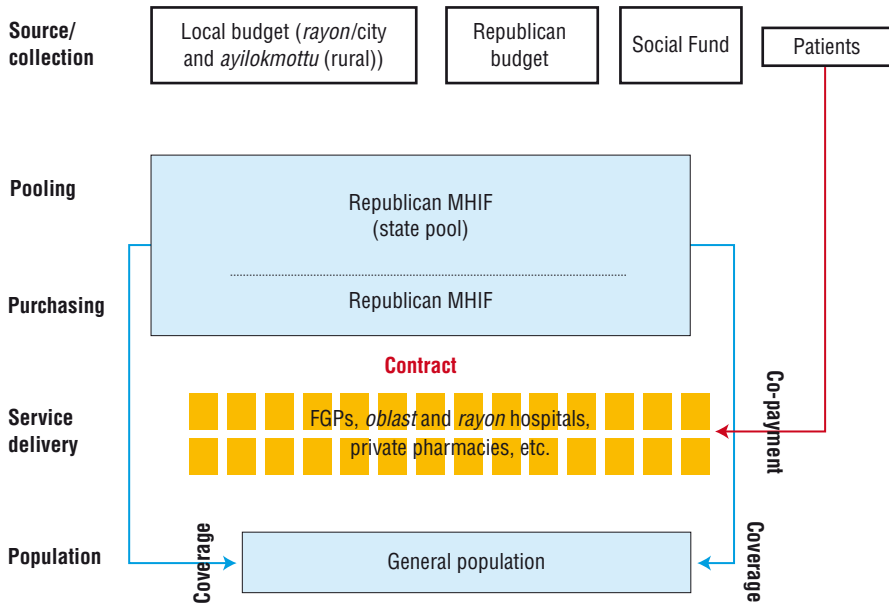
The MHIF also differed from the previous system in the sense that its pooling and purchasing were national in scope, rather than confined to an *oblast*, *rayon*/city or rural area (*ayilokmottu*). This meant that population coverage was not limited by geographical considerations and the corresponding duplicating and overlapping health care delivery systems. However, many other aspects of the health system did not change. In particular, there was no change to the organization of functions and population coverage in the budget-funded system, although attempts at reform were made (Health Policy Analysis Project, 2002; Ibraimova & Kutzin, 2002).

The fragmentation of health funds into small pools (i.e. local budgets) increased financing inequities across *oblasts*, *rayons*/cities and *ayilokmottus*, decreased the effectiveness of available resources, magnified the duplication in health care delivery systems, increased the financial burden borne by the population and diminished access to health services. The pooling of health funds at the national level since 2007 allowed a more equitable allocation of financial resources across *oblasts*, *rayons*/cities and *ayilokmottus* on the basis of a single per capita financing norm. It also allowed the outcome-oriented purchasing of health services based on population needs (Government of the Kyrgyz Republic, 2006; Kutzin et al., 2009). In addition, through risk pooling and cross-subsidizing health services provided to different social groups, the opportunity emerged to plan health resources based on population needs in different types of health service (taking into account health policy priorities), irrespective of the geographical characteristics of the regions, thus ensuring transparency of budget formation. This cardinal change in the budgeting process and the transition to a two-level budgetary system were introduced within the framework of local government reform (Government of the Kyrgyz Republic, 2006). By 2006, health revenues within the framework of the single payer system were pooled at *oblast* level and, beginning in 2007, at national level (Fig. 3.10). This model has since also been adopted in Kazakhstan, at least in so far as funding of hospital care is concerned (Rechel et al., 2011). Within the new system of pooling funds, there are distinct responsibilities for the MHIF and the Ministry of Health.

- The MHIF is responsible for financing individual health services provided under the SGBP and additional programmes financed by mandatory health insurance.
- The Ministry of Health is responsible for financing costly (high-technology) health services, as well as health services provided to the whole population. This includes the centralized procurement of pharmaceuticals, expensive medical equipment and other capital

**Fig. 3.10**

Pooling of funds and population coverage, 2008



Source: Based on data in Kutzin et al., 2002.

investment. The Ministry of Health is also responsible for financing health organizations that are paid from the republican budget and do not provide health services under the SGBP.

The transition from *oblast*-based pooling of funds to pooling at the national level allowed the MHIF to distribute funds more equitably for the SGBP and the Additional Drug Package. The Ministry of Health earmarked 61 million soms for this transition. Rural coefficients and coefficients for small towns were introduced at an additional expenditure of 56 million soms. The results of this initiative are encouraging. The financing gap between Bishkek and other *oblasts* for implementation of the SGBP declined substantially between 2005 and 2006 (Government of the Kyrgyz Republic, 2006; Ministry of Health, 2008).

### 3.6 Purchasing and purchaser–provider relations

While public health services still have the same purchaser and provider, which is the Ministry of Health, individual health services under the SGBP and the Additional Drug Package are purchased by the MHIF, which enters into contracts with health care providers. The contracts are based on the payment parameters of output-based provider payment systems. With the establishment of the MHIF, and the purchaser–provider split that came with it, the Kyrgyz health system experienced the transformation of purchaser–provider relations. The purchaser was no longer a passive intermediary that allocated predetermined budgets to facilities under its supervision (Health Policy Analysis Project, 2002; Kutzin et al., 2002).

The MHIF contracts with health care providers on an annual basis. Contracts specify rights and obligations of both health care providers and the MHIF, including the expected volume of services for a given year, the total amount to be paid by the MHIF for these services and sanctions for exceeding the value of the contract. However, many providers had not been able to manage their resources efficiently and had accumulated arrears, particularly for utilities and medical supplies. In addition, in the case of hospitals, they often exceeded the number of patients specified in their contracts, which led to increased and unplanned expenditure for the MHIF. This weakened the effectiveness and value of contracts (Kutzin et al., 2002). In addition, the case-based payment for hospital services, while reducing previously unjustifiably long stays in hospitals, had led to a growth in the number of admissions and unnecessary hospital referrals from primary health care facilities. Unfortunately, the situation has yet to be improved, although a number of attempts have been made to change it.

The Additional Drug Package has been facing similar challenges. A number of FMCs have been exceeding the total levels of financing planned by the MHIF on the basis of existing per capita norms. At the same time, others have been underusing funds intended for this programme. As a result, the MHIF had to redistribute the remaining funds to those areas that exceeded the planned allocations (Kutzin et al., 2002; Kutzin, 2003).

A step towards strengthening the role of contracts and improving the quality of health services was taken in 2008 with the introduction of performance indicators in provider contracts through the Ministry of Health Decree No. 97 (adopted 5 March 2008). These include indicators on key health outcomes

related to mother and child health and cardiovascular diseases, and on the quality of services and management, including the accumulation of arrears (Ministry of Health, 2008).

With the strengthening of the managerial and financial autonomy of providers, including transition from line-item budgets to consolidated budgets, the responsibility of providers is also increasing. Monitoring shows that a number of providers are unlikely to become financially sustainable, despite improvements in their structure and staffing. Capacity building of health care providers, particularly in financial management, is one of the key priorities of current health reforms (Government of the Kyrgyz Republic, 2006).

## 3.7 Payment mechanisms

### 3.7.1 Paying for health services

#### Primary health care

In the first phase of health reforms (1996–2005) capitation-based payment was introduced in primary health care. A gradual increase of the capitation rate allowed an increase in funding for primary health care, both in absolute terms and relative to total health expenditure. The share of primary health care in total health financing increased from 16% in 2000 to 30% in 2004 and 38% in 2009.

Primary health care has been strengthened significantly and more conditions are being managed at primary care level by family practitioners, although there is scope for further improvement (Atun, 2005). Several studies that preceded the *Manas Taalimi* reform programme have found that there were still high rates of referrals from FGPs to narrow specialists in FMCs or hospitals. One of the main reasons for this is the lack of economic incentives for FGPs to provide appropriate treatment at primary level rather than referring their patients to higher levels of care. This is partly because of the separate capitation financing norms for FGPs and for the specialty services provided by FMCs. While they protect FGP expenditure, they also provide them with incentives to refer patients to narrow specialists. The FMCs, by comparison, face difficulties in expanding their staffing with narrow specialists and in using the funds rationally that are intended for the provision of specialty services in outpatient settings. The second major reason that primary health care providers have not yet expanded

their scope of services to the extent planned is that the health system is still dominated by specialists who have yet to recognize the benefits of primary health care and who do not want to undermine their own referrals.

The transfer of ambulance services to FMCs in 2004 provided additional incentives to improve the quality of health services and the performance of family doctors. However, there was no change in the financing of ambulance services, which continues to be based on traditional historic budgeting per ambulance team.

A number of measures are being planned to improve the effectiveness and quality of primary health care. In addition to improving the qualifications of family doctors and the equipment of FMCs, these include an increase in the managerial and financial autonomy of primary health care providers and the introduction of performance-based payment incentives, as has been suggested in the context of the Health Systems Strengthening Programme of the Global Alliance for Vaccines and Immunisation (GAVI Alliance 2011). Health promotion, disease control and immunization activities are partly integrated in the primary health care system. Immunoprophylaxis is carried out within the framework of the SGBP, while the procurement of vaccines, serums and diagnostic materials is done centrally by the Ministry of Health.

## Hospital services

Hospitals are paid per case according to clinical cost groups, a type of diagnosis-related groups. The phased introduction of the SGBP and patient co-payments in 2001–2004, the re-classification and re-calibration of clinical cost groups in 2003 and the transition to the classification of cases based on the 10th revision of the *International Classification of Diseases* (WHO, 1992) required a thorough analysis of hospital payment methods to find solutions for cases above the volumes set in the contracts with the MHIF (Government of the Kyrgyz Republic, 2006).

Overall, the introduction of case-based payment has created incentives to increase the effectiveness of hospital performance, reduce the average length of stay and increase the share of direct treatment expenses. It also introduced payment for services rather than infrastructure or buildings and required an alignment of payments with the SGBP. The use of modern information technology permits in-depth analyses to be conducted of the scope and structure of health services provided to different population categories, and to plan measures that aim to improve effectiveness and the rational use of funds (Kutzin et al., 2002; Kutzin, 2003; Government of the Kyrgyz Republic, 2006).

However, there continues to be an overreliance on hospital services for conditions that could be treated at primary care level. Hospitals have little incentive to reduce overcapacity and increase efficiency. As funding from budgetary and MHIF sources is insufficient for patient treatment costs, hospitals are trying to attract patients who can make out-of-pocket payments, and the number of treated cases far exceeds the number stipulated in contracts with the MHIF. Hospitals in Chatkal and Chong-Alay *rayons*, as well as some rural district hospitals located in remote and difficult-to-reach areas where there is virtually no transport connection in wintertime, are in a very difficult financial situation. These hospitals require different payment methods (Government of the Kyrgyz Republic, 2006).

### Co-payments

Patient co-payments were introduced in 2001–2004 because of insufficient levels of budgetary and MHIF financing. They were intended to reduce the high levels of informal payments and the unnecessary consumption of health services. The 1992 Health Protection Law stipulated that the population needed to pay for health services that are not covered by the SGBP. Although setting the co-payment levels is far from an exact science, the comprehensive health purchasing reforms have made it easier to establish a comprehensive linkage between public payment and private co-payments for SGBP services.

Co-payment levels were based on surveys of informal payments and considerations of affordability. Socially vulnerable groups were fully or partially exempted. On average, co-payments increased from 20.8% of the average monthly wage (302 soms) in 2001 to 30.8% (679 soms) in 2004. Co-payment levels vary significantly across regions and depend on the disease profile, social status and whether there is a referral for hospitalization. In line with government policy, there was no significant increase in the level of co-payments between 2005 and 2010.

### High-technology health services

To cover the costs of high-technology health services, the Ministry of Health established a special fund in 2002, the High Tech Fund, with contributions from the republican budget, humanitarian aid and fees of legal and physical entities, sponsors, and public, commercial, religious and international organizations. The fund operates by establishing payment systems and selection and waiting list processes for selected high-cost health services.

## Capital investment

One of the objectives of the health reforms that have been undertaken in the last few years is to improve the quality of health services through a renewed and better equipped infrastructure of health care providers. The share of funds spent on capital investment in the 1990s was less than 5% of total state health expenditure. Over recent years, however, considerable capital investment in new or refurbished facilities and equipment has been undertaken in the framework of different projects and programmes financed by external agencies such as the World Bank, the Asian Development Bank, USAID, and the German, Swiss and Japanese governments (Government of the Kyrgyz Republic, 2006). However, it is still not sufficient and a number of health facilities, including hospitals, FMCs, FGPs and FAPs, are in need of repair and new equipment.

## Priority programmes

Priority programmes are not yet fully integrated into the general health care delivery system. However, there are differences across programmes in terms of integration. Priority programmes such as mother and child health, family planning and reproductive health, and cardiovascular diseases are much more integrated into the system than programmes for infectious diseases, in particular tuberculosis and HIV/AIDS, which are still contained in separate vertical systems.

Although purchasing of individual health services is primarily carried out under the SGBP, 24 hospitals are still financed from the republican budget based on line items. In addition, procurement of drugs and medical supplies within priority programmes, such as those for tuberculosis, reproductive health, HIV/AIDS or sexually transmitted infections, is carried out centrally by the Ministry of Health or on a grant basis through international organizations.

## Medical education and research

The Ministry of Health finances the educational activities of two institutions, the Kyrgyz State Medical Academy and the Kyrgyz State Medical Institute of Postgraduate Training and Continuous Education. The funds come from the republican budget and are used for salaries, utilities and stipends. The share of the republican health budget devoted to education stood at a little over 7% in 2009. Medical colleges responsible for training mid-level health personnel are financed from local budgets.



Research activities are financed by the state through the State Agency on Intellectual Property, covering the salaries of researchers and their Social Fund contributions. Research studies are carried out and financed only after approval by the Expert Council of the Ministry of Health and the Ministry of Education. The Ministry of Health aims to increase the capacity of research laboratories to the level of reference laboratories by providing them with modern equipment, staff training and accreditation. According to the Law of the Kyrgyz Republic “On Public Health” (2009), which also specifies scientific support of public health, the NGO Preventive Medicine is planned to be reorganized in 2011–2012 into a scientific research institute of public health under the Ministry of Health, although the main activities and structure of this new research institute still have to be determined. In general, scientific activities are still underfunded, with only expenditure on line-items such as wages and deductions covered by the Social Fund and no funding for items such as travel, transportation or equipment. The limited funds for research activities may, therefore, affect the quality of the studies and may also lead to the loss of skilled staff.

However, funds intended for the provision of health services to patients are often used for scientific research. Although some reforms have been initiated, starting with nursing education, overall, the current approaches to financing medical education and research do not take sufficient account of regional disparities in the distribution of health workers and the need for research underpinning health reform initiatives (Government of the Kyrgyz Republic, 2006).

## **Private sector**

Private sector development has become a key health policy issue over recent years. Contracting with private providers is one of the instruments of private sector development that is currently being discussed. A proposal on tax exemption for the health sector has been developed; it will allow changing the legal status of health care providers from state institutions to state enterprises (Checheybaev et al., 2008). Such a change would increase managerial and financial autonomy, further solidify the purchaser–provider split, improve the accountability of health care providers and create a level playing field for competition between public and private providers.

### 3.7.2 Paying health care personnel

The salary levels of health workers vary, depending on education, professional category, workload and other factors (Kojokeev, Murzalieva & Manjieva, 2008; Manjieva, Kojokeev & Murzalieva, 2008). Although health financing reforms and new output-based provider payment systems have substantially reduced fixed costs and there have been changes in salary payment mechanisms, allowing the distribution of savings, salaries of health workers are still quite low compared with other sectors. An annual increase of salaries in the social sector, including the health system, has become part of national policy. However, only in 2007 did the salaries of health workers come close to the minimum consumer basket, with wages of nursing and auxiliary medical personnel only reaching slightly more than 50% of the minimum consumer basket. Low salaries in the health sector lead to poor motivation and quality of care, as well as to requests for informal payments. They also make the profession unattractive for school leavers and graduates, leading to an ageing of the health workforce. In 2007, 64% of doctors and 44% of nurses were at or close to retirement age (Kojokeev, Murzalieva & Manjieva, 2008).

## 4. Physical and human resources

### 4.1 Physical resources

#### 4.1.1 Infrastructure

The infrastructure of Kyrgyzstan's health system comprises a network of organizations providing individual and public health services. In 2009, this network consisted of 72 FMCs (including 678 affiliated FGPs), 19 free-standing FGPs, 26 GPCs and 122 hospitals with 25 975 beds (Republican Medical Information Centre, 2010). The network of public health facilities in 2008 consisted of 56 organizations: the Department of State Sanitary-Epidemiological Surveillance, 5 republican, 2 city and 48 *rayon* and town facilities (Ministry of Health, 2009b).

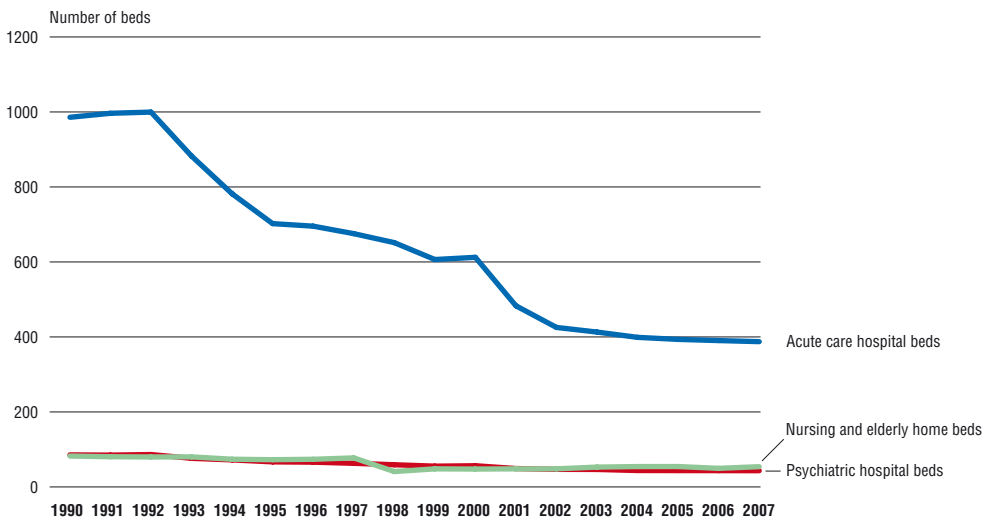
The health care infrastructure inherited from the Soviet period had facilities of all types in every administrative and geographical unit: in each *oblast* there was an *oblast* hospital, an *oblast* maternity hospital, an *oblast* children's hospital and several other *oblast* facilities providing specialized services. In addition, in each *rayon* there was a *rayon* hospital, several *rayon* facilities providing specialized services and local hospitals, which were small and quite inefficient (Meimanaliev et al., 2005). At the republican level, the fragmentation was significantly worse, as Bishkek had a large number of separate specialized hospitals, such as for cardiology, haematology and urology.

The restructuring of the network and reduction of the enormous excess capacity in the hospital sector became important aims of the first phase of health reforms. Under the *Manas* reform programme, many hospital buildings were vacated and small district hospitals first became branches of territorial hospitals and were then transformed into primary health care facilities. As a result of this restructuring, the number of hospitals decreased from 256 in 2001 to 143 in 2004. There have also been substantial reductions in the number of beds in acute care hospitals, from 1000 per 100 000 population in 1992 to 387 in 2007 (Fig. 4.1). In view of the fact that reducing the number of beds does

not always reduce fixed costs, hospital space was reduced by 47% between 2000 and 2005 (Government of the Kyrgyz Republic, 2006) Activities are now being carried out with the intention of improving efficiency and reducing facility costs, such as through the introduction of energy-saving technologies (Meimanaliev et al., 2005).

### Fig. 4.1

Beds per 100 000 population in acute care hospitals, psychiatric hospitals and nursing and elderly homes in Kyrgyzstan, 1990–2007

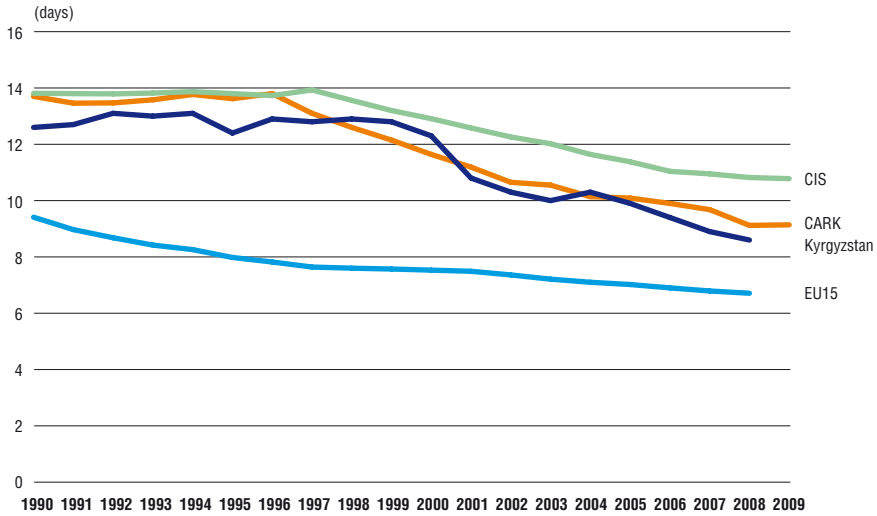


Source: WHO Regional Office for Europe, 2011.

The average length of stay in acute care hospitals has also been driven down considerably, to a level below CARK and CIS averages (Fig. 4.2), while the bed occupancy rate has increased to close to 95% (Fig. 4.3).

**Fig. 4.2**

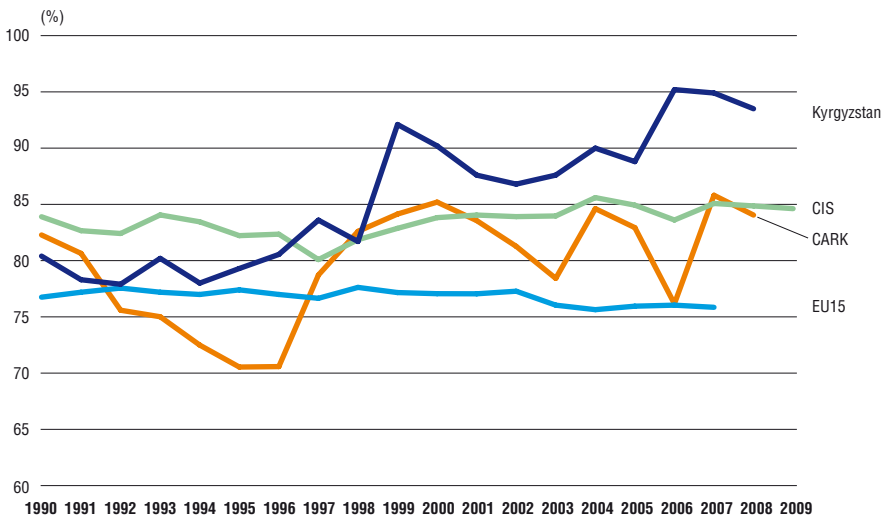
Average length of stay in acute care hospitals in Kyrgyzstan, CARK, CIS and EU15, 1990–2009



Source: WHO Regional Office for Europe, 2011.

**Fig. 4.3**

Bed occupancy rate in acute care hospitals in Kyrgyzstan, CARK, CIS and EU15, 1990–2009

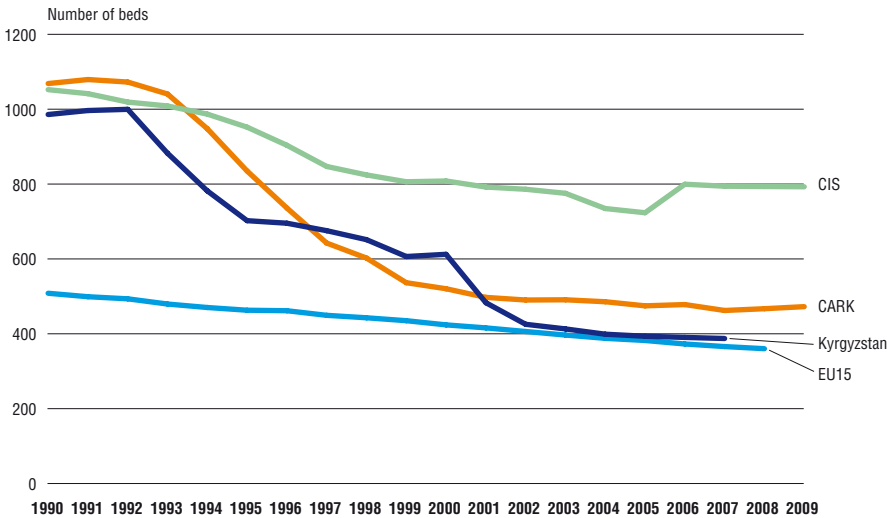


Source: WHO Regional Office for Europe, 2011.

In terms of the ratio of beds per population in acute care hospitals, by 2007 Kyrgyzstan had reached levels far below the CIS average and close to the EU15 average (Fig. 4.4).

**Fig. 4.4**

Beds in acute care hospitals per 100 000 population in Kyrgyzstan, CARK, CIS and EU15, 1990–2009



Source: WHO Regional Office for Europe, 2011.

Kyrgyzstan has several remote areas with small populations of around 20 000–25 000. In these places, an individual approach to manage health facilities is needed because it is not cost-effective to maintain territorial hospitals and FMCs there. The Ministry of Health has decided to establish centres of general practice, which fulfil the functions of FMCs and minor hospitals. For hospitals that cannot be closed for geographical or socioeconomic reasons, despite their failure to survive economically under the conditions of output-based payment, customized financial mechanisms are being applied.

#### 4.1.2 Capital stock and investments

In the years after independence, public expenditure on health at both national and local levels declined substantially, and very few resources were allocated to maintaining or renewing the capital stock of health facilities. As a result, the physical condition of many facilities deteriorated. Within the framework of the latest reforms, funds for capital investment have come mainly from

grants and loans provided by external agencies such as the World Bank, the German Development Bank, the Asian Development Bank, the Swiss Agency for Development and Cooperation, and the Japan International Cooperation Agency. These funds allowed the reconstruction of a number of health facilities, although funds for maintenance were subsequently lacking and some buildings fell again into a state of disrepair.

The Kyrgyz Government has now embraced the target of increasing state expenditure on health. As a result, the Ministry of Health has been increasingly able to provide resources for capital investment since 2003–2004, although these do not exceed 5% of overall public expenditure on health. Moreover, with the introduction of administrative and financial autonomy, health facilities have become authorized to use funds from their consolidated budgets for recurrent repairs. However, overall funds for capital investment are still insufficient.

#### **4.1.3 Medical equipment, devices and aids**

The medical equipment of health facilities has not been properly maintained or updated since the country's independence. Despite significant investments, mainly from the external agencies mentioned above, vital tools such as X-ray, respiratory and anaesthetic equipment have become outdated in many hospitals and need replacement. The function and maintenance of available equipment are, therefore, serious concerns. Equipment purchased through donor funds often remains unused as there is a lack of funds for maintenance. To address this problem, the Ministry of Health has created the Technology Maintenance Fund within the framework of the *Manas Taalimi* reform programme. Following requests from health facilities, this fund provides resources for the maintenance of medical equipment. Moreover, the Ministry of Health has obliged all health facilities to allocate funds from their consolidated budgets for the maintenance of equipment (Government of the Kyrgyz Republic, 2006). However, this order has not been implemented consistently and the maintenance of existing equipment remains a problem.

If medical equipment is obtained through external agencies, procurement follows the elaborated procurement procedures of the World Bank, ensuring that the medical equipment is of acceptable quality. No similar procurement procedures are in place for equipment obtained directly by health facilities. To improve procurement of medical equipment, spare parts and devices, as well as the management of repairs, a national database of medical equipment and supplies has been created. So far no health technology assessment policy has been adopted.

#### 4.1.4 Information technology

Development of health information technology in Kyrgyzstan started with the health reforms financed by the World Bank, with technical assistance provided by the USAID ZdravReform and ZdravPlus projects. Initially, health facilities started to be equipped with computer hardware. To identify priorities in developing the unified health information system (see section 2.6) and to introduce new information technology, the Ministry of Health approved the Concept of Developing a Unified Health Information System for 2001–2010 and an action plan for implementation of this concept for 2001–2005. As mentioned above, the Concept provides for the establishment of a unified health information system under the Ministry of Health, with a central information portal and three levels of data collection (national, *oblast* and *rayon/city*). The Concept included the following objectives:

- to create a standardized information technology for supporting units that produce reports and collect and process data;
- to create a network for data transmission;
- to develop standards for information exchange;
- to ensure the safety of the system's operation; and
- to ensure reliability of data storage and transfer.

To ensure the effective functioning of health organizations, the integration of software products developed earlier (population assignment to FMCs, case-based financing, outpatient clinical information formats and Additional Drug Package) is under way. These software products function independently from each other, but do not allow comprehensive processing and analysis of data. The integration of software products aims to achieve a single format of data storage, making it possible to retrieve data on disease incidence, age categories and doctors' performance.

Within the network for provision of information to the Ministry's divisions, an internal information portal was created. This provided a single entrance point to the health information system and gave access to comprehensive information for data analysis, planning and predictions.

The *Manas Taalimi* reform programme puts particular emphasis on the further development of health information systems and health technology. A number of measures are envisaged (Government of the Kyrgyz Republic, 2006), including:



- the development and introduction of mechanisms to ensure the safety of information systems and data confidentiality;
- the introduction and adaptation of international medical information standards; and
- further introduction of software products for the collection, processing and analysis of data on health and health care.

## 4.2 Human resources

### 4.2.1 Trends in health care personnel

In 2009 the health system in Kyrgyzstan employed 230 physicians and 517 nurses per 100 000 population (both full-time equivalents). The health personnel per 100 000 population is shown in Table 4.1.

**Table 4.1**

Health personnel per 100 000 population, 1990–2007 (selected years)

Type of personnel	1990	2002	2003	2004	2005	2006	2007
Physicians (FTE)	429	295	281	276	263	262	278
Dentists (FTE)	26	19	18	16	17	17	16
Pharmacists (PP)	28	3	3	3	3	3	2
Nurses (FTE)	1 020	552	545	539	395	512	544
Midwives (FTE)	64	40	37	35	38	33	36

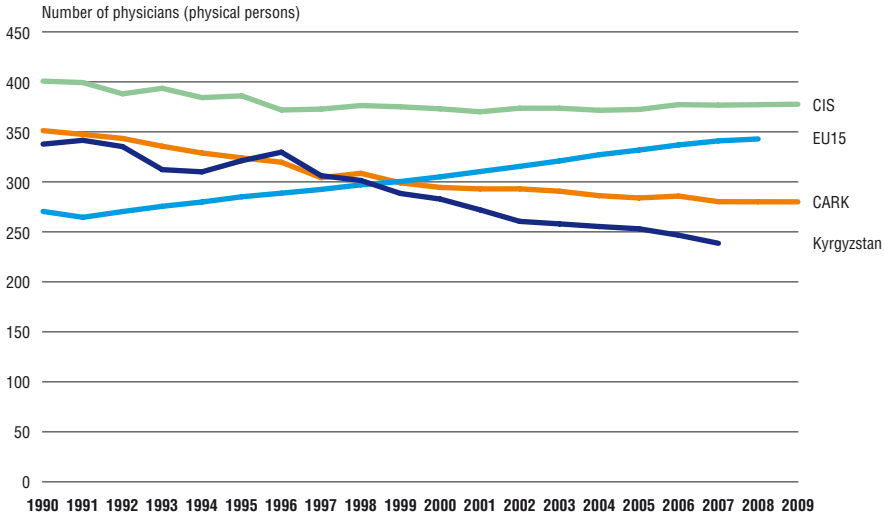
Source: WHO Regional Office for Europe, 2011.

Notes: FTE: Full-time equivalent; PP: Physical person.

When these figures are compared with averages for CARK, CIS and EU15, it becomes apparent how steep the fall in health personnel in Kyrgyzstan was between 1990 and 2009 (Fig. 4.5 and Fig. 4.6). Fig. 4.7 compares the number of physicians and nurses in Kyrgyzstan with other countries in the WHO European Region.

**Fig. 4.5**

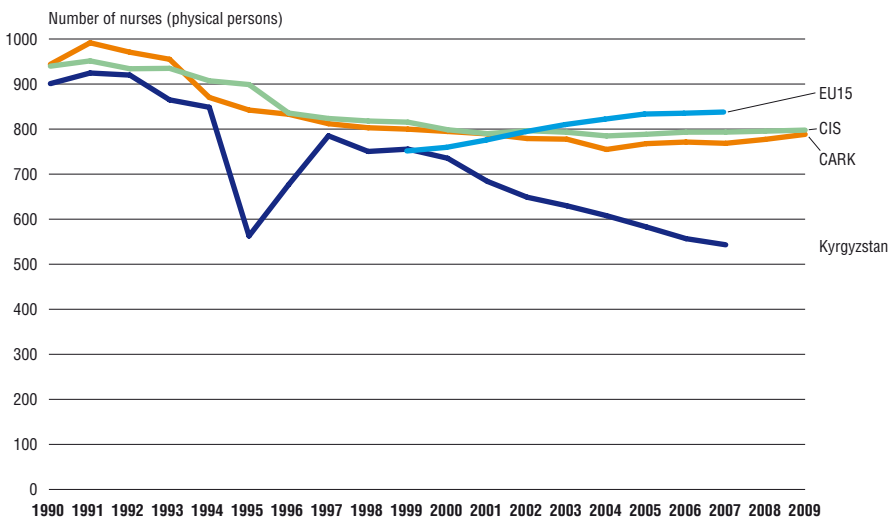
Number of physicians (physical persons) per 100 000 population in Kyrgyzstan, CARK, CIS and EU15, 1990–2009



Source: WHO Regional Office for Europe, 2011.

**Fig. 4.6**

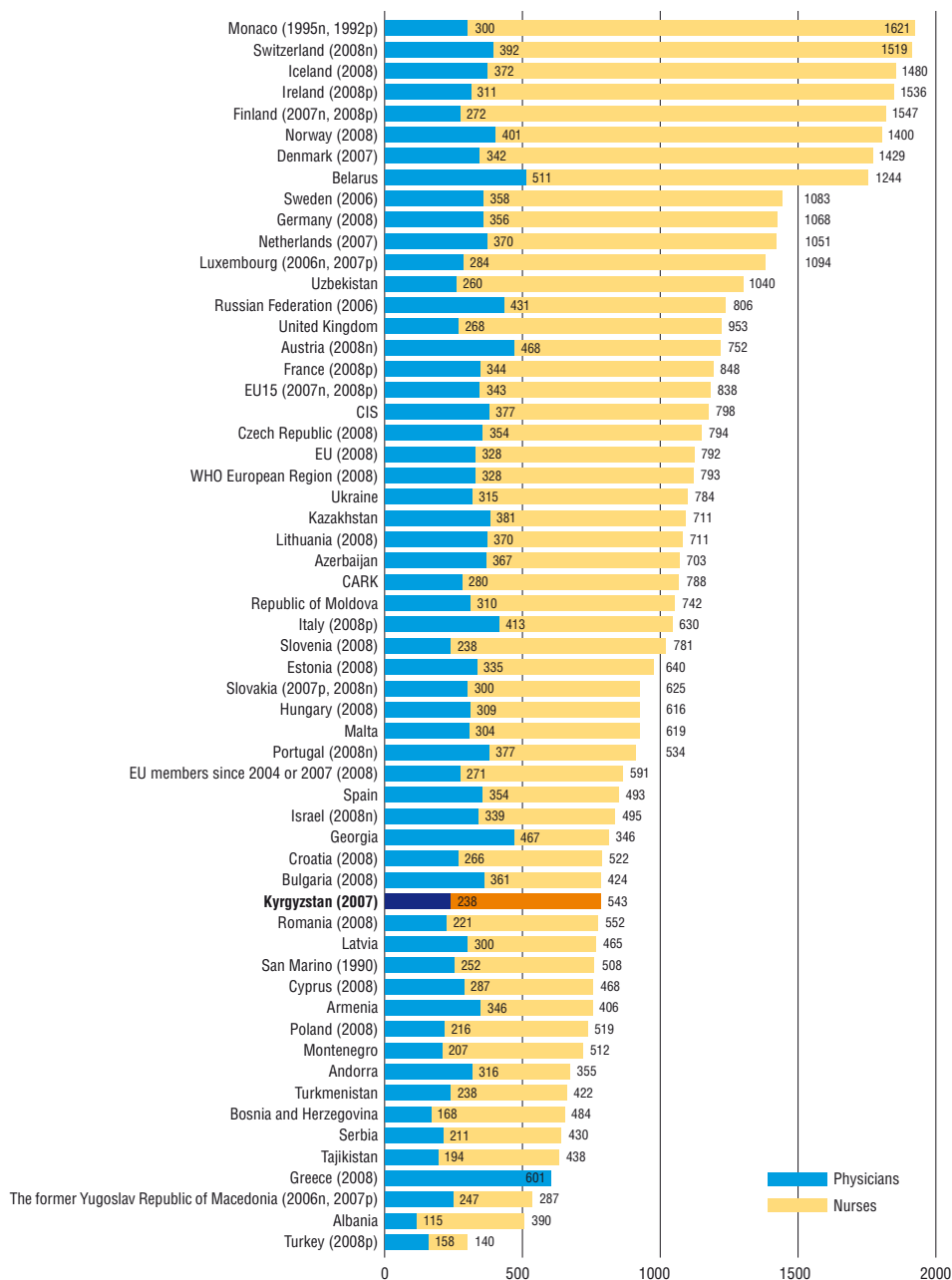
Number of nurses (physical persons) per 100 000 population in Kyrgyzstan, CARK, CIS and EU15, 1990–2009



Source: WHO Regional Office for Europe, 2011.

**Fig. 4.7**

Number of physicians and nurses (physical persons) per 100 000 population in the WHO European Region, 2009 (or latest available year)



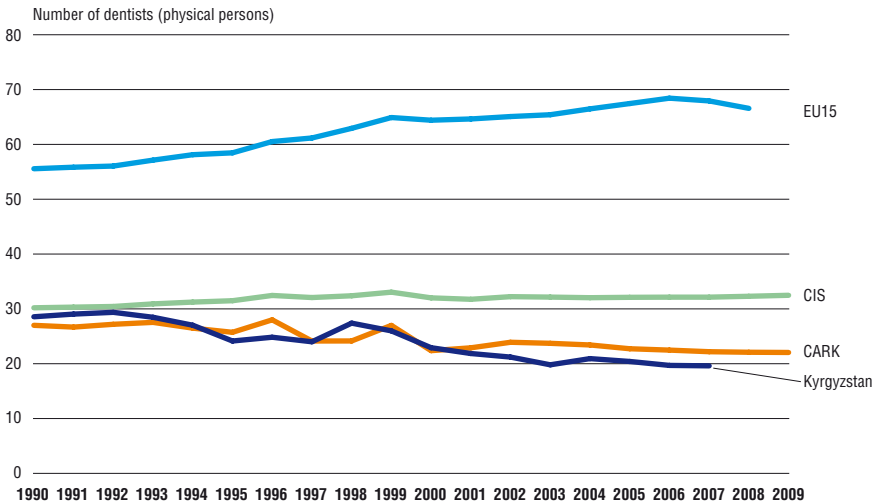
Source: WHO Regional Office for Europe, 2011.

Notes: n: nurses; p: physicians.

Kyrgyzstan also witnessed declines in the ratio of dentists and, particularly, pharmacists between 1990 and 2009 (Fig. 4.8 and Fig. 4.9).

**Fig. 4.8**

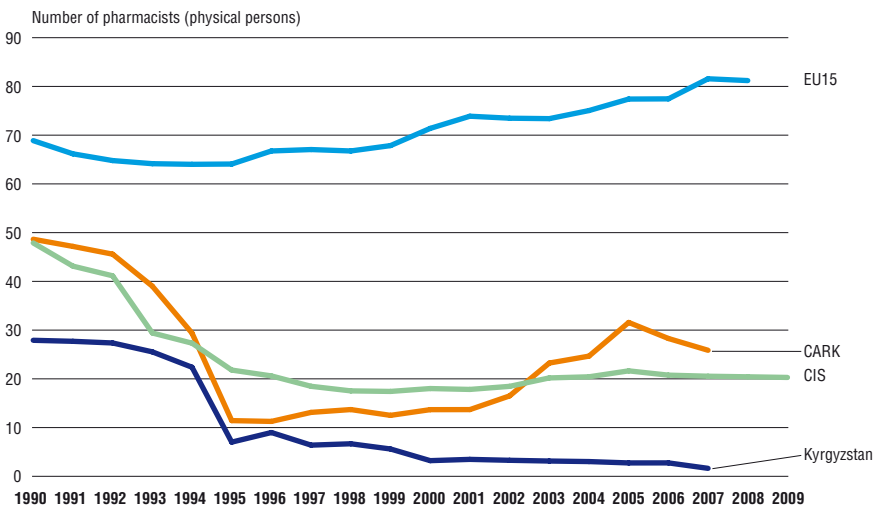
Number of dentists (physical persons) per 100 000 population in Kyrgyzstan, CARK, CIS and EU15, 1990–2009



Source: WHO Regional Office for Europe, 2011.

**Fig. 4.9**

Number of pharmacists (physical persons) per 100 000 population in Kyrgyzstan, CARK, CIS and EU15, 1990–2009



Source: WHO Regional Office for Europe, 2011.

One of the critical challenges for human resources in Kyrgyzstan is their uneven regional distribution (Table 4.2). The urban regions are better staffed than the rural ones, where shortage of physicians is sometimes critical. In some areas of the country, there are only about 100 physicians per 100 000 population.

**Table 4.2**

Geographical distribution of physicians and nurses per 100 000 population, 2009

<i>Oblast</i>	Physicians	Nurses
Issyk-kul	153	423
Naryn	154	575
Talas	141	490
Chui	151	345
Osh	151	552
Jalalabad	134	499
Batken	146	651
Bishkek city	277	328
Osh city	243	470
Kyrgyzstan total	230	517

Source: Republican Medical Information Centre, 2010.

There is an increased rate of both internal and external migration among health workers in Kyrgyzstan. In 2009, 1099 doctors and 3080 nurses left government health facilities; of those, 60 doctors and 180 nurses emigrated (Ministry of Health, 2010b). Apart from migration, another reason for the higher proportion of physicians in urban areas is the concentration of health facilities in the capital and *oblast* centres. Rural health facilities, in contrast, are often poorly equipped and supplied, and living conditions in rural areas tend to be worse.

The system in which medical graduates were allocated to specific (mostly rural) areas was discontinued in the early years of transition. However, given the current crisis in human resources, Article No. 97 of the 2005 Health Protection Law re-established mandatory postings to rural areas. It stipulated that students who received state scholarships for their medical studies must serve in assigned rural areas for a minimum of two years. The article also charged local governments with responsibility to create conditions for recruiting young health workers locally (Meimanaliev et al., 2005).

In order to improve the supply of human resources to rural areas and to mitigate the impact of migration, the Ministry of Health has undertaken several other measures to attract and retain health professionals in rural areas. One such programme, the Deposit Programme for Doctors, was originally developed

to attract young doctors to rural areas. It is a three-year programme in which doctors have to be willing to relocate to one of the remote villages considered to have an acute shortage of medical personnel. In return, they receive 3000 soms (US\$ 83) per month into their bank account (subject to income tax), which can only be withdrawn every six months (Manjjeva, Kojokeev & Murzalieva, 2008). After the first year of the programme implementation, it became clear that it was failing to attract medical graduates and young physicians; by the end of 2007, only 58 of 150 places had been filled. The Ministry of Health decided to allow doctors to apply for their current positions so as to retain, at least, those physicians already working in these villages. The programme has thus become a tool for keeping existing physicians from leaving, rather than an instrument for attracting new ones. As of early 2009, there were 147 participants in the programme. Out of those, 20 were graduates of clinical residency and postgraduate study, while the remaining 127 were doctors working at the local level. By early 2010, the total amount paid to doctors working in this programme was 6.3 million soms.

Another measure to attract and retain health workers in rural areas is a gross salary bonus of 10%. The effectiveness of this measure has not yet been evaluated. Under a grant from the Health System Strengthening Programme, the MHIF is planning to pilot a new system of incentives for primary care providers (Akkazieva, Samiev & Temirov, 2009). Based on their progress made with regard to indicators on maternal and child health, cardiovascular diseases and primary care-sensitive conditions, workers in FGPs will receive small bonuses to their salaries. While this measure was designed to target performance, and not the shortage of health workers, it is expected to have a positive impact on the motivation of doctors in rural areas. Other steps to mitigate the human resource crisis include capacity building of mid-level staff, such as *feldshers*, and attempts to decentralize training.

As mentioned above, the Ministry of Health has re-established the mandatory posting of state-funded medical graduates to rural areas. However, a growing number of graduates do not go to the health facilities to which they were assigned. In previous years, about 50% of all graduates accepted employment in the village or town to which they had been sent by the government. This fell to about 20% in 2007. The majority of graduates choose to stay in Bishkek city and Chui *oblast*.

A one-year internship programme was re-established in 2007. It requires students to undertake practical training in the country's *oblasts* (*oblast* merged hospitals, *oblast* FMCs, territorial hospitals and *rayon* FMCs). The main aim

of the programme is to improve the quality of medical education in terms of practical skills and clinical experience, but it also aims to attract and retain young specialists outside of major urban areas. However, it is unclear whether the benefit of trying to mitigate the rural human resources crisis will outweigh the danger of reducing two-year residency programmes to one-year residencies, in addition to the problem of limited supervision inherent in the internship programme.

To improve human resource planning, the Ministry of Health has established a database on personnel employed in health facilities in the public sector. However, a comprehensive system of human resource planning in the health sector has not yet been established.

The Ministry of Health has divided professional qualification into three categories: highest, first and second. Criteria for these categories include examination results, length of work experience, completion of retraining courses and assessment of the past three years of work. Qualifications are subject to confirmation every five years. Specialists with a professional category are eligible for supplements to their salaries.

#### **4.2.2 Training of health care personnel**

In Kyrgyzstan, training of physicians is provided by four institutions for medical education. The number of medical schools in Kyrgyzstan was reduced from nine in 1991 to four in 2010 as a result of the introduction of accreditation for medical education, started jointly with the Ministry of Education and Science. In 2010, physicians were trained at the following institutions.

*Kyrgyz State Medical Academy.* This was established in 1939 in Bishkek and is the leading medical university. It had an output of 467 medical graduates in 2007 (compared with 782 in 1996).

*Osh State University.* This was established in 1992 in Osh, a city of 300 000 inhabitants in the southern part of Kyrgyzstan. It started to graduate students in 1999 and had an output of 338 medical graduates in 2007.

*Kyrgyz-Russian Slavic University.* The university was founded in 1993 in Bishkek and is supported by the Russian Federation. Between 2002 and 2007, it had an output of 66 medical graduates per year.

*Kyrgyz-Uzbek University.* This university was founded in 1997 and is located in Osh. Its first class of 25 medical students graduated in 2006.

Admission to clinical practice is regulated by the 2005 Health Protection Law. It stipulates that medical and pharmaceutical graduates should only practise after receiving a licence or certificate, and that registration should follow procedures established by the Ministry of Health. Certification (attestation) of medical and pharmaceutical workers is carried out by the Ministry of Health and professional associations.

The admission process to medical education has been revised as a result of a nationwide testing of secondary school graduates. Only students (both state- and self-funded) with excellent grades are admitted to medical universities. The medical students who have obtained the best grades at the end of secondary school (better than 80% of all pupils) are entitled to receive financial support from the state and can pursue medical studies free of charge. Other students have to pay for their training. Quotas have been established to allow for some balance between rural and urban students. The number of state-funded students is determined by the Ministry of Education and Science, in coordination with the Ministry of Health.

The basic training leading to a medical diploma lasts five to six years, depending on specialty, followed by one to four years of additional training. Internship and clinical residency training differ according to the specialty chosen. Those who want to specialize further enter *aspirantura*, a two-year clinical residence in a scientific research institute or national centre. *Aspirantura* graduates can practise as narrow specialists. They can start working on a candidate thesis to obtain the academic degree of Candidate of Medical Sciences within two years after concluding their *aspirantura*. A Candidate of Medical Sciences can start working on a doctoral thesis to obtain the academic degree of Doctor of Medical Sciences within three years after the approval of their candidate thesis. Decisions on the award of academic degrees and titles are taken based on the regulations approved by the National Certification Commission. 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 Kyrgyz State Medical Institute of Retraining and Continuous Medical Education has been leading in the development of primary health care and the introduction of family medicine. The Institute developed and implemented a comprehensive primary health care education and training strategy between



1995 and 2005, with support from a number of international donors, including the World Bank, the USAID ZdravPlus project, Kyrgyz–Finnish projects, and other development partners. The strategy initially included 11-month training courses in family medicine, the establishment of *oblast* level family medicine training centres and the retraining of all primary health care doctors and nurses in the country.

When this large task was completed, the strategy evolved to establish a modern continuous medical education programme, introduce distance learning and establish a residency in family medicine. By design, the continuous medical education modules are closely linked to the implementation of clinical practice guidelines and integrated with facility-level quality improvement processes for priority programmes. Unlike in some other countries of central Asia and the former USSR, the Kyrgyz State Medical Institute of Retraining and Continuous Medical Education and its international development partners worked closely together to ensure an integrated training mechanism for primary health care rather than a number of separate, vertical training programmes. Family medicine trainers have not only been incorporated into the budget but also formed an NGO entitled the Family Medicine Specialists Association and they contract for a variety of training activities.

The training of mid-level health personnel is provided by 10 medical colleges and 2 schools of nursing subordinated to the Kyrgyz State Medical Academy. The training of mid-level health personnel consists of 3 years of full-time education, following 11 years of school. The School of Nursing of the Kyrgyz 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 (Pirnazarova & Schlickau, 2010).

As in other countries of the former USSR, the system of medical education in Kyrgyzstan was developed in the Soviet period. Several weaknesses were associated with this system. The knowledge obtained by graduates did not fully correspond to the practical requirements of health care, and public health was neglected, particularly with regard to disease prevention.

To address these challenges, the Concept for Reforming Medical Education was developed with the aim of improving the system of higher medical and pharmaceutical education. The intentions are to:

- improve the regulatory and legal framework of medical and pharmaceutical education;

- modernize the system of training medical and pharmaceutical staff in accordance with international standards;
- revise the admission system for institutions of medical and pharmaceutical education;
- revise the quality assessment system, levels of professional competence and admission to the profession;
- introduce an accreditation system in medical education;
- consolidate the resource base of institutions of medical and pharmaceutical education and provide them with modern equipment; and
- develop human resources by training and evaluating scientific and teaching staff in accordance with international standards.

## 5. Provision of services

### 5.1 Public health

Public health services in Kyrgyzstan are provided by the SSES centres, the health promotion services, the Republican Centre for Quarantine and Dangerous Infections, the NGO Prophylactic Medicine, the Department of State Sanitary-Epidemiological Surveillance, and the Republican AIDS Association (see Chapter 2).

The core responsibilities of the SSES centres are to control infectious disease through surveillance, analysis, treatment and prevention, as well as to carry out sanitary inspection and control. Disease surveillance is carried out for 30 infectious and 5 parasitic diseases and aims to provide a response at local levels to outbreaks in consultation with local administrations. Sanitary inspection and control is carried out for food and water safety, occupational health and safety, school health and radiation, and for the licensing of commercial facilities and products. These functions are performed through the network of SSES organizations, supported by microbiology laboratories (equipped to different standards) that are used jointly for purposes of disease control and sanitary inspection and control. In order to use laboratory equipment more effectively, the SSES laboratories at *rayon* level are being merged with HIV/AIDS laboratories.

Sanitary inspection and control is conducted on the basis of several major laws and about 3000 detailed SSES-mandated regulations. Based on the Law “On Basics of Technical Regulation in the Kyrgyz Republic” (adopted 22 May 2004, amended 16 November 2009), it is planned to substantially reduce the number of regulatory documents but to afford them the status of laws approved by parliament. The process of reviewing, updating and drafting the new regulations, which started in December 2004, has taken about five years to complete and is linked to accession to the World Trade Organization. A similar updating is under way with regard to procedures for epidemiological surveillance.

According to the immunization calendar approved by the Ministry of Health in March 2009, mandatory child immunizations in Kyrgyzstan cover BCG (Bacillus Calmette–Guérin, the vaccine against tuberculosis), pentavalent vaccine (a combination of vaccines for diphtheria, pertussis, tetanus, haemophilus influenza and hepatitis B), MMR/OPV (a combination of vaccines against polio, measles, mumps and rubella), HepB (the vaccine against hepatitis B virus), DT (vaccine against diphtheria) and Td (vaccine against tetanus). The Republican Centre for Immunoprophylaxis is responsible for planning vaccination activities, procurement of vaccines, transport and maintenance of the cold chain. The vaccinations are administered at the vaccination rooms of FMCs, FGPs and territorial hospitals.

The Republican Centre for Quarantine and Especially Dangerous Infections provides guidance on particularly dangerous infections, develops policy documents, trains the specialists of laboratory services to conduct surveys of natural foci of plague and arbovirus infections, and coordinates sanitary protection measures.

The Republican Health Promotion Centre, established in 2001, is responsible for health promotion aimed at enabling people to take responsibility for their own health. The Centre is a subdivision of the Ministry of Health and reports directly to the deputy minister, the chief state sanitary doctor. Its field activities are carried out through a health promotion centre in Osh city and a health promotion centre in Bishkek. At *oblast*, *rayon* and city level, FMCs have health promotion rooms, with the aim of facilitating the integration of health promotion into primary health care.

Based on a pilot programme under the Kyrgyz–Swiss Health Reform Project, named initially the Jungal model and currently named Community Activities on Health Issues, health promotion is being practised by village health committees. The programme was initially piloted in Naryn *oblast*, then in Talas *oblast*, and is currently being extended to the rest of the country. By 2011, 1312 village health committees in 1254 villages had been established nationally. These village health committees promote community action for health through a large community-based health development programme. This programme has been recognized by both Kyrgyz and development partners as one of the most successful. With respect to the urban population, a Healthy City programme has been piloted in the cities of Bishkek and Tokmok since 2010, with technical assistance from the Kyrgyz–Swiss Health Reform Project. The programme includes activities by local government departments, schools and kindergartens.

The Republican Health Promotion Centre provides a full range of health education and communication activities, based on participatory appraisal techniques, interpersonal communication and monitoring and evaluation of behaviour changes. The centre is well placed to achieve the integration of health promotion and disease prevention and control that is foreseen under the *Manas Taalimi* reform programme and the programme Health Promotion in the Kyrgyz Republic in 2009–2011 (approved by the Country Interagency Coordination Committee, Minute No. 8, 18 December 2008).

For further development of public health, the Concept on Public Health has been developed under the *Manas Taalimi* reform programme and approved by the Ministry of Health Order No. 347 on 4 October 2007. The concept covers the following areas: legal basis, organizational structure and management system, intersectoral and international cooperation, research activities, financing system, personnel policy, information technology and equipment, health promotion, disease control and surveillance, and laboratory services.

The SSES is leading the reform and improvement of public health services using a three-pronged approach:

- top-down: includes improving the legal basis and public health financing mechanisms, and restructuring the public health system;
- bottom-up: improving local (i.e. *rayon*) SSES skills and public health services, establishing *rayon*-level SSES services as public health coordinators and creating linkages with health promotion, health protection, disease control and community mobilization through joint actions involving *rayon* and village health committees, health promotion centres, FGPs, veterinary services and local administrations; and
- core: a middle layer of activities including improvement in core public health service delivery areas, such as surveillance and laboratory services, as an ongoing process, which will require intensive international technical assistance over the next few years.

On 24 July 2009, the Law “On Public Health” was adopted by the parliament. The law aims to improve the integration and effectiveness of public health services.

## 5.2 Patient pathways

The SGBP defines how health services should be provided. Primary care facilities (FGPs or FAPs) are the first point of contact and act as gatekeepers to more specialized services. Primary health care is free of charge for patients regardless of insurance status and enrolment with primary health care providers.

If patients need more specialized care, they are referred to specialists in FMCs, which are outpatient diagnostic departments within hospitals. Consultations, simple laboratory tests and diagnostic interventions are provided free of charge, as specified by the SGBP. When additional tests and interventions become necessary, patients have to make co-payments, based on a price list developed by the Ministry of Health and agreed with the State Agency for Antimonopoly Policy and Development of Competition.

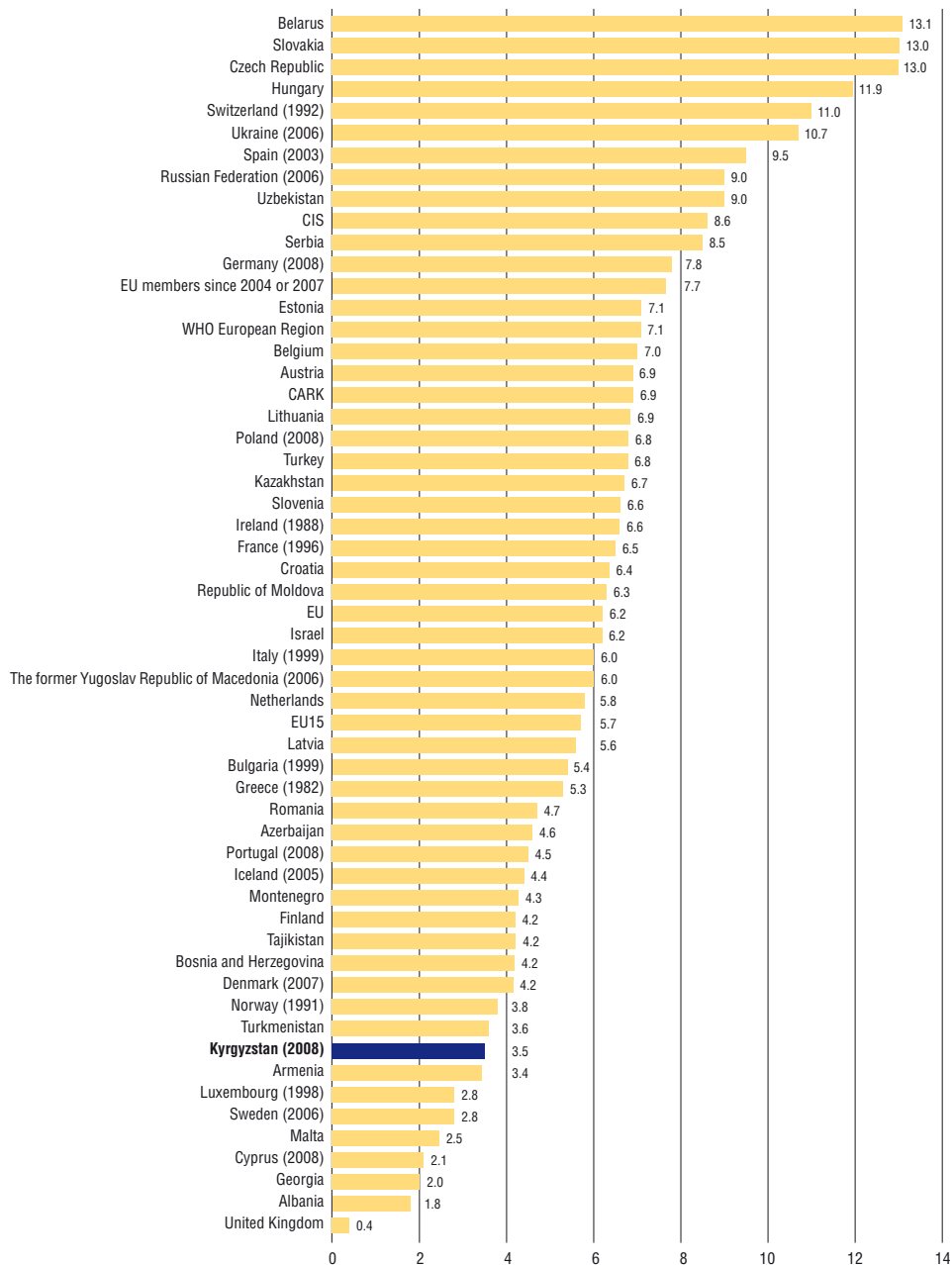
In order to receive planned inpatient care, patients need a referral from FGPs, narrow specialists in FMCs, intradepartmental health services or medical commissions under military agencies. Co-payments are required for inpatient care. The levels of co-payments, as well as the patient categories exempted from co-payments or entitled to reduced rates, are defined in the SGBP. However, some patients access inpatient care directly without referral, in which case they have to cover the total costs of their treatment. Patients needing emergency health care can call an ambulance or go directly to a hospital. Ambulances and hospitals provide emergency care free of charge.

## 5.3 Primary or ambulatory care

Primary health care is the first point of contact with the health system. To improve the effectiveness of primary and emergency health care, inpatient departments and health facilities providing first aid were separated. In 2007, there were 82 FMCs, 695 FGPs (including 25 FGPs that operated as independent legal entities) and 932 FAPs. FGP services, including those provided by FAPs, covered 98.2% of the population in 2007. Fig. 5.1 shows the annual outpatient contacts per person for Kyrgyzstan in 2008 compared with other countries in the WHO European Region.

**Fig. 5.1**

Outpatient contacts per person per year in the WHO European Region, 2009 (or latest available year)



Source: WHO Regional Office for Europe, 2011.

## FAPs

FAPs (*feldsher*-midwifery posts) are the first point of contact with the health system for patients in rural areas. FAPs were established in the Soviet period to serve small villages and remote localities with populations between 500 and 2000 people. They are staffed by at least one health worker, called *feldsher*, who is a paramedic. In larger villages, they are also staffed by a midwife and a nurse. Services rendered by FAPs are limited to very basic curative care, antenatal and postnatal care, immunization and health promotion. Women in labour are referred to the nearest FMC or territorial hospital. FAPs were formerly subordinate to central *rayon* hospitals, but at present they report to either FGPs or FMCs in their *rayon*. The *Manas Taalimi* reform programme pays special attention to the development of FAPs, as they serve a large part of the rural population. The intended integration of primary health care and public health means that the staff at a FAP has greatly increased responsibility for preventive activities related to health promotion, as well as for collaborating with the population, local communities and NGOs in the promotion of healthy lifestyles and the development of sanitary and hygienic skills.

## FGPs

FGPs (family group practices) have been formed in recent years on the basis of pre-existing health facilities (FAPs, rural doctor ambulatories, polyclinics and rural district hospitals). FGPs 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 members depends on the size of the village. In cities, FGPs mainly exist as part of FMCs. The main principle of FGPs is that patients have the free choice of family doctors.

FGPs are responsible for providing comprehensive primary care to their enrolled population. With the introduction of FGPs, the principles of family medicine were introduced in the health sector. When FGPs were established, an extensive retraining programme in family practice was offered to specialists (Hardison et al., 2007). FGPs are usually staffed with doctors representing the three specialties of internal medicine, paediatrics and obstetrics/gynaecology, as well as with midwives and nurses. The advantage of such an organizational unit is that it enables the provision of comprehensive, continuous and 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).



## FMCs

FMCs (family medicine centres) are the largest outpatient health facilities in the country. They combine primary and outpatient care services, ranging from general medical care to specialized care and diagnostics, including radiography and ultrasound. FMCs provide care for children, minor surgery, rehabilitation, family planning, obstetric care, perinatal care, first aid, prescriptions, certifications, home visits and preventive and health promotion services. There are usually 10–20 specialists in each FMC. FMCs were formed in each *rayon* and *oblast*, replacing the former polyclinics. The FMCs are also responsible for all FGPs and FAPs in their respective *rayon*, although, as mentioned above, there are now some FGPs that are independent legal entities. The relationship between FMCs and FGPs and between narrow specialists and primary health care professionals is not without challenges. On the one hand, FGPs need specialist, laboratory and diagnostic services contained in the broader FMC structure. On the other hand, an excess of narrow outpatient specialists with no ties to hospitals has hampered the development of primary health care, especially in Bishkek.

The further development of primary health care will be directed at improving the infrastructure and equipment of FAPs, FGPs and the ambulance service, developing a master plan of where health facilities should be located, improving the provision with communication technologies, strengthening human resources, and introducing socioeconomic incentives for health workers in rural and remote areas.

## GPCs

GPCs (general practice centres) are a new type of health facilities. They have been created by merging territorial hospitals with primary health care facilities. Since 2006, 26 GPCs have been established in remote areas of the country. The main reasons for this decision were:

- a lack of financial resources in hospitals in remote areas, because the small patient volume did not generate sufficient revenues under the new case-based provider payment system;
- a lack of human resources, because health professionals were migrating to urban areas and few new graduates were willing to work in remote areas; and
- inadequate equipment and lack of ambulance cars to reach the population in remote areas.

Once these problems had been identified, the Ministry of Health decided that remote and hard-to-reach areas required a special solution in terms of service delivery and financing. The establishment of GPCs aimed to improve the efficiency of health services and access to high-quality care in remote areas.

An early evaluation of the performance of GPCs showed an ambiguous picture (Murzalieva et al., 2007). All GPCs had both strengths and weaknesses, depending on a number of factors, including the conditions in place before the GPCs were established (e.g. funding levels, infrastructure and specific features of the covered area), logistical support, human resources (number of physicians and nurses, professional competence and age distribution) and the style of management and routine activities. While the evaluation found that efficiency and quality of care had improved, it also identified the need to update payroll administration procedures and to review the legal framework for GPC activities, in particular the roles and job duties of administrative and medical staff.

## 5.4 Secondary and tertiary care

### 5.4.1 Secondary care

Secondary care is provided at specialized outpatient facilities and general hospitals and differs in rural and urban areas. FMCs and some departments of general hospitals provide specialized outpatient care. General inpatient care is provided by a number of different providers, including territorial (city and *rayon*) hospitals, affiliates of territorial hospitals, children's hospitals, maternity houses and *oblast* merged hospitals.

#### Territorial hospitals

Territorial hospitals have been established since 2002, replacing the former central *rayon* hospitals. Central *rayon* hospitals had provided general hospital care at the *rayon* level up to 2004. They were large health facilities situated in the *rayon* centre (the largest town or village of the *rayon*) and designed to serve the hospital care needs of the whole *rayon*. Central *rayon* hospitals used to have a wide scope of specialists, medical equipment and supplies, and they usually housed a FMC and ambulance service. Traditionally, central *rayon* hospitals played a key role in health management at the *rayon* level. They were responsible for all health care in the *rayon*, including for minor health facilities such as rural district hospitals, rural doctor ambulatories and FAPs. They were also in charge of centralized accounting and medical statistics. The financial

arrangements under the single payer system required a new organization for health facilities, and in 2002 central *rayon* hospitals began to be transformed into territorial hospitals or affiliates of territorial hospitals (including territorial city hospitals). By 2004, this process was completed. The reorganization has resulted in greater centralization at the *rayon* level, as the directors of territorial hospitals determine the structure of their affiliates. It is hoped that the new organizational setting will facilitate the further restructuring of hospitals, while at the same time enabling stronger territorial hospitals to cross-subsidize financially weak affiliates in remote and geographically isolated settlements.

### **Rural district hospitals**

Rural *rayon* hospitals used to be the main facilities providing hospital care in remote rural areas. Rural *rayon* hospitals are the smallest hospital facilities, designed to have 25–30 beds. They also provide outpatient care in addition to general inpatient services. They are staffed by up to four categories of doctors: paediatricians, internists, gynaecologists and, in some cases, dentists. In general, rural *rayon* 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 of care that can be provided. A number of rural *rayon* hospitals have been closed down or transformed into FGPs, FMCs or affiliates of territorial hospitals. Restructuring plans envisage a further reorganization of rural *rayon* hospitals into outpatient facilities, affiliates of territorial hospitals, or GPCs through merging with primary care facilities.

### **City hospitals**

City hospitals of all types provide general hospital care in cities, including hospitals specializing in adult care, child care and maternity/gynaecological care. Unlike in rural areas, these facilities were separate from polyclinics. As a result of the restructuring of the hospital network, 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 FGPs or FMCs.

### **Oblast merged hospitals**

*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 a restructuring in 2000, when *oblast* health departments were abolished. The *oblast* merged hospitals were formed by merging all *oblast* hospitals into one organizational unit with the aim of achieving cost savings and improving integration and coordination of care. As an interim measure, the administrative functions of *oblast* health departments were transferred to *oblast* merged hospitals. Later, these functions were transferred to *oblast* FMCs. These hospitals have now incorporated general, specialized and paraclinical health facilities, such as dispensaries, tuberculosis hospitals, transfusion stations and forensic medicine.

#### 5.4.2 Tertiary care

Tertiary care is provided by republican health facilities at the national level (national hospitals, centres and scientific research institutes) and by specialized dispensaries and hospitals at the regional level. These facilities are narrowly specialized and cover, inter alia, cardiology, tuberculosis, traumatology and orthopaedics, oncology and radiology, obstetrics and paediatrics, rehabilitation, treatment of infectious diseases and treatment of mental illnesses. All tertiary care facilities provide specialized outpatient and general and specialized hospital care. Republican health facilities have usually the best facilities and experts in the health sector, and they often act as teaching and research hospitals. Almost all republican facilities are situated in Bishkek. They are intended to provide tertiary care to the whole population regardless of where patients 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. Restructuring of health facilities in Bishkek, including the republican facilities, had been planned under health reforms since 1996, but by 2010 no restructuring had been achieved, as no political consensus could be reached. However, the national pooling of funds creates opportunities to resume this process in the future. In addition, there is a change in the role of republican institutes; for example, the Republican Cardiology Institute is now leading and coordinating a broad cardiovascular diseases strategy.

Three large private hospitals also provide tertiary care. They have up-to-date facilities and equipment and highly qualified personnel. They also act as clinical locations for teaching and research. These highly specialized surgical hospitals provide treatment for high-income patients, including foreign citizens.

## 5.5 Emergency care

In 2009, there were four ambulance stations and 99 ambulance departments of FMCs and GPCs, containing 137 general profile brigades, 443 *feldsher* brigades and 88 specialized brigades. In 2009, ambulances served 665 245 calls. A major challenge is that the provision of emergency care is unevenly distributed across regions. At the start of the *Manas Taalimi* programme, emergency calls per population in the country's *oblasts* differed from the national average by a range of -92% to +40%. By 2007, the variation had slightly decreased to a range of -29% to +75%. Osh city, Bishkek city and Chui *oblast* are better served by emergency medicine than the national average. In addition, a private ambulance service is available in Bishkek 24 hours a day. It is well equipped but only accessible to the richest segments of the population (Ministry of Health, 2008).

The quality of emergency care leaves much to be desired. Challenges include lack of communication technologies, the unreasonable location of ambulance units, poor technical equipment, shortage of ambulance cars and resources to maintain them, low salaries and high staff turnover. In 2004, ambulance units were removed from inpatient facilities and transferred to FMCs to improve primary health care. To improve emergency care further, the following activities are being undertaken within the framework of the *Manas Taalimi* reform programme:

- reviewing and revising the location of ambulance stations to ensure access to emergency services for the whole population;
- improving the quality of care through training of staff, development and implementation of clinical protocols and strengthening the functional interaction with FGP physicians and other health organizations when providing emergency care; and
- updating the equipment of ambulance stations with regard to ambulance cars, communication technologies and medical equipment.

Following on from a mapping exercise and taking account of population density, geographical terrain, distance from roads and availability of communication technologies, a plan has been developed for the revised location of ambulance stations and the procurement of vehicles and communication technologies. In 2006, with support of the World Bank and MHIF funds, 82 new vehicles were purchased.

## 5.6 Pharmaceutical care

In the Soviet period, the supply of pharmaceuticals and health technologies followed state plans. A monopoly state agency, Kyrgyz Pharmacia, imported and distributed drugs throughout the country. A network of public pharmacies distributed drugs to the population at fixed retail prices. With the break-up of the USSR in 1991 and the independence of Kyrgyzstan, the supply of pharmaceuticals dramatically worsened and the country encountered shortages. As a result of the privatization of the pharmaceutical network, the government lost its control over the pharmaceutical market, and underdeveloped legislation facilitated the development of a black market and the import of drugs of poor quality. Furthermore, the system of selling pharmaceuticals only against prescriptions had practically collapsed. People could buy any drug in pharmacies without prescription, including psychoactive pharmaceuticals and antibiotics.

On 4 December 1998, the Kyrgyz Government adopted its first State Drugs Policy, which had the following aims:

- ensuring access to safe, effective and high-quality medicines
- quality assurance of medicines and pharmaceutical services
- rational use of medicines
- human capacity development
- information system development.

The State Drugs Policy for 2007–2010, adopted in 2007, pursued similar strategic objectives. Important legislative acts stipulating government policy on pharmaceuticals include the Law “On Narcotic Substances, Psychotropic Substances and Precursors” (adopted 22 May 1998), the Law “On Drugs” (adopted 30 April 2003), the Law “On Licensing” (amended 1 August 2003), the Law “On Basics of Technical Regulation in the Kyrgyz Republic” (adopted 22 May 2004), the 2005 Health Protection Law (adopted 5 January 2005) and a number of government resolutions.

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. There is 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.

The pharmaceutical market in Kyrgyzstan amounted to an estimated US\$ 95 million in 2009, with 97% of medicines imported, mainly from the CIS (Ministry of Health, 2010a). Local production of pharmaceuticals consists of tablets, unguents, galenicals and herbal raw materials. There is hardly any production of essential medicines in the country. Strengthening domestic manufacturing is one of the main priorities of the State Drugs Policy. However, an important barrier for this is the absence of raw materials for pharmaceutical production, except local herbs.

Between 2003 and 2009, the number of retail pharmacies grew by 47.8%. In 2009, there were 2669 pharmaceutical facilities in the country: 39 were involved in production activities, 306 were warehouses, 940 were pharmacies, 62 were pharmacies in hospitals, 1267 were pharmacist points and kiosks, and 55 were facilities for optical or dental products. The distribution of pharmacies across rural and urban areas differs. Improving access of the rural population to drugs and increasing the number of rural pharmacies were explicit objectives of the reforms. In 2009, rural pharmacies accounted for 70% of all pharmacies in Chui *oblast*, 28% in Osh *oblast*, 42% in Jalalabad *oblast*, 50% in Issyk-Kul *oblast*, 59% in Talas *oblast*, 30% in Batken *oblast* and 60% in Naryn *oblast* (Ministry of Health, 2010a).

Procurement of medicines has been decentralized and health facilities purchase their own drugs based on the Essential Drugs List, which promotes the use of generics. Health facilities can use MHIF funds to purchase drugs that are not included in the Essential Drugs List, but this purchase is limited to 10% of total procurement costs. The introduction of patient co-payments seems to have improved the provision of drugs to patients. Pharmaceuticals are also centrally procured in the public sector (e.g. insulin or vaccines), following competitive bidding, as set out in the Law of the Kyrgyz Republic “On State Purchases” (adopted 24 May 2004). Procurement legislation and regulations do not yet mandate that the procured medicines are compliant with good manufacturing practices. A WHO study on the quality of medicines within

the public sector drug procurement system in Kyrgyzstan suggested a number of activities for the gradual transition to drug procurement based on good manufacturing practices (WHO Regional Office for Europe, 2007).

The first list of essential drugs in Kyrgyzstan was developed in 1996. Since then, it has been regularly updated according to WHO recommendations. The latest Essential Drugs List was adopted in March 2009 and includes 358 international non-proprietary names. Development and updating of the Essential Drugs List are coordinated by the Unit on Rational Drug Use, which is part of the Department of Drug Supply and Medical Equipment. Each new version of the Essential Drugs List is approved by the government.

Rational drug use has been promoted at all levels of health care. The development of clinical protocols based on evidence-based medicine is intended to encourage rational drug use. Clinical protocols are being developed on the basis of the Essential Drugs List. Revisions of this list and of clinical protocols are interrelated and synchronized.

The SGBP entitles patients with certain medical conditions to free outpatient drugs. These conditions include:

- acute cardiac infarction
- tuberculosis
- bronchial asthma
- cancer in the terminal phase
- mental disorders (paranoid schizophrenia and affective disorders)
- epilepsy
- diabetes
- haemophilia.

In 2000, the MHIF introduced the Additional Drug Package on a pilot basis. Under this package, pharmacies that have concluded a contract with the MHIF sell specified drugs at lower prices to patients insured by the MHIF. In 2009, approximately 77.6% of the population was covered by the MHIF; this group included employees, pensioners and children under the age of 16 (MHIF, 2010).

In 2008, the Additional Drug Package consisted of 74 generic medicines and about 350 by trade names. Elaborating the list of medicines included in the package is the responsibility of the MHIF, but the list is based on the national



Essential Drugs List (Ministry of Health, 2008). The reimbursement rate is determined by a reference price system, in which the reimbursement price is calculated as the median price of the medicines available on the market.

Introduction of the Additional Drug Package, as well as outpatient drug supply covered by the SGBP, has helped to improve the economic access to drugs for the population, in particular for pensioners. It also improved the reputation of primary health care and family doctors, decreased patient admissions to hospitals and was accompanied by the partial resumption of prescription-based sales of medications.

Despite significant improvements in the pharmaceutical sector, there are still challenges. One is that financial access to medications remains limited, in particular in rural areas. The quality of drugs is another concern. Overall, the system lacks transparency and coordinated efforts of all stakeholders, leading to poor affordability, quality and safety (WHO Regional Office for Europe, 2008).

In April 2009, the government officially launched the Medicines Transparency Alliance project. The project aims to increase the transparency of information on medicines with the ultimate aim of increasing access to medicines. It is a collaboration between the government, the private sector and civil society. The overall goal of the project is to strengthen the pharmaceutical system through more transparency and accountability. The goals of the project are:

- development of instruments for enhancing transparency in procurement and legislative practice;
- research on the quality of and access to drugs; and
- raising public awareness.

Within the framework of the project, research activities have been launched to explore the quality of drugs available in community pharmacies in Bishkek, as well as access to the medicines covered by the SGBP for patients suffering from bronchial asthma and mental disorders. The project is also modernizing the information system of the Department of Drug Supply and Medical Equipment.

## 5.7 Palliative care

As in many other countries of the former USSR, well-established palliative care is lacking in Kyrgyzstan. In most cases, palliative care is provided by primary health care facilities, whose staff visit patients at home, carry out essential medical procedures and train relatives and carers. When the condition of patients deteriorates, they can be referred to hospitals. Under the SGBP, patients with cancer are provided with analgesic drugs free of charge. There are two hospices for patients with cancer in Kyrgyzstan: one is part of the National Oncology Centre and the other is the Osh *Oblast* Oncology Centre. In addition, there is a palliative care department under the National Oncology Centre.

## 5.8 Mental health care

Mental health care is regulated by the Law “On Psychiatric Care and Citizens’ Rights to Receive it” (adopted 17 June 1999). The law has been generally recognized as being compliant with international standards of human rights. It stipulates that mental health care should be based on the principles of legality, mercy, humanity and observance of human rights and freedom. The law provides for voluntary access to mental health care, except for certain specified cases. According to Article 16 of the law, mental health patients are guaranteed:

- emergency care;
- consultations, diagnostics, treatment, prevention and rehabilitation in outpatient and inpatient facilities;
- all mental health examinations that are undertaken by medical consultative commissions in primary health care facilities;
- social and legal support services and assistance for people with mental disorders in finding employment;
- assistance with guardianship;
- counselling on legal issues and legal support in mental health facilities;
- improvements in social and living conditions and care for people with disabilities and elderly people suffering from mental disorders;
- training for people with disabilities and for young people suffering from mental disorders; and
- mental health care in the case of natural disasters and accidents.

Primary health care for patients with mental disorders is provided in specialized clinics in Bishkek and Osh city and by mental health care units within FMCs in other regions of the country. Emergency mental health care is provided by 16 mental health ambulance brigades (8 in Bishkek and 8 in Osh city). Mental health services for inpatients are provided by 6 independent health organizations, with a total of 2235 beds. These include the Republican Centre of Mental Health (660 beds), the Republican Hospital in Chym-Korgon village (850 beds), the Republican Hospital in Kyzyl-Jar village (555 beds) and the Osh *Oblast* Centre of Mental Health (170 beds). In addition, inpatient mental health care is delivered in seven psychoneurological departments, which are part of general hospitals. There are two tertiary level health facilities: the Republican Centre of Narcology (in Bishkek) and the Osh *Oblast* Centre of Narcology (in Osh city). In 2007, there was a total of 161 psychiatrists (3 per 100 000 population) and 84 psychiatrist–narcologists (2 per 100 000 population).

The quality of mental health care remains poor. There has hardly been any change in clinical practice since the Soviet period, and outdated methods of treatment are frequently used. There is an overemphasis on large inpatient facilities, where people with mental disorders from the whole country are concentrated. These facilities work inefficiently, as indicated by a low bed occupancy rate of 66% in 2007. The Ministry of Health has undertaken some steps to reform mental health care provision. Beginning in 2007, activities to integrate mental health care into primary care have been carried out with WHO assistance, including training of general practitioners in the detection and diagnosis of mild forms of mental illness and establishment of nine psychoneurological departments within territorial and *oblast* hospitals to make specialized mental health care more accessible to the population. In addition, the number of beds in the largest mental health care hospitals has been reduced.

A study by the Open Society Institute (2009) found that the reforms of mental health care provision have helped to increase access to other kinds of health care, as patients attending mental health care departments in most hospitals undergo the same set of basic examinations as other patients. Where found necessary, patients attending mental health care departments are provided with surgical, ophthalmological, gynaecological and other care. Patients can also receive medicines for the treatment of somatic illnesses that hospitals have available under the SGBP.

In 2006, the MHIF, within the SGBP, introduced a programme for providing people suffering from paranoid schizophrenia and affective disorders of various origins with psychotropic drugs. The programme operates through a network

of pharmacies. The Additional Drug Package of the MHIF for insured citizens at the outpatient level allows the provision of certain psychotropic drugs at reduced prices.

According to the study by the Open Society Institute (2009), the availability of psychotropic medicines has improved. In 2007, 5699 patients across the country received psychotropic and anti-epileptic medicines included in the list of essential medicines in their area of residence. Reimbursement from the government budget amounted to 2.9 million soms. Patient satisfaction with the availability of psychotropic drugs under the Additional Drug Package of the SGBP was found to be high. The programme also improved the status and job satisfaction of local psychiatric doctors. Patients and members of their families appreciated, in particular, that there was no need to access distantly located mental health care hospitals (Open Society Institute, 2009).

Outpatient rehabilitation programmes aim to support patients requiring mental health care to live independently and with minimal medical intervention. Several projects for people with serious mental disorders are carried out by NGOs with the support of external agencies, including the Soros Foundation Kyrgyzstan, the Mental Health Initiative of the Open Society Institute and the European Department of Caritas.

In 2006, a day-care programme was launched within one FMC in Bishkek. The programme provides services to people with serious mental disorders, including schizophrenia, bipolar affective disorders and depression. It aims to improve the quality of life for people suffering from mental disorders and for their families and to help them to cope better with illness. All participants are involved in the programme voluntarily and based on informed consent. The staff includes social workers and specially trained nurses. Psychiatrists, working on a part-time basis, supervise chemotherapy, counsel patients and members of their families and conduct training for staff, patients and family members.

Within the Republican Centre of Mental Health, a mobile team provides home care to mental health patients in Bishkek who are unable or unwilling to leave their homes. The mobile team aims to integrate patients into society, provide them with problem-solving skills, support them in taking responsibility, prevent recidivism, intervene in crisis situations and support and train family members and carers. The team reaches patients through regular visits and consists of seven professionals, including a psychiatrist, mental health care

nurses and social workers. The Republican Centre of Mental Health also contains the Centre for Legal Advice and Information, which provides patients at the centre with information and legal support.

## 5.9 Dental care

In the Soviet period, dental care consisted of general dental care services, offered at the primary care level, and specialized care delivered primarily at inpatient facilities. At present, dental care is provided by both public and private clinics. Private clinics opened in the capital and *oblast* centres, where the population can choose between public and private services. Dental services provided by private clinics are paid for in full by the patient.

The network of public providers of dental care includes 37 dental polyclinics and 97 dental surgeries within FMCs and GPCs. They deliver dental care to the population in the framework of the SGBP. Services outside the SGBP are paid for by patients themselves. However, the volume of dental services that falls within the framework of the SGBP is quite limited because of the scarcity of government funds. The SGBP covers:

- prevention:
  - biannual preventive examinations of teeth and oral cavity of children in preschool facilities, pupils in secondary schools and pregnant women;
  - oral health education to the population;
- urgent dental care to all citizens, including the required medication; and
- dental prosthetics and orthodontic prosthetics.

Free prosthetics (except prosthetics made of precious metals) are available for certain categories of the population, such as veterans of the Second World War, survivors of the Chernobyl nuclear disaster and people with certain disabilities. Services to correct anomalies of tooth position, occlusion (the manner in which the upper and lower teeth come together when the mouth is closed) and jaw are provided for free to children under 14 years of age.

## 5.10 Complementary and alternative medicine

The 2005 Health Protection Law recognizes the right to practise alternative medicine (or “healing”). Practitioners of alternative medicine (“healers”) need to be trained in both official and alternative medicine and to possess a medical licence as well as a diploma of alternative medicine. The training and licensing of practitioners of alternative medicine are regulated by the Ministry of Health. Advertisements for alternative medicine are forbidden. Harming patients through alternative medicine is subject to criminal penalties. Following the licensing of practitioners of alternative medicine, the Ministry of Health monitors their activities with regard to prevention, diagnostics and treatment. Cases in which the health of patients has deteriorated as a result of receiving alternative medicine are considered by a medical commission. No data are available on current utilization levels of alternative medicine.

## 5.11 Health care for specific populations

During the Soviet period, parallel health systems were run by the Council of Ministers, the Ministry of Defence, the Ministry of Interior, the National Security Committee, the Railway Administration, the Civil Aviation Department and large enterprises. Health services were provided to employees and family members. At the same time, when necessary, people could seek health care in the health system run by the Ministry of Health.

The economic crisis after independence and the health financing reforms have generated significant difficulties for maintaining these parallel health systems. A number of large enterprises were privatized or closed, and their health organizations transferred to the Ministry of Health. Examples include the health facilities of the Kyrgyz mining complex and the Railway Administration.

Access to the health system run by the Ministry of Health became more difficult as patients from parallel health systems were now charged for using Ministry of Health structures – expenditure that was not envisaged in the budgets of the parallel health systems.

To address these issues, the Law “On Introducing Changes and Amendments to the ‘Law on Health Insurance of Citizens in the Kyrgyz Republic’” was adopted on 15 July 2003. Based on this law, military personnel (both current and retired) became entitled to mandatory health insurance. However, there were no contributions for this population group allocated in the republican

budget. Military personnel were offered the option of paying on a voluntary basis for health insurance coverage. By 2009, the mandatory health insurance system included employees of the Ministry of Interior, the Ministry of Defence, Border Troops, and the Ministry of Emergency Situations. Employees of these structures have to make voluntary health insurance contributions if they want to receive health services covered by the MHIF.

The integration of refugees into the national health system was resolved in similar vein. Refugees from Tajikistan had experienced significant difficulties with accessing health care, as they were not citizens of Kyrgyzstan and had to pay out of pocket for receiving health care. In 2002, at the initiative of the Ministry of Health and the United Nations High Commissioner for Refugees, a joint programme for the integration of Tajik refugees into the national health system was developed. Refugees were included in the mandatory health insurance system, with funds allocated from the United Nations and entitlements to services within the SGBP. In 2009, 8000 refugees were included in the mandatory health insurance system (MHIF, 2010).





## 6. Principal health reforms

### 6.1 Analysis of recent reforms

The health system Kyrgyzstan inherited from the Soviet period was built on the premise of universal access to free health services, but it was also characterized by a rigid and highly centralized management structure, a high level of bureaucracy, inflexibility, fragmentation and duplication of health care delivery, inefficient methods of financing, and an excessive health care infrastructure. All of these ultimately undermined the declared principle of free and universal access. Two major health reform programmes were developed after the country's independence: *Manas* (1996–2006) and *Manas Taalimi* (2006–2010).

#### 6.1.1 The *Manas* reform programme (1996–2006)

The *Manas* programme launched comprehensive structural changes of health care delivery, financing and management. It included the following major components:

- reforming the health care delivery system with the aim of strengthening primary health care, developing family medicine and restructuring the hospital sector;
- reforming health financing, including introduction of outcome-based payment methods;
- improving medical education and developing human resources;
- improving the provision with pharmaceuticals;
- improving quality of care;
- strengthening public health; and
- introducing new health management methods in the context of greater autonomy of health facilities.

The following structural changes of the health care delivery system were undertaken with the aim of increasing effectiveness and reducing expenditure on costly inpatient care.

- The provision of primary and inpatient care were legally separated. FGPs and FMCs were established throughout the country and *oblast* FMCs were set up in every *oblast* and charged with coordinating primary health care activities. Doctors and nurses were trained or retrained in family medicine. The principle of free choice of FGP was introduced and a campaign on enrolling the population in FGPs carried out. At the same time, new methods of per capita financing were introduced at the primary care level.
- The Additional Drug Package on provision of outpatient pharmaceuticals to the insured population was introduced with the aim of improving affordability and accessibility of pharmaceuticals for the population and recognizing that it is difficult to strengthen primary health care without access to outpatient drugs.
- Efforts were undertaken to strengthen the material and technical infrastructure of primary health care providers through the renovation of facilities and supply with medical and laboratory equipment.
- In 2004, ambulance units were removed from inpatient facilities and transferred to FMCs to increase the efficiency of primary health care and improve the continuity of emergency care. At the staff meetings in the morning, the personnel who were on-call in the night report the received emergency calls and how they responded and pass information on patients to FGPs for further health care delivery.
- The extensive hospital network was restructured and rationalized. Specialized facilities were merged and general profile hospitals created. *Oblast* merged hospitals were created in all *oblasts*. Inefficient small hospitals were transformed into structural subdivisions of territorial hospitals or into FMCs and FGPs. At the same time, many inpatient facilities were repaired and renovated.
- Between 2000 and 2003, 42% of all hospital buildings were closed, with a 35% reduction of floor space. Efforts were made to reduce utility costs still further through improved planning and the use of energy-saving technologies, such as improved insulation.

Although the share of health financing as a percentage of GDP declined from 4.0% in 1991 to 1.9% in 2002, the *Manas* programme introduced fundamental changes to the health financing system. In 1997, mandatory health insurance was introduced with the aim of attracting additional sources of funding to the health sector and improving the social protection of the population. The MHIF was created to administer the health insurance system, which laid the foundation for:

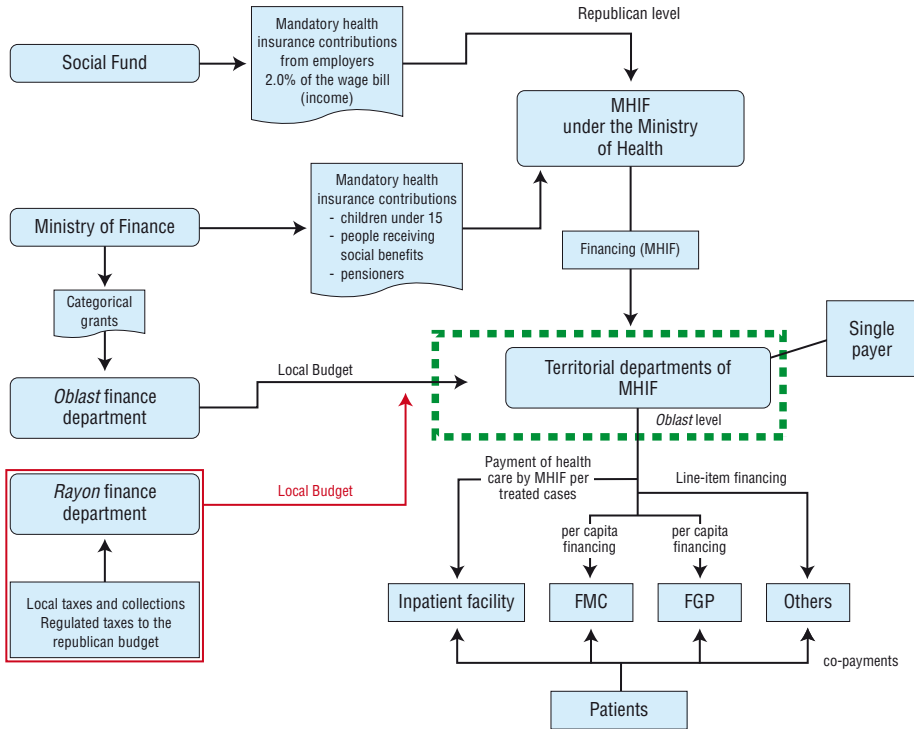
- introduction of a purchaser–provider split and the development of a contracting strategy;
- further development of a strategy to reduce fragmentation in pooling;
- emergence of additional sources of health financing;
- improved access to health services, particularly for socially vulnerable groups (such as pensioners, children and people receiving social benefits);
- testing and introduction of progressive payment methods for health services;
- introduction of a monitoring system based on quality indicators; and
- introduction of mechanisms to protect patient rights when receiving health services.

The share of mandatory health insurance funds as a percentage of total government expenditure on health increased from 0.8% in 1997 to 19.6% in 2004. New provider payment methods were developed and introduced for the use of the mandatory funds, including case-based payment in hospitals and a capitation rate for primary health care. In 1999–2000, with the increased use of mandatory health insurance funds for the purchase of health services, the contradiction between the payment mechanisms used for mandatory health insurance funds (based on outcomes or capitation) and that for line-item budget financing (based on the number of health facilities and staff) became more visible. The Ministry of Health decided to make the transition towards a unified system of paying health care providers.

In 2001–2004, the single payer system for the SGBP was developed, with the MHIF and its territorial departments becoming the single payer in the state-run health system (Fig. 6.1). This implied a shift from an administratively fragmented financing system to the pooling of local budget funds at the *oblast* level. Since 2001, with the introduction of amendments and additions to some laws, local budget funds began to be pooled at *oblast* level. Pooling mechanisms for health funding were tested in the form of health contribution norms for

*rayons* raising their own taxes (in Chui and Osh *oblasts*), and through the reallocation of revenues remaining at the disposal of *oblast* budgets from regulated taxes. In the case of both pooling mechanisms, it became possible to equalize health funding across *rayons* within particular *oblasts*.

**Fig. 6.1**  
Pooling of funds in the single payer system, 2001–2004



Source: adapted from Government of the Kyrgyz Republic, 2006.

In addition to new financing methods, the SGBP and official patient co-payments were introduced; both affected supply and demand and stimulated the transition of health care providers to more managerial and financial autonomy. One of the main aims of introducing official patient co-payments was to replace the informal under-the-table payments that had flooded the health system (Kutzin et al., 2002).

The Additional Drug Package for the provision of outpatient drugs to the insured population gained widespread public acceptance. It contributed to the increased demand for evidence-based primary health care services, improved access to high-quality drugs and a decline in complications in conditions

sensitive to the quality of primary health care (Kutzin et al., 2002). A national drug policy, including the Essential Drugs List, was developed and introduced with the aim of providing safe, effective and high-quality drugs to the population and promoting the rational use of drugs.

There was also a reform of medical education. Faculties of the Kyrgyz State Medical Academy were reorganized and curricula revised in line with evidence-based medicine and the broader health reforms. The Republican Centre on Continuous Training of Medical and Pharmaceutical Workers was reorganized into the Kyrgyz State Medical Institute of Retraining and Continuous Medical Education. It was charged with providing postgraduate and continuous education, including in family medicine.

In order to improve the quality of health services, a whole set of activities was introduced, including new incentive mechanisms, improvements of facilities, purchase of equipment, improved access to drugs, introduction of the principles of evidence-based medicine and new methods of quality assurance (e.g. facility accreditation and utilization review) and quality improvement. About 200 new clinical guidelines were developed and are currently being implemented.

A quality assurance system was developed on the basis of medical records, the monitoring and analysis of quality indicators, patient satisfaction surveys, telephone hotline calls and the introduction of continuous quality assurance methods. Telephone hotlines are being used by both the population and the health workforce to obtain medical advice or assistance in accessing health services, as well as to complain about violations of patient rights. The Health Information Centre provides the government, the MHIF, providers and patients with financial, clinical, epidemiological and quality data, with the aim of monitoring and improving the performance of the health system. The reforms also included the development and introduction of accreditation and licensing standards for organizations operating in the health sector.

The reform of health promotion started in 2001 when it was separated from the SSES service and became an independent structure. Structural reforms began by merging and creating a number of institutions and laboratories. Improvements were made in the equipment of 20 laboratories at the national level and of a number of SSES facilities, which allowed expansion of the list of tests being conducted (Government of the Kyrgyz Republic, 2006).

Analyses and evaluations of the *Manas* programme have found that the health reforms it initiated, which have been more intensively implemented since 2000, have resulted in improvements in terms of equity, transparency, accessibility and responsiveness of the health system to the needs of the population (Government of the Kyrgyz Republic, 2006).

### 6.1.2 The *Manas Taalimi* reform programme (2006–2010)

In 2004, the Ministry of Health requested technical support from WHO in the development of further reform strategies. In December 2006, the Ministry of Health launched a new health reform programme for 2006–2010, named *Manas Taalimi* and approved on 16 February 2006 by the Government Decree on the National Programme of Health Reform “*Manas Taalimi*”. The programme’s name means “Lessons of *Manas*”. It aimed to build on the results achieved under the *Manas* programme, while ensuring a more active involvement of the population in the process. The main principles of the *Manas Taalimi* programme were:

- continuity with the *Manas* programme and building on lessons learnt;
- comprehensiveness and consistency;
- orientation towards poverty reduction and a reduction of differences between urban and rural areas in health service utilization;
- transparency of the decision-making process, and participation of the public and national and local governments in health protection and promotion;
- achievement of a balance between state commitments and available funds; and
- adoption of a SWAp framework for health reforms.

The main goal of *Manas Taalimi* was to improve the health status of the population through the creation of a responsive, efficient, comprehensive and integrated health system and through increased responsibility of the population, society and state authorities for population health. The programme had the following objectives:

- improving equity and accessibility of health services
- reducing the financial burden on the population
- increasing effectiveness of the health system
- improving quality of health services
- increasing responsiveness and transparency of the health system.

Key reforms included:

- solidifying and expanding the health financing reforms;
- building the capacity of FAPs and ambulance services with the aim of increasing the effectiveness of primary health care;
- optimizing specialized care and regulating access to specialist health services, including high-technology health services;
- improving the quality of health services through the introduction of effective internal management, promotion of the principles of evidence-based medicine, rational pharmaceutical management, better laboratory services, reduced hospital infections and improved medical waste management;
- orienting health services towards achieving the MDGs, based on a strengthened role of public health and the active involvement of communities, NGOs, the mass media and local self-governance bodies; and
- improving the quality of graduate, postgraduate and continuous education through revised accreditation requirements for educational institutions and programmes and new mechanisms to recruit and retain health personnel, particularly in rural areas.

The *Manas Taalimi* reform programme had four main components:

- population and community involvement
- health financing
- service delivery
  - individual health services
  - public health services
  - content of medical practice/evidence-based medicine
  - priority programmes
  - investing in human resources
- stewardship.

These components are described in detail in the next subsections.

## Population and community involvement

The goals of the first component were to develop new approaches to achieve population involvement, based on the shift from a passive transfer of information and knowledge to the promotion of partnership, and to identify priorities for solving the health problems of society, individual communities, population groups and individuals (Government of the Kyrgyz Republic, 2006).

The component included the development and implementation of activities to promote the involvement of the population in health decision-making, such as supporting patients' organizations, developing the interaction between village health committees and health organizations, establishing public consultative committees and working with social protection associations, such as pensioners' associations. The programme Community Activities on Health Issues promoted community action for health through a large community-based project financed initially under the Kyrgyz–Swiss Health Reform Project. It was initially implemented just in two *oblasts*, Naryn and Talas. The programme was recognized by the Ministry of Health as the main mechanism for long-term community mobilization and health promotion. The programme expanded the capacity of local communities to address their priority health issues and contributed to the establishment of village health committees across the country. Key partners in this process were the Ministry of Health, the primary health care organizations and the health promotion service. By 2011, 1312 village health committees in 1254 villages had been established nationally, covering 2.7 million people living in rural areas and accounting for 96% of all villages in the pilot areas and more than 60% of villages in Kyrgyzstan as a whole. The programme has been recognized by both Kyrgyzstan and its development partners as one of the most successful.

## Health financing

The goals of the health financing component were to develop a sustainable, effective and integrated system of health financing based on increasing funding, to ensure an equitable distribution of resources, to meet state commitments within the SGBP and other priority programmes, to decrease the financial burden of the population, especially the poor, to improve access to health services, and to use health resources more effectively and rationally (Government of the Kyrgyz Republic, 2006).



The main objectives of the component were:

- Increasing public financing of the health sector and improving revenue collection for health care: This involved a commitment from the government to increase public resources allocated for health as a share of GDP and as a share of public expenditure and was in line with commitments included in the Comprehensive Development Framework, the National Poverty Reduction Strategy and the Medium-Term Budget Framework for 2006–2008. In part, this objective required improved mechanisms of health budget formation and execution. The involvement of local self-governments would bring some additional funding to the sector.
- Improving risk-pooling arrangements and gradually equalizing health financing across regions: Following fiscal decentralization and the change in the public finance system, health funds were no longer pooled at the oblast level, but only at the republican level. This facilitated the equalization of funding across oblasts by more tightly linking resources to outputs. At the republican level, two financial pools were created: one for individual health services under the SGBP administered by the MHIF and one for population-based health services administered by the Ministry of Health.
- Improving purchasing arrangements of the MHIF and the Ministry of Health in order to improve efficiency, quality of services and to ensure transparency of financial flows: Under the SGBP, the MHIF improved purchasing mechanisms by strengthening the role of contracts between the MHIF and providers, in order to reward high-quality and efficient providers. Provider payment systems initiated under *Manas* for individual health services, including primary health care, outpatient specialty care and inpatient care, would be continuously improved. In addition, reimbursement of drugs under the MHIF Additional Drug Package was reviewed in order to encourage more rational drug prescription and use, and to limit the financial burden of pharmaceuticals on the population. The Ministry of Health was responsible for reviewing and improving purchasing arrangements for high-technology medical services, public health services and centralized procurement arrangements for priority programmes. In addition, the Ministry of Health took the lead in ensuring targeted and balanced capital investments and the effective contracting and funding of education, research and scientific activities. This task required significant capacity building of both purchasers and providers

in contracting, management and financial practices that were not fully implemented within the *Manas Taalimi* framework. It is envisaged that they will be included in the next national health programme.

- Reviewing the structure of benefits and co-payments in order to reduce the financial burden of households and improve equity in financing: The envisaged increase in public financing and additional donor funds was channelled towards reducing the financial burden of the population by reducing co-payment rates and ensuring free access for children up to 5 years of age.
- Improving the health information system for purchasing health services: Building on existing mechanisms, the Ministry of Health and the MHIF further developed the health information system infrastructure and communication and information systems. They also integrated the databases on population and enrolment into a unified database, and developed, integrated and implemented software for different types of health service. Some activities have not been implemented fully and are planned to be included in the next national health programme.

## Service delivery

### Individual health services

The subcomponent goal of the service delivery component was to further improve the system of delivering individual health services, including access to high-quality care, while ensuring the leading role of primary health care. While the *Manas* programme focused on introducing family medicine principles and creating FGPs, *Manas Taalimi* extended the focus of primary health care to include FAPs and emergency care; it also sought to improve linkages between primary health care and secondary care and began to address the need for improved tertiary care services. An overarching strategy of *Manas Taalimi* was to create a comprehensive, integrated and efficient service delivery network that is physically and financially accessible to a vast majority of the population. This required additional work in optimizing the inpatient and specialty care sector, particularly in cities, the continued provision of low-cost drugs at the primary care level, investments in medical and laboratory equipment, infection prevention and control measures, and improvements in quality of care and patient satisfaction (Government of the Kyrgyz Republic, 2006).

The main objectives of this subcomponent were:

- Further developing primary health care with particular emphasis on improved performance of FAPs, FGPs and emergency care: One of the most significant achievements of the *Manas* reform programme was the introduction of family medicine. *Manas Taalimi* aimed to strengthen primary health care services further through the following activities:
  - improving the infrastructure at the primary care level through the purchase of medical and diagnostic equipment and computers, and the continuous training of FGP doctors and nurses in family medicine;
  - strengthening FAPs by upgrading their equipment, medicines and supplies, ensuring communication lines with higher level medical centres and emergency services, training staff, and improving economic incentives;
  - improving access to primary health care for remote populations by identifying villages with no medical points and creating new FAPs in coordination with local governments;
  - reviewing the distribution of ambulance stations to improve access to emergency and specialist care;
  - improving quality of care provided by ambulance services by training staff, developing and implementing clinical protocols, improving service interaction with FGPs and other health organizations, and improving the material and technical conditions of ambulance stations (vehicles, communication technologies and medical equipment);
  - identifying new mechanisms to ensure access to drugs for populations residing in villages with no pharmacies, based on existing pilot projects; and
  - enhancing the effectiveness of health promotion activities in primary health care based on close interaction with FGP and FAP staff.
- Optimizing the performance of FMCs, outpatient/walk-in diagnostic departments in hospitals and health organizations delivering specialized health services in outpatient settings: The efficiency and quality of outpatient services are negatively affected by the duplication of specialists in FMCs and outpatient departments in hospitals, the insufficient medical and laboratory equipment in FMCs, and the oversupply of specialists in hospitals. The number of narrow specialists in FMCs was planned to be optimized under *Manas Taalimi*, taking into account population needs and based on a separate approach for urban and rural areas. With the

introduction of new technologies, FMCs were envisaged to respond better to population needs and reduce expenditure for inpatient care. Medical and laboratory equipment and training of FMC and laboratory specialists were expected to improve the quality of outpatient health services. Dental care services, the most required type of specialty care, were envisaged to be improved to ensure access through the SGBP for socially vulnerable and targeted population groups. However, some of the envisaged activities were not implemented fully and are planned to be included in the next national health programme.

- Further restructuring and optimizing inpatient care in order to establish a hospital network that is responsive to population needs: Hospital care was envisaged to be further restructured under *Manas Taalimi*, focusing on hospitals located in Bishkek and Osh cities. By transforming inefficient structural subdivisions of hospitals in rural areas into primary health care organizations, reinforced by ambulance cars and communication technologies, access to quality services has improved for populations residing in remote and mountainous areas. New payment mechanisms were developed for some remote hospitals that were making losses under the new payment mechanisms, but had to be retained to ensure access of the population to health services in these areas. The activities that were not implemented fully are planned to be included in the next national health programme.
- Optimizing the performance of tertiary care organizations to improve access to highly specialized and expensive types of health care: It was hoped to improve access to tertiary health services by increasing the effectiveness of the referral system. The role of tertiary health organizations in supervising and coordinating the quality of care provided by primary and secondary levels of care was planned to be increased. Particular attention was paid to the expansion of opportunities in providing assistance and training, the organization of mobile teams and the delivery of care to populations at local levels. The activities that were not implemented fully are planned to be included into the next national health programme.
- Improving the management of health organizations working under managerial and financial autonomy in order to increase the efficiency and quality of delivered health services: Providers received capacity building and training in health management to enable them to adapt to new contractual mechanisms and financial incentives and to strategically

plan and optimize their work in response to population needs and sanitary-epidemiological conditions. Activities were also conducted to increase public awareness on health organizations.

- Developing efficient mechanisms of integration and interaction of health organizations delivering individual health services in order to ensure continuity and feedback: The referral system was planned to be reviewed to strengthen the interaction between health organizations and to ensure continuity and feedback mechanisms across providers. Particular emphasis was envisaged to be given to the functionality of emergency medicine, including appropriate communication technologies, means of transport, drugs and medical supplies and a sufficient supply of blood and blood products.
- Improving physical infrastructure and provision of modern medical and laboratory equipment to health organizations providing individual health services: The programme envisaged the improvement of health care providers by repairing premises and buildings, installing energy-saving technologies and providing medical and laboratory equipment. However, some of these activities have not been implemented fully and are planned to be included in the next national health programme.
- Improving the quality of health services at all levels of care: Quality improvement was recognized by *Manas Taalimi* as a critical challenge at all levels of health service delivery and the programme envisaged capacity building for medical staff at all levels of care. The role of nurses was planned to be expanded in the areas of hospital management, nursing care and the management of patients. *Manas Taalimi* further envisaged the introduction of methods of continuous quality improvement and improvements to rational pharmaceutical management, including the development and implementation of a policy on rational use of antibiotics and clinical pharmacology. Finally, the implementation of infection control programmes and efficient technologies of medical waste disposal were envisaged with the aim of improving quality of care. The activities were not fully implemented are planned to be included in the next national health programme.

### **Public health services**

The goal of the second subcomponent of service delivery was to create a sustainable public health service oriented towards population needs and based on the integration of health protection and promotion programmes, wide intersectoral collaboration and active involvement of society in health

protection and health promotion activities. Strengthening and modernizing public health functions in Kyrgyzstan were seen by *Manas Taalimi* as crucial reform activities (Government of the Kyrgyz Republic, 2006).

The main objectives of this subcomponent were:

- Increasing the effectiveness of epidemiological surveillance, health promotion and government regulation through creation of sustainable and integrated public health services: As a first step, a further refinement of the vision for public health was undertaken, followed by a structural reorganization of public health services in the areas of health promotion, disease control and government regulation. Capacity-building activities were considered key for improving the performance of public health services. Another challenge was to integrate health promotion and disease control activities with primary health care and to achieve the participation of communities and the population at large.
- Creating a new regulatory basis for public health services: The regulatory basis of public health services was envisaged to be completely revised under *Manas Taalimi* in order to improve effectiveness and efficiency and harmonize it with international standards and requirements.
- Further expanding and developing intersectoral collaboration and increase transparency: Effective health promotion and protection activities required stronger intersectoral collaboration on priority directions, more transparency and increased skills among the population and society as a whole to protect and promote their own health and made choices in favour of healthy lifestyles.
- Reorienting public health services towards health priorities: Through better priority setting and coordination, *Manas Taalimi* expected to change engrained behaviours, reorient the health system towards the specific population needs of each locality and decrease occupational, environmental and social risks to health. This required the strengthening of infection control, implementing the European Children's Environment and Health Action Plan, preventing micronutrient deficiencies and strengthening activities on radiation safety.

### **Content of medical practice and introduction of evidence-based medicine**

The third subcomponent was designed to improve the quality of health services delivered at all levels of the health system, based on the introduction of evidence-based approaches into medical practice and education. Introduction of evidence-based medicine into the clinical practice of doctors and managers improves the

content of clinical practice and it was hoped that it would also contribute to a more efficient use of limited resources. Kyrgyzstan has been implementing principles of evidence-based medicine since 2000. The first clinical protocols were aimed at primary health care. In 2001, the Coordination Committee was established at the Ministry of Health for the development and implementation of clinical protocols. The Committee included key specialists of health organizations, the MHIF, the Department of Strategic Planning and Reform Implementation, the Department of Drug Supply and Medical Equipment, the Department of State Sanitary-Epidemiological Surveillance, as well as representatives of medical education facilities. To enable promotion of evidence-based medicine, distribute literature and support the development and review of clinical practice guidelines, the Evidence-Based Medicine Unit was established at the Health Development Centre. In addition, professional associations have been involved in the development of clinical practice guidelines, to increase professional development and self-regulation. Monitoring the introduction of clinical protocols into clinical practice has been an important activity throughout, and activities under *Manas Taalimi* were based on this work.

The main objectives of this subcomponent were:

- Institutionalizing evidence-based medicine and further expanding its scope in order to improve quality of care: Development of clinical protocols and guidelines is a very difficult process, requiring access to modern medical literature and scientific research. In order to facilitate the development of medical practice based on scientific evidence, the Evidence-Based Medicine Centre was envisaged to be established under *Manas Taalimi*, with a network of resource centres through which access to resources could be provided for practising doctors and students, and for specialists participating in the development of clinical protocols and guidelines. In addition, the following activities were envisaged:
  - capacity building for the development of evidence-based medicine (e.g. through training of specialists and creation of an association of specialists in evidence-based medicine);
  - creation and maintenance of a database on evidence-based medicine, dissemination of information among stakeholders, including specialists who were developing clinical guidelines and protocols, and development and implementation of research studies; and
  - expansion of international collaboration with other centres and associations.

- Further promoting evidence-based medicine in medical practice and education: The development and updating of clinical protocols and guidelines and their introduction into clinical practice and education are continuous process involving many actors. *Manas Taalimi* envisaged the delegation of the development of clinical protocols to professional medical associations, national centres, research institutes and republican organizations with the Ministry of Health in charge of coordinating and introducing clinical protocols. *Manas Taalimi* also envisaged the inclusion of clinical protocols in the curricula of postgraduate and continuous medical education and a system of monitoring for the effectiveness of introduction for clinical protocols and guidelines. However, not all envisaged activities were completed fully under *Manas Taalimi* and they are planned to be included in the next national health programme.

### Priority programmes

The goal of this fourth subcomponent of service delivery was to increase the efficiency of delivering individual and public health services in the context of priority programmes (mother and child protection, tuberculosis control and prevention of respiratory diseases, prevention of cardiovascular diseases and their complications, and HIV/AIDS prevention) with the aim of reducing morbidity, disability and premature mortality and of achieving the health-related MDGs. These programmes had been prioritized based on an analysis of the current epidemiological situation, demographic and health indicators, and the government commitments to achieve the MDGs. While these priority programmes were important in themselves, an overarching strategy of *Manas Taalimi* was to integrate, where possible, these often vertical systems into the general health care delivery system in order to optimize health services and use resources more efficiently.

The main objectives of this component were:

- Reducing maternal and child mortality rates through expansion of evidence-based health services: *Manas Taalimi* aimed to expand the range of health services for pregnant women before and after delivery, as well as to children under 5 years of age. Most interventions for reducing maternal and child mortality can be undertaken at the level of primary care and public health. Interventions included encouraging preventive approaches at primary health care level and upgrading the skills of primary health care health personnel with regard to family planning, delivery management, timely detection of complications and appropriate referrals. At the secondary care level, improvements included better



delivery management and emergency care. At the tertiary care level, specialists were involved in improving care. Improvements in accessing health services included exemptions from co-payments and free-of-charge antenatal services for pregnant women. *Manas Taalimi* also envisaged expansion of the immunization programme and the provision with micronutrients. Activities were carried out to raise the awareness of the population, families and communities regarding maternal and child health, reproductive health and family planning issues.

- Reducing morbidity and mortality from tuberculosis and respiratory diseases through the implementation of WHO strategies: The WHO's directly observed treatment, short-course (DOTS) regimen for drug therapy and the Practical Approach to Lung Health strategy are intended to improve detection of tuberculosis and prevent acute respiratory and chronic lung diseases. The WHO's Practical Approach to Lung Health strategy was introduced countrywide. The aim was to gradually integrate tuberculosis and pulmonary services into the general health care delivery system. This strategy standardizes treatment methods, improves the quality of health services and intensifies preventive work among the population. As with other priority programmes, primary health care facilities were envisaged to have a key role in preventing and treating respiratory diseases and tuberculosis. *Manas Taalimi* envisaged that management and coordination arrangements for the control of respiratory diseases and tuberculosis would be streamlined and evidence-based approaches expanded, including vaccination and re-vaccination against tuberculosis. It also envisaged the better coordination and development of the bacteriological service and an increase in microscopic investigations, with the aim of improving detection rates. Since many tuberculosis infections take place in the penitentiary system, *Manas Taalimi* planned to expand DOTS coverage to the country's prisons, providing the necessary infrastructure and equipment, and to develop rehabilitation mechanisms for patients with tuberculosis before release from detention. Finally, the reform programme also envisaged expansion for detection and treatment of multidrug-resistant tuberculosis.
- Prevention and better treatment of cardiovascular diseases: Cardiovascular diseases are the main cause of adult deaths in Kyrgyzstan, disproportionately affecting men of working age. Considering the importance of this issue, *Manas Taalimi* envisaged two main approaches. At the population level, preventive activities were envisaged, with active involvement of the population, communities, local authorities and NGOs.

At the service delivery level, *Manas Taalimi* envisaged capacity building of health professionals in effective methods for preventing and treating cardiovascular diseases.

- Reducing drug addiction and transmission of HIV/AIDS and sexually transmitted diseases: Several strategies were envisaged under *Manas Taalimi* to reduce the transmission of HIV/AIDS and sexually transmitted diseases, including interventions targeted at high-risk groups and penitentiary facilities, methods to ensure the safety of medical procedures, public awareness campaigns on prevention and sexual behaviour and interventions to reduce mother-to-child transmission of HIV/AIDS.

### **Investing in human resources**

The goal of the last subcomponent of service delivery was to improve human resource policy in the health sector through strategic planning, improving the medical education system and introducing sustainable and efficient mechanisms of human resource management.

The main objectives of this subcomponent were:

- Improving human resource management based on strategic planning: This included the following activities:
  - revising the roles, job descriptions and requirements for health staff;
  - reviewing workforce planning parameters, standards and recommendations;
  - maintaining, updating and extending the Ministry of Health’s personnel database and integrating it with the databases on continuous medical education, patient enrolment and clinical activities to allow productivity and workforce planning;
  - updating projected workforce requirements at primary, secondary and tertiary level, based on approved workload standards;
  - developing a human resource methodology and reporting system for planning the supply of health workers; and
  - creating a sustainable system of incentives.
- Reforming the system of undergraduate and postgraduate medical education: Activities under *Manas Taalimi* in this area included:
  - developing a revised admission process;
  - introducing international standards in medical education;
  - revising and setting up accreditation for existing curricula and developing new training programmes;

- introducing new mechanisms for improving the qualifications of teaching staff;
- improving the training of postgraduate specialists by enabling the acquisition of practical skills in health facilities across the country; and
- strengthening residency programmes.
- Improving the system of continuous medical education: Activities included:
  - strengthening the existing system for retraining primary health care staff and expanding it nationwide;
  - developing and implementing a continuous medical education programme for secondary care staff working in priority services; and
  - developing and implementing a continuous medical education programme for public health staff.
- Introducing sustainable and efficient regulatory mechanisms for human resource management in the health sector: This would involve creating and implementing a process for the attestation and licensing of medical staff at all health care levels and revising the training system for health care managers and nurses with higher education.

## Stewardship

The goal of the stewardship component was to strengthen health policy and management in order to improve population health and health system performance. This component sought to introduce a qualitatively new approach to health policy formulation and management methods and enhance the capacity of the Ministry of Health and the health system at large to achieve health sector goals and objectives. Stewardship in Kyrgyzstan's health sector was considered critical in the context of growing population expectations and scarce financial resources. The goal cut across all functions of the health system and included development of health policies with clear goals and objectives, coordination of the work of all health system entities (including international donor organizations) and monitoring and regulation of health organizations. Activities under this component were designed to continue the transition from a command-based health management system to one based on partnerships, clear separation of functions, orientation towards outcomes, evidence-based decision-making and a culture of openness and responsiveness (Government of the Kyrgyz Republic, 2006).

The main objectives of this component were:

- Developing health policies based on a clear vision, continuity, a solid legal foundation, improved intersectoral cooperation and effective donor coordination: Several key tasks to improve the policy-making function in the health sector were identified. While the Ministry of Health was the lead agency in policy formulation, many other governmental agencies can make decisions that strongly affect health reforms and outcomes. Consequently, a key challenge was to clearly separate functions between the Ministry of Health and other agencies. The following activities addressed this area:
  - the Ministry of Health continued to take the lead in policy development with active stakeholder involvement based on the use of evidence and feedback from providers and the population;
  - the Ministry of Health’s organizational structure and roles were realigned to enable implementation of *Manas Taalimi*;
  - the respective roles and functions of central government agencies and local governments were clearly identified, taking into account the new administrative structure under fiscal decentralization;
  - the Ministry of Health’s functions that could be delegated to other entities, including professional associations, were identified and transferred;
  - the Ministry of Health developed mechanisms to protect the health system from political and economic risks by stepping up advocacy efforts and building a stronger alliance with key offices at higher governmental levels and with other line ministries;
  - greater attention was paid to the promotion of health policy and health reforms within and outside the health sector, not only within the government but also reaching out to providers, NGOs, and communities;
  - efforts were undertaken to increase the effectiveness of intersectoral interaction and the responsibility of government agencies for environmental risks, including in agriculture and industry;
  - synchronization and harmonization of health sector legislation within and outside the sector were sought in order to reduce duplication, avoid conflicting legislation and ensure synergies in key areas of intersectoral action (e.g. public health and health financing); and
  - the Ministry of Health took the lead under the SWAp in coordinating donor assistance and aligning it with health sector priorities.

- Shifting to new methods of management based on new functional characteristics and effective regulatory mechanisms: The relationship between provider organizations and the Ministry of Health had undergone significant structural and legislative changes with the introduction of provider autonomy. This required the development of new models of interaction, planning, management and reporting on both sides. To facilitate this, regulatory mechanisms of the Ministry of Health were strengthened; a unified procedure of appointment and discharge of managerial staff was introduced, and the capacity of providers was strengthened in health management, financing and administration.
- Institutionalizing health reforms: Many important functional changes began in the first 10 years of health reforms, and in line with the principle of continuity, *Manas Taalimi* aimed to institutionalize these activities:
  - activities focused at central and regional levels on increasing the role of the Ministry of Health in health policy formulation, identifying strategic directions for further development and establishing mechanisms of interaction between the public and private health sector;
  - functions and decision-making authorities of central and local structures were planned to be separated and clearly identified;
  - conflict of interest related to the concentration of political, regulatory and control functions was partly addressed;
  - restructuring and optimization of individual service delivery were continued, with a focus on the further development of primary health care and the establishment of a flexible hospital network;
  - reorganization of public health service delivery was undertaken, based on separated functions of surveillance, health protection and promotion, and health service delivery;
  - restructuring of specialized health organizations was envisaged, with their step-by-step integration into the general health service delivery system; and
  - partnerships with civil society were encouraged.
- Improving data collection, monitoring and evaluation in order to facilitate effective and adequate decision-making: Kyrgyzstan has a good track record in using information for policy-making. To build on this strength, the Ministry of Health took responsibility for monitoring progress of *Manas Taalimi*. Improving monitoring and evaluation required strengthening the health information system, including strengthening

the linkage between information and policy decisions, identifying synergies across various monitoring systems and upgrading information technologies. To facilitate this, a corporate governance system was planned to be introduced with a unified communication infrastructure for the entire health system. At the technological level, software products were developed, normative reference identifiers introduced and existing software standardized and integrated.

### Midterm review

The midterm review in May 2008 indicated strong progress in the implementation of *Manas Taalimi* (Ministry of Health, 2008). Implementation of the programme has become part of the routine operations of the Ministry of Health and the MHIF, resulting in ownership and full engagement by staff at all levels. Progress on all components was on schedule, reflecting a significant volume of technical work. A set of impact evaluations was carried out in early 2008 to inform the midterm review. Survey data were used to assess progress on key health and financial indicators (see Chapter 7).

To summarize, the main achievements of the *Manas Taalimi* programme include (Ministry of Health, 2008):

- a reduced financial burden for patients;
- a reduced proportion of patients making informal payments;
- improved regional distribution of expenditure under the SGBP and the Additional Drug Package;
- improved financial and physical access to health services;
- increased utilization of primary health care and hospital care;
- increased availability of the Additional Drug Package in rural areas; and
- an increased primary health care share under the SGBP.

## 6.2 Future developments

Health reforms in Kyrgyzstan suggest that each component of the health system involved in the reform process needs to go through three phases. The first phase, *initiation*, requires the most time. It is necessary to engage in policy dialogue and advocacy, inform stakeholders, draw up plans, develop the technical methodology and start implementation. The second phase, *solidification*,

requires evaluating the results of implementation, improving methodology and operational processes, refining implementation based on experience and analysis, building capacity and beginning to institutionalize the reform. The third phase, *sustainability*, is needed to ensure monitoring results are fed back into the implementation process and implementation is refined and fully institutionalized on a sustainable, long-term basis.

The components of the *Manas Taalimi* programme are currently in the following phases:

- population and community involvement: solidification
- health financing: solidification
- individual health services: solidification for primary health care and initiation for hospital services
- public health services: initiation
- content of medical practice: initiation
- priority programmes: initiation or solidification
- human resources and medical education: initiation
- stewardship: initiation or solidification.

Once the *Manas Taalimi* reform programme has been concluded, continued investments will be required to move some components from the initiation to the solidification phase and others from solidification to sustainability. It will be particularly important to strengthen the reforms currently occurring in medical education, public health, the content of medical practice and some individual health services and priority programmes. The results so far suggest that the health financing reforms are working, but that they need to be institutionalized to become sustainable in the long run. Service delivery components need to become more comprehensive and integrated, with due regard to quality improvements (Ministry of Health, 2008).

The next stage of health reforms, for the period 2012–2016, is currently being developed under the leadership of the Ministry of Health and with technical assistance of the WHO Regional Office for Europe. As far as it is possible to say, the next reform programme will be a continuation of the *Manas Taalimi* programme, targeting the provision of better quality of care with the aim of improving the health status of the population.





## 7. Assessment of the health system

A strong monitoring and evaluation system has been developed in Kyrgyzstan in order to analyse and assess progress in health reforms. Monitoring is based on the collection of process and outcome indicators with the aim of evaluating progress in implementation and whether the objectives of the *Manas Taalimi* programme have been achieved. Indicators cover the following areas (Ministry of Health, 2008):

- population health status
- equity and access to health services
- financial protection
- efficiency of health service delivery
- quality of health services
- responsiveness and transparency of the health system.

The most important process and outcome indicators, named “dashboard indicators”, assist policy-makers in assessing the overall status of the health system and making appropriate health policy decisions.

Indicators are based on statistical data collected by the Republican Health Information Centre. Indicators on health financing are drawn from existing databases and financial reporting of the MHIF and the Ministry of Health, including data on external financial assistance. Analysis and evaluation of indicators are undertaken by the Centre for Health System Development, which includes the Health Policy Analysis Unit. Annual reports are provided to the Ministry of Health, the government and the parliament, as well as to external development agencies (Government of the Kyrgyz Republic, 2006).

In order to assess the impact of health reforms on population health, further studies are being conducted, most of which form part of the household surveys conducted every two years by the National Statistical Committee. Additional

evaluations of reform implementation are being undertaken that investigate topics identified during the health summits that the Ministry of Health organizes twice a year to analyse the implementation progress of the *Manas Taalimi* programme (Ministry of Health, 2008).

## 7.1 Financial protection

Financial protection is a key objective of *Manas Taalimi*; it is directly linked to poverty reduction. The *Manas* reform programme began to improve financial protection for hospital care with the introduction of the single payer system for the SGBP and the downsizing of hospital infrastructure. These reforms were found to limit the financial burden for patients at the hospital level in pilot *oblasts*. However, patient expenditure on outpatient medicines increased rapidly in the early 2000s, undermining the achievements of the single payer reforms. As a result, out-of-pocket payments stood at an all-time high in 2004. To address this, the *Manas Taalimi* programme placed particular emphasis on reducing the financial burden for patients. This was to be achieved with increased public funding, targeted reduction in co-payments for certain population groups, more equal distribution of funds across *oblasts* for both the SGBP and the Additional Drug Package, and strengthened service provision in rural and hard-to-reach areas.

Three indicators were established to measure the impact of the *Manas Taalimi* programme on financial protection:

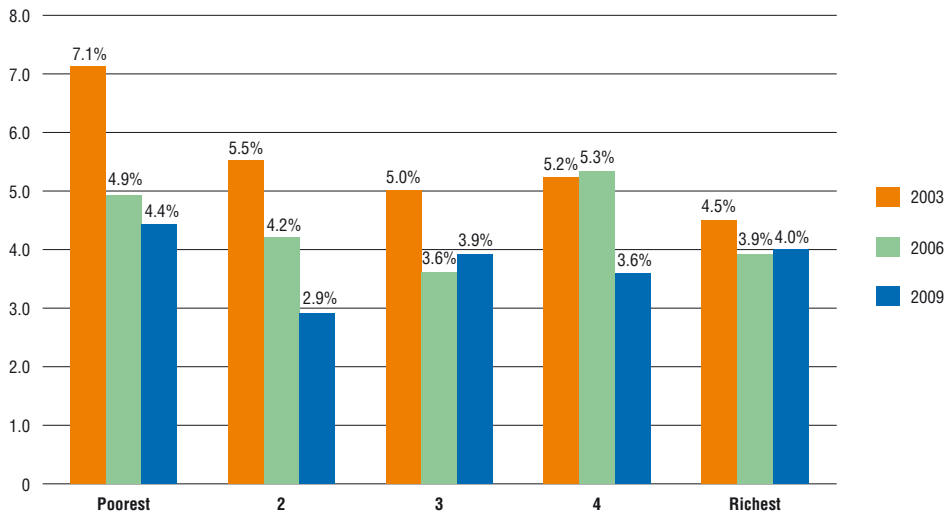
- out-of-pocket payments on health in the two poorest quintiles as a share of total household expenditure;
- level of co-payments relative to the official mean salary; and
- *oblast* deviation from the average national per capita expenditure for the Additional Drug Package.

All three indicators point to a significant improvement in financial protection, a reduction in the financial burden for patients and a more equal distribution of resources across *oblasts*. Between 2003 and 2009, the financial burden for the poorest 40% of the population declined significantly. The calculation of out-of-pocket payments included all household payments for health, including fees for outpatient visits, outpatient medicines, co-payments for hospitalizations and other official fees for laboratory tests and diagnostics, as well as informal payments to providers for medicines and supplies. Out-of-pocket expenditure

was quite regressive in 2003, with the poorest quintile paying 7.1% of their household resources for health, compared with 4.5% paid by the richest quintile (Fig. 7.1). Between 2003 and 2009, the distribution of out-of-pocket payments became more equal. In the poorest quintile, out-of-pocket payments as a share of household expenditure declined from 7.1% to 4.4%, while in the second poorest quintile they declined even more, from 5.5% to 2.9%.

**Fig. 7.1**

Total out-of-pocket payments for health as a share of total household expenditure, 2003, 2006 and 2009



Sources: Falkingham, Akkaziya & Baschieri, 2010; Ministry of Health, 2011.

The 2010 target for both of these groups, at 5%, seems to be within reach if public financing continues to increase. Although these reductions in the share of household expenditure being spent on out-of-pocket payments for health could also reflect declining health care utilization among the poor, utilization has, in fact, increased. With both increasing utilization and a declining financial burden, the *Manas Taalimi* programme has brought significant benefits to the poorest two quintiles of the population.

The mean co-payment level is steadily declining relative to the mean salary in the country and the indicator has surpassed the target for 2010. At baseline, mean co-payment for specialized and hospital care amounted to 30.8% of the mean monthly salary, a sizeable payment to make for a household experiencing a hospitalization episode. During 2004–2009, the mean co-payment remained constant, while the mean salary increased by 2.7 times. As a result, the

mean co-payment relative to the mean salary had declined to 11.4% by 2009. Co-payment levels are adjusted annually in an attempt to balance available state funds and the costs of providing benefits in the SGBP. This means that an increase in state funds allows a reduction of co-payments. Reductions of co-payments have focused on specific population groups, such as children under 5 years of age, women for prenatal care and deliveries, and pensioners older than 70 years.

Expenditure for the Additional Drug Package became more equally distributed across *oblasts* between 2005 and 2010, with excellent progress towards reaching the 2010 target. In 2005, the *oblast* deviation from the national average expenditure under the Additional Drug Package was +67% in Bishkek and -45% in Talas. Per capita expenditure in Bishkek relative to the national average declined to +43% in 2006 and +13.3% in 2009. At the same time, per capita expenditure in Talas and Naryn *oblasts* increased relative to the national average. In 2007, spending on the Additional Drug Package had become more equitable, with a variance across *oblasts* from +24.2% to -29.4%. Further revisions of per capita allocations under the Additional Drug Package are being considered.

Although not chosen as a key indicator, public expenditure has become more equally distributed for the SGBP as well. Pooling of funds at the national rather than the *oblast* level has allowed a more equal distribution across *oblasts*, with a declining gap between Bishkek city and other *oblasts* of the country.

It can be concluded that financial protection has improved during the implementation of *Manas Taalimi*. The benefits are particularly visible among the poorest groups of the population. Several reasons for this progress can be identified.

- The increase in budgetary funds and external resources allocated within the SWAp framework allowed reversal of a decade of declining public financing.
- Increased levels of funding allowed certain groups to be exempted from co-payments, including children under 5 years of age, pensioners older than 70 years, and women for prenatal care and deliveries.
- Pooling of funds was moved from the *oblast* to the national level, thus allowing a more equitable allocation of funds across *oblasts* for the health services contained in the SGBP.

- Ongoing improvements in the methods used for paying health care providers through the MHIF allowed funds to be distributed to health care providers in a way that encouraged improvements in equity, access and efficiency; for example, the introduction of several coefficients for a more equitable spending under the SGBP, such as for gender, age, small towns and rural areas, or the regional coefficients used within an Asian Development Bank-funded project.
- Investments in FAPs to improve care for remote and rural areas.

One of the remaining challenges is that private payment for health, although reduced, still accounts for a substantial part of total health expenditure. As financing from the state budget and external agencies increases, it will be important to reduce patient co-payments and develop a policy on how to determine co-payment levels in the future.

## 7.2 Access and equality in the utilization of health services

Utilization of both primary care and hospital services declined during the 1990s and early 2000s, raising concerns about barriers to access. Reasons included rising costs of care and a change of clinical practice away from the unnecessary and lengthy hospitalizations typical of the Soviet period. The *Manas Taalimi* programme aimed to strike a careful balance between ensuring access and avoiding encouraging unnecessary utilization, particularly at the hospital level. It envisaged to halt the decline in health care utilization (such as in primary health and hospital care), improve regional equality in the distribution of services (such as for ambulance services) and reduce the number of villages without certain health services (such as pharmacies).

The following indicators for measuring access to health services were identified:

- overall access barriers
- access to primary health care
- access to hospital care
- access to the Additional Drug Package in rural areas
- regional equality in the distribution of emergency services.

Access to care and equality in access are improving; household surveys report reduced financial and geographical barriers to access, increased utilization of FGPs and hospital services and greater regional equality in the use of the Additional Drug Package. However, the human resource situation remains a concern, particularly in rural areas, and migration of health workers is resulting in an increased workload for primary health care doctors, which may negatively affect quality and access to care in the long run (see section 4.2.1 *Trends in health care personnel*).

Overall, access barriers show a declining trend. According to the Kyrgyz Integrated Household Surveys between 2000 and 2009, the proportion of the population that reported that they needed health care but did not seek it because it was too expensive or too far away fell significantly, from 11.2% in 2000 to 3.1% in 2006, although it increased again to reach 4.4% in 2009 (Table 7.1).

**Table 7.1**

Financial and geographical barriers to access, 2000–2009 (selected years)

	2000	2003	2006	2009
Percentage of respondents who reported that they needed but did not seek health care in the past 30 days	13.5	15.1	18.2	n/a
Of them, the percentage of respondents who named “too expensive” or “too far away” as the reason	11.2	6.3	3.1	4.4

Sources: Falkingham, Akkazieva & Baschieri, 2010; Ministry of Health, 2011.

Note: n/a: Not available.

The decline in the utilization of primary care services has been halted and reversed. The dashboard indicator for access to primary health care is the utilization of FGPs. Utilization of this type of primary health care service increased from 1.6 per inhabitant in 2005 to 2.2 in 2007. A recent study based on data from the Kyrgyz Integrated Household Survey showed that the utilization rate among the poorest quintile of the population increased slightly, from 6.3% in 2001 to 8.1% in 2009 (Ministry of Health, 2011).

In rural areas, the share of FGPs serving a population of more than 2000 people is increasing, as a result of the continuing migration of health workers. This far exceeds the 1500 population envisaged per FGP in rural areas, a target set with the aim of reducing the share of FGPs with a high workload and improving access to and quality of care. At the start of the *Manas Taalimi* programme, 58% of FGPs in rural areas had an enrolled population of more than 2000 people and it was intended to reduce this share to 33%. However,

there was an increase from 58% in 2004 to 81% in 2007, largely as a result of the migration of medical personnel from rural areas to big cities or other countries (Falkingham, Akkazieva & Baschieri, 2010).

Between 1992 and 2004, utilization of hospital services declined. The Ministry of Health aimed to move away from the overly hospital-focused Soviet system, but rising costs of hospitalization (through both formal and informal payments) also contributed to declining hospitalization rates, raising concerns about accessibility. With the launch of *Manas Taalimi*, the decline in the utilization of hospital care was reversed and the hospitalization rate increased to 15.2 per 100 inhabitants in 2009. The target for this indicator was set at 12.5 per 100 inhabitants (the 2005 level) with the aim of halting the decline in hospital care utilization without encouraging inappropriate hospitalizations. A recent study on the appropriateness of hospitalization for selected conditions highlighted that about half of the admissions were inappropriate, caused by factors such as the absence of clinical protocols on many common conditions, with resulting over- or underdiagnosis (Murzalieva, Cholurova & Zurdinova, 2010). A study based on the Kyrgyz Integrated Household Survey also found that the hospital utilization rate increased between 2004 and 2007, reaching levels similar to those in 2001 (Falkingham, Akkazieva & Baschieri, 2010) and preliminary data indicate that by 2009 it increased further. Differences in hospitalization rates across socioeconomic groups narrowed between 2001 and 2004; hospitalization rates in the lowest quintile remained unchanged, while rates in the richest quintile fell from 9% to just under 6%.

Access to the Additional Drug Package in rural areas is improving. The number of villages that have FGPs but no pharmacies decreased from 142 in 2004 to 102 in 2009. With the exception of Issyk-Kul *oblast*, the number of pharmacies contracted by the MHIF has increased in all *oblasts*. The 2010 target of only 99 FGPs without pharmacies was met.

Regional inequality in the distribution of emergency services has been slightly reduced since 2004, but continues to remain significant. This indicator was included in the *Manas Taalimi* programme to measure the impact of expected investments in ambulance services. At the start of the programme, *oblast* deviation from the national average of served emergency calls per population ranged from -92% to +40%. By 2007, this variation declined slightly, ranging from -29% to +75%. Among the underserved *oblasts*, a slight improvement was noted in Naryn and Issyk-Kul *oblasts* (see section 5.5).

Overall, good progress has been made in improving access and equality in the utilization of health services. Several reform elements contributed to this progress:

- increased funding to the SGBP, more equitable allocation of funds across *oblasts* as a result of pooling at national level, and improvements in health purchasing;
- increased funding to the Additional Drug Package and establishing and contracting additional pharmacies in rural areas;
- improved availability of services (including more ambulances and new equipment);
- investments in health facilities (such as for renovation and equipment);
- improved capacity of health care providers through continuous medical education and facility-level quality improvement programmes;
- increased population and community involvement, including through information campaigns that increased knowledge about how to access health services; and
- increased capacity of health care providers through priority programmes, including for maternal and child health and cardiovascular diseases.

### 7.3 Efficiency of resource allocation in health care

Efficiency gains were a major concern in the *Manas* reform programme. The excess hospital capacity of the health system inherited from the Soviet period absorbed an increasing share of declining government resources. This meant that 75% of the government budget was allocated to cover fixed costs, such as utilities and staff, and only 25% was used for direct medical expenditure, such as medicines and medical supplies. These latter inputs were costly and had to be provided informally by patients, resulting in inefficiencies and poor financial protection.

The second aspect of inefficiency concerned the very small share of health spending allocated to primary care relative to hospital care. Soviet medicine was overly focused on hospitalization, even for conditions that could be treated in a primary care setting (such as asthma, ulcers, hypertension or anaemia). Apart from the impact on patients, this approach was wasting resources.



The *Manas* reforms were successful in achieving efficiency gains along both of these dimensions. Hospital capacity was reduced by 40%, leading to savings in utility and personnel costs and increasing the share of resources allocated to direct medical expenditure. Primary care began to receive an increasing share of funding. In the *Manas Taalimi* programme, these two aspects of efficiency continued to be monitored to ensure that previous gains were not reversed. As the restructuring of hospital services has been largely accomplished, the focus has now turned to continuous planning of service delivery.

Two indicators were formulated to measure the impact of the *Manas Taalimi* programme on efficiency:

- direct medical expenditure (medicines, medical supplies and food) as a share of total public expenditure at the hospital level; and
- public expenditure on primary care as a share of total public expenditure on health.

Both indicators suggest continued improvements in efficiency. Primary care continues to receive a growing share of public expenditure in the SGBP, increasing from 26.4% in 2004 to 37.7% in 2009. Direct medical expenditure (medicines, medical supplies and food) continues to increase annually as a share of hospital expenditure in the SGBP. Between 2004 and 2009, the indicator increased from 20% to 29.5%. This relative increase translates into significant increases in absolute terms, as budgetary allocations to the health sector have increased since the launch of the SWAp framework. In 2009, SGBP expenditure per admission and day increased by 11.1% on medicines and by 14.5% on food. However, there is still significant variation across *oblasts* in the mean spending on medicines (Ministry of Health, 2011).

Improvements in efficiency resulted from the following factors.

- MHIF provider payment systems continued to be refined and contain financial incentives for health care providers to allocate resources more efficiently.
- Health care providers were allowed to reinvest savings from restructuring and other efficiency increases.
- Primary health care received priority in the allocation of resources across care levels in the SGBP.
- Facilities gradually improved their budgeting and financial management processes to take advantage of their increased autonomy and allocated resources more efficiently.

- Through implementation of new clinical guidelines and protocols, improved training and continuous medical education, plus facility-level quality improvement and monitoring, health care providers are starting to reduce the provision of unnecessary health services.

## 7.4 Transparency and responsiveness

As noted in Section 7.1 on financial protection, out-of-pocket payments (both formal and informal) were high at the start of the single payer reforms. They included payments to medical personnel, for medicines, medical and nonmedical supplies and food. The introduction of the SGBP aimed to create a transparent system of payments at the hospital level, with a flat lump-sum paid at admission. Several accompanying measures were introduced to increase the awareness of the population of their entitlement and payment obligations. The single payer reforms were successful in the beginning in reducing informal payments and increasing the transparency of the health system, but declining state funding at the time limited their impact. The *Manas Taalimi* programme aimed to further enhance the transparency of the health system by ensuring adequate funding for key inputs of care (medicines, supplies and food) and increasing the awareness of the population about their entitlement to health care.

Three indicators were selected to assess the impact of the *Manas Taalimi* programme on transparency and responsiveness of the health system towards patients:

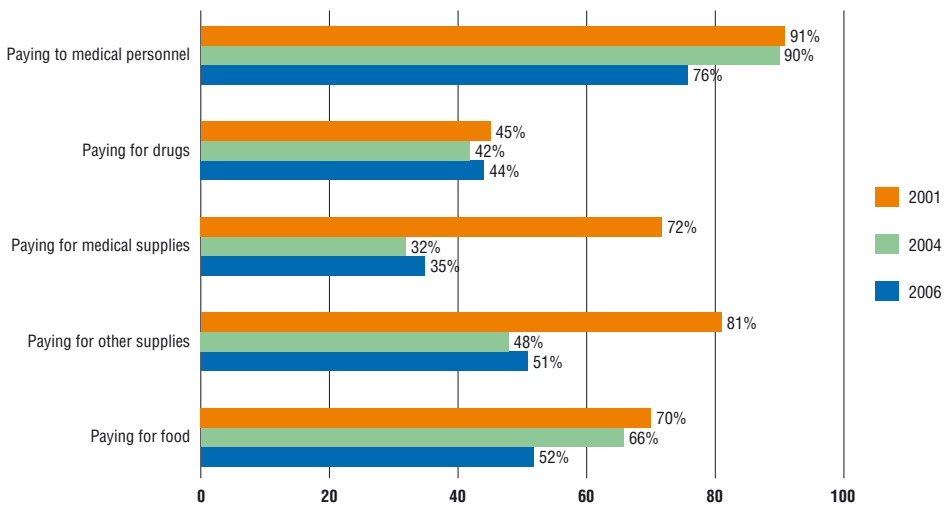
- informal payments as a share of out-of-pocket payments at the hospital level;
- share of the population aware of their entitlement in the SGBP and the Additional Drug Package; and
- responsiveness of hospital services to users' expectations.

In terms of transparency, the share of patients making informal payments has declined significantly since the launch of the single payer reforms in 2001. One explanatory factor is the relatively good awareness of the population of their entitlement in the context of the SGBP. In terms of responsiveness, patients continue to give high scores for various service aspects of hospital care. It seems that the Kyrgyz health system is gradually becoming more transparent and responsive.

The share of hospitalized patients making informal payments declined significantly between 2001 and 2006. Informal payments are measured by the Discharged Patients Survey conducted by the Health Policy Analysis Center. The survey was based on 2913 hospitalized respondents in 2001, 4533 hospitalized patients in 2004, and 5337 hospitalized patients in 2006. Patients were interviewed at home after discharge to obtain more accurate responses to questions on informal payments. The share of hospitalized patients reporting having made informal payments declined between 2001 and 2006 across all five categories of payments (Fig. 7.2). Between 2004 and 2006, a pronounced decline was recorded in the percentage of patients making payments to medical personnel or for food. This occurred for several reasons, including increased financing for hospitals, which allowed them to increase salaries and improve the supply with medicines and food (Jakab & Kutzin, 2009).

**Fig. 7.2**

Percentage of hospitalized patients making informal payments, 2001, 2004 and 2006



Source: Jakab & Kutzin, 2009.

The 2006 survey was the first that included questions about the awareness of the population of their rights in the SGBP. The survey questions aimed to elicit awareness of entitlement about primary care, hospital care and the Additional Drug Package. Population awareness was found to be highest related to entitlement for hospital care. Over 66% of household heads correctly noted

that a hospitalized patient does not have to pay to medical personnel, and 49% were aware of the fact that a hospitalized patient does not have to pay for medicines once they have paid the official co-payment (Jakab & Kutzin, 2009).

With regard to primary care, seven services were listed and respondents were asked to identify which ones were free of charge and which needed payment: 46% of interviewed patients answered at least four of the seven questions correctly. A positive trend is observed when comparing population awareness between 2006 and 2009. In 2006, 82% of respondents knew that FGP consultations were free, increasing to 83.7% in 2009, while the share of respondents who knew that blood pressure measurement should be free increased from 69% in 2006 to 77.8% in 2009. Much fewer patients knew that ultrasound should be provided free for pregnant women, although here too awareness increased, from 19% in 2006 to 24% in 2009. The Additional Drug Package was also not very well known among respondents. In 2006, only 30.4% of insured people responded that they were entitled to subsidized prices for outpatient medicines, although this increased to 36.6% in 2009. Awareness about subsidized prices for outpatient medicines for children under 16 years of age changed little between 2006 (26%) and 2009 (26.9%) (Table 7.2).

**Table 7.2**

Population awareness of entitlement, 2006 and 2009

	2006	2009
Percentage correctly answered entitlement to at least 4 out of 7 primary care services (free of charge: visit to FGP, visit to specialist, blood and urine test, blood pressure measurement, ambulance services, ultrasound for pregnant women; need to pay: hormone/kidney/rheumatism test)	46.0	57.4
Percentage correctly answered whether patient has to pay to medical personnel beyond the co-payment for hospitalization	66.5	76.4
Percentage correctly answered whether patient has to pay for medicines beyond the co-payment for hospitalization	49.2	52.6
Percentage reporting "entitled to subsidized prices for outpatient medicines" of those who also reported being insured by MHIF	30.4	36.6
Percentage reporting "children under 16 years of age are entitled to subsidized prices for outpatient medicines" of those who have children under 16	26.2	26.9

Source: Ministry of Health, 2011.

Responsiveness to patient expectations at the hospital level remains high. Table 7.3 presents patient assessments of six dimensions of hospital care, including care and respect, information about diagnosis and treatment, time devoted by medical personnel, participation in decision-making about treatment, cleanliness and outcome of treatment. Each dimension was evaluated on a 4-point scale, with 1 being the worst and 4 being the best score. Table 7.3 shows the share of patients scoring each of these dimensions as 3 or 4, based on

the Discharged Patients Surveys of 2004 and 2006. High scores were recorded with regard to all six dimensions, with no significant change between 2004 and 2006. The mean of the six dimension-specific percentages resulted in a composite responsiveness score, which stood at 90.6% in 2004 and 87.4% in 2006 (Ministry of Health, 2008).

**Table 7.3**

Patient satisfaction with hospital services, 2004 and 2006

Questions evaluating dimension of care	Percentage with a score of 3 or 4	
	2004	2006
How often were you treated with care and respect by medical personnel? (never, sometimes, usually, always)	95.2	92.4
How often did you receive adequate information about your diagnosis, treatment and analysis? (never, sometimes, usually, always)	92.2	89.2
How often did doctors find time for your questions about your health? (never, sometimes, usually, always)	92.1	88.0
How often did you participate in decision-making about your care? (never, sometimes, usually, always)	76.8	71.6
How do you evaluate the cleanliness of the hospital? (very bad, bad, good, very good)	95.6	92.7
How do you evaluate the outcome of your treatment? (got worse, stayed the same, got better, got well)	91.6	90.7
Composite responsiveness score	90.6	87.4

Source: Ministry of Health, 2008.

Note: Score was on a 4-point scale with 1 being the worst and 4 being the best score.

Activities contributing to increased transparency and responsiveness of the health system include:

- increased funding to the SGBP and improved health purchasing, allowing better supply of key inputs (medicines, medical supplies and food);
- increased capacity of health professionals through training and quality improvement programmes; and
- continuing population information campaigns using the mass media and village health committees.

## 7.5 Quality of care

The *Manas* reform programme focused on quality improvement at the primary care level. For six diseases (asthma, ulcers, anaemia, hypertension, acute respiratory infections, diarrhoeal diseases and pneumonia), primary health care doctors were expected to treat patients according to new guidelines and to refer

them less frequently to hospitals. Pharmaceuticals required for the treatment of these conditions were subsidized by the Additional Drug Package of the MHIF. These steps resulted in improved quality of care.

In the *Manas Taalimi* programme, quality improvement was based on a two-pronged approach. First, several activities aimed to increase the overall quality of care by strengthening evidence-based medicine and improving medical education. Second, quality improvement was sought under the four priority programmes: mother and child health, cardiovascular diseases, tuberculosis and HIV/AIDS.

The dashboard indicators on quality of care relate to maternal and child health. Originally, it was envisaged that three indicators would be used, but this was reduced to two because of problems of availability of data covering the percentage of women who receive the full package of antenatal services. The two dashboard indicators are:

- the percentage of children receiving immunizations according to the national immunization calendar; and
- the percentage of women giving birth who suffer from anaemia.

So far, the two indicators do not indicate improvements in the quality of care. However, some other indicators suggest that the quality of care is improving in selected conditions of maternal and child health and cardiovascular diseases.

The recorded level of immunization remains high in the country, at 95.6% in 2009, although this is a decline from the 99% recorded in previous years. The decline most likely reflects increasing internal migration. Internal migrants, mostly in Bishkek, are not well covered by vaccination services. On the one hand, many are not aware that they can receive free primary care and vaccinations without being registered in their new place of residence. On the other hand, primary health care providers in these new settlements (*novostroikas*) of Bishkek are overwhelmed by their increasing workload. Combined with poor roads, lack of cars and resources for fuel, outreach activities are nearly impossible in these areas.

Despite efforts to strengthen the early identification and treatment of iron-deficiency anaemia, the proportion of women giving birth who are anaemic remains high, at 45.5% in 2009. The persistently high level of this indicator is surprising, since there has been a decline in poverty levels and micronutrient supplements have been included in the Additional Drug Package of the MHIF.

Reasons might include an improved registration of iron-deficiency anaemia in the clinical recording forms of the MHIF since 2006, but also the deeply ingrained nutrition habits of the population (Ministry of Health, 2008).

As mentioned above, other indicators suggest improvements in the quality of care for selected conditions of maternal and child health and cardiovascular diseases, following intensive training and quality improvement programmes. A composite safe motherhood indicator increased from 17.1% in 2006 to 61.3% in 2009. The indicator was tracked in two pilot facilities in 2006, nine pilot facilities in 2007 and fifteen facilities in 2009. The programme is led by the Ministry of Health and supported by a consortium of external agencies, including USAID/ZdravPlus, WHO, UNICEF, UNFPA and the Asian Development Bank. The composite indicator is based on the following five indicators (Ministry of Health, 2011):

- percentage of providers enabling deliveries according to WHO standards;
- percentage of normal vaginal deliveries;
- percentage of women attending antenatal classes;
- percentage of women choosing their own birth positions; and
- percentage of women giving birth with a partner.

The introduction of continuous quality improvement programmes for the management of hypertension in 1318 primary care facilities led to significant improvements in key indicators of quality of care between 2006 and 2009. The share of adults who visited primary health care facilities and had their blood pressure checked increased from 63% in 2006 to 80% in 2009. The share of patients who were prescribed with the first-line medications envisaged by the current clinical protocol increased from 64% to 79%. While hypertension control at the primary care level is improving, much remains to be done to increase awareness of the population on the need to measure their blood pressure annually and, where necessary, to take prescribed medicines on a daily basis (Ministry of Health, 2011).

Quality of care remains a major challenge in Kyrgyzstan, at both the primary and hospital level, but there is encouraging evidence that quality improvement programmes can bring results. Activities that help to improve quality of care include:

- development of evidence-based clinical guidelines and protocols;

- better linkages in health facilities between key inputs (including infrastructure and equipment, drugs, laboratory services and training) and quality improvement techniques, such as the monitoring of quality-related indicators;
- integration of priority programmes with the general health system;
- continued improvements in SGBP purchasing and refined targeting of the Additional Drug Package to priority conditions and diseases;
- a reform of medical education, resulting in better qualified health professionals; and
- health promotion that encourages greater involvement of the population in their own health care.

Involving local communities and NGOs in the development and implementation of health programmes and quality improvement has proven to be very effective. Work of health committees in Naryn *oblast* on the prevention of iodine-deficient conditions and the quality control of imported white salt exercised by local communities resulted in an increased share of households using iodized salt for cooking, far exceeding the national average (Government of the Kyrgyz Republic, 2006).



## 8. Conclusions

Since the early 1990s, Kyrgyzstan has undertaken wide-ranging reforms of its health system in a challenging socioeconomic and political context while faced with severe threats to the health of the country's population. Kyrgyzstan developed two major health reform programmes after the country's independence: *Manas* (1996–2006) and *Manas Taalimi* (2006–2010). The *Manas* programme launched comprehensive structural changes for health care delivery, financing and management. It included reforms of the health care delivery system with the aim of strengthening primary health care, developing family medicine and restructuring the hospital sector, as well as efforts to improve the provision of pharmaceuticals, strengthen public health and improve quality of care. The *Manas* programme also introduced fundamental changes to health financing. In 1997, mandatory health insurance was introduced with the aim of attracting additional sources of funding to the health sector and improving the social protection of the population. The MHIF was created to administer the health insurance system, which laid the foundation for the introduction of a purchaser–provider split and the development of a contracting strategy. In 2001–2004, the single payer system was developed, with the MHIF and its territorial departments becoming the single payer for the SGBP in the state-run health system. This implied a shift from an administratively fragmented financing system to the pooling of local *oblast*, *rayon/city* and *ayilokmottu* budget funds at the *oblast* and later national level. With the pooling of funds and the introduction of new health purchasing mechanisms, including output-based provider payment systems, through the single payer for the SGBP, Kyrgyzstan managed to overcome the earlier fragmentation and to reduce excess capacity in the health system. Pooling of funds was also key in starting to address the pronounced regional inequities in funding and resources, as it allowed the MHIF to distribute funds more equitably for the SGBP and the Additional Drug Package. This helped to improve access to health services and increase equity.

Health reforms have achieved improvements in several key aspects of health system performance. The introduction of the SGBP and the Additional Drug Package has helped in using the limited resources for health more effectively. The introduction of a specified budget for the SGBP, in conjunction with MHIF funds, has made it possible to improve access to health services for the most vulnerable categories of the population, and to increase the efficiency and transparency of health care provision. The systems of paying providers were changed from input- to output-based systems, with capitation payments for primary care and case-based payments for hospitals.

An increase of state funding for health was important to address financial barriers to access. One of the key conditions set by external development agencies for disbursing funds within the SWAp framework was an annual increase of 0.6% in the state health budget as a percentage of total state expenditure. Between 2000 and 2008, state financing (including mandatory health insurance funding) increased from 2.1% to 2.4% of GDP. Total expenditure on health accounted for 6.4% of GDP in 2008, which meant that Kyrgyzstan was spending a higher share of GDP on health than many other countries of the former USSR. However, despite increased state funding, private out-of-pocket payments still constitute more than half of total health expenditure. While decreasing, the share of hospitalized patients making informal payments to medical personnel still stood at 52% in 2006.

Unsurprisingly, financial protection remains a major challenge. Patient expenditure on outpatient medicines increased rapidly in the early 2000s, and out-of-pocket payments stood at an all-time high in 2004. To address this, the *Manas Taalimi* programme placed particular emphasis on reducing the financial burden for patients. Between 2003 and 2009, the financial burden for the poorest 40% of the population indeed declined. According to the Kyrgyz Integrated Household Surveys between 2000 and 2009, the proportion of the population that reported that they needed health care but did not seek it because it was too expensive or too far away fell significantly, from 11.2% in 2000 to 4.4% in 2009.

Population health indicators show the enormous challenges the Kyrgyz health system faces. Life expectancy, estimated at 72 years for females and 63 years for males in 2008, is still below the level recorded in 1990 and far below levels in western Europe. Infant and maternal mortality show declining trends but are still very high, with officially recorded infant mortality of 25 per 1000 live births in 2009 and maternal mortality of 69.8 per 100 000 live births in 2009. Furthermore, there is still a very high incidence of tuberculosis, at 101 per

100 000 inhabitants in 2009, and the number of newly registered HIV infections is increasing. Malnutrition is another challenge, with 43.8% of pregnant women being anaemic at delivery.

Apart from aligning the health system to improve population health, several areas will need to be addressed by future reforms. One of them relates to the health workforce. The system of medical education is currently being reformed, but an even greater challenge is the uneven regional distribution of health workers. Furthermore, salaries of health workers remain comparatively low and health workers are increasingly migrating within Kyrgyzstan or to other countries, resulting in an increased workload for primary health care doctors in rural areas.

The further strengthening of primary care will remain a challenge. While it is receiving an increasing share of state funding, inpatient facilities still account for most health expenditure. The issue of parallel and vertical health services also still needs to be addressed, in order to decrease duplication and waste of resources. Quality of care remains a major area requiring attention, and some clinical areas, such as mental health, still adhere to Soviet-style treatment approaches and guidelines. The release of resources for capital investment and medical equipment is another challenge for the future.

Kyrgyzstan has progressed considerably in reforming the health system it inherited from the Soviet period, with substantial external assistance. As the *Manas Taalimi* programme is drawing to a close, it will be important to evaluate its achievements and lessons so that the next stage of health reforms can build on the progress achieved so far.



## 9. Appendices

### 9.1 References

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## 9.2 Useful web sites

Department of Sanitary-Epidemiological Surveillance under the Ministry of Health: <http://www.dgsen.kg>

DFID (United Kingdom Department for International Development): <http://webarchive.nationalarchives.gov.uk/+http://www.dfid.gov.uk/countries/asia/kyrgyzstan.asp>

German Development Bank: [http://www.kfw-entwicklungsbank.de/EN\\_Home/LocalPresence/Asia49/Office\\_Kyrgyz\\_Republic/index.jsp](http://www.kfw-entwicklungsbank.de/EN_Home/LocalPresence/Asia49/Office_Kyrgyz_Republic/index.jsp)

Health Policy Analysis Center: <http://www.hpac.kg>

Medicines Transparency Alliance project WHO: <http://www.metakg.org>

MHIF (Mandatory Health Insurance Fund): <http://www.foms.med.kg>

Ministry of Finance: <http://www.minfin.kg>

Ministry of Health: <http://www.med.kg/>

National Statistical Committee: <http://www.stat.kg>

Swiss Agency for Development and Cooperation (country web site): [http://www.sdc-health.ch/priority\\_countries/cis/kyrgyzstan](http://www.sdc-health.ch/priority_countries/cis/kyrgyzstan)

UNAIDS (Joint United Nations Programme on HIV/AIDS) (country web site): [http://www.unaids.org/en/Regions\\_Countries/Countries/kyrgyzstan.asp](http://www.unaids.org/en/Regions_Countries/Countries/kyrgyzstan.asp)

UNDP (United Nations Development Programme) (country web site): <http://www.undp.kg>

UNICEF (United Nations Children's Fund) (country web site): <http://www.unicef.org/kyrgyzstan>

WHO (World Health Organization) (country web site): <http://www.who.int/countries/kgz/en/>

World Bank (country web site): <http://www.worldbank.org.kg>

## 9.3 Principal legislation

Law "On Health Protection of the Citizens of the Kyrgyz Republic", 1992 (1992 Health Protection Law)

Law "On Licensing", No. 12 (3 March 1997), amended 1 August 2003, 13 October 2009 (No. 270)

Law "On Guarantees and Free Access to Information", No. 89 (5 December 1997), amended on 28 December 2006 (No. 89)

Law "On Protection of People from Tuberculosis", No. 64 (18 May 1998), amended on 31 July 2006 (No. 138)

Law "On Narcotic Substances, Psychotropic Substances and Precursors", No. 66 (22 May 1998), amended on 4 June 1998 (No. 90) and 20 March 2010 (No. 40)

Law "On Psychiatric Care and Citizens' Rights to Receive it", No. 60 (17 June 1999), amended on 4 July 2005 (No. 10)

Law "On Health Insurance of Citizens of the Kyrgyz Republic", No. 112 (18 October 1999), amended on 21 April 2003 (No. 85) and 15 July 2003 (No. 149)

Law "On Prevention of Iodine Deficiency Diseases", No. 40 (18 February 2000)

Law "On Oncological Care of the Population", No. 83 (4 October 2000)

- Law “On Immunoprophylaxis of Infectious Diseases”, No. 56 (26 June 2001), amended on 18 June 2005 (No. 77) and 30 July 2005 (No. 118)
- Law “On Drugs”, No. 91 (30 April 2003), amended on 28 March 2009 (No. 92) and 17 April 2009 (No. 125)
- Law “On Introducing Changes and Amendments to the ‘Law on Health Insurance of Citizens of the Kyrgyz Republic’” (adopted 15 July 2003)
- Law “On the Single Payer System in Health Care Financing”, No. 159 (30 July 2003)
- Law “On Financial and Economic Foundations of Local Self-Government”, No. 215 (25 September 2003), amended on 28 January 2010 (No. 15)
- Law “On Basics of Technical Regulation in the Kyrgyz Republic”, No. 67 (22 May 2004), amended on 16 November 2009 (No. 299)
- Law “On State Purchases”, No. 69 (24 May 2004), amended on 20 July 2009 (No. 236)
- Law “On Health Care Organizations in the Kyrgyz Republic”, No. 116 (13 August 2004)
- Law “On Health Protection of the Citizens of the Kyrgyz Republic”, No. 6 (9 January 2005)
- Law “On AIDS Prevention in Kyrgyzstan”, No. 149 (13 August 2005)
- Law “On State Statistics”, No. 40 (26 March 2007), amended on 27 March 2009 (No. 85)
- Law “On Donation of Blood and its Components in Kyrgyzstan”, No. 96 (2 July 2007), amended on 30 December 2009 (No. 96)
- Law “On Reproductive Rights of Citizens and Guarantees of their Enforcement”, No. 147 (10 August 2007)
- Law “On Public Health “, No. 248 (24 July 2009)
- Government Decree “On the State Guaranteed Programme to provide Citizens of the Kyrgyz Republic with Medical-Sanitary Care in 2006”, No. 4 (30 January 2006)
- Government Decree “On the National Programme of Health Reform ‘*Manas Taalimi*’”, No. 100 (16 February 2006)
- Government Decree “On the State Drugs Policy for 2007–2010”, No. 11 (12 January 2007)
- Government Decree “On Approval of the Essential Drugs List of the Kyrgyz Republic”, No. 187 (20 March 2009)

## 9.4 HiT methodology and production process

The HiT profiles are produced by country experts in collaboration with the Observatory’s research directors and staff. The profiles are based on a template that, revised periodically, provides detailed guidelines and specific questions, definitions, suggestions for data sources, and examples needed to compile HiTs. While the template offers a comprehensive set of questions, it is intended to be used in a flexible way to allow authors and editors to adapt it to their particular national context. The most recent template is available online at: <http://www.euro.who.int/en/home/projects/observatory/publications/health-system-profiles-hits/hit-template-2010>.

Authors draw on multiple data sources for the compilation of HiT profiles, ranging from national statistics, national and regional policy documents, and published literature. Furthermore, international data sources may be incorporated, such as those of the OECD and the World Bank. OECD Health Data contain over 1200 indicators for the 33 OECD countries. Data are drawn from information collected by national statistical bureaus and health ministries. The World Bank provides World Development Indicators, which also make use of official sources.

In addition to the information and data provided by the country experts, the Observatory supplies quantitative data in the form of a set of standard comparative figures for each country, drawing on the European Health for All database. The Health for All database contains more than 600 indicators defined by the WHO Regional Office for Europe for the purpose of monitoring Health for All Policies in Europe. It is updated for distribution twice a year from various sources, relying largely upon official figures provided by governments, as well as health statistics collected by the technical units of the WHO Regional Office for Europe. The standard Health for All data have been officially approved by national governments. With its summer 2007 edition, the Health for All database started to take account of the enlarged EU of 27 Member States.

HiT authors are encouraged to discuss the data in the text in detail, including the standard figures prepared by the Observatory staff, especially if there are concerns about discrepancies between the data available from different sources.

A typical HiT profile consists of 10 chapters.

1. Introduction: outlines the broader context of the health system, including geography and sociodemography, economic and political context, and population health.
2. Organization and governance: provides an overview of how the health system in the country is organized and outlines the main actors and their decision-making powers; discusses the historical background for the system; and describes the level of patient empowerment in the areas of information, rights, choice, complaints procedures, safety and involvement.
3. Financing: provides information on the level of expenditure, who is covered, what benefits are covered, the sources of health care finance, how resources are pooled and allocated, the main areas of expenditure, and how providers are paid.

4. Regulation and planning: addresses the process of policy development, establishing goals and priorities; deals with questions about relationships between institutional actors, with specific emphasis on their role in regulation and what aspects are subject to regulation; and describes the process of health technology assessment, and research and development.
5. Physical and human resources: deals with the planning and distribution of infrastructure and capital stock; the context in which information technology systems operate; and human resource input into the health system, including information on registration, training, trends and career paths.
6. Provision of services: concentrates on patient flows, organization and delivery of services, addressing public health, primary and secondary health care, emergency and day care, rehabilitation, pharmaceutical care, long-term care, services for informal carers, palliative care, mental health care, dental care, complementary and alternative medicine, and health care for specific populations.
7. Principal health reforms: reviews reforms, policies and organizational changes that have had a substantial impact on health services.
8. Assessment of the health system: provides an assessment based on the stated objectives of the health system, the distribution of costs and benefits across the population, efficiency of resource allocation, technical efficiency in health care production, quality of care and contribution of health care to health improvement.
9. Conclusions: highlights the lessons learned from health system changes; summarizes remaining challenges and future prospects.
10. Appendices: includes references, useful web sites and legislation.

The quality of HiTs is of real importance since they inform policy-making and meta-analysis. HiTs are the subject of wide consultation throughout the writing and editing process, which involves multiple iterations. They are then subject to the following:

- A rigorous review process (see the following section).
- There are further efforts to ensure quality while the profile is finalized that focus on copy-editing and proofreading.

- HiTs are disseminated (hard copies, electronic publication, translations and launches). The editor supports the authors throughout the production process and in close consultation with the authors ensures that all stages of the process are taken forward as effectively as possible.

One of the authors is also a member of the Observatory staff team and they are responsible for supporting the other authors throughout the writing and production process. They consult closely to ensure that all stages of the process are as effective as possible and that the HiTs meet the series standard and can support both national decision-making and comparisons across countries.

## 9.5 The review process

This consists of three stages. Initially the text of the HiT is checked, reviewed and approved by the series editors of the European Observatory. The HiT is then sent for review to two independent academic experts and their comments and amendments are incorporated into the text, and modifications are made accordingly. The text is then submitted to the relevant ministry of health, or appropriate authority, and policy-makers within those bodies are restricted to checking for factual errors within the HiT.

## 9.6 About the authors

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## The Health Systems in Transition profiles

### A series of the European Observatory on Health Systems and Policies

The Health Systems in Transition (HiT) country profiles provide an analytical description of each health system and of reform initiatives in progress or under development. They aim to provide relevant comparative information to support policy-makers and analysts in the development of health systems and reforms in the countries of the WHO European Region and beyond. The HiT profiles are building blocks that can be used:

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

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<b>Armenia (2001<sup>g</sup>, 2006)</b>	<b>Republic of Korea (2010)</b>
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<b>Belgium (2000, 2007, 2010)</b>	<b>Slovenia (2002, 2009)</b>
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<b>Bulgaria (1999, 2003<sup>b</sup>, 2007<sup>g</sup>)</b>	<b>Sweden (2001, 2005)</b>
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<b>Croatia (1999, 2007)</b>	<b>Tajikistan (2000, 2010<sup>g</sup>)</b>
<b>Cyprus (2004)</b>	<b>The former Yugoslav Republic of Macedonia (2000, 2006)</b>
<b>Czech Republic (2000, 2005<sup>g</sup>, 2009)</b>	<b>Turkey (2002<sup>g</sup>)</b>
<b>Denmark (2001, 2007<sup>g</sup>)</b>	<b>Turkmenistan (2000)</b>
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<b>France (2004<sup>g</sup>, 2010)</b>	<b>United Kingdom (England) (2011)</b>
<b>Georgia (2002<sup>g</sup>, 2009)</b>	<b>Uzbekistan (2001<sup>g</sup>, 2007<sup>g</sup>)</b>
<b>Germany (2000<sup>e</sup>, 2004<sup>e</sup>)</b>	
<b>Greece (2010)</b>	
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<b>Iceland (2003)</b>	
<b>Ireland (2009)</b>	
<b>Israel (2003, 2009)</b>	
<b>Italy (2001, 2009)</b>	
<b>Japan (2009)</b>	
<b>Kazakhstan (1999<sup>g</sup>, 2007<sup>g</sup>)</b>	
<b>Kyrgyzstan (2000<sup>g</sup>, 2005<sup>g</sup>, 2011)</b>	
<b>Latvia (2001, 2008)</b>	
<b>Lithuania (2000)</b>	
<b>Luxembourg (1999)</b>	
<b>Malta (1999)</b>	
<b>Mongolia (2007)</b>	
<b>Netherlands (2004<sup>g</sup>, 2010)</b>	
<b>New Zealand (2001)</b>	
<b>Norway (2000, 2006)</b>	

### Key

All HiTs are available in English.  
When noted, they are also available in other languages:

<sup>a</sup> Albanian

<sup>b</sup> Bulgarian

<sup>c</sup> French

<sup>d</sup> Georgian

<sup>e</sup> German

<sup>f</sup> Romanian

<sup>g</sup> Russian

<sup>h</sup> Spanish

<sup>i</sup> Turkish

<sup>j</sup> Estonian

<sup>k</sup> Polish

<sup>l</sup> Tajik





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HITs are in-depth profiles of health systems and policies, produced using a standardized approach that allows comparison across countries. They provide facts, figures and analysis and highlight reform initiatives in progress.