European Observatory on Health Care Systems

Health Care Systems in Transition

Kyrgyzstan





The European Observatory on Health Care Systems is a partnership between the World Health Organization Regional Office for Europe, the Government of Norway, the Government of Spain, the European Investment Bank, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine in association with the Open Society Institute.

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Foreword

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

The Observatory is a unique undertaking that brings together WHO Regional Office for Europe, the Governments of Norway and Spain, the European Investment Bank, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine in association with the Open Society Institute. This partnership supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of the dynamics of health care systems in Europe.

The aim of the HiT initiative is to provide relevant comparative information to support policy-makers and analysts in the development of health care systems and reforms in the countries of Europe 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 care services;
- describe accurately the process and content of health care reform programmes and their implementation;
- highlight common challenges and areas that require more in-depth analysis;
- 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 the different countries of the European Region.

The HiT profiles are produced by country experts in collaboration with the research directors and staff of the European Observatory on Health Care Systems. In order to maximize comparability between countries, a standard template and questionnaire have been used. These provide detailed guidelines

and specific questions, definitions and examples to assist in the process of developing a HiT. Quantitative data on health services are based on a number of different sources in particular the WHO Regional Office for Europe health for all database, Organisation for Economic Cooperation and Development (OECD) health data and the World Bank.

Compiling the HiT profiles poses a number of methodological problems. In many countries, there is relatively little information available on the health care system and the impact of reforms. Most of the information in the HiTs is based on material submitted by individual experts in the respective countries, which is externally reviewed by experts in the field. Nonetheless, some statements and judgements may be coloured by personal interpretation. In addition, the absence of a single agreed terminology to cover the wide diversity of systems in the European Region means that variations in understanding and interpretation may occur. A set of common definitions has been developed in an attempt to overcome this, but some discrepancies may persist. These problems are inherent in any attempt to study health care systems on a comparative basis.

The HiT profiles provide a source of descriptive, up-to-date and comparative information on health care systems, which it is hoped will enable policy-makers to learn from key experiences relevant to their own national situation. They also constitute a comprehensive information source on which to base more in-depth comparative analysis of reforms. This series is an ongoing initiative. It is being extended to cover all the countries of Europe and material will be updated at regular intervals, allowing reforms to be monitored in the longer term. HiTs are also available on the Observatory's website at http://www.observatory.dk.

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

The Observatory team working on the HiT profiles is led by Josep Figueras, Head of the Secretariat and the research directors Martin McKee, Elias Mossialos and Richard Saltman. Technical coordination is by Suszy Lessof. Administrative support, design and production of the HiTs has been undertaken by a team led by Phyllis Dahl and comprising Myriam Andersen, Sue Gammerman and Anna Maresso. Special thanks are extended to the WHO Regional Office for Europe health for all database from which data on health services were extracted; to the OECD for the data on health services in western Europe; and to the World Bank for the data on health expenditure in central and eastern European (CEE) countries. Thanks are also due to national statistical offices which have provided national data.

Introduction and historical background

Introductory overview

The Kyrgyz Republic, located in central Asia, gained its independence from the former USSR in August 1991. The country is bordered on the north by Kazakhstan, on the east by China, on the south by Tajikistan and on the west by Uzbekistan. The country lies between the Tien Shan mountains to the north-east and the Pamir-Alai mountains to the south-west. It is a small, mountainous and land-locked country of 199 000 km^2. The majority of the population lives in the fertile highland valleys. The capital, Bishkek (population 800 000), is surrounded by high mountains. The country has extensive water resources with over 3000 lakes, including Lake Issyk-Kul.

The estimated 1997 population was 4.6 million, with 62% living in rural areas and 38% in urban areas. The main ethnic groups are the Kyrgyz (about 61%), Russians (15%) and Uzbeks (14%), while the remaining 10% include a large number of minority groups (*26*). The main languages are Kyrgyz (from the Turkic group of languages) and Russian (the latter being the main language of business and government). The main religions are Sunni Muslim with minorities of Russian Orthodox and Roman Catholic.

The Scythians were among the earliest recorded inhabitants of the region, notable for their resistance to Alexander the Great in his fourth century BC advance through central Asia. The region was controlled by Turkic groups from the sixth to the twelfth century, including the Qarakhanids, who established several cities. Ancestors of today's Kyrgyz people moved into the region, especially after the rise of Jenghiz Khan in the thirteenth century, followed in the sixteenth century by the Mongol Oyrats, and next were ruled by the Kokand khanate. Russia controlled the region from the second half of the nineteenth century, with many Russians settling in the country. A revolt by the Kyrgyz in 1916 was suppressed with many thousands of deaths (*21*). Kyrgyz lands became

Fig. 1. Map of Kyrgyzstan[1]

Source: Central Intelligence Agency, The World Factbook, 2000.

part of the Turkestan Autonomous Soviet Socialist Republic within the Russian Federation in 1918. Many nomads were settled in forced farm collectivizations in the 1920s, although many fled across the mountains to China. A Kyrgyz Autonomous Soviet Socialist Republic was formed in 1926 and the Kyrgyz Soviet Socialist Republic in 1936.

Government administration

On 31 August 1991, the Kyrgyz Supreme Soviet voted for independence from the USSR. Askar Akaev (first elected in October 1990) continued as President of the new Republic. On 5 May 1993, a new constitution and new government structure was adopted by the parliament. In its first two years of independence, the Kyrgyz Republic began to dismantle its Soviet structures and to lay the foundations for a civil society by promoting a free press, allowing political associations and beginning the shift towards a market economy (*12*).

Akaev was re-elected President for a five-year term in January 1995 and has continued as President. A referendum in February 1996 significantly

[1] The maps presented in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the European Observatory on Health Care Systems or its partners concerning the legal status of any country, territory, city or area or of its authorities or concerning the delimitations of its frontiers or boundaries.

expanded the power of the President and consolidated a Presidential style of government.

The first parliament (Jogorku Kenesh) after independence had 350 members. Its structure was changed after a referendum in 1995 as follows. The parliament had two chambers: the Legislative Assembly with 35 elected members (elected for five-year terms) represented the electorate; the Assembly of Representatives, with 70 members (five-year terms), represented regional interests. The structure again was changed in 1999. The Legislative Council now comprises 60 members, 45 of whom are elected while 15 are appointed by the political parties; the Assembly of Representatives comprises 45 members. The last parliamentary election was held in March 2000.

The Cabinet of Ministers are appointed by the President on the recommendation of the Prime Minister. There were sixteen political parties in 1999, the largest party being associated with the President.

The Kyrgyz Republic is divided into seven oblasts (regions) each centring upon a large highland valley: Chui, Issyk-Kul, Osh, Talas, Djalal-Abad, Naryn and Batken. The capital, Bishkek, is a separate administrative region. Each region is headed by a Governor (Akim) and also has an elected oblast council (oblast kenesh). Each oblast has several towns and rayons (districts) with 64 towns or rayons in total. There are 455 municipalities. There are 64 self-governing bodies: seven at oblast level plus Bishkek, twelve towns and 45 rayons (*26*).

Demographic and health indicators

The population grew by only 2.7% between 1990 and 1997, despite a high birth rate, the drop in the early 1990s being due mainly to ethnic Slavic groups and Germans leaving the country after independence. After drops in 1993 and 1994, the population grew in 1995 and 1996 with an apparent dip in 1997 to 4.48 million people (Table 1). These estimates are uncertain, however, until the results of the 1999 census become available.

The country has a young population with 37% under the age of 15 years. The fertility rate (although decreasing since the mid-1970s) remains fairly high by western European standards, with 3.4 births per woman aged 15–44 years (*22*). The number of live births per 1000 population continues to far outnumber the number of deaths.

Health status indices have deteriorated during the 1990s (Table 2). Male life expectancy at birth fell from 64.4 in 1990 to 62.5 in 1997 (compared to 62.2 in the former Soviet countries and 74.2 in the European Union). Female life expectancy at birth dropped slightly from 73.3 in 1990 to 71.2 in 1997

Table 1. Demographic indicators, 1989–1997

Indicators	1989	1990	1991	1992	1993	1994	1995	1996	1997
Population (millions)	4.294	4.362	4.421	4.461	4.450	4.440	4.482	4.543	4.480
% population aged 0 –14 years	37.5	37.6	37.6	37.7	37.8	37.9	37.7	37.5	36.9
Total fertility rate	3.8	–	3.7	3.1	3.6	3.1	3.3	3.0	2.8
Live births per 1000 population	30.6	29.5	29.3	28.8	26.3	24.8	26.2	23.8	22.2
Deaths per 1000 population	7.3	7.0	6.9	7.2	7.8	8.4	8.2	7.6	7.5

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

(compared to 72.8 in the former USSR and 80.8 in the European Union). Life expectancy has fallen in the Kyrgyz Republic, as in the former USSR, against a continuing rise in European Union countries.

Infant mortality was 28.6 deaths per 1000 live births in 1997 (higher than the former USSR at 21.1 and much higher than the European Union average of 5.7). The Kyrgyz Republic still uses definitions established by the former Soviet Union, which did not count as live births premature and low birth weight babies who died within seven days (*5*). The infant mortality rate would be higher if international definitions were used. The Kyrgyz Republic Demographic and Health Survey showed infant mortality at 61 per 1000 live births using the international definition (*22*). Major causes of infant deaths include respiratory diseases, diarrhoea and accidents, which are mostly preventable deaths.

Maternal mortality improved during the 1990s from very high rates, perhaps after more attention to reproductive health services, although there was an apparent rise in 1997. The maternal mortality rate in 1997 was 62.7 deaths per 100 000 live births (compared to 39.4 in the former USSR and 7.1 in the European Union). Pregnancy outcomes are worse for women with anaemia; the 1997 Demographic and Health Survey found that about 16% of pregnant women had moderate levels of anaemia (*22*). The Kyrgyz abortion rate was 212 per 1000 live births in 1997, which is relatively low compared to 1065 in the former USSR.

Rates of noncommunicable diseases have risen sharply, as in most countries of the former USSR, partly associated with unhealthy behaviours such as a high fat diet, smoking and alcohol abuse. The age standardized male death rate from ischaemic heart disease worsened during the 1990s, and in 1997 was 136 per 100 000 population. The age standardized male death rate from cerebrovascular disease worsened but then dropped slightly by 1997 to 85.8 per 100 000 population. Age standardized mortality rates from cancer have declined.

Table 2. Health indicators, 1990–1997

Indicators	1990	1991	1992	1993	1994	1995	1996	1997
Female life expectancy at birth[a]	73.0	72.7	72.2	71.1	69.9	69.9	71.0	71.2
Male life expectancy at birth[a]	64.4	64.6	64.2	62.5	61.1	61.3	62.5	62.5
Infant mortality rate per 1000 live births[a]	30.2	29.7	31.6	32.9	29.6	27.7	26.6	28.6
Maternal mortality per 100 000 live births[b]	62.9	55.6	49.9	44.5	42.7	44.3	31.5	62.7
Abortions per 1000 live births[a]	41.6	37.7	34.2	31.9	28.5	23.1	22.4	21.2
SDR ischaemic heart disease 0–64 per 100 000 males[a]	103	104	109	135	158	152	153	136
SDR cerebrovascular diseases per 10 000[a]	60.7	67.7	71.1	79.8	96.0	103.9	91.1	85.8
Syphilis incidence per 100 000 population[a]	1.9	2.1	2.8	4.4	23	74	153	151
Tuberculosis incidence per 100 000, all forms[a]	52.9	56.9	57.9	54.5	61.4	75.4	90.1	114

Source: [a] WHO Regional Office for Europe health for all database; [b] UNICEF TransMONEE database 3.0.

Some communicable diseases have returned, including those associated with poverty, plus new infectious diseases. The increase in poverty among the population (discussed later) underlies many of these deteriorating health indices. The Kyrgyz Republic has high notification rates for pulmonary tuberculosis and a high mortality rate. The incidence of TB (all forms) per 100 000 population was 114 in 1997 (compared to 67.4 in former USSR countries and 13.2 in the European Union). The incidence of communicable diseases such as diphtheria and hepatitis has also increased. The incidence of syphilis and other sexually transmitted diseases (STDs), and the prevalence of drug abuse (as measured by registered drug users) began to rise in the1990s, as in the other central Asian republics. The rates are uncertain, however, given the reluctance to seek medical treatment, and the economic and social consequences of mandatory reporting (*25*).

Economic indicators

The Kyrgyz economy suffered badly after the collapse of the former USSR, upon whom the country had depended for its export market, and for substantial government budget subsidies. A dramatic fall in economic activity was accompanied by very high inflation rates. The Kyrgyz Republic since 1991

has pursued market-oriented economic policies. Small enterprises were privatized, price controls were lifted, the banking sector was restructured, and laws were passed to enable a market-based economy, including full private ownership of land (which required a constitutional amendment in 1998).

The drop in GDP has been severe with a 50% contraction between 1992 and 1995 (IMF 1999), including a 20% GDP drop in 1994 (Table 3). The country embarked upon a comprehensive structural reform package in 1994 and there were signs of recovery in 1996 and 1997. GDP growth was estimated at only 2% in 1998, however, with declining gold production, lower than expected agricultural output and financial turmoil in the Russian Federation (*13*). The country has become increasingly dependent upon foreign aid, however, and has a high foreign debt burden. Its fiscal position was assessed as not sustainable without tighter fiscal management and increased economic activity (*13*). The second International Monetary Fund (IMF) programme runs from 1998–2001.

Tight monetary and fiscal policies led to a dramatic decline in inflation from 1995. However, the Russian financial crisis caused further inflation from the last quarter of 1998. GDP per capita declined in purchasing power parity terms from US $3520 PPP in 1990 to US $2140 PPP in 1997. The country introduced its own currency, the som, in 1993. Continuing structural economic reforms are planned, including tackling the problems of a large government budget deficit and mounting foreign debts.

Data reported by the National Statistical Committee (Table 4) show that the overall government fiscal deficit was at its highest (11.5% of GDP) in 1995 but has since been reduced. The reduction has been achieved by a steady decrease in public expenditures. Public sector revenues as a percentage of GDP have increased slightly, but remain consistent with (though slightly below) low income countries worldwide. Overall, the level of public sector revenues and the need to achieve fiscal balance suggest that there is little scope for significantly increasing public funds for the health system.

The economy mainly depends upon agriculture, which was estimated at 45% of GDP in 1997 (*29*). Production of most crops declined in the early 1990s but has begun to recover, although livestock and wool production remain severely depressed. Agriculture is the best performing sector with 10–13% growth between 1996 and 1997. The country has significant mineral deposits and had substantial current export earnings from gold in 1996. The coal industry has collapsed but the country's energy policy hopes to develop its abundant hydropower resources.

Poverty and income inequalities in the Kyrgyz Republic and in its central Asian republic neighbours have increased substantially (*9*). Real wages declined

Table 3. Macroeconomic indicators, 1989–1997

Indicators	1989	1990	1991	1992	1993	1994	1995	1996	1997
GDP growth rate (% change)[b]	4.5	3.0	-5.0	-19.0	-16.0	-20.0	1.3	5.6	6.0
Annual inflation rate (%)[a]	–	–	113	1 359	1 086	181	43	32	23
GDP per capita[a]	–	–	1 550	810	850	610	690	–	–
GDP US $ PPP per capita[a]	–	3 520	3 239	2 776	2 328	1 712	1 880	1 745	2 140
Average monthly wage US $[c]	–	–	–	–	–	22	36	39	36
Real wages index (1994=100)[c]	–	–	–	–	–	100	112	114	126
Consumer price index (1995=100)[d]	–	–	–	2.1	24.8	69.7	100.0	132.0	162.9
Government expenditure % GDP[b]	–	38.3	30.3	33.9	39.1	28.6	30.2	23.4	22.3
Registered unemployment rate[a]	–	–	0.01	0.10	0.20	0.70	2.90	4.40	3.10

Source: [a] WHO Regional Office for Europe health for all database; [b] UNICEF TransMONEE database 3.0; [c] International Monetary Fund 1999; [d] National Statistical Committee of the Kyrgyz Republic.

Table 4. Long-term trend in public finance, million soms and % of GDP

	1993	1994	1995	1996	1997	1998
GDP	5 355	12 019	16 145	23 399	30 686	34 181
Total government revenues	848	1 891	2 746	3 933	5 090	6 132
Total government expenditures	1 226	2 813	4 611	5 202	6 696	7 166
Government deficit	378	922	1 865	1 269	1 605	1 033
Revenues as a percentage of GDP	15.8%	15.7%	17.0%	16.8%	16.6%	17.9%
Expenditures as a percentage of GDP	22.9%	23.4%	28.6%	22.2%	21.8%	21.0%
Deficit as a percentage of GDP	7.1%	7.7%	11.5%	5.4%	5.2%	3.0%

Source: National Statistical Committee.

Note: The figures prior to 1996 are slightly understated since expenditures from Special Means were not included.

before steadying in 1997. The real wage index fell (taking 1991 as the base year at 100) to 62 in 1996 (*9*). The IMF estimates that the real value of wages fell by one third between 1995–1997, with the minimum wage being 100 soms per month in January 1998 (*13*). Registered unemployment is around 3–4% but real unemployment is likely to be around 20% (*13*). Household living costs increased considerably with the loss of price subsidies. A 1993 Kyrgyz household survey found that the extent of poverty had increased during the political and economic transition (*2*). The proportion of the population estimated

in annual household surveys as living in poverty has risen from 45% in 1993 to an alarming 71% in 1997 (*26, 28*). This has adverse implications both for the health status of the population and for their access to health services. It should be noted, however, that income is difficult to measure in a country with a large informal economy, and where many people have access to a plot of land.

The Kyrgyz Republic had relatively good human development indicators, mainly due to high literacy levels, but the overall score has been declining. The Kyrgyz Republic scored 0.652 on the Human Development Index in 1997, in the world group of countries with medium level of development, but below the average for transition economies (*26*). (The main indicators in this index are average life expectancy, adult literacy and educational attainment, and per capita GDP). This deterioration in social conditions prompted the Kyrgyz Republic to endorse a sustainable Human Development Strategy in May 1998, wherein more attention will be paid to the condition of the people when undertaking economic and public sector programmes (*26*).

Historical background

Health services

Before independence in 1991, the Ministry of Health in the Kyrgyz Republic administered policies made in Moscow through a centrally organized hierarchical structure, from the republic level to regional/city administrations, then to the subordinate district level (*17*). The Kyrgyz Republic is now developing its own health care policy in response to changing social and economic conditions and the worsening health status of its population.

The extensive health care system of the Soviet era was state-owned and centrally planned. The health sector was centrally managed with no discretion allowed to local managers. The key delivery principles were that services should be accessible to everyone and free. A network of health care facilities was established ranging from feldsher/nursing posts mainly in villages, to polyclinics, to district hospitals, and then to regional and national-level hospital and research institutes. The distribution of resources followed the planning norms developed by the All-Union Semashko Research Institute of Social Hygiene and Public Health. These set high standards (per 10 000 population) for the number of hospital beds and the number of physicians. The accessibility of services in the 1980s, however, was constrained by the growing shortage of resources and the worsening health status of the population.

The Soviet model health care system achieved an extensive distribution of health services, good access for the population, and an effective system of sanitary and public health services geared to controlling communicable diseases. By the 1980s, however, the health care system was no longer responding effectively or efficiently to the health needs of the population. Some changes were planned but not fully implemented during the period of perestroika in the USSR from 1985–1991. The intention was to preserve guaranteed and free state health care for the whole population, but to make health services more effective and efficient by improving their management.

With independence in 1991, reform of the health care system was included on the Kyrgyz policy agenda but remained a lower priority than economic reform. The Ministry of Health embarked upon a programme of change, given the broad economic and political changes in the Kyrgyz Republic. Many international and bilateral agencies assisted in this period of transition and health sector reform has continued to be influenced by external donors. The severe cuts in government expenditure, including health expenditure, and the resulting health system crisis, was the main focus of attention in the early 1990s (*10*,*15*). The huge challenge facing health care reform in these first few years demonstrated the need for a consistent policy framework.

The MANAS health care reform programme (named after a warrior king from an ancient epic of the Kyrgyz people) was set up in 1994 as a joint programme, between the Ministry of Health of the Kyrgyz Republic and the WHO Regional Office for Europe, which aimed to develop health care reform policies and implement the resulting plans (*18*). The objectives are to improve the health status of the population, to improve quality and equity, and to make more effective use of health resources (*14*). The Government adopted this health care reform plan in 1996. The World Bank is another important international player and its Health Sector Reform Project (in Bishkek and Chui regions) began in November 1996, as part of the national health plan of the Kyrgyz Republic. This report draws heavily upon a series of reports on the implementation of the MANAS programme (*3*,*4*,*11*,*23*).

The key legislation and events since 1990 are set out in *Appendix 1*.

Organizational structure and management

Organizational structure of the health care system

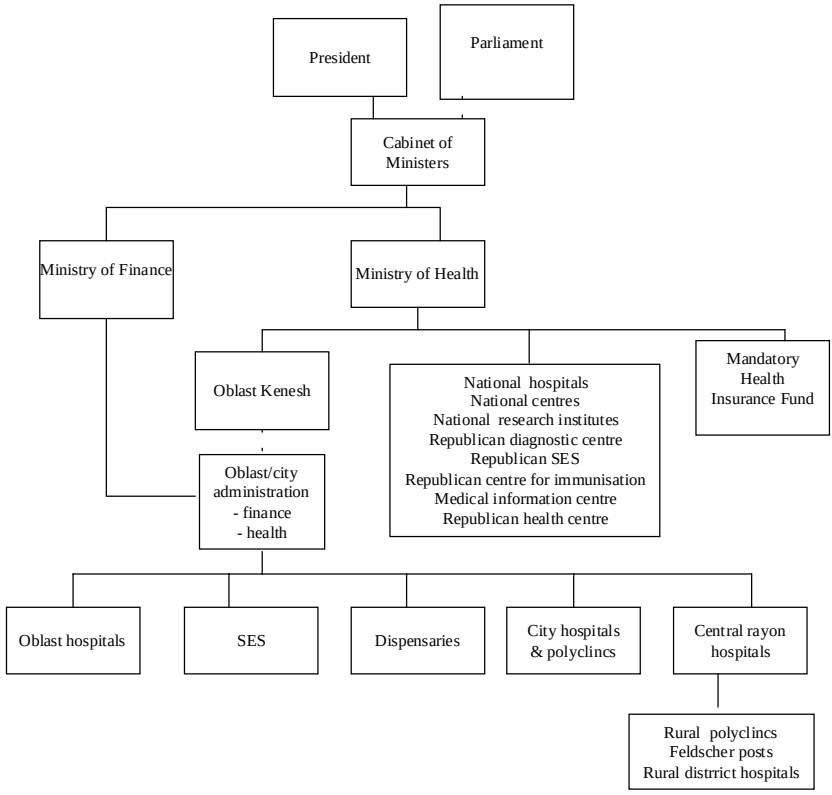
The main responsibilities of the key organizations in the health care system are summarized in the following section. The organizational chart (Fig. 2) depicts the administrative structure.

The *Ministry of Health* has a policy-making and supervisory role and administers Republican health facilities. The Ministry of Health, however, has few means of exerting power in the total health care system. It does not directly own or administer local (oblast, city and rayon) health services, which receive their budgets from local government administrations. The Ministry of Health supervises the activities of all health-related institutions, including training and research institutions, and approves their policy and programme documents. The Ministry of Health was reorganized internally in the early 1990s in order to equip it for these new responsibilities. The executive board, the Kollegya, consists of the Minister, Deputy Ministers, heads of the main departments and the President of Kyrgyz Pharmacia.

The *Ministry of Finance* has direct responsibility for financing health care and for all national budgeting and allocation processes.

Regional administrations (oblast and city) are responsible for administering most primary and secondary health care, including polyclinics and regional and district hospitals. The two main departments relevant to health within the oblast administration are finance and health. The head of an oblast (or city) health department is appointed by the oblast governor (who is appointed by the President) with the approval of the Minister of Health. The oblast administration appoints the chief physician of each central rayon hospital (located in the central town of each district) who also runs the local primary and secondary health care services. In January 2000, the oblast health departments were abolished and replaced by committees, although this management structure is still being developed.

Fig. 2. Organizational chart of health care system



Parallel health services remain in place as some ministries provide health services directly to their employees. These include the Ministry of Internal Affairs, Ministry of Defence, Ministry of Railways, Ministry of Labour and Social Affairs and the Ministry of National Security. These accounted for about 6% of total government health care expenditure in 1998 (Kyrgyz Government Treasury data).

The Mandatory Health Insurance Fund, established in January 1997, was initially run by a board answerable to the parliament (Resolution of the Government of the Kyrgyz Republic Number 429 dated 16 September 1996) and by an executive committee. This board was abolished (in December 1998) and replaced by a committee with broad responsibility for health sector reform.

The Fund was moved under the Ministry of Health but remains a quasi-government authority.

The Social Fund, also a quasi-government authority, was set up in 1994 by merging the Pension Fund, the Employment Fund and the Social Insurance Fund. The Social Fund collects all insurance payments, including health insurance, the latter being transferred to the Mandatory Health Insurance Fund. Payments by employers to the Social Fund amounted to a 39% payroll tax in 1997.

Professional associations are emerging, principally the Association of Physicians and Pharmacists, established in 1992 which so far, however, has little significant influence on policy-making. There is an association of nurses as well as several other professional associations. Two new associations were established in 1997, the Family Group Practice Association and Hospital Association, and these work closely with the Ministry of Health. The professional associations have little role in licensing, accreditation and standard setting.

Trade unions are affiliated to the peak organization, the Trade Union Federation of the Kyrgyz Republic, although unemployment and other factors have caused a drop in membership. The Health Workers Union, one of the biggest affiliates, had around 100 000 members in 1995 (Lines 1995). New-style trade unions, able to represent health workers and to negotiate on their behalf, have yet to emerge in central Asia (ILO 1999).

Nongovernment organizations (NGOs) are being formed and are active in the areas of maternal and child health, family planning and sex education. Women's associations, in particular, are emerging and becoming more influential (*26*). These NGOs as yet do not have a strong voice in health sector policy making.

Planning, regulation and management

The central authority of the Soviet system has gone and other ways of developing policies, planning, regulating and managing health services are being developed. The support of the President and the Health Minister are crucial in the adoption of policies and plans. The Ministry of Health develops national health plans but their implementation depends upon the oblasts. The main problem has not been the development of policies, but rather their implementation, as well as the regulation of the health care system. Apart from the Mandatory Health Insurance Fund, no quasi government bodies have been set up to set standards or regulate the health sector.

The parliament *(Jogorku Kenesh*) passes laws concerning the health of the population, approves plans for actions aimed at health protection and improvement, and approves the budget.

The *Cabinet of Ministers* (appointed by the President) implements health care legislation and coordinates governmental and national programs.

The *Ministry of Health* develops policies which go to the Cabinet and then to the Jogorku Kenesh for approval. The Ministry of Health is responsible for translating these policies into action at the national level. The Department of Reform Coordination and Implementation (which succeeded the MANAS policy team) also seeks to coordinate the international and bilateral agencies.

A *Coordination Commission* established by the Government in 1997 as an advisory board, includes representatives of the Ministry of Health, Mandatory Health Insurance Fund, Ministry of Finance, Social Fund, other relevant government agencies, employers, and provider and consumer associations.

The *Ministry of Finance* deals with national financial planning, approves the oblast budgets, and also recommends how the oblast budget should be allocated between the various sectors. The key role of the Ministry of Finance in both the national and regional budgetary process gives it considerable influence in health policy making.

The *State Commission on Foreign Investment and Economic Assistance (Goscominvest*) has a limited role in health policy-making. Goscominvest develops and coordinates public investment policies and plans, including for the health sector, as well as coordinating the activities of international and bilateral donor organizations.

The *State Property Fund* develops and implements privatization policies in the Kyrgyz Republic, which would also cover the health sector.

Local administrations collect taxes, some of which are retained, while the rest are transferred to the Ministry of Finance. The oblast, city and rayon health administrators develop local plans (in line with Ministry of Health policy) and allocate budgets within national guidelines.

Decentralization of the health care system

The health sector has preserved its monopolistic character, since the state remains the main purchaser and provider of health care services. More groups are now involved in health policy making, however, and quasi market practices (such as service contracts) are being introduced.

The Ministry of Health formulates plans but has less capacity for implementation. The Ministry of Health sets guidelines for service delivery and standards for clinical performance but has little power to regulate their implementation by oblast level health care providers.

The role of the oblasts in delivering regional and local health care services has been strengthened. The 1994 Law on Local Government and State Administration defines their role in developing and implementing programmes, and in proposing and managing their budgets. Soviet model planning norms are still used but are being adjusted, especially since the funds are insufficient to maintain the infrastructure. Oblast administrations are now required to fund more health care from their own revenue sources.

The health care system remains very fragmented with four levels of government administration: rayon, municipality, oblast and republican. These different systems serve overlapping catchment populations. Functional responsibility for funding and providing health care to specific populations is therefore often duplicated. For example, oblast capital cities contain both an oblast paediatric hospital and a city paediatric hospital. Furthermore, many national programmes, such as immunization schemes, operate through separate vertical systems.

The small private health care sector is growing in urban areas but is mainly limited to ambulatory care and pharmacies, and a few small hospitals.

Health care finance and expenditure

Main system of finance and coverage

The health system is financed from several sources. The main official source is state taxation. Other sources, since January 1997, are compulsory pay-roll based health insurance contributions (about 4.3% of government spending in 1998), a very substantial but unknown amount of out-of-pocket payments by consumers, and loans/grants from external donors. The health sector suffers from chronic under-financing but, as discussed later, the hospital system has considerable excess capacity.

Complementary sources of finance

Mandatory health insurance

The Mandatory Health Insurance Fund so far contributes a small amount to the state health budget. The fund was set up under Resolution Number 281 of the Legislative Assembly, dated 16 January 1996. The principle had been adopted earlier in 1992 legislation. The fund began to receive insurance premiums from 1 January 1997 and from July 1997 began to fund health care services. Employers pay insurance contributions for their employees (2% of payroll); pensioners and the registered unemployed are paid for (in theory) by the Social Fund (equivalent to 1.5% of the average wage); and farmers are paid for (in principle) out of land tax (2% of land tax in 1999). The social contribution rates (including health insurance) are determined annually by the government. Mandatory Health Insurance Fund expenditures accounted for 4.3% of the total state budget (including special means) in 1998.

The Mandatory Health Insurance Fund is phasing in coverage of population groups and, by January 1999, covered 32% of the total population. The insured population categories are meant to include employees, pensioners, registered unemployed population and children. The fund intends to phase in full-time students and all disability pension beneficiaries. The Mandatory Health Insurance Fund promises only one additional benefit to its members (not available to the uninsured): free inpatient drugs.

The Mandatory Health Insurance Fund has encountered several difficulties. First, the revenue collected was much lower than expected due to the deteriorating economy and high real unemployment. The Social Fund (experiencing revenue problems of its own) transferred less than expected in 1997, and only partial funds in 1998 (about 25% of the amount for pensioners and 15% for the unemployed). In 1998, large government wage arrears increased the collection problems for the Social Fund so that the government had to transfer a budget subsidy. Second, there were inadequate unit cost information and service utilization data upon which to base contracts and payments.

Out-of-pocket payments

Out-of-pocket payments constitute a major source of revenue for the health care system, although their full extent is unknown. These payments can be divided into four groups. First, official user fees are charged by government health institutions for health services and some non-medical services (such as rent of buildings, transportation and fees for postgraduate education). Second, semi-official user charges are made for consumable supplies (such as drugs and medical supplies). Third, unofficial user fees or under-the-table payments are made by consumers to health care providers. Fourth, private providers of health services charge for goods and services, the largest category being pharmaceuticals.

User fees have been permitted officially since 1991, and the Ministry of Health set up a Department of Non-budgetary Activity in 1993 to make policy and regulate user fees. Health facilities had to return about 20% of fees to the government but this was reduced to a 2.3% "tax" in 1996. Given falling public sector revenues, the expected level of revenue from fees is now factored into budget allocations to health facilities (*16*). Health facilities determine the fee for each service subject to the Government Anti-Monopoly Committee guidelines. Republican health facilities must have their price list approved by the Department of Non-budgetary Activity and oblast facilities approved by the oblast finance department. Oblast health facilities must have their spending approved by the Ministry of Finance and by the oblast finance department.

The accounting system must follow the traditional 18 budget lines and funds cannot be transferred without approval. Any unspent funds at the end of the financial year are transferred to the state health sector budget.

Co-payments or full payments are required for complementary medicine (such as osteopathy, homeopathy, acupuncture, massage and physiotherapy), induced abortions, dental care (with some exempt categories) and some ongoing medical interventions (such as kidney dialysis). Patients also have to buy medical supplies during their stay in hospital and make co-payments for a range of health services and laboratory tests. Hospital and ambulatory services currently charge for the following categories:

- drugs (increasingly for inpatients while ambulatory patients always paid except in emergencies and for exempt categories)
- amenity services (such as private rooms and television)
- hospital services for 17 defined items (such as physiotherapy and acupuncture)
- laboratory tests (to cover expenses on reagents and X-ray films) for inpatients and outpatients
- hospital admission fees (the extent and level of these fees varies)
- outpatient and clinic ultrasound examinations, cytological tests and X-rays
- initial visit to primary care and polyclinic physicians.

The amount of revenue from official user fees and from the sale of services (such as laboratory tests, meals and teaching fees) is increasing. The Treasury refers to this source as "special means". Health facilities are forced to increase these charges since other budgetary sources are insufficient, but this source of revenue allows the health care facility some discretion on how it should be spent. The revenue from user charges has risen from 24.2 million soms (3.3% of government health spending) in 1996 to 83.5 million soms in 1998 (8.4% of government health spending) (Table 6). Pensioner groups are exempted from the official user fees. The Ministry of Social Labour and Protection is developing further criteria to determine who is entitled to social benefits.

Unofficial out-of-pocket payments are substantial. This include semi-official user fees, that is, those goods and services that a patient or family members provide or buy themselves, such as bringing food or linen to the hospital, or buying drugs. Unofficial (under-the-table) payments to physicians are common, particularly to specialists. Throughout eastern Europe unofficial payments to physicians are common in order to gain access to treatment. Furthermore, it is not known how much people use traditional health care providers nor how much they pay them (in cash or in kind).

Evidence from several sources suggests that informal payments are increasing. These are the 1993 Kyrgyz Republic Living Standards Household Survey funded by the World Bank, a 1994 household survey funded by the United Kingdom Department for International Development, and a survey in Djalal-Abad and Osh oblasts in 1997 conducted for the Asian Development Bank. The 1994 household survey showed that nearly 70% of the population paid for some of their outpatient care, and 86% paid for some inpatient care (*1*). The 1997 survey reported that nearly half of the people who said they needed treatment could not afford to use health services (*26*). An analysis of these sources of information suggests that official consumer payments amount to about 30% of health spending, the largest item being drugs (*16*). The addition of unofficial or under-the-table payments may increase this to over half of health care spending. For example, results from a central Asian neighbour, the Tajikistan Living Standards Household Survey, suggest that out-of-pocket payments (official and unofficial) account for two-thirds of all health spending (*8*). An analysis is presently underway on the health questions in the 1996 and 1997 Kyrgyz Republic Living Standards Household Surveys.

Voluntary health insurance

Voluntary health insurance was legalized in 1993. Twelve private insurers registered with the government in 1998, but only a few small schemes are actually functioning. Opting out of the government fund to take out voluntary insurance is not permitted. The voluntary health insurance sector is, therefore, unlikely to expand unless government policy changes and the economy improves.

Private insurance schemes do not offer full health coverage but are oriented towards specialist services and contract with a limited number of providers, and also offer other kinds of insurance in addition to health insurance. Private schemes could contract with employers to insure their employees, but most coverage so far is based on individuals. The insurance premiums differ between companies. Dependents must be insured separately.

External sources of funding

External donors have funded health care projects since 1992, in cash or in-kind, as loans, grants or donations, and for specific or general purposes. These funds come from bilateral and multilateral organizations; very minor amounts come from small organizations, enterprises and individuals. The Ministry of Health does not have a system for central recording of external funds; some funds bypass the republican level and go directly to oblast health

administrations; while some funds go directly to health provider organizations. The Department of Reform Coordination and Implementation within the Ministry of Health aims to coordinate the activities of external donors, but an annual breakdown of total project grants is not available. The most significant credit for health sector reform is a World Bank loan of US $18.5 million.

External funds initially were mainly for drug purchases, medical equipment and baby foods. Loans and grants since 1995 are mainly to procure medical equipment, for the reconstruction of the pharmaceutical manufacturing industry, and for health care system reforms. By 1999, many external organizations were working in the health sector. These were as follows: UNDP, WHO, the World Bank, Asian Development Bank, UNICEF, USAID, United Kingdom Department for International Development, the Netherlands Red Cross, Swiss Agency for International Cooperation and Development, German Technical Cooperation Agency (GTZ), Turkish International Cooperation Agency (TICA), Danish Government Development Agency (DANIDA), the SOROS Open Society Institute, International Planned Parenthood Federation, and Médecins Sans Frontières.

Health care benefits and rationing

Under the inherited Soviet model health care system, all citizens were entitled to a comprehensive package of services (with the exceptions of outpatient drugs, cosmetic surgery and cosmetic treatment). However, since 1992, limited state resources have forced the introduction of official user charges, as explained in the section on *Out-of-pocket payments*. In practice, health care services are no longer free to the user.

There is no explicit benefit package, defined as those services financed from prepaid sources. In principle, the entire population benefits from general tax revenue funded health services, and the insured population is currently entitled to free inpatient drugs. In practice, given the presumed extent of unofficial charges, consumers pay something towards most services currently available.

Health care expenditure

Comprehensive and accurate data on all health expenditure is not yet available, given the problems in obtaining data on private health spending. The Treasury has collected extensive data, however, on government health expenditures (since

1995) and official user fee revenues (since 1996). In addition, the Mandatory Health Insurance Fund has data on its expenditures since its inception in 1997. Table 5 shows time series statistics on government expenditure. Table 6 gives more reliable figures ("well-recorded") dating from 1995 when the Treasury improved its accounting systems (*16*). The government health budget, also, is now presented by sectors, with subdivision by agencies, which gives a better picture of overall state health expenditures.

Government health care expenditure during the 1990s has fluctuated between 3 and 4% of GDP (Table 5 and Table 6). This is similar to other central Asian countries and former USSR countries, but much less than the European Union average of 8.5% (Fig. 3 and Fig. 4). Comparisons between countries must be treated cautiously, however, since health expenditure figures for the Kyrgyz Republic (and all former USSR countries) do not include the unofficial payments made by health care users.

Table 5. Trends in government health care expenditure, soms, 1990–1999

Total expenditure	1990	1991	1992	1993	1994	1995	1996	1997	1998
Share of GDP (%)[a]	3.7	3.0	2.8	2.6	3.5	3.9	3.1	2.9	2.9
Value in current prices (million soms)[b,c]	1.6	2.8	21.3	137.4	418.3	639.7	744.6	904.1	1 043.1
Value in constant prices (1990)(million soms)[b]	1.8	1.4	1.0	0.7	0.8	–	–	–	–
Health expenditure % total government expenditure[b]	–	13.1	8.8	11.5	14.2	12.9	14.0	13.7	11.6

Source: [a] (*20*)Ministry of Health, Bishkek; [b] (*30*)World Bank 1996: 9; [c] (*16*)Kutzin 1999.

In 1994, government health expenditure was 3.5% of GDP but fell to 2.9% of GDP in 1998 (Table 5) or perhaps 3.1% of GDP (Table 6). A condition of the Health Sector Reform Project funded by World Bank was that the government health budget would be maintained at the real (inflation-adjusted) 1994 level, and also not reduced using revenues raised through the Mandatory Health Insurance Fund or from user fees. Despite improved economic activity in the Kyrgyz Republic from 1995 onwards (in the annual GDP growth rate), the health budget (in real 1995 million soms) dropped from 639.7 in 1995 to 632.1 in 1998 (Table 6). The health share of government spending also dropped slightly from 12.3% to 11.9%, and per capita expenditure (in 1995 dollars) dropped from $13.1 to $12.4.

Treasury data from 1995 now includes the health care spending of ministries that run their own health care services (such as the Ministry of Internal Affairs). Big state enterprises in the past also had ambulatory health care clinics for their workers, but many have now closed.

Table 6. Total government health expenditure (million soms)

	1995	1996	1997	1998
Local government	487.3	530.7	590.4	659.4
Republican government	152.4	213.9	307.1	338.6
Total government	639.7	744.6	897.5	998.0
Special means share of budget health	–	3.3%	6.4%	8.4%
Total budget (1995 thousand soms)	639.7	617.6	614.9	604.8
Real per capita spending (1995 soms)	142	135	132	129
Health share of total government budget	12.3%	13.2%	11.7%	11.9%
Health share of local government budget	25.4%	28.4%	27.6%	27.6%
Health share of Republican government budget	4.7%	5.7%	5.4%	5.6%
MHIF expenditures	0	0	6 650	45 100
Total health spending ("well-recorded" sources)	639.7	744.6	904.1	1 043.1
Special means share ("well-recorded")	–	3.3%	6.3%	8.0%
MHIF share ("well-recorded")	–	–	0.7%	4.3%
Real spending (1995 thousand soms) ("well-recorded" health)	639.7	617.6	619.4	632.1
Real spending (1995) per capita ("well-recorded" health)	142	135	133	135
Real spending per capita ("well-recorded") 1995 dollars	13.1	12.5	12.3	12.4
Health spending as share of GDP ("well-recorded")	4.0%	3.2%	2.9%	3.1%

Sources: Kyrgyz Treasury data for budget and special means expenditures; NSC for price index, nominal exchange rate, and GDP figures; MHIF for its expenditures.

Notes: No data are available on expenditures from special means for 1995. The figures for 1997 exclude 95.7 million soms of counterpart funding for World Bank-supported health project, due to the absence of similar data for 1998. If this were included, it would raise the 1997 health share of total government spending to 12.7%, the GDP share to 3.3%, and real per capita health expenditures to 147 soms.

Structure of government expenditure

Local governments are the main administrators of health services. The local government share of the total state health budget has dropped from 76% in 1995 to 68% in 1998, suggesting that republican facilities have been more successful in protecting their revenue. Health accounts for 28% of the local government budgets (Table 6). Since the revenue base of the oblasts differ considerably, there are variations in per capita local government health expenditure, which in 1998 ranged from 111 soms in Djalal-Abad to 227 soms in Bishkek (*16*). When republican level health spending is included, however, the per capita variation is skewed much more heavily to Bishkek (593 soms) compared to Osh (118 soms), since most republican health facilities are located in the capital.

Hospitals take the largest share, 70–72%, of the government budget (Table 7 and Table 8). The central Asian republics all have hospital-dominated health care systems, as discussed later, and the Kyrgyz hospital sector share of the budget has not declined significantly from the mid-1990s.

Table 7. Health care expenditure by category, (%) of total expenditure on health care, 1990–1997

Total expenditure on:	1990	1991	1992	1993	1994	1995	1996	1997
Inpatient care	76.3	77.8	72.5	73.5	73.8	74.6	72.0	72.0
Pharmaceuticals	10.9	8.0	9.4	8.0	8.0	6.8	9.7	13.0
Capital investment	9.1	5.5	10.4	5.8	4.3	1.7	10.1	3.2

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

Ambulatory care takes about 10% of the health budget, which includes primary health care activities. Clearly, primary health care is severely underfunded, with no increase between 1995 and 1998.

Expenditure on pharmaceuticals increased from 11% of the state budget in 1990 to around 12–13% by 1998, as the health budget shrank and the price of drugs increased (Table 7 and Table 9). This is a small share (compared to central European countries) since health care users in the Kyrgyz Republic buy most of their own drugs. Private expenditure would bring pharmaceuticals expenditure to over one third of total health spending, as discussed in the *Pharmaceuticals section*. Pharmaceuticals in 1998 took up a large share of the republic health budget (tertiary care hospitals and institutes) with 20% compared to the oblast/city budgets with 8% (Treasury statistics).

Capital investment as a share of the government health budget fell drastically during the 1990s (Table 7) and between 1995 and 1998 (Table 8 and Table 9). Health care facilities have deteriorated physically over the last few decades, with few funds available in the 1990s even for basic repairs. The health budget is insufficient to maintain an extensive health care infrastructure that is surplus to requirements. While the massive style of Soviet construction has helped preserve the structural integrity of buildings, mechanical, electrical and plumbing fittings, generally of poor quality, have suffered considerable damage. Much equipment is unused for want of spare parts, and the failure to repair damaged equipment has led to its permanent loss. With the simultaneous rise in fuel prices and collapse of the budget, the old extremely inefficient space heating systems became prohibitively expensive. Utilities absorb about 15% of the total government budget (Table 9), probably an underestimate of the true costs given implicit subsidies from public utility companies in the light of unpaid bills.

The situation is worse for facilities maintained from oblast health budgets, where expenditures on capital repairs and medical equipment are usually around 3% (Kyrgyz government treasury data). Most equipment in oblast and district facilities is outdated. Medical supplies of all types are seriously inadequate (drugs, laboratory reagents, X-ray films and disinfectants). There are few incentives, however, for staff to use equipment and supplies more efficiently except to avoid running out of supplies before the end of the financial year. Only 1.7% of the state budget was spent on medical equipment in 1998, with more spent in the republican budget with 2.8%, compared to only 1.2% in the oblast budgets (Treasury data).

Table 8. Distribution of government health spending, by programme, in %

	1995	1996	1997	1998
General hospitals (child and adult)	53.3	51.5	47.3	46.8
Specialty hospitals	14.5	15.6	18.3	19.3
Maternity hospitals	3.8	3.1	3.0	3.2
Rehabilitation hospitals	0.0	0.0	0.1	0.0
Other hospitals	0.2	0.3	0.2	0.2
Hospital sub-total	71.7	70.4	68.9	69.5
General polyclinics & OPD physicians	7.9	7.9	7.4	7.1
Specialty polyclinics and specialty physicians	0.2	0.5	0.5	0.6
Dental polyclinics	1.2	1.6	1.5	1.7
Ambulance stations	1.0	1.0	1.0	0.9
Ambulatory care sub-total	10.3	11.1	10.4	10.2
Public health (SES)	7.1	7.3	7.5	6.8
Health research	0.7	0.6	0.6	0.6
Administration & accounting	0.7	0.7	0.8	0.8
Central maintenance services	0.9	1.2	0.0	0.1
Capital investments*	4.4	5.0	3.3	1.6
Education of health professionals	1.9	1.5	1.7	3.3
Other services not included in other categories**	2.3	2.0	6.7	7.0
Other***	0.1	0.1	0.1	0.1
Consolidated government health spending	100	100	100	100

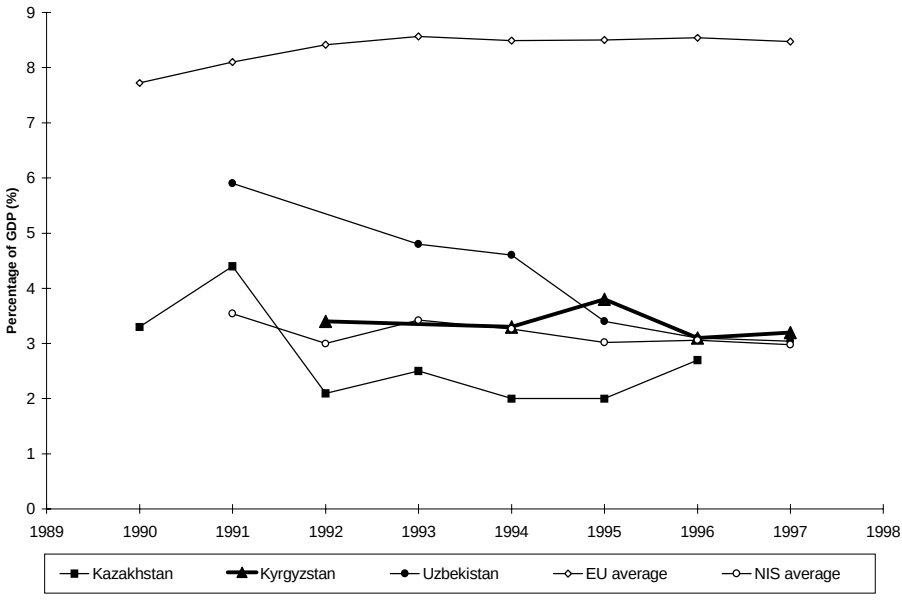
Notes: Includes expenditures from “special means”; * includes “Other enterprises and economic entities” (Program 5.6.0.6) and “Capital investments” (Program 5.9); ** includes (Program 5.6.0.5): Department of Reform Coordination and Implementation (“Manas”, beginning 1997), Department of Drugs and Supplies (beginning 1997), other centralized measures of MOH, Pathological Anatomy Bureau, Forensic Medicine Expertise, Base of medical supply, Republican Immuno-Prophylaxis Center, and Medical Information Center. *** includes “Drugs, prostheses, medical instruments, equipment & other materials used in medical practice” (Program 5.4), plus libraries under the MOH and preschools for health workers’ children.

Table 9. Distribution of government health spending, by chapter line item, in %

	1995	1996	1997	1998
Total recurrent expenditure	91.0	90.9	91.7	93.7
Personnel-related expenditures*	56.3	51.6	52.3	51.8
Pharmaceuticals & supplies	8.4	9.8	12.7	12.0
Food	8.3	9.0	8.3	10.0
Utility costs (heat, electricity, gas, phone)	12.4	15.5	13.7	15.4
Hiring and maintenance of vehicles	2.5	2.0	1.8	1.8
Other purchases and services	3.1	2.9	2.9	2.7
Total capital investment	9.0	9.1	8.3	6.3
Equipment and materials	2.1	2.1	2.0	1.7
Buildings, facilities, other civil works	4.4	4.8	3.4	1.7
Capital renovation	2.5	2.2	2.8	2.9
Total expenditures from budget	100	100	100	100
Special means (fees) as % of Total		3.3	6.4	8.4

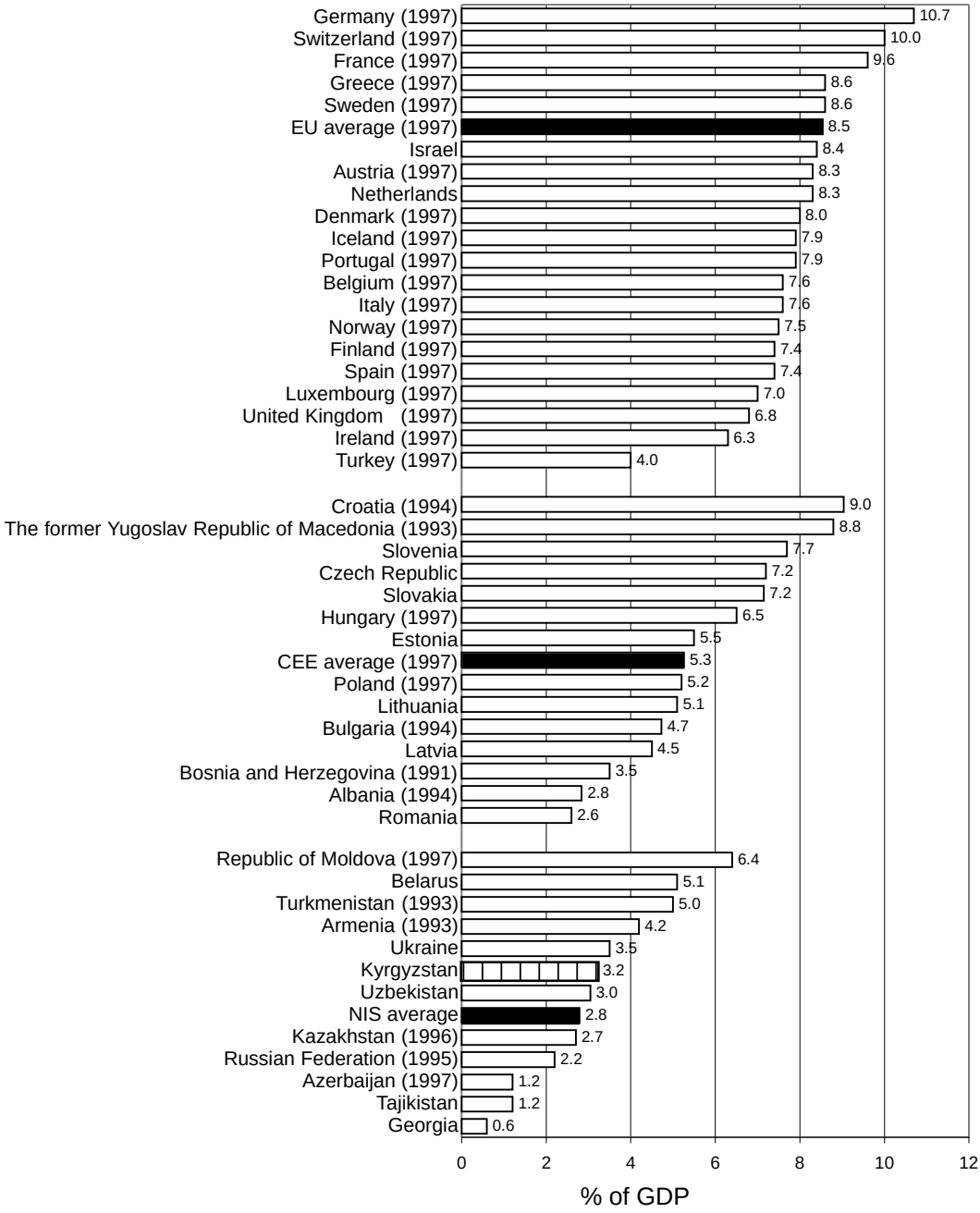
The percentage distribution across line items excludes expenditures from special means. However, the percents for special means are calculated including the expenditures from these in the denominator; * Personnel-related expenditures include salaries, social fund contributions, and travel expenses.

Fig. 3. Trends in health care expenditure as a share of GDP (%) in Kyrgyzstan and selected European countries, 1990–1997



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

Fig. 4. Total expenditure on health as a % of GDP in the WHO European Region, 1998 (or latest year)



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

Health care delivery system

Health care services in the Kyrgyz Republic, like other former USSR countries, are delivered through a hierarchy of services: primary care by feldsher-midwifery posts and physician clinics in rural areas, and by polyclinics in urban areas. The extensive system of hospitals range from village hospitals and upwards through central district hospitals, regional and national hospitals, and a very large number of specialist hospitals. Health care is divided up according to the administrative structure of the country (republican, oblast/city and district health facilities) and services are organized differently in rural and urban areas. Thus the delivery of health care services is fragmented between levels of administration, between vertical programmes and between specialized services. This extensive network of health care facilities, developed according to the Soviet model of health care, does not correspond to international definitions of primary, secondary and tertiary levels of care.

The central Asian countries differ from western European countries in many ways, which must be noted when comparing health care systems. Some key differences are as follows: lower national health care budgets; poorer populations; little transport in rural areas where most people live; rising rates of both communicable and noncommunicable disease; very limited primary health care; limited skills and technology in ambulatory health services; and rural hospitals that provide primary care and social care rather than secondary care.

The health care delivery system badly needs reform, given dilapidated facilities, physicians who do not have the skills or equipment to treat people, and with co-payments increasingly expected. The trend throughout the health care system is not to treat but to refer patients to higher levels of care. People are using health services less despite worsening health. Hospital and ambulatory care utilization rates are falling. People bypass general doctors and self-refer to specialists and hospitals; also high unemployment means that fewer people attend polyclinics in order to obtain sick leave certificates (a requirement under the Soviet system). The long-term trends (from 1980) in hospital admission

and ambulatory care contacts show that utilization was declining even before independence (Fig. 5). Compared to other central Asian countries, the Kyrgyz Republic had the highest hospitalization rate in 1998 but was below average in terms of per capita ambulatory contacts (WHO Regional office for Europe health for all database).

Table 10 lists the number and type of health care facilities. Each of these is discussed in turn in the following sections.

Fig. 5. Long term trends in inpatient and outpatient utilization

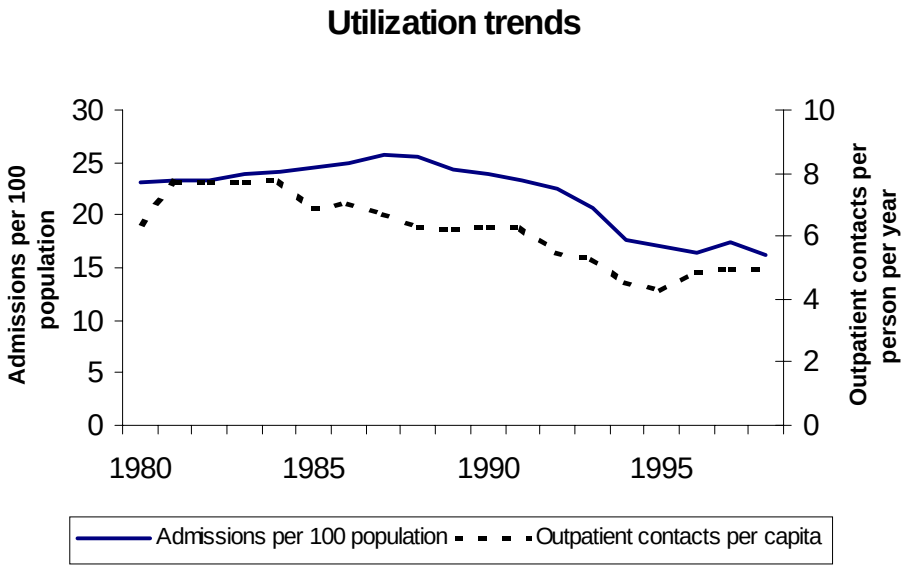


Table 10. Number of health care facilities

	1997
Feldsher/midwifery posts (FAPs)	856
Rural doctor clinics (SVA)	204
Rural hospitals (SUB)	157
Central rayon hospitals	40
Polyclinics/outpatient	97
Oblast/city hospitals	39
Dispensaries	44
Republican hospitals	12
Sanatoria	10

Source: Ministry of Health, Medical Information Centre, 1998

Primary health care and public health services

Primary health care

Primary health care refers to the first point of contact by a consumer with the health care system and includes general medical care for common conditions and injuries, as well as health promotion and disease prevention activities (described later under public health services). For example, the 1996 Kyrgyz Republic Living Standards Household Survey showed that patients in urban areas seek advice first from pharmacists and in rural areas from feldshers.

People visit a feldsher-midwifery post in villages or a physician clinic in small towns. Rural hospitals also provide primary and basic inpatient care. (Rural hospitals are discussed in the section on *Inpatient care.*) The feldsher-midwifery posts and rural health centres are accountable to the chief doctor in central rayon (district) hospitals. People in cities and towns visit polyclinics for primary health care while emergency cases go to a hospital accident and emergency department. Rural physician clinics and urban polyclinics (either freestanding or attached to hospitals), provide primary care and general medical care, family planning services, minor surgery, care for children, gynaecology and obstetrics care, perinatal care, some preventive measures such as immunization, and dispensary care (follow-up for patients with chronic diseases).

Primary care is in the process of being re-organized (as discussed later) but the original types of services are outlined below.

Feldsher-midwifery post (FAP)
Feldsher-midwifery posts (856 in 1997) are a first point of contact with health professionals for a rural population catchment area of 500–2000. These posts are usually small centres with a few rooms and one, two or three staff: feldsher, midwife and nurse. These "nurses" offer simple curative care, antenatal and postnatal care (deliveries are referred to the nearest hospital), undertake basic health prevention activities such as immunization and health education, and dispense medication prescribed by doctors.

Rural physician clinic (SVA)
Rural physician clinics (204 in 1997) serve a population of about 6000–10 000. The clinics are staffed by a physician for adults (therapeutist), paediatrician, obstetrician/gynaecologist, dentist (all regarded as general physicians), nurse and midwife.

Polyclinic

Polyclinics (97 in 1997) provide care to the population living in towns and cities as well as referred or self referred patients from rural areas. Polyclinics are staffed by several types of physicians: therapeutists, paediatricians, obstetricians and 10–20 types of specialists. There were three types of polyclinics: adults, children and women's health care (mainly reproductive health services). Polyclinics in cities are usually free-standing, but in the main town of the district (rayon) are located in the central district hospital. In 1997, out of 97 polyclinics, 25 were free-standing urban polyclinics, 40 were located in hospitals, and 32 were dental polyclinics (*20*).

Other services

Dental services used to be free of charge in public dental polyclinics in cities and in dental clinics in rural and district hospitals, but are now free only to exempted categories (pensioners, children and invalids). Emergency ambulance units and/or stations are on 24-hour call for emergency and acute care and are divided into two types of brigades: regular (in rural areas) and specialist in urban areas (paediatric, intensive care, cardiology, neurology, psychiatric and obstetric). Regular brigades are staffed by one physician and one driver; specialist brigades are staffed by one physician and two middle-level personnel (nurse, midwife or feldsher). These ambulances are poorly equipped and lack equipment, drugs and the petrol to go out on calls.

Family group practices

The family group practice model was piloted in a project in the Issyk-Kul oblast in 1995. It was then rolled out to Bishkek and Chui oblasts in 1996 and 1997 (under the Health Reform Project funded by the World Bank), and to two southern oblasts in 1999 (under the Social Sector Reform Project funded by the Asian Development Bank). The family group practices in rural areas consist of reorganized rural medical centres (SVAs) and feldsher/nurse posts. In most cities, primary health care from 1996 began to emerge in integrated polyclinics (instead of separate polyclinics for adult, children and women).

Family group practices are being introduced that consist of three types of physicians: "therapeutist" (adult internal medicine), paediatrician, and obstetrician/gynaecologist, together with several nurses. These physicians are gradually being retrained as general practitioners or family physicians (as discussed later). In some rural areas, family group practices incorporate feldshers and midwives. By the end of 1999, 789 family group practices were said to have formed across every oblast (Table 11).

Table 11. Number of family group practices, by oblast, 1999

Oblast	Number of FGPs	Number contracted with MHIF
Bishkek	108	108
Chui	144	144
Osh	175	22
Batken	64	–
Djalal-Abad	142	64
Talas	40	10
Naryn	42	–
Issyk-Kul	74	74
Total	789	422

Source: Family Group Practice Association, Bishkek.

This constitutes a rapid diffusion from the initial pilot project of 1995. The intention is to extend family group practices throughout the country by the year 2001. A new NGO, the Family Group Practice Association, has been formed to advocate for and strengthen their quality and scope. Most primary health care providers remain public employees not independent providers and work in government facilities. Each family group practice is meant to provide comprehensive primary health care to its registered (enrolled or assigned) population.

Primary care issues and changes

As the utilization rates suggest, and as anecdotal evidence attests, the feldsher-midwifery posts, rural physician clinics and polyclinics are very much under-used. Primary health care reforms now aim to create a service capable of offering most primary care to families, to strengthen clinical capabilities, and to increase consumer choice.

The longer-term intention is to move urban primary care out of the polyclinic system. The implementation of family group practices has varied across oblasts. Those in the pilot regions (Issyk-Kul, Bishkek and Chui) are functioning, some others exist only on paper, whilst in others staff continue to work much as before. By 1999, the family group practices were of three main types: free-standing and autonomous (in Issyk-Kul oblast); a unit within a free-standing polyclinic (in urban areas); or a unit within a hospital-based polyclinic.

The policy has been to encourage the voluntary formation of family group practices since physicians must be willing to collaborate. There is a financial incentive to reorganize, however, since the Mandatory Health Insurance Fund will only contract for primary care with family group practices, with over half of family group practices under contract by 1999. These family group practices must meet licensing and accreditation criteria.

People were previously assigned to a district physician according to their place of residence. The new policy allows people a choice of family group practices within certain limitations. In urban areas, people attend a practice within previously defined polyclinic catchment areas. In rural areas with fewer providers, people are assigned to a family group practice within the rayon catchment boundaries. A patient can switch practices in the next annual registration period. The free choice of family group practice is meant to be a steering mechanism for directing funds (patient capitation) according to the number of registered patients: practices who attract more patients will receive more funds (as discussed later). It is thus a means of introducing some competition between providers, as well as strengthening the accountability of physicians to their patients.

A family group practice is expected to make more efficient use of scarce equipment and some practices in Issyk-Kul oblast have negotiated mergers. Family group practices (apart from pilot projects with external funding) do not have the capital to repair buildings and equipment, since oblast administrations lack sufficient investment funds.

General physicians traditionally referred patients to higher levels of care. They did not have the skills or equipment to treat many basic conditions, there were no incentives to retain patients, and no budgetary constraints upon referring to more expensive care. In Soviet times, primary care staff were meant to act as gatekeepers, but in practice referred patients onwards for many procedures and conditions. During the 1990s, even this system broke down with patients by-passing general physicians. For example, in 1997, one third of patients attending the outpatient department of the National Clinical Hospital were self-referred. Although the current policy intention is for primary care physicians to act as gatekeepers to higher levels of care, the mechanisms (financial incentives and clinical skills) are not yet in place to counter the entrenched practice of onward referral.

Staffing re-training is crucial to the success of family group practices but is proceeding slowly. Primary health care is to be provided to whole families rather than as specialties to individuals, but currently practising physicians were trained in one of three types of medicine: adult medicine, paediatrics or obstetrics-gynaecology. Some retraining is under way: first, doctors in the family group practices are expected to learn from each other; second, four cycles of three-week retraining courses in family medicine began in 1998; and third, follow-up short courses on certain topics will be offered. A new postgraduate specialty of general practice is being established. These issues are discussed further under the section on *Human resources and training*.

Treatment protocols are outdated and require revision. These guidelines (usually treated as rules) call for inpatient rather than outpatient treatment, long lengths of stay and treatment in specialized facilities for many conditions. The Mandatory Health Insurance Fund, the Family Group Practice Association and Department of Drug Procurement are revising treatment protocols for common conditions treated in primary health care. New clinical protocols are being developed based on internationally accepted standards. For example, treatment protocols for TB and STDs have been revised and introduced in pilot regions. Pilot projects in four rayons for the WHO DOTS (Directly Observed Treatment Short-Course) tuberculosis strategy were set up in 1996, and were expanded in 1998 to Issyk-Kul and Chui oblasts, as well as Bishkek.

Public health

Public health in the Kyrgyz Republic remains oriented to the traditional functions of the sanitary epidemiological service with its emphasis upon environmental health and the control of infectious diseases. These public health functions are run as separate vertical programmes with few contacts (except for immunization) with primary health care. The sanitary and epidemiological service, developed during Soviet times, had several functions. The first was an environmental service responsible for regulating environmental health factors such as clean water and food safety. The second was the control of infectious and parasitic diseases. The third was monitoring the health status of the population.

New public health functions are now being developed, such as the prevention of noncommunicable disease, health promotion, and broader population health measures, such as promoting better nutrition and conducting anti-smoking campaigns. These require interventions at different societal levels as well as cooperation across sectors of government. The move towards this broader view of public health was signalled in the "Healthy Nation" national programme (1994–2000), which aims to improve the health status and quality of life of the population in five priority areas: family, maternal and child health, environment protection, safe drinking water and food, and healthy life-styles.

Population health services

The Ministry of Health is responsible for implementing a range of national programmes for reducing and eliminating disease and for promoting health. These include the WHO/UNICEF programme on fighting Acute Respiratory Infections and Diarrhoea, National Tuberculosis Programme, National

Programme on AIDS and STDs Prevention, WHO CINDI (Countrywide Integrated Noncommunicable Disease Intervention) programme, and the Safe Drinking Water programme. Specific targets include the elimination of cases caused by "wild" polioviruses by the year 2000; eliminating diphtheria by the year 2000; decreasing the annual whooping-cough incidence to less than five cases per 100 000 population; decreasing measles incidence to less than one case per 100 000 population; preventing measles mortality by the year 2000; preventing cases of infant tetanus; and decreasing the incidence of disseminated forms of tuberculosis.

Health screening programmes suffer from reduced resources although the following have been maintained: annual compulsory chest X-rays, tuberculosis screening (Mantoux test), annual dental screening programmes of school pupils, and parasitology tests at schools. The efficiency of some screening programmes is low (such as annual chest X-rays), while other tests (such as pap smears) are mainly done only in cases of pregnancy or at outpatient consultations. Antenatal care screening carried out by primary care staff is fairly successful, within a standard package of antenatal services, and indicators for followup are monitored. Coverage of women in the first trimester of pregnancy was 74% in 1997. This programme is very important given the high proportion of problem pregnancies.

A 1989 Presidential Decree on Family Planning aimed to increase the interval between births, reduce abortions and extend the use of modern contraceptives. Family planning services are being integrated with primary health care especially in rural areas. Primary and secondary care health care facilities now are expected to offer family planning. Four marriage and family consultation offices, run by the Research Institute of Obstetrics and Gynaecology, offer medical and genetic advice, family planning, medical and social care, and counselling.

Immunization is the main area where the sanitary epidemiological services and primary health care intersect. The State Sanitary Epidemiological Service organizes programmes and ensures the provision of vaccines while primary health care staff immunize the population. Vaccine preventable infections (such as diphtheria and measles) increased in the early 1990s due to the lack of vaccines. Since 1995, however, immunization coverage has been high with about 92–99% coverage of the target population for tetanus, pertussis, diphtheria and poliomyelitis, and 98% coverage for measles immunization (Fig. 6).

Mandatory salt iodizing is an example of a relatively successful national population health intervention programme, dating from the late 1980s. The mountainous terrain of the Kyrgyz Republic means that its soil, and hence the diet, is iodine-deficient.

State sanitary epidemiological service

The Department of State Sanitary Epidemiological Services (SES) was established by merging the republican SES and the Sanitary Epidemiological Department of the Ministry of Health. The service operates at four levels: national, oblast, city and rayon (district). In addition to the national office there are seven oblast centres, ten city centres and 41 district centres. Some SES restructuring has occurred since 1995; for example, oblast and city SES stations were merged (in Jalal-Abad, Talas and Naryn cities). The SES has its own vertical data reporting system with information flows from rayon to oblast to national level, and aggregated data are then transferred to the Republican Ministry of Health Medical Information Centre.

The Republican Health Centre, set up in 1990, and its oblast affiliates are responsible for implementing health education programmes. The Republican Centre for Immunoprevention, set up in 1994, works through its branches in SES oblast offices, undertakes immunization programmes, and controls and coordinates vaccine supply. The Republican AIDS Prevention Centre has four oblast affiliates. The Republican Anti-Plague Station has three special units within each oblast SES and two disinfecting stations.

The SES in 1998 employed a large workforce of 621 sanitary doctors and 2050 middle-level personnel including technicians. Many of this work force need retraining, especially to undertake new tasks. Productivity is low due to poor task management and lack of transport and modern equipment. Employees have become de-skilled, mainly acting as sanitary inspectors but with little authority. Penalties for breaching sanitary guidelines are not necessarily enforced and the SES sanitary surveillance divisions need better links with the legal system.

Physical resources are inadequate with outdated laboratories (bacteriology, parasitology, virology and environmental), obsolete equipment and shortages of materials. Information technology also is outdated with most data processed manually and few computers. The tasks of population health surveillance and statistical analysis therefore are poorly performed given the large volume of collected data and lack of modern equipment.

Environmental protection

Environmental protection is carried out (or not) by different agencies making this a complex intersectoral area. The 1992 government resolution “On state control in the sphere of nature preservation and use of nature resources” authorized several state agencies to take action, including the Ministry of

Environmental Protection, Ministry of the Interior, State Sanitary Epidemiological Services, State Inspectorate for Land Tenure under the Government, State Forestry Inspection, and the State Inspection on Industrial and Mining Safety. The Issyk-Kul resolution at the Ministerial meeting of central Asian republics in 1996 called for legislation to clarify and coordinate the responsibilities of government agencies.

The National Environmental Health Action Plan (NEHAP) of the Kyrgyz Republic followed the European Conference on Environment and Health, held in Helsinki in 1994. The 1995 NEHAP was extended in 1997 with objectives in line with the Environmental Health Action Plan for Europe (*19*). This plan sets out the considerable environmental problems facing the Kyrgyz Republic, such as poor industrial waste management, contamination by agricultural fertilizers and pesticides, the breakdown of water purification and the discharge of toxic substances (despite a substantial decrease in industrial production).

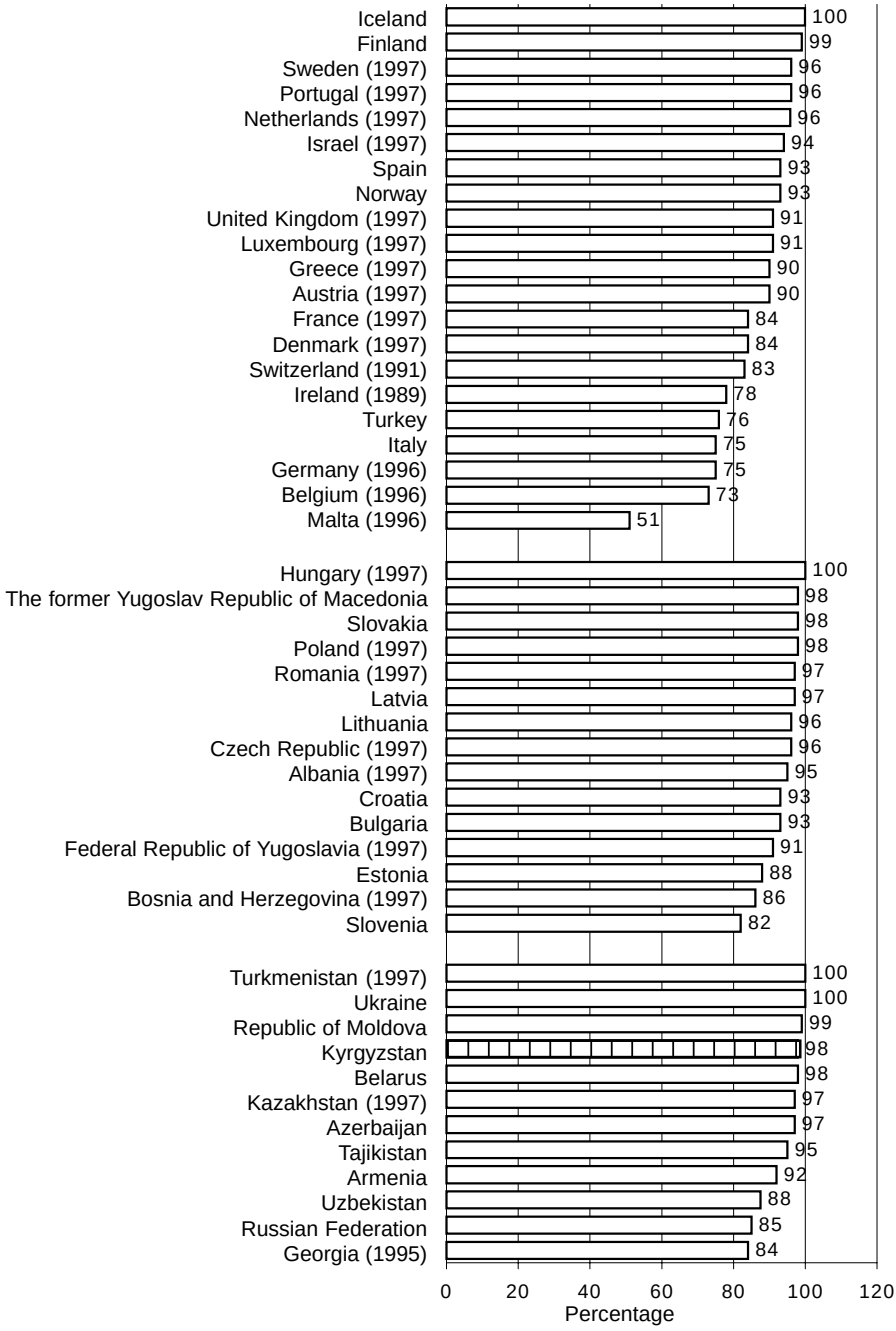
Various proposals on the SES and environmental health were discussed at a workshop in the Kyrgyz Republic of the central Asian republics in January 1999. The conclusions and recommendations of this workshop can be summarized as follows: maintain state regulation through the SES; revise the division of functions between the SES and other agencies; integrate SES services with primary health care and environmental protection activities; change funding methods; involve more non-medical professionals; update the training of public health physicians; involve professional associations in certification of SES personnel; make changes in line with health reform programmes; improve intersectoral cooperation; and improve information systems.

Secondary and tertiary care

Secondary care refers to specialized ambulatory services and to basic hospital care (excluding long term care institutions). Tertiary care refers to specialist medical services of higher complexity and usually higher cost. Most of the republican level hospitals function more as secondary rather than tertiary care providers. In practice, there are few clear divisions between levels of care, since tertiary care facilities provide secondary care, and many secondary care facilities also offer primary care. For example, the Republican Diagnostic Centre is regarded as a tertiary care institution but also offers primary and secondary care, while the regional (oblast) hospitals treat a high proportion of basic secondary care cases, according to Mandatory Health Insurance Fund data.

The tendency is to refer patients onwards to the next level rather than to treat. Within polyclinics, the referral route is better controlled in that a patient

Fig. 6. Levels of immunization for measles in the WHO European Region, 1998 (or latest available year)



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

needs a referral to a specialist. Specialists in all hospital polyclinics, however, tend to diagnose rather than treat patients, another main function being to decide whether to admit patients to hospital. Polyclinics, therefore, mainly function as a referral route. The aim is to restrict this upward flow, and the Hospital Association is developing criteria for hospital admissions. A financial incentive is now in place in that the Mandatory Health Insurance Fund will only pay for secondary and tertiary treatment referred via a primary care physician.

Ambulatory secondary care services

Polyclinics are free-standing (in urban areas) or are located in rayon and oblast hospitals (as discussed earlier). Polyclinics and outpatient departments are staffed with specialists but offer primary as well as secondary care. Secondary care is also offered in outpatient departments, in republican hospitals, in specialist hospitals (such as for children) and in dispensaries (hospitals that deal with chronic diseases).

Private clinics and private specialists provide treatment on a fee-for-service basis and their numbers, though very small, are beginning to increase in urban areas.

Inpatient services

Soviet Semashko planning norms called for a large number of hospital beds for the population. This hospital model of health care included easy access to hospitals, referrals to higher levels of health care, and separate specialist institutions. These norms have resulted in an oversupply of beds, multiple hospitals and over-specialization. The Kyrgyz Republic health care system (similar to other former USSR countries) is dominated by hospitals. Over 70% of the government health care budget is allocated to hospitals, which mainly goes on running dilapidated buildings and employing staff, with little left over for medical supplies or equipment in order to treat people.

Rural hospitals (SUBs) (157 in 1997) have 20–50 beds (mainly obstetrics beds) and serve a population of 20 000–25 000, with people either going directly or being referred. These small "hospitals" provide primary care rather than secondary care. The intention is to close many rural hospitals or to convert them into outpatient facilities. Many of these hospitals have deteriorated badly and have little equipment or drugs.

Central rayon hospitals are located in the central town of the rayon (district), offer several specialties, and many also house a polyclinic. There were 40 such hospitals in 1997. These also are the administrative centres for district primary health care services.

Maternity hospitals usually are separate hospitals in urban areas and units in central rayon hospitals. At the oblast level, maternity hospitals handle complicated pregnancies and provide specialized gynaecological treatment. Hospitals for children are also mostly separate at the oblast and republican levels.

Dispensaries provide outpatient and inpatient secondary care to defined categories of patients (such as tuberculosis, sexually transmitted diseases and oncology) within a geographic catchment area. There were 44 dispensaries in 1997.

Oblast (regional) and city hospitals (39 in 1997) provide mostly secondary care (but also primary care in their outpatient departments). These offer a fuller range of specialties and are located in the main city of the oblast.

Republican hospitals and research institutes (12 in 1997) offer clinical tertiary care and also act as teaching hospitals. Republican facilities had 7860 beds in 1998. Most republican facilities are located in Bishkek, with the exception of four in the oblasts, as follows: two republican dispensaries for psychiatric disorders, and for dermatological and venereal diseases; two general hospitals, the National Hospital and the Republican Children's Hospital; six research institutes (tuberculosis, oncology, paediatrics, obstetrics and haematology, ecology and prophylaxis); two national centres (cardiology and surgery); the Republican Narcology Centre; the Republican Infectious Diseases Hospital; the Republican Rehabilitation Hospital; two psychiatric hospitals (outside the capital); and two Republican tuberculosis hospitals for children and adults (outside the capital).

Private hospitals: Bishkek also has three small for-profit specialist hospitals (ophthalmology, surgery and narcology).

Hospital utilization

The Kyrgyz Republic is notable in having more hospitals per 1000 people than all but two former USSR countries. It had more hospitals in 1998 than in 1990 (although bed capacity has been reduced). The number of all hospital beds per 1000 population has dropped from 11.9 in 1990 to 8.3 in 1997. The number of acute hospital beds per 1000 population was 7.5 in 1997 compared to 7.2 in former USSR countries and 4.5 in European Union countries (Fig. 7 and Fig. 8).

Admissions to hospital have dropped from nearly 24 admissions per 100 population in 1990 to 17.5 in 1998. This drop (in all hospitals and in acute care hospitals) may reflect the lack of treatment capacity with few drugs and equipment. Despite this decline, the Kyrgyz Republic still had the highest hospitalization rate of any central Asian country in 1998.

Table 12. Inpatient facilities utilization and performance, 1990–1997

Indicators	1990	1991	1992	1993	1994	1995	1996	1997
Number of hospitals per 100 000 population	6.9	7.3	7.4	7.5	7.7	7.6	7.4	7.4
Number of acute hospitals per 100 000 population	5.9	6.2	6.4	6.4	6.5	6.4	6.2	6.7
Total hospital beds per 1000 population	11.9	12.1	11.9	10.7	9.6	8.6	8.4	8.3
Acute beds per 1000 population	9.8	9.9	9.9	8.8	7.8	7.0	6.9	7.5
Hospital admissions per 100 population	23.9	23.4	22.4	20.7	17.7	16.9	16.5	17.5
Acute care hospital admissions per 100	22.9	22.5	21.7	19.9	17.0	16.3	15.8	16.5
Average length of stay in days	14.9	14.9	15.0	15.0	15.4	14.7	14.9	14.5
Average length of stay acute care hospitals	12.6	12.7	13.1	13.0	13.1	12.4	12.9	12.8
Occupancy rate (% acute hospital beds)	80.4	78.3	77.9	80.2	78.0	79.3	80.5	83.6

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

The average length of stay in acute care hospitals remains high with nearly 12.8 days in 1997 (Table 12). Average length of stay in all hospitals was 14.9 days, similar to other former USSR countries, but higher than most European countries (Table 14).

The occupancy rate in acute hospital beds was 84% in 1997, a rise from the 78% in 1994 perhaps due to some reduction in hospital beds. The real occupancy level is lower, however, since it is common practice to delay recording a patient in the discharge statistics in order to maintain the hospital budget (*24*). A survey of rural hospitals (SUBs) in 1994 found that only two thirds were occupied (*14*).

Hospital restructuring

About 26% of hospital beds were closed under the hospital rationalization programme between 1990 and 1996 (*14*). The number of hospitals increased, however, so that few savings were made in fixed costs. Few incentives (or penalties) are yet in place to encourage more cost-effective care. The disincentives in closing hospitals include the retention of hospital financing by number of beds and patients; the retention of rigid 18-line item budgets; hospitals cannot roll over savings to the next financial year; outdated clinical treatment protocols call for long hospital stays; while the increase in some diseases means that such hospitals have been retained. For example, no dispensaries are to be

closed before the year 2000 according to a prikaz (order) of the Ministry of Health, the rationale being the increase in drugs, alcohol abuse and mental illness.

The total number of hospitals increased by 10% between 1990 and 1997, although the total number of hospital beds was reduced by 27% (Table 13). These reductions were achieved by closing some rural hospitals but mostly by closing beds. The extent of change has varied across oblasts. Rural hospital closures were guided by the following criteria: scope and quantity of services, distance from other hospitals, road conditions and accessibility, number of beds, and number and type of staff (*14*). Bishkek, with a population of around 800 000, has 26 secondary and tertiary care hospitals, and an apparently high bed occupancy rate (nearly 88%). These hospitals are run by the republic, Chui oblast, or Bishkek City. Bishkek hospitals have not been closed or merged (except for two City hospitals), despite a detailed rationalization plan (*24*).

The Hospital Association plans to monitor hospital performance indicators (occupancy rates, average length of stay, bed turnover rates, and the number of cases treated). The Mandatory Health Insurance Fund introduced an element of case based payment in 1997 following pilot testing in Issyk-Kul oblast. The original case mix categories have been refined (a Kyrgyz Republic variant of the diagnosis related groups), and the Fund has established a utilization review intended to link payments with clinical performance, discussed under the section on *Paying hospitals*.

Table 13. Number of hospitals and hospital beds

Type of hospital and beds	1990	1991	1992	1993	1994	1995	1996	1997	% change 1990–1997
Acute hospitals	257	275	284	285	290	288	282	306	+19.1
Total hospitals	–	304	323	332	335	341	341	335	+10.2*
Acute hospital beds	43 000	44 050	44 598	39 260	34 712	31 469	31 593	34 627	-19.5
Total hospital beds	52 245	53 305	53 224	47 815	42 651	38 703	38 197	38 332	-26.6

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

A financial incentive was offered in December 1998 in government resolution Number 793 “On reinvesting saved resources into the health care sector”. The city and oblast health departments were to retain any budgetary savings from bed or hospital closures. This resolution has not been implemented, however, since the local government budget rules that define the use of funds for specific purposes have not been changed.

Social care

Much social care is provided in institutions including residential care for dependent groups, such as older people and people with intellectual, physical and psychiatric disabilities. There is no clear division between social and medical care and community services are not yet developed. Support in the community in large part depends upon families.

Health care is the responsibility of the Ministry of Health, and social services are the responsibility of the Ministry of Labour and Social Security. The voluntary sector is small but growing and some agencies are subsidized by the government, although the social services sector is under-funded. Few links currently exist between the health and social welfare sectors.

Formulating a mental health policy and a community care policy will require a comprehensive review: of existing residential care, adequacy of income support from social services, and the extent of community services. Work on a mental health strategy has begun linked to policies on hospital services and health insurance. Some small hospitals could be transformed into nursing homes and long term care facilities, but this would require staff to be re-trained.

Specialist hospitals and dispensaries provide treatment and care for people with mental illnesses, intellectual disabilities, and those with drug and alcohol problems. Administered by the Chief Psychiatrist in the Ministry of Health, there were ten such hospitals with 3224 beds in 1997. These hospitals provide both acute and long term care and dispensaries also offer outpatient treatment. The average length of stay in 1997 varied between 34 and 60 days, with longer stays in republican psychiatric hospitals of 101 to 253 days. Oblast psychiatric hospitals have between 40 to 170 beds and large republican hospitals have 660 to 1000 beds. Patients are referred by physicians or taken by ambulance in cases of emergency.

A network of sanatoria and spas offer rehabilitation and convalescence, often over long lengths of stay. These are mainly run by trade unions and funded by the Social Fund. Their impact on health is questionable and their rationalization is a priority.

The care of children with learning disabilities is the responsibility of the Ministry of Education, with special schools in urban areas, and boarding schools for children with severe sight and hearing disabilities.

Voluntary agencies

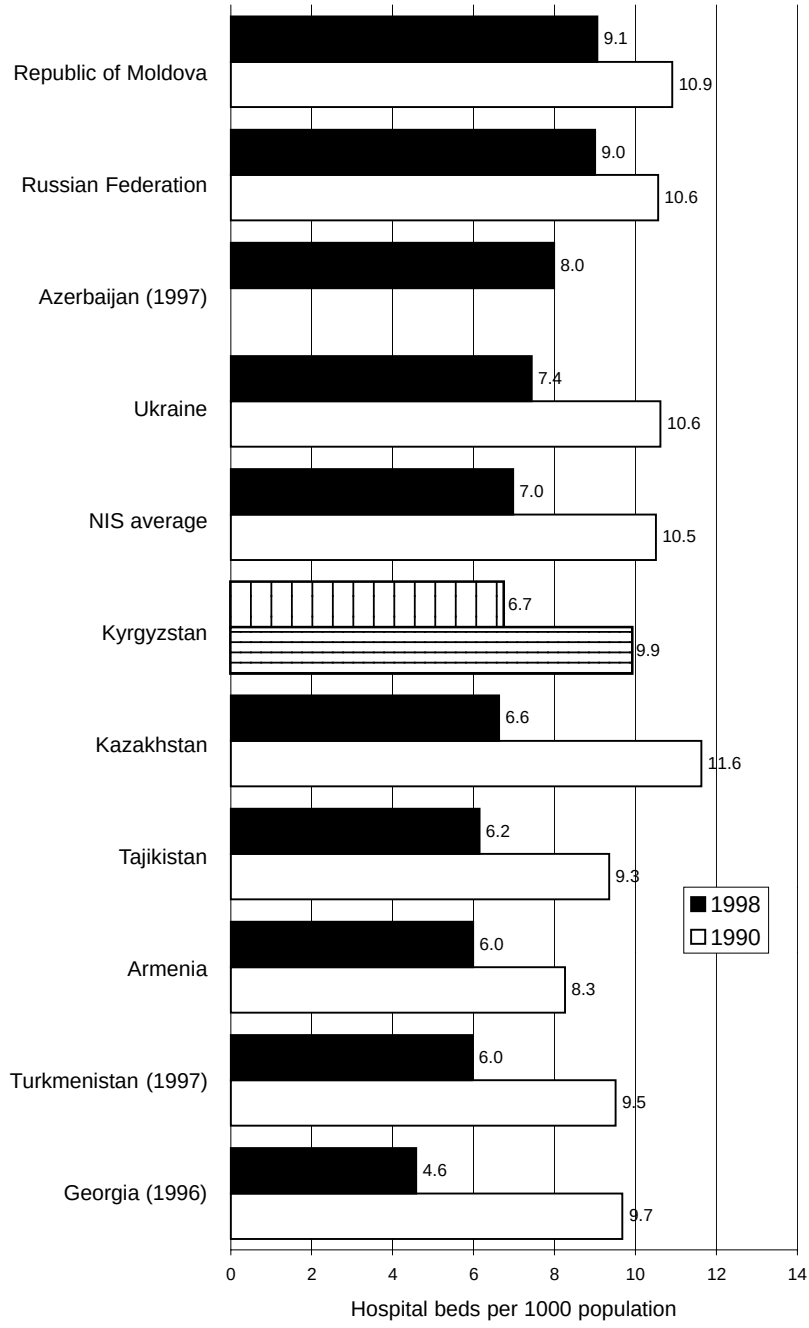
The main voluntary agency is the Red Crescent Society of the Kyrgyz Republic, established in 1926. Its traditional function is health and social care for

Table 14. Inpatient utilization and performance in acute hospitals in the WHO European Region, 1998 or latest available year

Country	Hospital beds per 1000 population	Admissions per 100 population	Average length of stay in days	Occupancy rate (%)
Western Europe				
Austria	6.4[a]	24.7[a]	7.1[a]	74.0[a]
Belgium	5.2[b]	18.0[b]	7.5[b]	80.6[c]
Denmark	3.6[b]	18.8[b]	5.6[b]	81.0[b]
Finland	2.4	20.5	4.7	74.0[c]
France	4.3[a]	20.3[c]	6.0[b]	75.7[a]
Germany	7.1[a]	19.6[a]	11.0[a]	76.6[a]
Greece	3.9[f]	–	–	–
Iceland	3.8[c]	18.1[c]	6.8[c]	–
Ireland	3.4[a]	14.9[b]	6.7[b]	82.3[b]
Israel	2.3	18.4	4.2	94.0
Italy	4.6[a]	16.5[a]	7.0[a]	76.0[a]
Luxembourg	5.6[a]	18.4[d]	9.8[b]	74.3[d]
Malta	3.9[a]	–	4.5	72.2[a]
Netherlands	3.4	9.2	8.3	61.3
Norway	3.3	14.7[b]	6.5[b]	81.1[b]
Portugal	3.1	11.9	7.3	75.5
Spain	3.1[c]	10.7[c]	8.5[b]	76.4[c]
Sweden	2.7[a]	16.0[b]	5.1[b]	77.5[b]
Switzerland	5.2[b]	14.2[e]	11.0[a]	84.0[a]
Turkey	1.8	7.1	5.5	57.3
United Kingdom	2.0[b]	21.4[b]	4.8[b]	–
CCEE				
Albania	2.8[a]	–	–	–
Bosnia and Herzegovina	3.4[g]	7.4[g]	9.7[g]	70.9[g]
Bulgaria	7.6[b]	14.8[b]	10.7[b]	64.1[b]
Croatia	4.0	13.4	9.6	88.2
Czech Republic	6.5	18.4	8.8	70.8
Estonia	6.0	17.9	8.8	74.6
Hungary	5.8	21.7	8.5	75.8
Latvia	–	–	–	–
Lithuania	–	–	–	–
Poland	–	–	–	–
Romania	–	–	–	–
Slovakia	7.1	19.3	10.3	77.9
Slovenia	4.6	15.9	7.9	75.4
The former Yugoslav Republic of Macedonia	3.5[a]	8.1	8.9	66.5
NIS				
Armenia	6.0	6.0	10.7	30.2
Azerbaijan	8.0	5.6	–	–
Belarus	–	–	–	88.7[d]
Georgia	4.6[b]	4.8[b]	8.3[b]	26.8[d]
Kazakhstan	6.6	14.9	13.0	91.2
Kyrgyzstan	6.7	15.8	12.9	81.7
Republic of Moldova	9.1	16.9	15.4	77.6
Russian Federation	9.0	19.9	14.0	82.5
Tajikistan	6.2	9.7	13.0	59.9[b]
Turkmenistan	6.0[a]	12.4[a]	11.1[a]	72.1[a]
Ukraine	7.4	17.9	13.4	88.1
Uzbekistan	–	–	–	–

Source: WHO Regional Office for Europe health for all database.
Note: [a] 1997, [b] 1996, [c] 1995, [d] 1994, [e] 1993, [f] 1992, [g] 1991, [h] 1990.

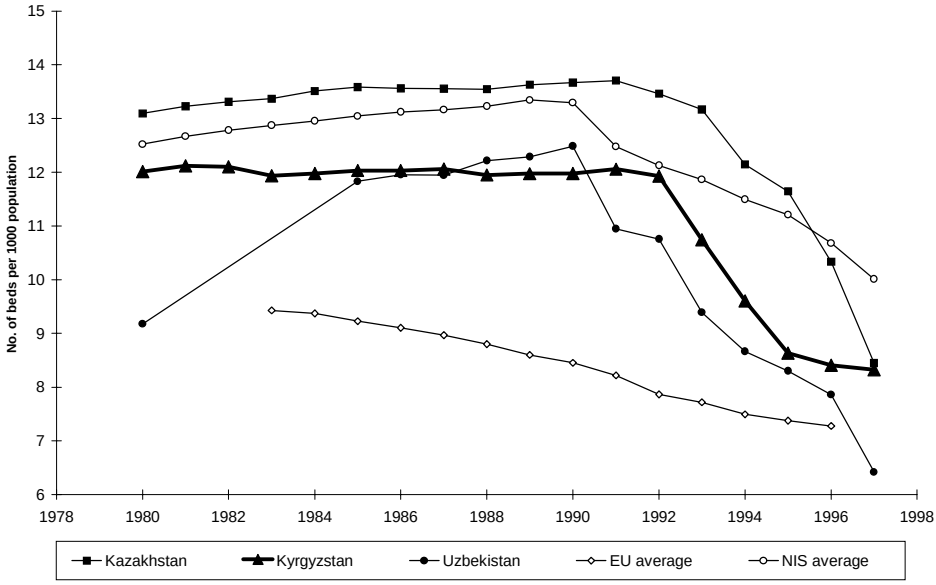
Fig. 7. Hospital beds in acute hospitals per 1000 population in the newly independent states (NIS), 1990 and 1998 (or latest available year)



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

Kyrgyzstan

Fig. 8. Hospital beds per 1000 population in the Kyrgyz Republic and selected countries, 1980–1997



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

dependent and socially isolated older people. From the 1950s, its Charity Service social workers and nurses delivered home nursing and social services (purchase of food, payment of public utilities, home help, meals and counselling). Their nurses worked from polyclinics under the supervision of a physician and were paid higher salaries than other nurses working in public health. There are now 178 charity nurses (down from 600 in 1991) who visit 2000 older people. The Ministry of Labour and Social Security determines the number of eligible people, who are growing as the population ages, as poverty increases due to very low pensions, and as support is lost with the migration of family members. The demand for assistance (especially in urban areas) is far greater than the supply. The nurses, social workers and doctors now work from seven oblast-level offices.

The Red Crescent Society of the Kyrgyz Republic affiliated with the International Red Cross and Red Crescent in 1992. It has broadened its activity to people with disabilities, child welfare, work with youth, emergency social assistance, and aid to refugees. In Soviet times, the society was funded solely by voluntary donations, but now only one third of the budget comes from fees and donations, and the rest from Red Cross/Crescent donors in other countries. Contributions shrank after the society lost its tax exemption in 1996. The Red

Crescent Society runs two medical centres that provide primary care to refugees (from Tajikistan). It assists 175 rural hospitals to buy pharmaceuticals and from 1998 has assisted nurse/feldsher posts in Osh oblast. It also runs a 40 place residential home for elderly people, and a residential home for abandoned children. The Red Crescent Society is considering its priorities for the future given the increasing demand for a broad range of services, its lack of a secure funding base, and the need to collaborate with other agencies and with government.

Human resources and training

The Kyrgyz Republic health sector has a large workforce, nearly all employed by the public sector, physicians are mainly specialists, and there is a low ratio of nurses compared to physicians. Health care workforce statistics must be treated with caution, however, since definitions are problematic (whether physical persons, full time equivalents or active staff) and numbers are inflated as the number of staff determines the budgets of health care facilities. For example, the number of full time equivalent physicians (or posts) in some years is one-third more than the number of physical persons, since some people hold more than one position (Table 15).

The health and welfare public sector employed 942 000 people in 1997 (down by nearly 8% from 1994), which corresponds to nearly 6% of the employed workforce (*13*). The public sector (principally the Ministry of Health) employed 52 134 health care professionals in 1997. The private sector remains very small, and mainly in urban areas and in some specialities (such as complementary medicine, gynaecology, urology and ophthalmology). Data on private sector personnel are not available except in licensing statistics.

Health professionals (such as physicians and dentists) numbered 14 354 in 1997 (3.1. per 1000 population); and mid-level personnel (feldshers, nurses, midwifes) numbered 37 780 (8.2 per 1000). Direct health service providers (excluding managers and non-active staff such as women on maternity leave) totalled 9 380 physicians (2.0 per 1000) and 30 026 mid-level staff (6.5 per 1000 of population).

The population proportion of physicians rose during the 1980s and has remained at around three physicians per 1000 population during the 1990s, just below the rising European Union average but well below former USSR countries (Fig. 9 and Fig. 10). Physicians (in terms of physical persons) fell by about 4% during the 1990s (Table 15).

Table 15. Health care personnel, 1980–1997

	1980	1990	1991	1992	1993	1994	1995	1996	1997	% change 1990–1997
Physicians per 1000 population	2.60	3.37	3.41	3.35	3.12	3.10	3.21	3.29	3.05	-9.5
Physicians (1000 physical persons)	9.4	14.7	15.1	14.9	13.9	13.7	14.4	15.0	14.0	-4.3
Physicians (1000 FTE)	12.1	18.7	19.4	19.5	18.4	17.5	17.5	15.8	15.4	-17.7
Dentists per 1000 population	0.15	0.29	0.29	0.29	0.28	0.27	0.24	0.25	0.24	-17.2
Nurses per 1000 population	7.01	9.01	9.25	9.20	8.65	8.48	5.63	6.77	7.85	-12.9
Midwives per 1000 population	0.90	0.94	0.85	0.81	0.80	0.75	0.50	0.59	0.71	-24.5
Pharmacists per 1000 population	0.15	0.28	0.28	0.27	0.26	0.22	0.07	0.09	0.06	-78.6
Physicians graduating per 1000 population	0.14	0.11	0.12	0.14	0.16	0.15	0.13	0.13	0.16	+45.5
Nurses graduating per 1000 population	0.67	0.68	0.70	0.81	0.80	0.50	0.63	0.47	0.47	-30.9
Dentists graduating per 1000 population	0.01	0.02	0.03	0.03	0.03	0.02	0.02	0.02	0.03	+50

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

The population ratio of nurses has dropped by 12.9% since 1990 and was 7.8 per 1000 population in 1997 (Table 15). There is a shortage of well-trained nurses. The physician to nurse ratio is low (1:2.6) compared to most western European countries (Fig. 10), and physicians perform many tasks that could be performed by trained nurses. Republican health facilities employ the highest population ratio of nurses.

The number of dentists fell by 17.2% during the 1990s and in 1997 was 1105 (0.2 per 1000 population), probably because many have moved into the private sector.

The population ratio of pharmacists dropped from 0.28 in 1990 to 0.06 per 1000 population in 1997 (a fall of 79%), which reflects the exodus of pharmacists out of the public into the private sector, since most pharmacies are now privatised.

The population distribution of health personnel across oblasts is uneven (Table 16). The number of physicians varies between 1.3 and 1.9 per 1000 population, with the lowest provision in the rural southern oblasts. The shortage of health personnel in rural areas has worsened over the last five years, as

Table 16. Distribution of health care providers (per 10 000 population) by oblasts, 1997

	Therapeutists	Paediatricians	Obstetrician/ gynecologists	Dentists	Nurses
Bishkek	5.5	6.2	3.8	3.5	40.4
Chui	2.7	2.9	1.8	2.1	55.6
Talas	2.6	2.4	1.7	1.9	63.1
Issyk-Kul	2.4	3.6	1.9	2.3	65.9
Naryn	2.5	3.2	1.6	1.6	80.5
Osh	2.1	3.2	1.4	2.1	62.5
Jalal-Abad	1.9	2.7	1.1	1.9	56.7
Total	**2.8**	**3.6**	**2.0**	**2.4**	**65.2**

Source: Ministry of Health, Medical information Centre, 1998.

recent medical graduates are unwilling to work in rural areas, and the previous mandatory three year posting to rural areas has been cancelled. The most physicians (but fewest nurses) are found in Bishkek, where most republican hospitals are located.

Human resources issues are pressing and lag behind other health sector reforms. A preliminary analysis by the Ministry of Health has shown significant variations in the distribution and productivity of health care staff across the country and across hospitals. The following issues have yet to be tackled: excess staffing may force redundancy despite the lack of alternative jobs; early retirement is not attractive given the lack of redundancy payments and low retirement pensions; staffing balance and skill mix require change; staff have been trained as specialists, with outdated knowledge and procedures, and require retraining; health workers lack motivation due to resource shortages, low salaries, and increasing insecurity; higher trained medical personnel are used inefficiently; there are few incentives for good practice and productivity; and job appointments are not competitive.

Salaries and working conditions

In countries of the former USSR, the health sector was not seen as productive compared with sectors such as mining, so that wages for health care personnel were set below the workforce average. The average wage in the health sector decreased from 92% of the average wage in 1994 to 59% in 1998 (Table 17). The average wage of the national workforce (all sectors of the economy) was

789 soms per month in 1998 but only 467 soms for the health sector (Table 17). The salaries of health professionals have remained low given the constrained health care budget. In contrast, salaries in banking and insurance are more than three times the national average (*31*). The salary share of total state health expenditure has fallen from about one half to around one third (WHO Regional Office for Europe health for all database).

Table 17. Average monthly wages

(soms)	1993	1994	1995	1996	1997	1998
Economy-wide average	83.8	233.4	368.2	490.9	680.2	789.3
Health sector	52.2	215.3	291.5	325.7	385.3	467.0
Health as percentage of average	62%	92%	79%	66%	57%	59%

Source: National Statistical Committee.

The loss of well-qualified personnel through emigration and to sectors that offer higher income threatens the quality of services. The dissatisfaction among physicians and middle level staff due to very low and irregular salary payments, combined with their low status, is not conducive to high quality care. In some cases, staff have not been paid for several months. These problems are most keenly felt in the rural areas, where irregular salary payment from district budgets is common. Many health care personnel are reluctant to work in rural areas because living standards are low and there are few financial incentives (such as subsidized accommodation). Moreover, rural health care facilities are often poorly supplied with equipment, drugs and even such essentials as water and electricity.

Training

The number of medical graduates per 1000 population (including physicians, sanitary-hygienists and physician-dentists) has risen by over 45% between 1990 and 1997 (Table 16). There were 891 medical graduates in 1993 and 723 in 1997. Physicians are trained in three institutions: the Medical Academy in Bishkek, medical faculties at the Kyrgyz-Slavic University, and the University in Osh City. The Bishkek Medical Academy has now reduced its intake recognizing that there is an oversupply of doctors. University undergraduate and graduate courses all now charge fees.

Undergraduate medical education was reorganized in 1996 when the Medical Academy merged the faculties of pediatrics and curative care into the faculty of general practice. Medical physicians previously graduated as therapists,

paediatricians or obstetrician/gynaecologists. Medical education and medical practice has been very conservative, attaching considerable importance to medical traditions and the rule-like application of clinical protocols (often unwritten).

In 1998, the postgraduate internship was increased from one to two years. Physicians do a short refresher course every five years and this requirement has been retained despite budget cuts. Completion of these courses determines qualifications and hence salary levels.

Training in general/family practice now operates at several levels. First, family medicine trainers are trained at the Centre of Continuous Medical Education. This one-year full-time course started in 1997 and was completed by about 30 people in 1999. These trainers now work either from the Family Medicine Training Centre (attached to a Bishkek polyclinc), the Centre of Continuous Medical Education and its affiliates in Issyk-Kul and Osh, or the Bishkek Medical Academy. Second, district doctors are being retrained in three-month courses by the Centre of Continuous Medical Education. These courses are provided in four cycles each lasting for three weeks. Primary care physicians in Bishkek and Chui are undergoing this retraining, and courses have been set up in Issyk-kul and Osh oblasts. Third, short courses on specific topics are provided locally to physicians who have completed retraining. Fourth, cross-training is being promoted among specialists in family group practices (therapists, paediatricians and obstetrician/gynaecologists).

A certification committee of the Ministry of Health now licenses physicians, which includes representatives from government (chief specialists of Ministry of Health departments), Medical Academy representatives, experts in particular specialties, and the professional associations. Certification criteria include length of work experience, completion of training courses every five years, assessment of the past three years work and exam results. Salary levels depend upon these certification categories. A certification process for family physicians is also being developed, which includes the Family Group Practice Association.

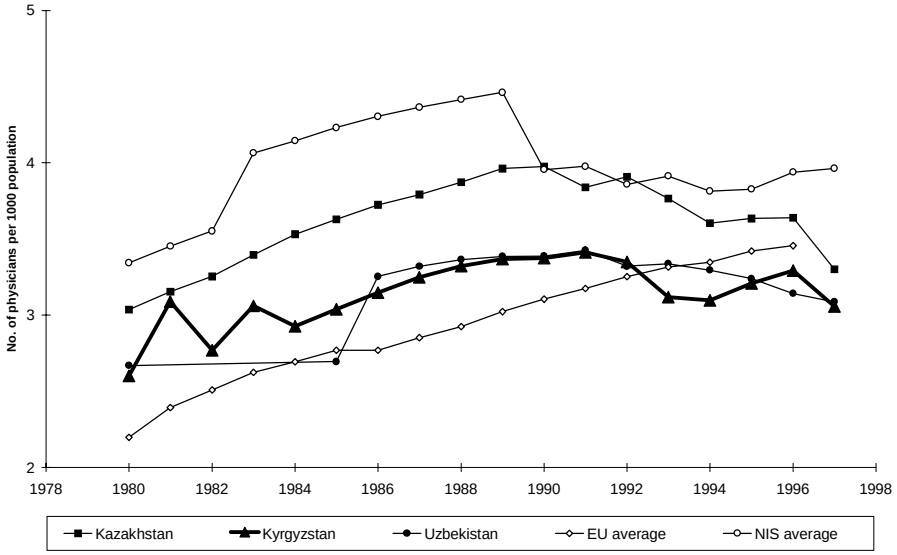
Nurse education

Nurse education from 1998 upgraded to a three-year course in nursing schools after eleven years of schooling, instead of the previous secondary school level two-year course. Nurses previously were taught by physicians but nurse teachers now are being trained at the new nurse higher education faculty at the Medical Academy; 40 trainees were admitted in 1998. Retraining of nurses is done by the Postgraduate Training Institute. The Nursing Association is an active member of the European Nursing Association and has developed guidelines on standard practices for nurses, which were approved by the Ministry of Health.

Public health and health management

The Kyrgyz Republic lacks trained professional health managers. The Health Management Training Centre was established in 1997 jointly between the Medical Academy and the International University of the Kyrgyz Republic. The two-year Masters programme in 1998 had 30 first-year students and 40 second-year students. The Centre also began training seminars for Mandatory Health Insurance Fund staff, health sector managers and family group practice managers. The intention is to develop a programme in Public Health at the Medical Academy in the Kyrgyz Republic.

Fig. 9. Physicians per 1000 population in the Kyrgyz Republic and selected countries, 1980–1997



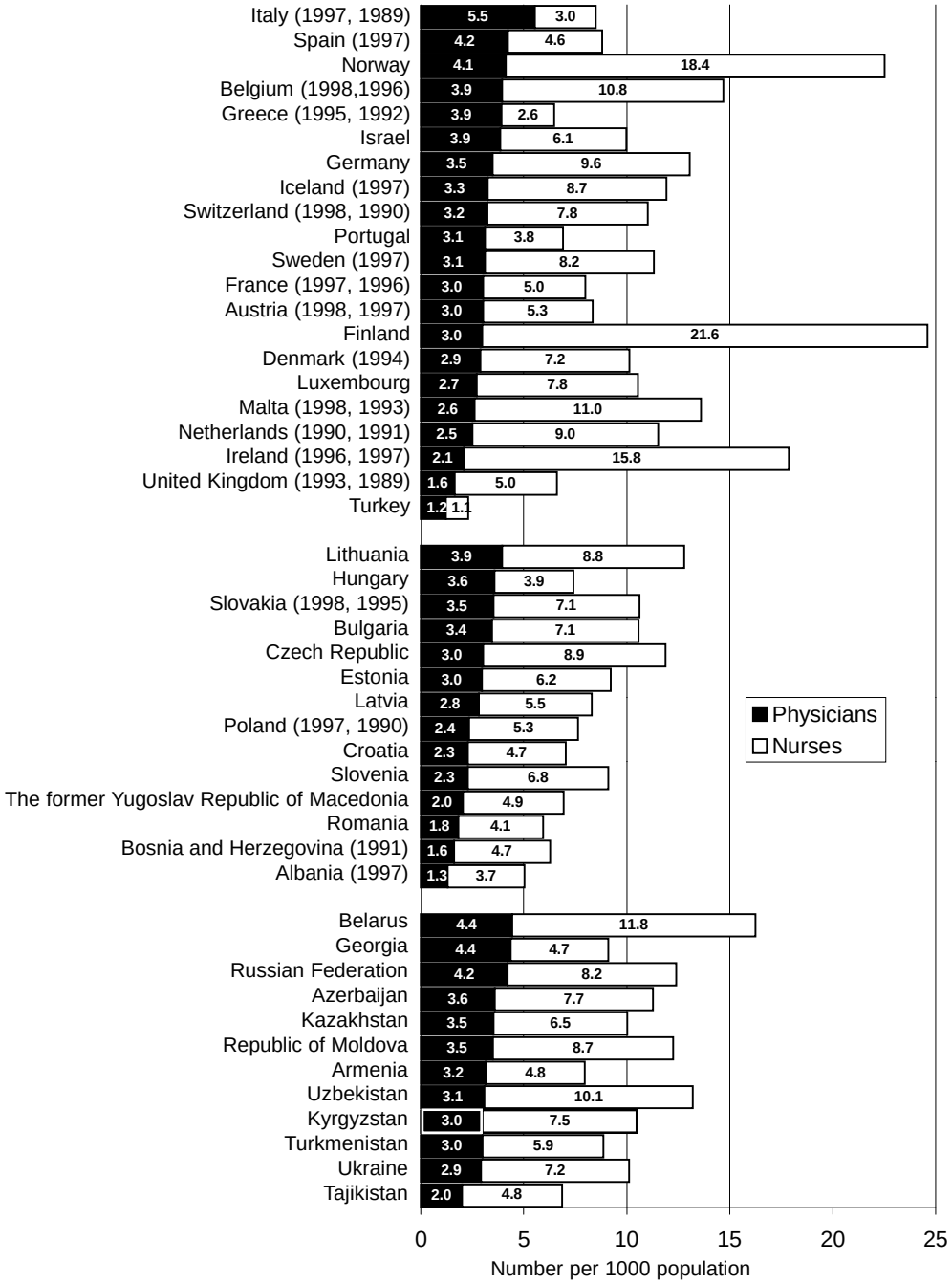
Source: WHO Regional Office for Europe health for all database.

Pharmaceuticals and health care technology assessment

Pharmaceuticals

The Kyrgyz Republic imports over 90% of its drugs. A new biopharmaceutical factory has been set up with a US $10 million loan from the Pakistan

Fig. 10. Number of physicians and nurses per 1000 population in the WHO European Region, 1998 or (latest available year)



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

Government in order to develop the local pharmaceutical industry, and production began in 1998 with nine items. A small factory also produces herbal medicines.

In Soviet times, a monopoly state agency, Kyrgyz-Pharmacia, imported and distributed drugs through warehouses in each oblast. This was reorganized in the early 1990s into a joint stock company, as were the oblast agencies, with all shares held by private individuals. The restructuring of Pharmacia (and its affiliates) is not yet complete. There are now five large wholesale companies and many small distribution companies.

Annual sales by the Kyrgyz Pharmacia Company dropped from US $120 million in the late 1980s to US $10 million in 1995 (*30*). Distributors were unable to sell all their stock given high prices, rising inflation, constrained demand due to low public sector budgets, and low incomes amongst consumers. By April 1999, 69% of the 1997 drug supply had been sold but only 29% of the 1998 supply, which posed the risk that some drugs would exceed the expiry date.

Pharmaceutical retailing was privatized from 1996 with at least 20 private pharmacies and over 550 drug kiosks. A few hospital pharmacies remain in the public sector. About 400 licenses were issued to private firms for the distribution and retail sale of pharmaceuticals through a network of more than 3000 pharmacies. Licensing criteria include appropriate credentials, appropriate physical space and acceptable plans.

In the period following independence, there was no regulation or control over the quality, types or prices of pharmaceuticals. A national drug policy (including an implementation plan) was developed from 1994 onwards with assistance from WHO and adopted by government decree on December 1998.

The Department of Drug Supplies and Medical Equipment, established under the Ministry of Health in 1997, merged several departments and now includes the following divisions: Administration, Pharmaceuticals and Medical Equipment Management, State Quality Control of Drugs and Medical Equipment, Drug Registration, Licensing, Pharmacological Committee, Pharmacopoeia Committee, Drug Information Centre and Accounts. As the national regulatory organization, it is responsible for implementing government policy on drugs, medical products and equipment; registering all drugs and vaccines manufactured in the country; reviewing technical information on safety and effectiveness; organizing clinical trials; monitoring drug use and possible adverse effects; and quality assurance of all drugs and vaccines.

The World Bank funded a pharmaceutical component in its Health Sector Reform Project, with US $6.9 million over a four-year period (1996–2000).

The main aims were to finance the procurement and distribution of essential drugs, to strengthen the Government's drug regulatory capabilities, and to improve the cost-effectiveness of public spending. Two groups of drugs are being purchased, that meet good manufacturing practice standards: (a) drugs sold by distributors to health facilities and the population at unrestricted prices; (b) drugs dispensed through the primary health care component of the World Bank project such as tuberculosis drugs.

Public purchasing of pharmaceuticals initially was not cost-effective since, in the absence of competitive bidding, expensive brand drugs were purchased instead of less expensive, therapeutically equivalent generic products. Purchasing procedures (for drugs and medical equipment) were developed in 1996 under the World Bank project. Procurement of drugs is currently based on competitive bidding according to the new Law on State Purchases. Oblasts and health facilities can purchase their own drugs in line with decentralization reforms and based on the Essential Drugs Formulary. A quality assurance programme was developed and modern laboratory equipment for pharmaceutical testing obtained. The World Bank project also addressed problems of storage, transportation and inventory management.

The supply of drugs was considerably disrupted after independence in 1991 and foreign loans and grants were used to import emergency drugs. Foreign donated drugs initially played an important role in drug supply but were poorly matched with real drug needs. Although the supply of drugs has improved, population access has been reduced due to unregulated prices, limited health facility budgets and a population where 70% live below the poverty line. In 1993, 17% of people could not afford required medicines, but this had soared to 73% by 1996 (*7*).

Out of a total sales volume of 520 million soms by retail pharmacies in 1998, 258 million were sales to individuals (out-of-pocket payments). This amount understates the actual volume of drug purchases by individuals, however, given a growing black market in pharmaceuticals. VAT and customs duties for drugs, even essential drugs, remain in the Kyrgyz Republic, and as a consequence the country has high drug prices. Reportedly, the differential has led to a flow of unregistered drugs from abroad. Staff of the Department of Pharmaceutical Provision and Supplies estimate that black market sales might add another 25% to total out-of-pocket expenditures for drugs. If so, this would add more than 320 million soms to total health expenditures in 1998. When added to total recorded health spending for 1998 (budget, special means, and Mandatory Health Insurance Fund), this would raise the share of health in GDP from 3% to 4%. This amount of private expenditure on drugs would represent almost 24% of total health spending.

Prescriptions from physicians were mandatory during Soviet times with the exception of certain common drugs. Most drugs were dispensed to patients at no charge, and although charges were made for outpatient drugs (apart from exempt categories), prices were heavily subsidized. After 1991, rising drug prices meant that hospitals often were unable to supply free drugs to their inpatients, although this situation has improved since the establishment of the Mandatory Health Insurance Fund. A perverse incentive for admitting insured patients to hospitals now exists because they receive free pharmaceuticals while outpatients must pay. In order to address this problem, an outpatient drugs package is being developed by the Mandatory Health Insurance Fund.

There was no essential drug list in Soviet times and all drugs were freely available. The first such list (261 items) was developed in 1996 based on WHO guidelines, and was revised to 260 items (including 48 new items) in December 1998. The Essential Drugs Formulary was distributed to health facilities in 1998 as well as a reference book on drugs. A review of the drug exemption policy is underway, the intention being to reduce both the categories and the number of fully or partially subsidised drugs, which far exceed the items on the essential drugs list.

The Ministry of Health hopes to rationalize the prescribing behaviour of physicians. Drug committees have been created in health facilities and training seminars are carried out regularly for health personnel. The Ministry of Health is developing standard drug treatment guidelines. Recommendations on drug prescribing have been published for students of the Medical Academy. The use of generic drugs is being promoted and a reference book on pharmaceuticals has been published and circulated. Further regulation is anticipated through the drug packages funded by the Mandatory Health Insurance Fund. Criteria are being developed for the selection of pharmacies eligible for a contract with the Fund, which include funding only generic drugs, price regulation, a defined drugs list and consumer co-payments.

Health care technology assessment

Only 1.7% of the 1998 state health budget was spent on medical equipment (Treasury data). Despite severe budget constraints, expensive medical equipment is purchased by national hospitals with little technology evaluation and no coordination between health facilities. A strategy for equipment purchase was circulated to oblast administrations in 1998. In 1999, an inventory of equipment was carried out and procedures developed for purchasing expensive equipment. The next steps are to decide the priorities, identify sources of funding, and purchase equipment in accordance with agreed procedures.

Financial resource allocation

Third-party budget setting and resource allocation

The two main types of organizations responsible for allocating recurrent funds to providers are state institutions (Republican Ministry of Health, oblast departments, central rayon hospitals), and the Mandatory Health Insurance Fund. Capital costs are funded through the public budget. The two separate budget sources and processes (budgetary and insurance) are discussed below. The financing flowchart is set out in Fig. 11.

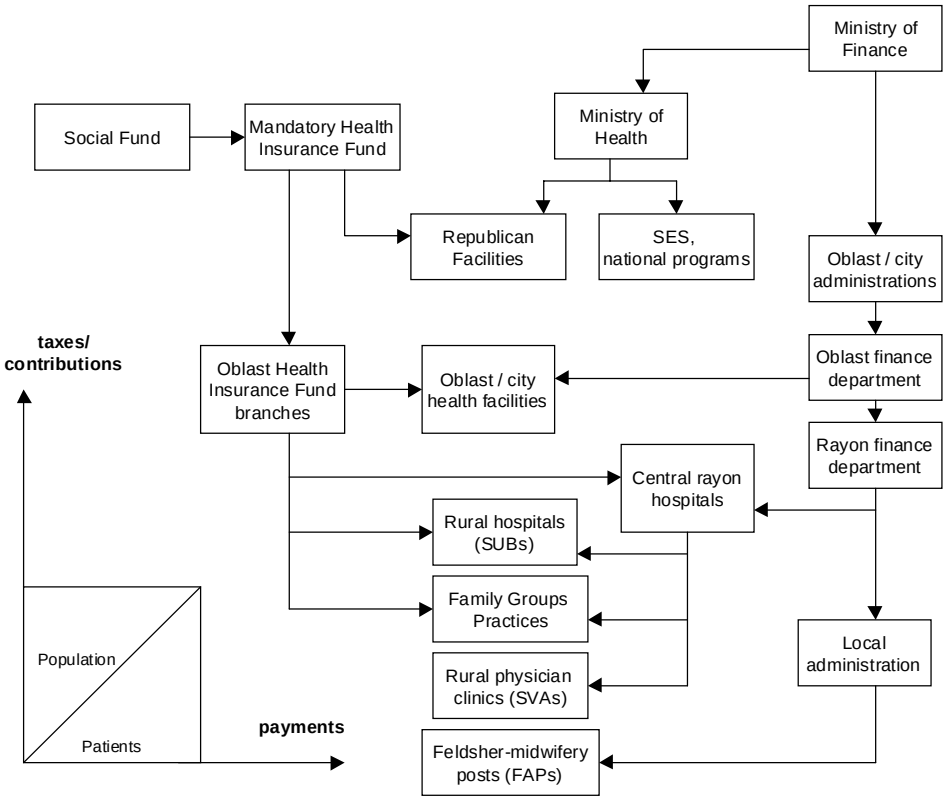
Health services are funded, therefore, by different levels of government administration as well as by the Mandatory Health Insurance Fund. Funding and delivery are not well matched, with considerable overlap across services and across population user groups. In addition, a substantial amount of revenue (perhaps over half) comes from official and unofficial payments from health care users.

An experiment in pooling health funds is under way in Bishkek City. The health sector budget in the capital, Bishkek (about 800 000 people) was pooled in January 1999 (previously four districts each ran their own budget). The next challenge is whether there is the political willingness to change the rules on use of funds by level of government, in order to allow them to reallocate health resources.

Government budget sources

The Ministry of Finance is the final budget arbiter but the procedures still follow the model set up in Soviet times. There are two public budgets: republican and regional. The republican budget comes from general taxes. The regional (oblast/city) authorities receive funds centrally allocated by the state, and also have locally generated funds. The size of the state health care budget is based on norms (developed in Soviet times) such as infrastructure, staffing and

Fig. 11. Financing flow chart



capacity/resource utilization. These allocations are adjusted to the available resources, so are no longer norms in an absolute sense, but still determine the distribution within the system. All facilities develop line item budget proposals up to an expenditure ceiling set by the Ministry of Finance. Oblast health departments (oblast committees from 2000) put together a submission that includes the health facilities. An oblast finance department decides the total size of the health budget, and later (after disbursement by the Ministry of Finance) allocates funds to health facilities via the oblast health department. The health sector budget is based mainly on the line items for the previous year (originally based on infrastructure norms) plus minor modifications.

The Ministry of Health finances only the republican institutions, the SES services and national health programmes. It has no direct involvement in the oblast budgetary process, although the national budget planning process between the Ministry of Finance and the Ministry of Health sets the national framework.

The World Bank, as a major external donor, also influences budget setting. However, a condition set by the World Bank for its health sector loan, that government spending be maintained at its 1994 level, has not been met.

Mandatory Health Insurance Fund

The introduction of the Fund in 1997 set up a dual payer system (although the Ministry of Health and the Mandatory Health Insurance Fund agreed to use a joint payment system). The Mandatory Health Insurance Fund was brought under the Ministry of Health, however, at the end of 1998. This change made it more likely (but not assured) that the Ministry of Health could implement a single policy on health reform, run a single payer system, and combine scarce trained staff (on health care quality assurance, information systems and payment systems). Insurance contributions (premiums) are collected by the Social Fund, which manages the pension system. The Mandatory Health Insurance Fund pools its funds at the national level before redistribution, taking about 3% for administrative costs. "Pools" (total amounts of revenue) are established separately for primary care and inpatient care (payment methods being described later).

Health care providers under contract with the Fund (mainly public providers) are still funded mainly through government budget allocations. The main role of the Fund has been to introduce new incentives and monitor the health sector, while providing a small but important additional revenue to contracted health facilities. One reason it can do this is because, unlike budget allocations, Mandatory Health Insurance Fund money is not tied to strict government line items.

Payment of hospitals

The budget allocation to hospitals remains largely based on norms such as number of staff and number of beds, and upon historical incrementalism (the previous year's allocation adjusted for inflation), while any unspent funds lead to a reduced budget the next year. The 18-line item budget allows no transfers between items, there are no incentives for hospitals to operate efficiently, and managers are expected to follow rules. Hospitals are still funded largely from public budgets under the established procedures. Some experiments in new ways of paying hospitals are underway, as described below.

The Mandatory Health Insurance Fund pays hospitals (additional to their state budget revenue) on a case mix basis (a form of diagnosis related groups). The complex payment system is based upon the clinical case group weight multiplied by a uniform base rate and an economic adjustment factor. The clinical case group weight reflects the mix of clinical case categories. The uniform base rate depends upon available resources divided by estimated admissions of insured persons. The economic adjustment factor depends upon the expected level of Mandatory Health Insurance Fund revenue and

expenditure. Because the base rate is budget-driven rather than cost-driven, payments by the Mandatory Health Insurance Fund do not cover (nor are they currently intended to cover) the full cost of a hospital case. Under the current guidelines, hospitals can use these additional revenues to supplement salaries and buy drugs.

The Mandatory Health Insurance Fund had contracts with 13 hospitals in 1997, 50 in 1998 and 66 in 1999 (out of 335 eligible hospitals). The fund is under pressure to contract with more health facilities but is at risk of expenditure exceeding revenue. The hospitals chosen were selected according to several criteria; for example, not marked for closure in the rationalization plan and covering a large patient population. Case-based payment was introduced gradually, and after one year's experience the Fund expanded its initial 54 clinical case categories to 139.

Case-based payments were introduced in April 1999 in three pilot hospitals in Bishkek City (funds were pooled). Payment was based on variable running costs (salaries, food, drugs, supplies and equipment) not fixed costs such as utilities, nor capital costs or depreciation. The oblast administrations have been unable to introduce case-based payments, however, since they are unable under existing regulations to pool oblast level budget funds.

A utilization review system has also been set up under a temporary regulation of the Mandatory Health Insurance Fund. Two to three physicians in each oblast office review data generated from the clinical information forms and select patient cases for review. These are reviewed in terms of five outcome variables: death, use of intensive care, more than one surgical operation during a single hospital admission, length of stay less than three days, and length of stay more than 20 days. A utilization review report is completed for each case. The Mandatory Health Insurance Fund can levy a financial penalty (withholding a proportion of payment) for poor performance. Health facilities also are encouraged to undertake their own quality assurance (*27*).

Payment of health care professionals

Public sector physicians are paid a monthly salary according to a national pay scale drawn up by the Ministry of Labour and Social Protection. This is based upon qualifications, degree of management responsibility and years of experience. Since the salary does not depend upon the quality, quantity, type of service or number of patients treated, there is no financial incentive (although there are personal and professional incentives) for physicians to provide cost-effective treatment. Physician payment methods are in the process of changing,

however, with differences between types of physicians and between oblasts. The situation with physician payments in April 1999 is summarized in Table 18. It should be remembered, however, that many physicians supplement their salaries with unofficial payments from patients.

Hospital physicians receive a salary determined by the national pay scale. Physician salaries in hospitals under contract with the Mandatory Health Insurance Fund might also be supplemented (bonus payments). Polyclinic specialists are still paid according to the national pay scale, although there are plans to pay by procedure according to a fee schedule.

Primary health care physicians are currently paid in several ways. First, those in non-pilot regions and on the public budget (the great majority of general physicians) continue to be paid a salary. Second, the family group practices in pilot regions, such as Issyk-Kul, receive a capitation rate for their registered patients, which is meant to cover physician salaries. Third, the Mandatory Health Insurance Fund has made capitation payments to contracted family group practices since 1998 (although most of their budget still comes from the oblast). The capitation payment is not based on enrolled insured patients, but on an oblast formula: population size, and group categories (insured, pensioners, registered unemployed, and employed). Capitation payments are not risk adjusted. The patient capitation rate set by the Fund is approved by the Coordination Committee on Implementation of Health Reforms. The capitation payment is earmarked to buy basic medical equipment (55%), drugs (10%) and a salary supplement for staff (35%).

Table 18. Physician payment methods, 1999

Regions	Source of funds	Hospital physicians	Outpatient physicians	Primary care physicians
Non-pilot Regions	Public budget	Salary	Salary	Salary
	Health Insurance Fund	Case-based part payment	–	Capitation fees to Family Group Practices for insured patients
Pilot regions	Public budget	Salary 3 Bishkek hospitals get case-based payments	Salary	Capitation fees to Family Group Practices for enrolled patients
	Health Insurance Fund	Case-based part payment	–	Capitation fees to Family Group Practices for insured patients

Capitation funding is not a full fund-holding model whereby the physician purchases all health care services required by their patients. A planned move to partial fund-holding (such as family physicians purchasing specialist outpatient services) has been postponed while the current health sector reforms are consolidated.

Health care reforms

Aims and objectives

Since independence in August 1991, the Kyrgyz Republic has been in transition from a command and control political and economic system to a more democratic, pluralist and market-oriented system. The collapse of the USSR brought severe social and economic problems; for example, the gross domestic product halved between 1990 and 1995 and 70% of the population live below the poverty threshold. The macro-economic context and budget cuts largely have driven health sector reform in the Kyrgyz Republic. Health sector reform also is part of broader public sector reform. The old system of public administration had been unable to respond adequately to new challenges, and the difficulties of setting up new systems of funding and governance have continued to hamper the implementation of new public sector policies (*26*). The following are the issues that are being addressed:

- worsening health status of the population
- an unsustainable level of health sector expenditure
- rigid norms-driven resource allocation mechanisms
- the high number of hospitals and hospital beds
- patients cannot always afford the necessary drugs
- the substantial and growing extent of informal payments
- an inefficient delivery system
- a large health sector workforce
- low health sector wages and poorly motivated staff
- outdated clinical knowledge and poor skills
- outdated treatment protocols.

Reform implementation

The MANAS Health Care Reform Programme set out three time periods. In the short term (1996–1997), the main features of the health care system were to be preserved, with public ownership of health services, with taxation as the main source of funding supplemented by a health insurance scheme. The aims were to rationalize services (down-size) by merging specialized facilities into general hospitals, reduce the number of facilities and staff, and strengthen primary health care. The medium term phase (1998–2000) continued the rationalization strategy and introduced new payment mechanisms. The long term phase (2001–2006) aims to improve efficiency and effectiveness, to introduce a purchaser-provider split, and to make hospitals autonomous. The Kyrgyz Republic has led the region in developing health sector reform plans. Their implementation has been more problematic, however, given the weak authority of the Ministry of Health in the public sector health system. The main successes and failures in implementing this ambitious ten-year plan are summarised below.

The Mandatory Health Insurance Fund was introduced in 1997 with about one third of the population covered in 1999. The Fund secured only 30% of its expected revenue, however, given the deteriorating economy, accounting for 4.3% of the state health budget in 1998. Despite its small financial role, the Mandatory Health Insurance Fund has introduced new purchasing methods that link payment to services, and has more flexibility in funding mechanisms. Theoretically, the Fund could become a 'single purchaser' and the channel for state budget funds.

New ways of managing the health sector have been introduced, despite the severe shortage of people with the necessary management, budgeting and technical skills. The reform process has emphasised capacity building in training both policy makers and field staff. Information systems are being developed with clinical and financial data linked in pilot regions. Health indicators are to be revised in order to meet international standards. New payment methods have been introduced, led by the Mandatory Health Insurance Fund, with capitation payments (according to an area formula) to family group practices and case-based payments to hospitals. Licensing and accreditation systems have been implemented; a health facility must be accredited in order to contract with the Mandatory Health Insurance Fund.

Strengthening primary health care is a main priority. First, integrated polyclinics were established in urban areas. Second, family group practices piloted in Issyk-Kul were rolled out to other regions. By December 1999,

789 family group practices were listed covering every oblast and family physicians are gradually being trained.

Hospitals, in contrast, have not been significantly reduced or rationalized, despite considerable effort, although the number of beds decreased by 20% between 1991–1997. Some rural hospitals were closed, but no republican or specialist hospitals. The number of hospitals actually increased during the 1990s, making the Kyrgyz Republic one of the most "hospital-centred" of the former USSR countries.

The pharmaceutical sector has been restructured with more emphasis upon essential drugs. These changes include enforcing drug laws, privatizing distribution and retail sales, establishing drug regulation, and disseminating drug information as well as promoting better physician prescriber practices.

Medical schools now train specialists as well as general practitioners. The further development of human resources (including issues of recruitment, career development, job description, performance evaluation, monitoring and supervision) has yet to be addressed.

A basic package of health services has not been defined. One proposal would restrict free health care to defined services for those registered with a family group practice. The government policy on user fees is also not yet clear. Proposals being considered include a flat rate co-payment for an outpatient visit and a hospital admission charge. Other health systems changes that are under way include: developing guidelines on standard treatment; developing hospital admissions criteria; determining the workforce load; and improving pharmaceutical management.

Continuity in health sector reform has been possible under the former Minister of Health (now State Secretary), N.S. Kasiev. The MANAS Health Care Reform Programme under the Ministry of Health and its Director (and current Minister of Health), Professor T. Meimanaliev, has also provided continuity. The Kyrgyz Republic has benefited from political stability and continuity among the key stakeholders.

Health for all policy

A commission headed by the Deputy Prime Minister was established in 1993 to develop a national health policy. This included the Ministry of Health, Ministry of Finance, Ministry of Economy, Ministry of Education, State Committee on Environment, Research Institutes of Obstetrics and Gynaecology, Oncology and Radiology, Cardiology, and the Federation of Trade Unions. A draft policy document developed by this commission was presented to the

Kollegya of the Ministry of Health. The final document was approved by the Government in 1994. The document defined five priority areas (addressed through 13 programmes): family, maternal and child health, protection of the environment, safe drinking water and healthy lifestyles. Targets were identified in terms of performance indicators to be achieved between 1994 and 2000, although many of these ambitious targets are unlikely to be attained. This health for all policy is being revised in accordance with the WHO HEALTH 21 strategy.

Conclusions

The Kyrgyz Republic embarked upon health sector reforms during the 1990s, with substantial support from external donors, in the context of severe economic and social pressures. The aims were to transform the inflexible centrally funded and managed health care system, reduce excess capacity, and shift more emphasis to primary health care. The Kyrgyz Republic has been a regional leader in health sector reform. A considerable amount has been achieved but much remains to be done. Many changes have been introduced as pilot projects and it remains to be seen whether these successes can be extended to the rest of the country, and within the existing infrastructure and budget process rather than as externally supported projects. Four issues are highlighted here: matching expenditure to needs, rationalizing the hospital system, strengthening primary care, and restoring equity.

Patterns of government expenditure have not responded to population needs and stated government health policies. The hospital sub-sector has continued to grow despite rationalization plans and resource constraints. Despite the stated aim of strengthening primary care there has been no shift in resources. Current spending patterns also are inconsistent with population health needs such as promoting healthier lifestyles, and improving the health of children in poor households. Mortality from noncommunicable diseases such as heart disease and stroke has continued to rise, as have communicable diseases such as tuberculosis and syphilis.

Rationalizing the hospital system has proved extremely difficult. The Kyrgyz Republic (like other former USSR countries) had an extensive network of hospitals and these largely remain. Changes to this hospital-centred health system require a coordinated effort, and financial incentives continue to encourage expansion. The fragmented tiers of health administration result in duplicated funding and service delivery and raise barriers to population-based planning. Health professionals are trained to depend upon specialized inpatient care. The government has not so far imposed a central planning strategy of capping hospital budgets and setting a ceiling upon hospital beds.

The Kyrgyz Republic has devoted considerable effort to reorganizing primary health care. Polyclinics have been integrated in urban areas. Medical schools now train general physicians and district doctors are being retrained. The model of family group practices, partially funded through patient capitation, is being extended throughout the country. The retraining of physicians as generalists rather than specialists, however, is a long process.

Equity, in terms of universal access to and use of health services, was a key feature of the Soviet health care model. People now increasingly pay for health services and drugs, or make under-the-table payments to physicians. Perhaps the major share of health revenue now comes from health care users, which disadvantages those on low incomes, and reduces the ability of the government to plan and regulate the health care system.

The Kyrgyz Republic has substantial natural and human resources, including its strong cultural traditions and a previously strong agricultural sector. The country remains optimistic about its capacity to reform its extensive health care system in line with the needs of its population and the constraints of its revenue base.

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Appendix 1

Chronology of events and legislation

1990	On improvement of hygiene education of the population and promotion of health lifestyle in the Kyrgyz Republic
May 1991	Proclamation of independence in the Kyrgyz Republic
June 1992	Health Protection Act determined the general legal framework of health protection and the roles and responsibilities of different state bodies in health protection
	Medical Insurance Law provided a basis for financing the health care system through medical health insurance (compulsory and voluntary)
	Sanitation Law refers to Article 35 of the Constitution that defines measures to ensure the rights of citizens to sanitation and environmental health safety. This responsibility was given to the Department of Sanitation and Epidemiology in the Ministry of Health
1993	Introduction of user fees
1994	Health for all policy
March 1994	Memorandum of Understanding between the WHO Regional Office for Europe and the Ministry of Health of the Kyrgyz Republic to undertake the MANAS Health Care Reform Programme
	USAID funding for a Health Insurance Demonstration Project in the Issyk-Kul region
August 1994	The National Health Policy developed and approved by government

1995–1996	Restructuring of primary health care in Issyk-Kul oblast: • formation of 83 family group practices • repair of family group practice locations • family group practices provided with basic equipment • dispersion of family group practices throughout community
June 1996	Government approves MANAS Health Care Reform Programme
1996	Family group practices open enrolment campaign in Issyk-Kul oblast
1996	Rationalization of polyclinics in urban areas by merging different separate facilities into integrated polyclinics
1996	Development and adoption of the Essential Drug List
November 1996	World Bank funded Health Sector Reform Project (1996–2000) in the Kyrgyz Republic (Bishkek and Chui region)
January1997	Introduction of mandatory health insurance in the Kyrgyz Republic
April 1997	Agreement between the Ministry of Health, the World Bank and the Mandatory Health Insurance Fund on health care system reforms
Spring 1997	Licensing and accreditation process started; establishment of the Association of Family Doctors Groups and the Association of Hospitals
July 1997	Mandatory Health Insurance Fund introduces case-based payment
July 1997	Demonstration sites chosen in Chui oblast and Bishkek city for testing primary health care clinical information and financial systems
By December 1997	13 hospitals contracted with the Mandatory Health Insurance Fund and 50 more hospitals apply for 1998
1997–1998	Rolling-out of primary health care reforms to Chui, Djalal-Abad and Osh oblasts and Bishkek Implementation of the hospital rationalization plan in Bishkek and oblasts
June 1998	Introduction of partial fundholding in 14 family group practices in Karakol city, Issyk-Kul oblast

December 1998	Adoption of the National Drug Policy Document; Essential Drug List is revised
December 1998	The Mandatory Health Insurance Fund brought under the Ministry of Health
November 1998–March 1999	Family group practices enrolment campaign in Chui oblast and Bishkek City
January 1999	Pooling of health sector budget in Bishkek City and introduction of the capitated payment to family group practices in Bishkek
April 1999	About 55 hospitals and 290 family group practices have contracted with the Mandatory Health Insurance Fund
April 1999	Introduction of the case-based payment from budget resources to selected hospitals in Bishkek City
1999	Revision of health for all policy