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Tajikistan

Health system review

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Health Systems in Transition

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Preface

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

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

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

Compiling the reviews poses a number of methodological problems. In many countries, there is relatively little information available on the health system and the impact of reforms. Due to the lack of a uniform data source, quantitative data on health services are based on a number of different sources, including

the World Health Organization (WHO) Regional Office for Europe's European Health for All database, data from national statistical offices, Eurostat, the Organisation for Economic Co-operation and Development (OECD) Health Data, data from the International Monetary Fund (IMF), the World Bank's World Development Indicators and any other relevant sources considered useful by the authors. Data collection methods and definitions sometimes vary, but typically are consistent within each separate review.

A standardized review has certain disadvantages because the financing and delivery of health care differ across countries. However, it also offers advantages, because it raises similar issues and questions. HiTs can be used to inform policy-makers about experiences in other countries that may be relevant to their own national situation. They can also be used to inform comparative analysis of health systems. This series is an ongoing initiative and material is updated at regular intervals.

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

HiTs and HiT summaries are available on the Observatory's web site http://www.healthobservatory.eu.

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This edition was written by Ghafur Khodjamurodov, Dilorom Sodiqova, Baktygul Akkazieva and Bernd Rechel. It was edited by Bernd Rechel, working with the support of Ellen Nolte of the Observatory's team at the London School of Hygiene & Tropical Medicine. The basis for this edition was the previous HiT on Tajikistan, which was published in 2010, written by Ghafur Khodjamurodov and Bernd Rechel and edited by Bernd Rechel.

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The Observatory team working on HiTs is led by Josep Figueras, Director, Elias Mossialos, Martin McKee, Reinhard Busse (Co-directors), Richard Saltman, Ellen Nolte and Suszy Lessof. The Country Monitoring Programme of the Observatory and the HiT series are coordinated by Gabriele Pastorino. The production and copy-editing process of this HiT was coordinated by Jonathan North, with the support of Caroline White, Jane Ward (copy-editing) and Pat Hinsley (typesetting).

List of abbreviations

CIS	Commonwealth of Independent States
CT	Computed tomography
DHIS-2	District Health Information Software 2
EU	European Union
GBAO	Gorno-Badakhshan Autonomous *Oblast*
GDP	Gross domestic product
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
MRI	Magnetic resonance imaging
NGO	Nongovernmental organization
OECD	Organisation for Economic Co-operation and Development
OOP	Out-of-pocket (payments)
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

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Abstract

The pace of health reforms in Tajikistan has been slow and in many aspects the health system is still shaped by the country's Soviet legacy. The country has the lowest total health expenditure per capita in the WHO European Region, much of it financed privately through out-of-pocket payments. Public financing depends principally on regional and local authorities, thus compounding regional inequalities across the country. The high share of private out-of-pocket payments undermines a range of health system goals, including financial protection, equity, efficiency and quality. The efficiency of the health system is also undermined by outdated provider payment mechanisms and lack of pooling of funds. Quality of care is another major concern, due to factors such as insufficient training, lack of evidence-based clinical guidelines, underuse of generic drugs, poor infrastructure and equipment (particularly at the regional level) and perverse financial incentives for physicians in the form of out-of-pocket payments. Health reforms have aimed to strengthen primary health care, but it still suffers from underinvestment and low prestige. A basic benefit package and capitation-based financing of primary health care have been introduced as pilots but have not yet been rolled out to the rest of the country. The National Health Strategy envisages substantial reforms in health financing, including nationwide introduction of capitation-based payments for primary health care and more than doubling public expenditure on health by 2020; it remains to be seen whether this will be achieved.

Executive summary

Introduction

Tajikistan is a former Soviet country in central Asia that became independent with the dissolution of the Soviet Union in 1991. A brutal civil war followed, with many casualties and damage to infrastructure, only ending in 1997. Since then, Tajikistan has experienced political stability and economic growth, although it remains the poorest country in the World Health Organization (WHO) European Region, with a gross domestic product (GDP) per head of only US$ 1100 – less than 20% of the European average. The country is a presidential republic, with four levels of administration: national (republican), *viloyat* (region or province; in Russian *oblast*), city and *rayon* (district), and *jamoat* (commune or municipality). The terrain is mainly mountainous, with some parts of the country difficult to reach, in particular in winter. Almost three-quarters of the country's 8.4 million people live in rural areas. The population is much younger than in western Europe, with 36.0% between 0 and 14 years in 2014, and only 3.2% aged 65 and above.

The first years after independence were disastrous for the health of the population because of the civil war and the transition to independence and a market economy. Since then, population health has improved in a range of aspects, with declining infant and child mortality, improvements in maternal mortality and mortality from communicable diseases, and increases in life expectancy. Yet, life expectancy is still low compared with that in western countries, reaching an estimated 64.1 years for males and 70.8 years for females in 2013. The reasons include comparatively high rates of infant mortality (an estimated 40.9 deaths per 1000 live births in 2013) and high rates of noncommunicable diseases.

Organization and governance

The organization and governance of the health sector is still in large parts shaped by the country's Soviet legacy. Ownership and administration of the vast majority of health facilities has remained in the public sector. The private sector remains small (with 1.6% of general outpatient services) but has been growing, in particular in diagnosis and ambulatory care (especially dental care), reflecting the government's progressive opening of the health sector in recent years to private provision. Governance is mostly top down, and decentralization of policy from the national to the local government has remained limited. No emphasis has so far been placed on patient rights and public involvement in health policy.

Provision of health services is mostly by local administrations: the Ministry of Health and Social Protection of the Population of the Republic of Tajikistan only runs national level health care services, while local authorities administer most *oblast*, *rayon* and peripheral health care services. The administration of health services at the *rayon* level is in flux, as their health departments and health units were abolished in 2012 and a new structure of health management at the *rayon* level is currently being established. Another remainder of the Soviet legacy are the parallel health systems still run by other ministries and state companies for their employees.

Financing

In the years since independence, Tajikistan has seen a major fall in public expenditure for health and private payments (both as formal payments and as informal, "under-the-counter" payments) have partly filled the resulting gap. In 2013, Tajikistan had the lowest total health expenditure per capita in the WHO European Region, amounting to a mere US$ 170 (purchasing power parity), while its share of private out-of-pocket (OOP) payments as a percentage of total health expenditure was one of the highest in the WHO European Region, reaching 60.1%; the European average was 26.4%. International and bilateral agencies also play an important role in supporting the country's health system, contributing 10.3% to total health expenditure in 2013. Yet, when considering total health expenditure as a percentage of GDP, Tajikistan does better than all its central Asian neighbours, despite having fewer economic resources.

General government expenditure largely relies on the resources of *oblast* and *rayon* authorities, which contributed 81.2% of government expenditure in 2012. As this makes health financing dependent on local resources, it compounds regional inequalities, with the poorest regions spending the least on health per person.

A basic benefit package was adopted in principle in 2007, with the aim of defining which services should be provided at no cost (focused on essential primary and emergency care) and formalizing additional payments for others (as opposed to current informal payments). However, it is still in pilot mode and has so far only been extended to 14 of the country's 65 districts. The introduction of mandatory health insurance has been envisaged for many years but was postponed several times. Voluntary health insurance is virtually non-existent.

As in Soviet times, the process of budget formation is still largely based on inputs, in particular the number of beds and health workers, and tends to favour hospital financing rather than primary care. Pooling mechanisms are still underdeveloped and there is no real mechanism for purchasing health services. Pilot projects on capitation-based financing for primary health care have been initiated, but so far agreement on national roll-out has not been reached.

Physical and human resources

Tajikistan's health infrastructure has suffered from the effects of the civil war and decades of underinvestment. External donors have provided some assistance to remedy this, but basic necessities (such as heating, water, sanitation and electricity) are still lacking in many health facilities. Medical equipment is often outdated or lacking altogether.

The country has made sustained efforts to reduce the overcapacity of hospital beds that it inherited from the Soviet period and has succeeded in more than halving the ratio of acute care hospital beds to population from 984 per 100 000 population in 1992 to 434 in 2013. This is still higher than the average of 356 beds per 100 000 population in the European Union (EU), despite Tajikistan's much younger population, but much closer than when the country gained independence. Operating indicators also suggest that existing facilities are not used in the most efficient way, although overall indicators such as average length of stay in acute care hospitals have also fallen much closer to the EU average (9 days, as opposed to 8.15 for the EU).

The number of health workers, by comparison, has fallen precipitously since independence. From similar levels to EU averages at independence, there are now only 170 physicians per 100 000 population in Tajikistan (compared with 347 for the EU) and only 444 nurses per 100 000 (compared with 850 in the EU). Health workers are concentrated in the capital, Dushanbe. Reforming medical education to bring it in line with international standards and structures has been one of the key directions of health reform. General practice (family medicine) has been established as a medical specialty and professional and training or retraining courses have been implemented for both physicians and nurses. However, family medicine continues to suffer from low prestige, working conditions tend to be poor and most medical graduates choose other specialties.

Provision of services

The provision of health services in Tajikistan is organized according to the country's administrative tiers and differs in urban and rural areas. In rural areas, primary care is delivered through health houses, rural health centres and rural hospitals. In urban areas, primary and secondary care is delivered by *rayon* and city health centres (replacing the former polyclinics), basic secondary care by central *rayon* or city hospitals, specialized secondary care by *oblast* hospitals, and more complex care in national hospitals.

There are some inefficiencies built into the administrative set-up of health services, as there is often a duplication of services of central *rayon* and city hospitals, as well as *oblast* hospitals. Furthermore, the number of specialized hospitals has remained largely unchanged since Tajikistan became independent. Efforts to strengthen primary health care have been a focus of health reform, but family doctors and district physicians are often bypassed by patients and seem to provide a very limited scope of services in practice. Public health is mainly delivered through separate vertical programmes, with little integration into primary health care.

Principal health reforms

Overall, Tajikistan has been rather hesitant to reform its health system, which retains many of the elements of the Soviet era. In 2010, the National Health Strategy for 2010–2020 was adopted, providing the framework for the most recent round of health reforms. Ongoing activities to strengthen primary health

care include activities to strengthen the material infrastructure of primary health care facilities, improve the qualifications of primary health care workers and reward performance. Health financing reforms have seen the piloting of capitation-based financing of primary health care. More far-reaching reforms are envisaged in the future, including the roll-out of the new provider payment mechanisms and of the basic benefit package to more areas of the country, the pooling of funds at the *oblast* level and the introduction of mandatory health insurance.

Assessment of the health system

Tajikistan's health system faces a series of challenges, not least because of the country's geography and its lack of domestic economic resources, but also because of insufficient efforts to move towards universal health coverage. The very high share of private OOP payments as a percentage of total health expenditure undermines a range of health system goals, including financial protection, equity, efficiency and quality. Many patients, particularly among poorer groups of the population, simply cannot afford the care they require. In 2011, 26.7% of households in the lowest consumption quintile faced catastrophic expenditure (defined as OOP spending on health that exceeds 40% of a household's non-subsistence spending). There are pronounced inequities in health care resources across *oblasts* and *rayons*, and the distribution of public spending tends to be inequitable as well, benefiting the rich more than the poor. Health care utilization is higher among better-off segments of the population. Quality of care is another major concern, reflecting factors such as insufficient training, lack of evidence-based clinical guidelines, underuse of generic drugs, poor facilities and equipment and perverse financial incentives for physicians in the form of OOP payments. Allocative efficiency is low, as most health funding still goes to inpatient care. Technical efficiency is undermined by outdated provider payment mechanisms and insufficient pooling of funds across the country. Challenges for the transparency and accountability of the health system include the widespread existence of informal payments, tax evasion and a lack of public participation in health policy-making. Against this, the national health strategy 2010–2020 includes plans to raise public expenditure on health to 4.4% by 2020. It remains to be seen how far this will be achieved.

1. Introduction

Tajikistan is a land-locked country in central Asia that gained independence from the USSR in 1991. Following civil war in the 1990s, political settlement was reached and the country's economy has shown strong signs of recovery. Nevertheless, Tajikistan remains the poorest country in the WHO European Region (when measured in gross domestic product (GDP) per capita) and continues to be plagued by widespread poverty. The population faces the double burden of high communicable and high noncommunicable diseases. Infant and maternal mortality also remain comparatively high, although major improvements have been made in recent years.

1.1 Geography and sociodemography

Tajikistan is a land-locked country of 143 100 km^2, surrounded by Uzbekistan to the west, Kyrgyzstan to the north, China to the east and Afghanistan to the south (Fig. 1.1). It is primarily mountainous, with the high Pamir mountain range in the south and lowland plains in the west (UNDP, 2012). Most of the population lives in valleys in the south-west and the north. During the winter, roads are often impassable and travel between some regions is via Uzbekistan and Kyrgyzstan. The climate varies considerably according to altitude, with very hot summers in the lowlands and temperatures below freezing in the mountain towns in winter. The post-independence development of Tajikistan has been negatively affected by civil war, interruptions to intercountry trade, and its location in a politically volatile region.

Tajikistan had a population of 8.4 million people in 2014 (Table 1.1). Slightly less than three quarters of the population lived in rural areas. The overall age structure was young, with 36% of the population below 15 years of age and only 3.2% aged 65 years and above.

Fig. 1.1
Map of Tajikistan

Source: United Nations, 2009.

Table 1.1
Trends in population/demographic indicators, 1980–2014 (selected years)

	1980	1990	1995	2000	2005	2010	2014
Population, total (millions)	3.9	5.3	5.8	6.2	6.8	7.6	8.4
Population, female (% of total)	50.5	50.3	50.0	49.9	49.7	49.7	49.8
Population aged 0–14 years (% of total)	43.0	43.6	44.3	42.9	38.4	35.9	36.0
Population aged ≥65 (% of total)	4.6	3.8	3.8	3.5	3.7	3.3	3.2
Population growth, annual (%)	2.8	2.6	1.4	1.5	2.1	2.4	2.4
Population density (per km^2 land area)	28.0	37.8	41.3	44.2	48.6	54.5	58.6
Fertility rate, total (births per woman)	5.7	5.2	4.6	4.0	3.6	3.8	3.8[a]
Birth rate, crude (per 1 000 population)	39.2	40.4	35.2	30.5	29.7	32.6	33.0[a]
Death rate, crude (per 1 000 population)	10.3	9.8	9.2	7.8	6.7	6.6	6.6[a]
Age-dependency ratio[b]	90.6	90.4	92.9	86.7	72.7	64.5	64.3
Urban population (% of total)	34.3	31.7	28.9	26.5	26.4	26.5	26.7

Source: World Bank, 2015.
Notes: [a]Data for 2013; [b]Ratio of population 0–14 and 65+ to that aged 15–64 years.

1.2 Economic context

Although Tajikistan was always one of the poorest countries in the Soviet empire, the country suffered a particularly severe economic decline and collapse of social infrastructure when the USSR dissolved, which was followed by several years of civil war. Following the return to political stability with the ceasefire in 1994 and the peace agreement in 1997, the economy has shown strong signs of recovery, with high rates of GDP growth in recent years (Table 1.2). Remittances from relatives working abroad constitute an important source of income (Steinmann, Baimatova & Wyss, 2012). The strong economic growth in the 2000s was shared by the population and the percentage of people living below the national poverty line declined from 73% in 2003 to 33% in 2014, with a concurrent decline in social inequality. Nevertheless, in terms of GDP per capita, the country remained the poorest in the WHO European Region in 2014 (WHO Regional Office for Europe, 2015a).

Table 1.2

Macroeconomic indicators, 1990–2014 (selected years)

	1990	1995	2000	2005	2010	2013	2014
GDP (current US$, million)	2 629	1 232	861	2 312	5 642	8 508	9 242
GDP (current million international $, PPP)	12 474	5 349	5 820	10 428	15 786	20 615	22 322
GDP per capita (current US$)	496	213	139	340	740	1 037	1 099
GDP per capita (current international $, PPP)	2 355	925	941	1 532	2 070	2 512	2 655
GDP growth (annual %)	–0.6	–12.4	8.3	6.7	6.5	7.4	6.7
General government final consumption expenditure (% of GDP)	8.7	15.8	8.3	14.6	11.3	11.7	n/a
Industry, value added (% of GDP)	37.6	39.3	38.9	31.3	28.2	21.7	n/a
Agriculture, value added (% of GDP)	33.3	38.4	27.4	24.0	22.1	27.4	n/a
Services etc., value added (% of GDP)	29.1	22.2	33.7	44.8	49.7	50.8	n/a
Labour force, total (million)	2.0	2.2	2.3	2.8	3.3	3.6	n/a
Real interest rate (%)	n/a	na	2.4	12.6	9.7	19.2	18.1
Official exchange rate (somoni per US$, period average)	n/a	0.1	2.1	3.1	4.4	4.8	4.9

Source: World Bank, 2015.
Notes: PPP: Purchasing power parity; n/a: Not available.

1.3 Political context

The Constitution defines Tajikistan as a presidential republic. A national referendum in September 1999 approved a series of constitutional amendments that included the introduction of a bicameral parliamentary system and permitted religiously based political parties. Tajikistan's bicameral legislature is composed of a lower house, the Majlisi Namoyandagon (Assembly of Representatives), which acts on a permanent and professional basis, and an upper house, the Majlisi Milli (National Assembly), which is convened at least twice a year.

The Majlisi Namoyandagon has 63 members: 22 are elected through a proportional, party-list system from a single nationwide constituency, and 41 are elected in single mandate constituencies under a majoritarian system. Parties must pass a 5% threshold to win seats on the party list vote. The Majlisi Milli has 34 members who are indirectly elected; 26 are selected by local deputies, while 8 are appointed by the president.

The central government comprises the presidential administration, ministries, state committees and agencies. The Council of Ministers is responsible for the management of government activities in accordance with the laws and decrees of the Majlisi Oli (Supreme Assembly: Tajikistan's parliament, consisting of the two houses described above) and the decrees of the president. The president appoints the prime minister and the other members of the Council, with the nominal approval of the parliament. Political power and decision-making are centred on the presidency.

The constitution foresees an independent judiciary, which includes at the national level the Supreme Court, the Constitutional Court, the Supreme Economic Court and the Military Court. The Gorno-Badakhshan Autonomous *Oblast* (GBAO) has a regional court, and subordinate courts exist throughout the country at the *viloyat* (region or province; in Russian *oblast*), *rayon* (district) and *jamoat* (municipality) levels. Judges are appointed to five-year terms. They are formally subordinate only to the constitution and beyond interference from elected officials. As in the previous Soviet system, the Office of the Prosecutor General in Tajikistan has authority for both the investigation and the prosecution of crimes within its broad constitutional mandate to ensure compliance with the laws of the republic. Elected to a five-year term, the prosecutor general is superior to similar officials in lower-level jurisdictions throughout the country.

There are four levels of administration in Tajikistan: national, *oblast* (region or province), *rayon* (district) and *jamoat* (commune or municipality). The 1994 Constitution defined the administrative duties of the territorial administrative units and their relationship to the central government. At each level there is an executive body (*hukumat*), an administration and an elected advisory body (representative council: *majlis*). The heads of *oblasts* and *rayons* are appointed by the executive arm of the government, usually the president. The *rayon* administrations and commune/municipality councils play an important role in the provision of health services to their inhabitants.

The *oblast* and local administrative areas of Tajikistan have been changed several times since 1992. The country is now divided into five main administrative units. The three *oblasts* are Khatlon (main city, Kurgan-Tyube), Sughd (main city, Khujand) and GBAO (main city, Khorog). This last *oblast* is geographically less accessible and operates more autonomously. Dushanbe City also has *oblast* status. In addition, there are 13 special *rayons* (Districts of Republican Subordination) that are independent from *oblasts* and report directly to the central state. The country has 65 *rayons* and 74 towns and urban settlements (State Statistical Agency, Ministry of Health and Social Protection & ICF International, 2013). There are approximately 406 *jamoats* (Wikipedia, 2015).

Tajikistan is a member of several international or regional organizations relevant to the health sector. These include the United Nations, the World Trade Organization, the Commonwealth of Independent States (CIS), the Organization of the Islamic Conference, the Eurasian Economic Community and the Shanghai Cooperation Organisation. Tajikistan has also acceded to a number of relevant international conventions, including the International Covenant on Economic, Social and Cultural Rights, the Convention on the Rights of the Child, and the World Health Organization (WHO) Framework Convention on Tobacco Control.

As in other countries in central Asia, corruption and weak governance are major problems. In 2014, Tajikistan ranked 152 out of 174 countries on the Corruption Perceptions Index (Transparency International, 2014).

1.4 Health status

The first years of independence were accompanied by a massive deterioration of the population's health status through the rise of some communicable and noncommunicable diseases (e.g. tuberculosis and diseases caused by micronutrient deficiencies), the effects of the civil war and deteriorating access to health services, particularly for poorer groups of the population. One of the main factors affecting the health status of the population is the present socioeconomic situation, characterized by widespread poverty.

The underreporting of infant and child deaths means that actual life expectancy is much lower than captured in official statistics. According to estimates by international organizations, life expectancy at birth in 2013 was 70.8 years for women and 64.1 years for men (Table 1.3).

Table 1.3

Mortality and health indicators, 1980–2013 (selected years)

	1980	1990	1995	2000	2005	2010	2013
Life expectancy at birth, female (years)	64.7	66.1	66.3	67.8	69.3	70.4	70.8
Life expectancy at birth, male (years)	59.9	59.8	58.7	60.0	62.2	63.8	64.1
Life expectancy at birth, total (years)	62.2	62.9	62.4	63.8	65.7	67.0	67.4
Mortality rate, adult female (per 1 000 female adults)	134.6	140.5	148.3	147.2	139.3	131.3	128.2
Mortality rate, adult male (per 1 000 male adults)	181.1	233.9	269.2	266.4	247.2	222.0	212.5

Source: World Bank, 2015.

Diseases of the circulatory system were the main causes of death in 2013 (Table 1.4). Infant and child mortality, as well as maternal mortality, are still high, although substantial decreases have been achieved since 1990 (Table 1.5). According to the Demographic and Health Survey 2012, infant mortality in 2008–2012 was 34 per 1000 live births (State Statistical Agency, Ministry of Health and Social Protection & ICF International, 2013). As is the case with infant mortality rates, estimates of maternal mortality in Tajikistan by international agencies differ from official statistics, although both sources indicate a declining trend (Table 1.5).

Table 1.4

Main causes of death, 1990–2013 (selected years)

Causes	Age-standardized death rates per 100 000 population						
	1990	1995	2000	2010	2011	2012	2013
All causes	986.1	1 212.2	1 066.1	1 044.9	1 051.6	1 040.5	949.2
Communicable diseases							
Infectious and parasitic diseases	43.5	62.2	35.6	20.9	24.1	17.7	13.8
Tuberculosis	7.2	13.3	17.3	6.2	6.5	5.1	4.9
HIV/AIDS	0	0	0	2.0	2.5	1.9	1.6
Noncommunicable diseases							
Malignant neoplasms	113.0	69.2	77.7	79.3	82.4	75.6	76.2
Malignant neoplasm of colon, rectum or anus	5.8	3.3	3.5	6.1	6.2	6.7	7.1
Malignant neoplasm of larynx, trachea, bronchus or lung	13.4	6.5	7.0	6.2	6.5	6.9	7.4
Malignant neoplasm of breast, female	8.5	6.3	7.4	22.0	22.6	23.2	23.9
Cervical cancer, female	6.7	4.3	2.5	16.1	16.3	16.9	17.4
Diabetes mellitus	16.7	20.0	17.2	13.9	14.6	17.0	12.4
Mental and behavioural disorders	1.1	3.3	1.8	1.3	1.4	1.2	0.8
Diseases of the circulatory system	480.3	627.9	600.8	338.5	653.4	643.9	568.9
Ischaemic heart disease	273.9	301.5	257.0	166.2	168.6	143.1	114.4
Cerebrovascular disease	131.2	122.6	70.9	n/a	n/a	n/a	n/a
Diseases of the respiratory system	138.6	187.5	115.7	64.2	62.5	57.0	75.2
Diseases of the digestive system	38.9	49.7	47.2	46.3	45.4	50.6	40.5
External causes							
Injury and poisoning	57.6	59.3	36.4	27.0	20.6	22.6	22.5
Transport accidents	18.8	8.4	4.9	n/a	n/a	n/a	n/a
Suicide and intentional self-harm	7.0	6.0	4.3	n/a	n/a	n/a	n/a
Symptoms, signs, abnormal findings, ill-defined causes	50.8	72.2	70.2	n/a	n/a	n/a	n/a

Sources: State Statistical Agency, 2013; Ministry of Health and Social Protection, 2014.
Note: n/a: Not available.

In recent years, Tajikistan has achieved comparatively high immunization coverage, reaching in excess of 92% of infants vaccinated against diphtheria, tetanus, pertussis, measles, poliomyelitis and tuberculosis in 2013 (WHO Regional Office for Europe, 2015a). However, the 2012 Demographic and Health Survey found a routine vaccination coverage of children aged 18–29 months of only 89%, with substantial variation across *oblasts*, ranging from 83.0% vaccination coverage in Dushanbe to 93.3% in Sughd (State Statistical Agency, Ministry of Health and Social Protection & ICF International, 2013).

Table 1.5
Maternal, child and adolescent health indicators, 1990–2013 (selected years)

	1990	1995	2000	2010	2011	2012	2013
Adolescent fertility rate (births per 1 000 women aged 15–19)[a]	57.0	53.1	44.6	43.6	43.2	42.8	41.5
Abortions per 1 000 live births[b]	95.5	108.7	77.4	44.0	38.8	38.5	68.0[c]
Perinatal deaths per 1 000 births[b]	22.6	17.1	13.2	17.4	18.5	18.3	22.0[c]
Neonatal mortality rate per 1 000 live births[a]	37.6	39.9	34.4	23.5	22.9	22.4	21.9
Estimated infant mortality rate per 1 000 live births[a]	84.9	92.9	74.7	44.7	43.4	42.1	40.9
Estimated infant mortality per 1 000 live births (World Health Report)[b]	84.9	92.9	74.7	44.7	43.4	42.1	40.9
Infant deaths per 1 000 live births[c]	40.9	30.9	15.5	16.8	17.8	17.2	17.9
Under-5 mortality rate per 1 000 live births[a]	108.2	119.7	93.5	52.7	51.0	49.3	47.7
Maternal mortality ratio (modelled estimate, per 100 000 live births)[a]	68.0	120.0	89.0	48.0	n/a	n/a	44.0
Maternal mortality ratio (national estimate, per 100 000 live births)[c]	97.7	97.7	44.6	46.0	37.0	33.4	33.0

Sources: [a]World Bank, 2015; [b]WHO Regional Office for Europe, 2015a; [c]Ministry of Health and Social Protection, 2014.
Note: n/a: Not available.

The prevalence of diseases caused by micronutrient deficiencies (iron-deficient anaemia, iodine-deficiency disorders, vitamin A deficiency) has increased since independence as a result of deteriorating access to high-quality food and iodized salt, especially for vulnerable groups of the population. Poor intake of food, an unbalanced diet rich in animal fats and high infection rates (with resulting diarrhoea), particularly during the summer, are major causes of malnutrition. Poor nutrition is the result of the lack of food in some households particularly in rural and mountainous areas, and poor feeding practices for infants and young children.

Access to safe water varies considerably across the country's regions. In urban areas, water systems are badly decayed and subject to frequent service outages. In rural regions, where less than half of residents have access to improved water sources, large parts of the population take their water from ponds, canals, rivers and other unsafe sources.

2. Organization and governance

The health system remains largely state owned and administered, although there is a growing private sector. The Ministry of Health and Social Protection of the Population of the Republic of Tajikistan (this was known as the Ministry of Health until the end of 2013 and then as the Ministry of Health and Social Protection; it will be referred to in this HiT as the Ministry of Health and Social Protection) runs national level health care services, while local authorities administer most *oblast*, *rayon* and peripheral health care services. Although the national Ministry of Health and Social Protection formulates health policy, it is mostly local administrations that deliver health services. In 2012, *rayon* health departments and health units were abolished; a new structure of health management at the *rayon* level is currently being established. There are also parallel health systems run by other ministries or state companies for their employees. Some limited policy and administrative powers have been delegated from the national government to *oblast* administrations. Patient rights and public involvement in health policy are still in their infancy.

2.1 Overview of the health system

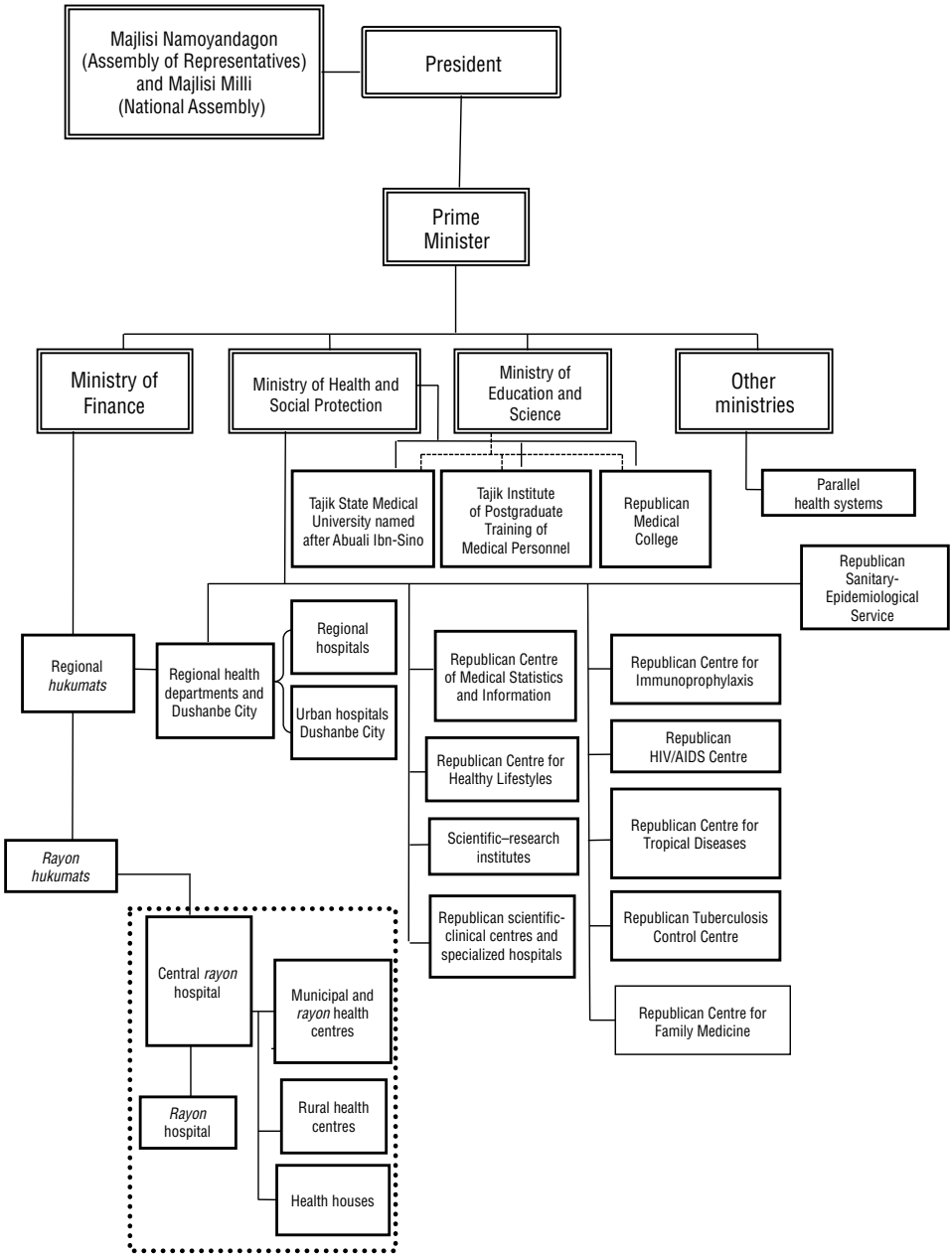
Tajikistan's health system has evolved from the Soviet model of health care, with so far few structural changes. The Soviet-style health system was generally comprehensive, but highly centralized, underfinanced and inefficient. The population was entitled to a wide range of services provided by the state, and financing mostly came from the general state budget. Private payments were limited to a few non-essential services, and some unofficial payments were made to public providers for preferential treatment. However, many protocols and procedures were inappropriate, management systems were hierarchical and consumer choice extremely limited.

The Tajik health system has started to embark on new mechanisms of management, financing and functioning, but overall the pace of reforms has been slow. So far, the state remains the main public funder and provider of health care services in Tajikistan. Private out-of-pocket (OOP) payments, however, are believed to account for a major source of revenue (see section 3.4). In 2010, the National Health Strategy for 2010–2020 was adopted, providing the framework for the most recent round of reforms.

The Ministry of Health and Social Protection runs national level health care services, while local authorities (at *oblast* and *rayon* level) administer most peripheral health care services. The organization of health services largely follows the administrative structure of the country, with services organized according to the horizontal tiers of administration and, for national programmes, into separate vertical pillars (Fig. 2.1). Health care management is thus organized according to the following four levels of administration:

- republican level: Ministry of Health and Social Protection;
- *oblast* and Dushanbe city level: health departments within *oblasts* and Dushanbe city executive authorities;
- *rayon* or city level: central, *rayon* or city hospitals, which also perform the functions of previously existing *rayon* or city health care departments; and
- *jamoat* level: commune/municipality peripheral primary health care (not shown in Fig. 2.1).

Fig. 2.1
Overview of the health system



2.2 Organization

The Government of Tajikistan is responsible for the approval and revision of national health policies. The government includes the prime minister and different ministries and agencies, including the Ministry of Health and Social Protection, and the Ministry of Finance. In accordance with the Law "on health protection" of 1997 (No. 421), the executive authorities of the state are responsible for the protection of the health of the population. Although the national Ministry of Health and Social Protection formulates health policy, it is mostly local level administrations that deliver health services.

2.2.1 Ministry of Health and Social Protection

In November 2013, Presidential Decree No. 12 transformed the Ministry of Health into the Ministry of Health and Social Protection. This Ministry is responsible for the development, implementation, monitoring, evaluation and coordination of a unified state policy in the health sector. It has responsibility for controlling the quality, safety and effectiveness of health services, pharmaceuticals and medical equipment. The Ministry of Health and Social Protection has direct managerial and financial responsibility for specialized republican health facilities and tertiary level health facilities in Dushanbe, as well as for procurement and distribution of medical supplies and equipment for priority programmes. It directly controls the limited number of health-related facilities that it finances. These are the republican hospitals, the State Medical University and public health services. All other health facilities at *oblast*, *rayon*, city and *jamoat* levels are financed through local governments, although they are managerially accountable to the Ministry of Health and Social Protection.

The management structure of the Ministry of Health and Social Protection includes the central administration, structural subdivisions of local health care departments (within *hukumats*), GBAO, Khatlon and Sogd *oblasts* and Dushanbe.

The Ministry of Health and Social Protection is responsible for the national health policy but has no control over the overall health budget, and it directly manages only the health facilities at the republican level. Although not fully implemented, its main responsibilities were defined in the Law "on health protection", which was adopted in 1997 and updated in 2002, as follows:

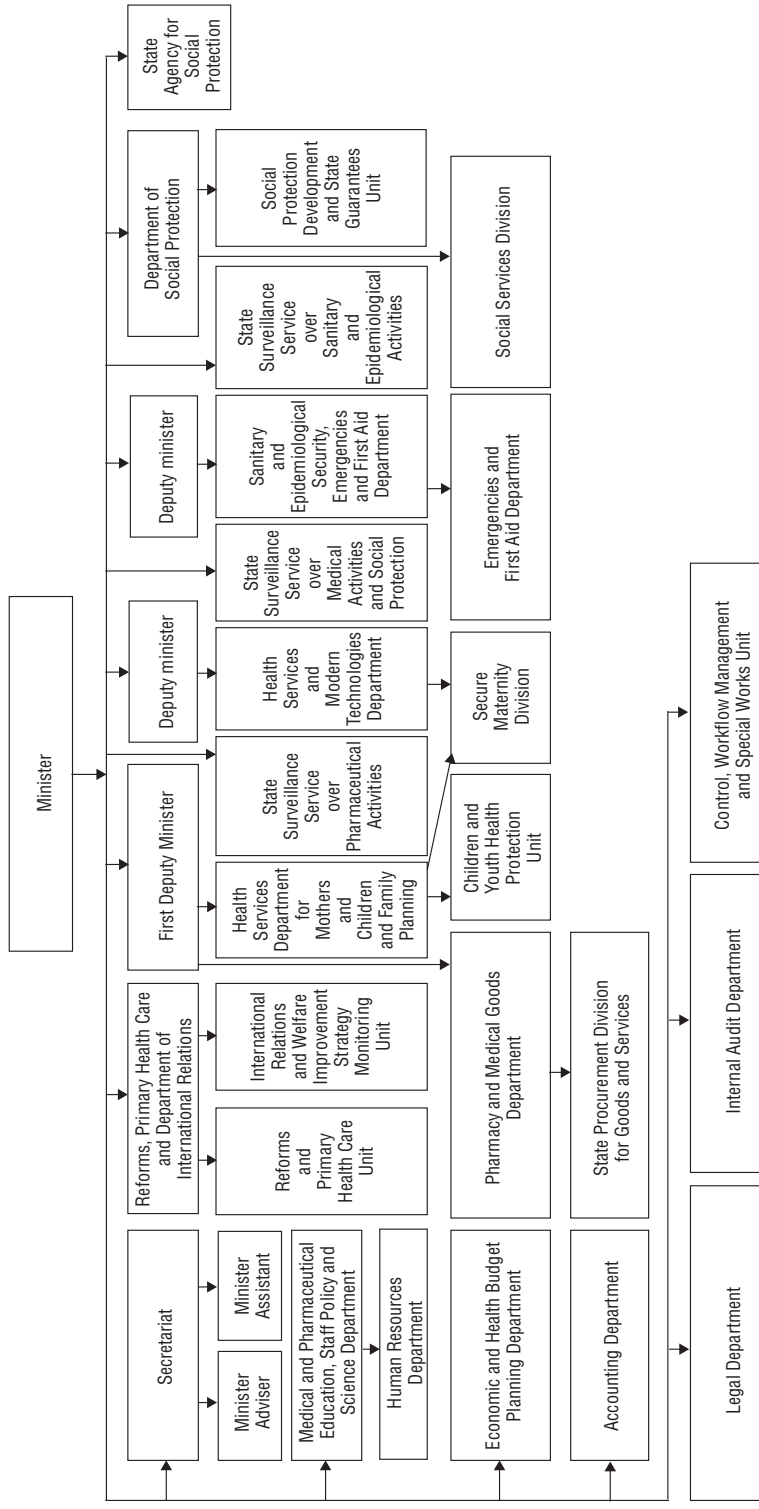
- developing a national health policy and identifying priorities in the health sector;
- implementing national programmes, such as those concerned with disease control;
- coordinating the health system of the country;
- directly managing health institutions at the republican level and scientific research institutes;
- formulating policies on pharmaceutical and other medical products and regulating their registration, licensing, production and sale;
- setting standards for the quality of care in public and private health facilities;
- providing sanitary and epidemiological services for the population;
- developing human resources and training policies for health professionals;
- licensing and certification of individuals and institutions engaged in health services; and
- ensuring international collaboration in the health sector.

An advisory board, the Kollegia, assists the Minister of Health and Social Protection. The Kollegia comprises seven members: the Minister of Health and Social Protection, three deputy ministers of health, the rector of the State Medical University, the head of the State Surveillance Service over Medical Activities and Social Protection, and the head of the State Agency of Social Protection. There are also informal coordination bodies involving external agencies, such as the Coordination Council for International Coordination.

The structure of the Ministry of Health and Social Protection is shown in Fig. 2.2.

There are 73 health-related organizations under direct supervision of the Ministry of Health and Social Protection, including 1 undergraduate medical university; the postgraduate medical institute; 14 republican, *oblast* and *rayon* medical colleges; 2 research institutes; 14 specialized clinical hospitals and centres; the Republican Centre of Medical Statistics and Informatics; 15 national and republican public health services; 5 republican sanatoriums and rehabilitation centres; and the national medical library.

Fig. 2.2
Structure of the Ministry of Health and Social Protection



2.2.2 Other key government bodies involved in health

Ministry of Finance

The Ministry of Finance is responsible for the state budget, including the financial allocation to the health sector. The Ministry of Health and Social Protection only plays a subordinate role in budgetary decisions. Budgetary funds to the health sector from the central government are distributed by the Ministry of Finance to the *oblast* administrations (*hukumats*) and managed by the *oblast* and *rayon* finance departments.

***Oblast* administrations**

Local authorities are responsible for most social services, including health and education. Within each local administration (*hukumat*), activities are divided between supervisory departments (such as finance) and line departments (such as health). An *oblast* health department manages *oblast* level health facilities, such as large hospitals and polyclinics, and is accountable to both the Ministry of Health and Social Protection (on professional matters) and the *oblast* administration.

The *oblast* and *rayon* authorities and finance departments:

- approve expenditures for health from local state budgets and distribute state funds at the *oblast* and *rayon* level;
- finance *oblast* level health facilities;
- receive financial accounts and monitor the use of resources; and
- submit financial reports to the Department of Economy and Financial Relations under the Ministry of Health and Social Protection.

The *oblast* health departments (in GBAO, Khatlon and Sogd) are responsible for health care provision of *oblast*-owned health care facilities and, together with the executive local authorities (*hukumats*) of cities and *rayons*, the activities of city and *rayon* health facilities within the respective *oblasts*. The health care department of Dushanbe *hukumat*, in conjunction with the city *rayon* administrations, coordinates the activities of city health care facilities. In cooperation with village authorities, primary health care facilities form the primary care network and the most peripheral level of health administration.

The *oblast* health departments have direct managerial and financial responsibility for their specialized and tertiary health facilities, as well as for the procurement and distribution of medical supplies and equipment to subordinated facilities. They have very limited financial resources to assist health facilities in their respective *oblast*. *Oblast* administration budgets do not

include funds for health, except for those health institutions that are under their direct subordination, but consolidated *oblast* budgets include planned health sector expenditures for *rayons*. An *oblast* health department has limited staff, mainly responsible for inspecting.

Until 2009, health services at *rayon* and city level were coordinated by the chief physicians of *rayon* and city hospitals. A consequence of this hospital-centred service management structure was that in the past budgetary allocations at *rayon* and city level usually favoured hospitals. This changed with Decree No. 665 in 2009 ("on establishment of *rayon* and city health departments", approved 2 December 2009), which established *rayon* and city health departments. This new management structure aimed to strengthen health system coordination at city and *rayon* level, assist the implementation of health reforms and improve the quality of health services (HPAU, 2013g). The Ministry of Health and Social Protection developed a regulatory framework for city and *rayon* health departments, as well as a model charter for *rayon*/city health centres and central hospitals, while the Ministry of Finance allocated funds from the health budget for two to five members of staff for each *rayon* or city based on their socioeconomic characteristics (HPAU, 2013g). However, in 2012, *rayon* health departments and health units were again abolished, in line with a decree of the President of the Republic of Tajikistan and a government resolution (Resolution of the Government of the Republic of Tajikistan No. 369, signed on 19 July 2012, "on measures for implementation of the Decree of the President of the Republic of Tajikistan on 11 July, 2012, No. 1301, on reduction of staff numbers of civil servants in public administration"). As an interim measure, managers of hospital services were empowered to report for the entire health sector at the *rayon* and city level, preserving, however, the current independent status of the primary health care sector (HPAU, 2013g). A new health management structure at *rayon* and city level is currently being developed (Ministry of Health and Social Protection, 2013a).

Since 2009, heads of *oblast* health administrations have been appointed by the Ministry of Health and Social Protection. The heads of *oblast* and Dushanbe city health departments report to the Ministry of Health and Social Protection on the organization of health care provision and the implementation of health policies, prophylactic and curative issues, treatment protocols and statistical data. At the same time, they have reporting responsibilities to the heads of local government, mainly on administrative matters such as finance, staffing and maintenance.

Parallel health systems

Apart from the health institutions at the republican level managed by the Ministry of Health and Social Protection, health care facilities (hospitals and polyclinics) are also run by other ministries or state companies for their employees. These include small inpatient facilities, but also primary care and public health services. The ministries or state companies that run these parallel health services in Tajikistan include the Ministries of Internal Affairs, Defence, Security, Taxation, and Transport; the Tajik Air company; Tajik Railway; the Tajik textile industry; and Talco (the Tajik aluminium factory). The health facilities in the parallel health services used to be better maintained and equipped than the mainstream facilities and had a better supply of pharmaceuticals, but this has changed because of a lack of resources. Parallel health services are directly funded by the respective ministries or companies, and, consequently, their expenditure is not reflected in the state health expenditures reported by the Ministry of Health and Social Protection (HPAU, 2013a). However, the expenditures of other ministries and agencies have been recorded in the National Health Accounts since 2010 and in the System of Health Accounts since 2013 (HPAU, 2013b).

The previous Soviet model of workplace-based health services has remained partially intact, although, as a result of the transitional recession, it is suffering from a lack of funds. Large factories and enterprises continue to provide inpatient and outpatient services for their employees. They provide and maintain the facilities, the running costs of which are supplemented by *oblast* or *rayon* administrations.

Professional associations and unions

Professional associations of doctors or nurses existed in the Soviet period but were working as scientific societies under the umbrella of the federal Ministry of Health and Social Protection. Over recent years, various associations have been established, including a national association of nurses, a physicians' association and an association of family doctors. Yet so far they have no formal role in accreditation or regulation and have little influence over health policy (Wyss & Schild, 2006), although physicians have nevertheless been able to lobby for policy changes.

Following a law in 1992, trade unions have become formally independent from the state but are still closely affiliated with the government. The Trade Union Federation of Tajikistan is the umbrella organization for all trade unions in the country. There is a national trade union of health workers with branches at regional and local levels; it negotiates salary levels with the government and has achieved several salary increases for health care workers.

2.2.3 Key nongovernment bodies involved in health

Private health care providers

Although growing, the number of private health care providers is still low and their services are generally limited to consultations, diagnostic services and ambulatory treatment. However, there are now a number of private hospitals and providers of specialist care (see below). Most dental services are now provided by private practitioners, in particular in major cities and *oblast* and *rayon* centres, and the pharmaceutical sector is fully privatized. Furthermore, many physicians working in public service supplement their state earnings with private (informal) payments.

The government has progressively legalized private ownership of health facilities, introduced private sources to cover health expenditures and allowed private provision of services. The Law "on private medical practice" was adopted in 2002 and a licensing committee established under the Ministry of Health and Social Protection for the opening of private medical practices. A Private Sector Development Strategy was developed in 2007 as part of the Poverty Reduction Strategy (Republic of Tajikistan, 2007), although without specific consideration of the health sector. Private health services have been regulated by the Law "on health protection" of 1997 (No. 421), Article 14 of which allows physicians to engage in private medical practice, reimbursed through user fees, employer contributions or health insurance companies. The government has also simplified the licensing of private providers and reduced the registration fee. In 2014, 80 private health care facilities (14% of the total) were located inside state facilities, operating according to Law "on public private partnerships" (No. 907 of 28 December 2012).

In 2014, there were 574 private health care facilities throughout the country, most of which had been opened in the preceding three to five years. Of these private facilities, 273 were run by private entities (47.6%) and 301 by individuals (52.4%). Most (33.8%) were located in Dushanbe, followed by subordinated *rayons* (15.8%), Sogd *oblast* (29.8%), Khatlon *oblast* (19.3%) and Badakhshon (GBAO; 1.3%). There were 53 private hospitals with a total of 1551 hospital beds. The private sector also provided 3350 rehabilitation beds. The total number of health workers in the private sector was 1230 physicians and 919 nurses. Private health care providers tend to offer high-technology diagnostic services, including angiography, computed tomography (CT), magnetic resonance imaging (MRI), endoscopy and ultrasound, as well as specialized dental or surgical procedures (in such areas as cardiology, urology or gynaecology). Overall, the private sector accounted for 1.6% of general outpatient services in 2014.

Many factors have delayed the development of private practice in Tajikistan. Most importantly, the vast majority of the population has very limited resources available for medical services.

Voluntary/nongovernmental organizations or civil society associations

In the years since independence, a number of nongovernmental organizations (NGOs) have emerged in Tajikistan, and their role in health and social services has gradually expanded. The NGOs that are working in the country's health sector are mainly concerned with community health issues and prevention of human immunodeficiency virus (HIV) and the acquired immunodeficiency syndrome (AIDS), trying to fill the gaps that are left by the limited human and financial resources of state-run health services.

The most common project objective for NGOs is to increase community knowledge and awareness of health and nutrition, although NGOs are also aiming to improve the quality of health services or the access of the population to them. Target populations include children and women of childbearing age, labour migrants and their families, people consuming unsafe water and residing in areas of high risk for infectious diseases, adolescents, and prisoners and newly released inmates. The activities of NGOs in the area of health promotion and disease prevention include areas such as reproductive health, safe motherhood, nutrition, HIV/AIDS and sexually transmitted diseases, mental health and drug use. NGOs are also involved in water and sanitation projects and the mobilization of financial resources for health, either through mobilizing communities to raise funds where required or through the pooling of emergency funds. In the latter case, the emergency funds can be used for the repair of health facilities, to cover fuel costs for transporting patients needing emergency care to far-away hospitals, for assisting impoverished members of the community or for covering the informal medical costs for those unable to pay.

International agencies

International agencies play an important role in Tajikistan's health sector. In 2014, 26 donor organizations and 27 international agencies had representative offices in the country, implementing 38 investment projects in the health sector.

2.3 Decentralization and centralization

The Tajik health system remains largely state owned and administered and the structure is generally (though not universally) hierarchical. However, the coordination between the national level, the *oblast* and *rayon* administrations

and local health facilities is compromised by unclear accountability arrangements (such as those arising from the abolition of *rayon*-level health departments in 2012) and the absence of a formal mandate and authority for managing localized services.

As mentioned above, the financial allocation to the health sector from the state budget is managed centrally by the Ministry of Finance, based on the proposal of the Ministry of Health and Social Protection within strict ceilings provided by the Ministry of Finance. The budgetary funds from the central government are then distributed to the finance departments of *oblast* administrations. Notably, most government revenue is generated locally and *oblasts* determine to a large degree the formation of local health budgets from which funds are allocated to the health facilities. While Tajikistan is still heavily centralized in terms of health policy and strategy, it is a fiscally decentralized system, including in health financing.

Some limited policy and administrative powers have been delegated from the national government to *oblast* administrations through the Law "on local administration and economy" of 1991 and the Law "on local government" of 1994. These laws allow *oblasts* to develop local health policies in line with the directives issued by the Ministry of Health and Social Protection and to allocate resources accordingly.

2.4 Planning

The government approves and revises national health policies and programmes, draft laws, investment projects and budgets for implementation, which are developed and proposed by the Ministry of Health and Social Protection and other ministries and agencies. The Ministry of Health and Social Protection is responsible for the planning, management and regulation of health services, and for the development and implementation of national health policies. It is accountable to the government, submits annual reports about its activities and draws up a budget of financial resources required for the following year.

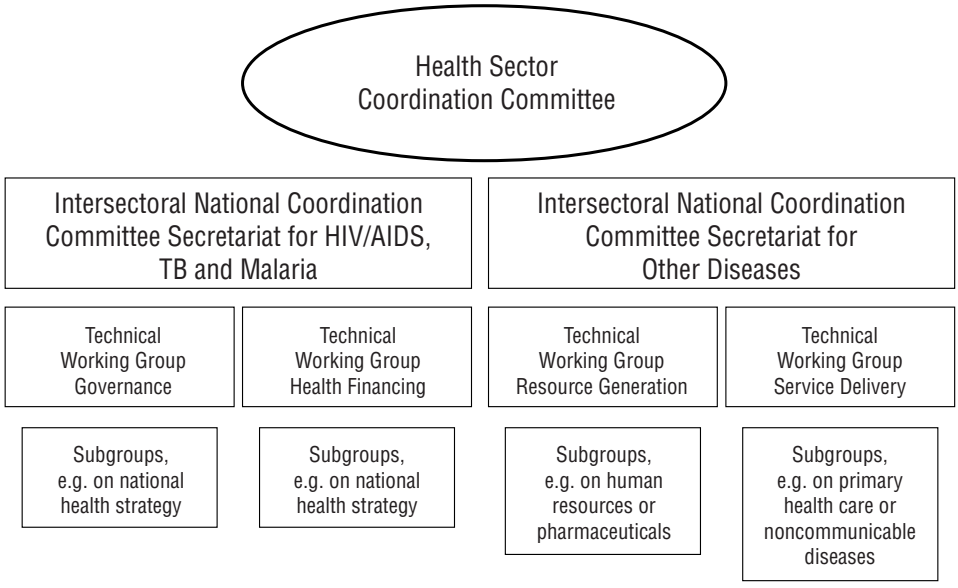
Health planning in Tajikistan remains focused on the budgetary process. For both primary and inpatient care, planning continues to follow mechanisms inherited from the Soviet period, with an emphasis on inputs and staffing rather than on quality and outputs (although there are pilots of per capita financing for primary health care, see section 3.7). While health reforms were introduced in Tajikistan in 2002 with the aim of moving towards a financing system based on activities or the size of the population covered, until recently the formation of

health budgets was still highly centralized and based on inputs. The Ministry of Health and Social Protection has now recognized that the standardized budget lines for inpatient care provide incentives for overcapacity and a too extensive structure of health facilities, while ignoring the content and quality of the care provided (Ministry of Health and Social Protection, 2014).

2.5 Intersectorality

Intersectoral governance mechanisms in Tajikistan are mainly in place with regard to selected priority programmes, in particular infectious diseases and mother and child health. An Intersectoral National Coordination Committee has been set up under the President's administration that mobilizes and oversees the alignment of external assistance to develop different sectors of the country (Akkazieva et al., 2015). Within the framework of the Intersectoral National Coordination Committee, a Health Sector Coordination Committee, including national and development partners, deals with health priorities and the health system (Fig. 2.3). This coordination mechanism offers a potential forum for advocating different interventions and engaging non-health sectors and industries to jointly tackle health challenges.

Fig. 2.3
Intersectoral coordination mechanisms



Source: Adapted from Akkazieva et al., 2015.

There are also interministerial working groups between the Ministry of Health and Social Protection and the Ministries of Education, Labour, Economic Development and Trade, Internal Affairs and Finance, as well as Committees on Environmental Protection and Emergencies (Ministry of Health and Social Protection, 2012, 2014).

2.6 Health information management

2.6.1 Information systems

Health statistics are a crucial element in the formulation and evaluation of health policies. In Tajikistan, key indicators on the health status of the population and the provision of medical services have been included in health policy documents and the country's Poverty Reduction Strategy (see section 6.1).

The central government agency responsible for the collection, analysis and publication of health data is the Republican Centre for Medical Statistics and Information. Through its offices at *rayon*, *oblast* and city level, the centre collects statistical data from all levels of the health system. The centre regularly publishes the newest statistical data. Irrespective of ownership, all health care providers are required to use the same accounting and reporting forms as approved by the Ministry of Health and Social Protection. However, it was recognized that health care providers are overloaded with reporting forms (a total of 42 forms) and quite often the collected data are not used appropriately. The health information system is currently undergoing changes, such as reductions in the number of required forms, and equipping health facilities at *rayon* level with computers (Ministry of Health and Social Protection, 2014). The private sector is required to use the same reporting forms, but it is unclear to what extent data are collected and reported.

The State Supervision Service over Sanitary and Epidemiological Activities is in charge of statistics on communicable diseases. However, it lacks technical capacity and resources. Its extensive network of laboratories (about 100) is understaffed and lacks equipment to perform most of its assigned duties. Furthermore, there is a fragmentation of public health services into several vertical structures and programmes, each with its own system of data collection (see section 6.1).

The State Committee for Statistics (State Statistical Agency under the President of the Republic of Tajikistan) is responsible for the collection of vital statistics, including data on births and deaths. A major challenge for reliable

health statistics in Tajikistan is the existence of a registration fee for birth certificates, leading to an underreporting of births. The registration fee has been reduced in recent years and stands now at US$ 1, although this does not account for informal payments.

Poor training of staff and the absence of modern information technologies are obstacles to reliable data collection. Forms continue to be completed manually, making the processing and analysis of data cumbersome. A survey of 255 family doctors and 225 *rayon* physicians in 2012 found that 90% of participating family doctors and 82% of *rayon* physicians did not use a computer in their practice; only 2–4% of those who did reported using a computer used it for keeping patient records (WHO Regional Office for Europe, 2014a). Since 2014, a number of computers were distributed among health care facilities to improve data collection and introduce electronic submission of statistical reports, using the unified District Health Information Software (DHIS-2). In 2013, only 30.7% of health facilities in 20 *rayons* reported using DHIS-2 (Ministry of Health and Social Protection, 2014).

In order to obtain data not well captured by current data collection systems, a number of surveys have been conducted in Tajikistan in recent years. Examples include the Tajikistan Living Standards Surveys in 1999, 2003, 2007 and 2009; the Demographic and Health Survey in 2012, the Multiple Indicator Cluster Surveys carried out by United Nations Children's Fund (UNICEF) in 2000 and 2005; and the National Nutrition and Water and Sanitation Surveys in 2003 and 2009.

With the support of external development partners, National Health Accounts have been established since 2009 for the collection of health financing data in line with the Organisation for Economic Co-operation and Development (OECD) System of Health Accounts. In 2013, the responsibility for National Health Accounts was transferred from the Department for Economy and Health Budget Planning at the Ministry of Health and Social Protection to the Republican Centre for Medical Statistics and Information and the health accounts system was institutionalized to become part of routine health data collection (Ministry of Health and Social Protection, 2013a).

A strategic development plan for the health information system has been drawn up, envisaging a unified health information system. As part of the implementation of this plan, reporting forms have been updated and improved. In 2012, all health facilities were ordered by the Ministry of Health and Social Protection to introduce the reporting programme "Medstat" (Ministry of Health and Social Protection, 2013a). The project "Technical assistance to support

the strengthening of the health information system in Tajikistan" (2012–2016), funded by the European Union (EU), aims to strengthen the health management information system for the Ministry of Health and Social Protection, the Ministry of Justice, the Agency for Statistics and the Civil Registration Office. It prepares for the countrywide introduction of DHIS-2 for data entry, analysis and reporting. Within the framework of the project, equipment has been distributed in all *rayons* and cities and around 800 specialists from the Ministry of Health and Social Protection and the Civil Registration Office had been trained by October 2014. Utilization of the DHIS-2 software has started on a pilot basis and was anticipated to be rolled out countrywide in 2015.

2.6.2 Health technology assessment

Until 1991, technology assessment in the health sector was the responsibility of Soviet agencies at the national level. After the dissolution of the USSR, many newly independent countries, including Tajikistan, lacked the capacity to carry out sophisticated technology assessments. Currently, the Ministry of Health and Social Protection has regulatory powers over the pharmaceutical and medical industry and for the purchase of medical technology.

2.7 Regulation

The Ministry of Health and Social Protection regulates the health sector through ministerial decrees, decisions of the advisory board (*kollegia*), guidelines, instructions and recommendations. It also monitors and visits health care facilities and considers claims or suggestions by the population. The monthly *kollegia*, which is chaired by the Minister of Health, assesses the implementation of national programmes and policies and is responsible for the consideration of any urgent problems or priority issues. As mentioned above, there is only limited policy formulation at local levels and there is no major involvement of the public in the planning and regulation of the health sector.

2.7.1 Regulation and governance of third party payers

Currently, hardly any health financing is channelled through third party payers and no specific regulations or frameworks exist in this regard. A mandatory health insurance system has not yet been introduced and private health insurance does not play a significant role.

2.7.2 Regulation and governance of providers

Although the "self-sustaining centres" have moved towards some degree of managerial and financial autonomy, the majority of public providers form part of the hierarchical state system and are officially financed by the state budget. The health system in Tajikistan, therefore, follows formally the integrated model, in which the vast majority of health care services are state owned and managed and financed from public sources, although a considerable part of health expenditure now comes from informal OOP payments. At the national/republican level, health facilities are directly managed by the Ministry of Health and Social Protection, while at the local level health facilities are managed by the local authorities at the city, *oblast* or *rayon* level.

The Ministry of Health and Social Protection is the principal institutional actor responsible for the regulation and management of public providers. The network of public providers is charged with the implementation of national health policies and programmes, and it has to ensure the required range, quantity and quality of medical services. The governance and management structure of public providers has changed little since the Soviet period and most activities are still based on norms and standards developed before 1991.

The Ministry of Health and Social Protection defines the activities of health care providers in the public system. Public health facilities are accountable to the Ministry and, at the local level, to their respective local authority. They submit regular reports to the Ministry on an annual, six-month, or three-month basis and provide statistical data, including data on staffing and services provided, to the Centre of Medical Statistics and Information. The Ministry of Health and Social Protection also regulates the working conditions of health professionals and their salary levels.

At the *oblast* level, health departments manage health facilities at *oblast* hospitals or urban hospitals in Dushanbe city and are accountable to the Ministry of Health and Social Protection (on professional matters) and to the *oblast* administration (on financial matters). *Rayon* health departments manage health facilities at that level, such as central *rayon* hospitals, rural health centres or medical houses, and are accountable to the Ministry of Health and Social Protection and the *rayon* administration.

Facility managers have little discretion, operate more like administrators, and are tied to detailed budget lines. Hospitals are managed by chief physicians who are advised by a medical board of deputies and other senior specialists. The chief physician is accountable to the respective government administration

(republican, *oblast* or *rayon*) and is appointed by the administration, subject to approval by the Ministry of Health and Social Protection. Rural health services are administered from the central *rayon* hospital. The heads of rural health services (nurse posts, physician clinics and village hospitals) report to the chief physician of the central *rayon* hospital.

At present, there are two principal management structures for primary health care institutions. Most public providers of primary care are still managed by *rayon* hospitals. Tajikistan has a hospital-centred service management structure, and the central management of most health services is located in hospitals. The head physicians of central *rayon* hospitals administer all health services in their respective *rayon*, and one of the results of this organizational arrangement is that budgetary allocations usually favour hospitals.

In pilot *rayons*, however, the government has devolved administrative functions to primary health care providers and has established new channels of financing. As part of the health reforms supported by the World Bank, the Ministry of Health and Social Protection, in conjunction with the Ministry of Finance, separated the primary health care budgets from those of the hospital sector in 2006. It also, on a national scale, increased the salary for primary health care staff more than that for other health workers and changed the salary structure for medical personnel. The current World Bank-financed Health Services Improvement Project aims to improve the coverage and quality of primary health care services, particularly maternal and child health, through piloting the use of performance-based incentives for primary health care providers.

The private sector is regulated by the Ministry of Health and Social Protection, which certifies individuals and institutions involved in private medical practice and defines the scope of services that can be provided (see section 2.2.3). For private medical practice, institutions and staff have to meet licensing and registration requirements. In accordance with Ministry of Health and Social Protection regulations, doctors can run private practice full or part time.

2.7.3 Regulation and governance of the purchasing process

Through the Ministry of Finance, the Ministry of Health and Social Protection purchases health services from public providers, covering consultative, diagnostic and curative services in the inpatient and outpatient sector. The financing of health care providers is largely a variable of limited budgetary funds and does not take account of outputs or the quality of medical services provided.

Although public health care providers have been facing a severe shortage of funds, they are generally not allowed to raise and manage their own funds through co-payment mechanisms. Consequently, many health facilities have faced considerable difficulties to meet recurrent costs and sustain their activities. Since 1991, some health care providers have only functioned symbolically (see section 4.1).

However, official patient co-payments have been introduced in some state-run health facilities, the so-called "self-financing centres", which are partially or fully financed on a fee-for-service basis (see section 3.4). The Ministry of Health and Social Protection has encouraged health facilities to introduce fee-for-service payments, in particular in large inpatient and outpatient facilities. Large hospitals, city or *rayon* health centres and research institutions have now successfully introduced official patient co-payments for diagnostic and curative consultations. This has enabled them to increase the salary of their staff, meet recurrent costs and cover other hospital expenditure. The majority has established price lists for medical services and gathered experience of managing the additional financial resources. Self-financing health centres now receive funds from the health budget based on line-items to cover beneficiaries defined by Government Decree No. 600 ("on the procedure of health service provision in public health facilities to the citizens of the Republic of Tajikistan", adopted on 2 December 2008). In addition, they are allowed to charge fees for certain services such as diagnostic and curative consultations (also in line with Government Decree No. 600) (see section 3.3.1).

The existing management structure for the majority of public providers is characterized by a vertical hierarchy and inflexible financing mechanisms that favour hospital over primary health care and result in an inefficient use of scarce resources. Reform efforts are under way to strengthen primary health care based on the concept of family medicine in order to use resources more efficiently. A financing mechanism that applied capitation financing to primary health care was introduced nationwide in 2010, although this remained partial in scope. Full per capita financing has been introduced in pilot *rayons*, although this only applies to the stage of budget distribution and not to the stage of budget formation, which is still based on line-items (see section 3.2).

The basic benefits package in the 14 pilot *rayons* is covered through the state budget and mainly comprises basic medical services provided by primary health care facilities. Other services, provided mainly at hospitals, are subject to patient co-payments. It is hoped that this will enable a more efficient and effective use of limited state resources for health, which at present cover an

extensive infrastructure and direct the majority of funds to the hospital sector at the expense of primary health care. The introduction of a basic benefits package is aimed to facilitate the establishment of new forms of financing and management in which health facilities are granted a greater degree of autonomy.

2.7.4 Regulation and planning of human resources

In the Soviet period, physicians had to undergo mandatory continuing education for a period of one month at least once every five years. This system has remained intact in Tajikistan, but continuing education opportunities are poor because of a lack of financial resources (Ministry of Health and Social Protection, 2005b) and non-adherence has no consequences for further medical practice.

Strategic documents of the Ministry of Health and Social Protection place emphasis on priority programmes and human capacity development in the areas of maternal and child health, HIV/AIDS, tuberculosis, malaria, polio and measles. The corresponding activities are typically delegated to a national programme under the responsibility of a republican centre (e.g. the Republican Centre for Healthy Lifestyles, the Republican Centre for Reproductive Health or the Republican Centre for Tuberculosis Control). There is little coordination across priority programmes and there is no consolidated human resource plan across priority programmes. Human resource development in Tajikistan is assisted by a number of international agencies and NGOs, but there are few formal mechanisms for aid coordination.

In July 2009, the Ministry of Health and Social Protection, in cooperation with five other ministries, approved Decree No. 10f on the payment of salaries for health workers, which set out new staffing standards for health workers in the public sector.

The Ministry of Health and Social Protection has also developed a number of strategies to retain health workers in rural and remote areas (see section 4.2.1), using both financial and nonfinancial incentives, but not all local *hukumats* have taken measures to improve the working and living conditions of health workers, such as through allocating them land or other benefits (Ministry of Health and Social Protection, 2013a).

2.7.5 Regulation and governance of pharmaceuticals

During the Soviet period, drug control and supply systems in Tajikistan were centralized and drugs and medical equipment were procured and stored by the subdivisions of the Ministry of Health and Social Protection of the USSR and

then delivered to Tajikistan. After independence in 1991, this system collapsed and the expenditure on procurement of medicines was drastically reduced. Alongside this, the price of pharmaceuticals, which are mostly imported, markedly increased.

In order to address this situation and regulate the pharmaceutical sector, the government has established a legal framework and mechanisms for enforcement. A list of essential drugs was introduced in 1994 and is revised regularly. However, most pharmacists and physicians are unaware of the essential drug list and do not use it in their practice. Even state entities such as Pharmacon, Sogd Pharmacy and Khatlon Pharmacy cannot secure the supply of the drugs on the essential drug list, do not follow the drug selection principles and import a large range of other drugs.

The government has also aimed to encourage and support the domestic production of pharmaceuticals. In 2015 there were 18 domestic companies that produced more than 125 different medicines and medical products.

The Department of Pharmacy and Medical Equipment of the Ministry of Health and Social Protection is responsible for the development, monitoring and evaluation of the state policy for the pharmaceutical sector. The State Surveillance Service over Pharmaceutical Activities carries out registration and maintenance of the Drug Register, accreditation and licensing of pharmaceutical and medical activities, drug quality control, pharmaceutical inspection and certification. The Pharmacological and Pharmacopoeia Committee at the Ministry of Health and Social Protection issues permissions for clinical and preclinical trials and medical use of new drugs, including for diagnostic and preventive purposes. It also considers, coordinates and approves normative-technical documentation related to drug quality.

The Scientific Centre for the Production of Experimental Pharmaceuticals is in charge of new drug development and use, based on local products. The Committee on Pharmaceutical Industry Development, Tajikfarmindustria, which used to be a unit of the Ministry of Health and Social Protection responsible for the development of new drugs based on local raw materials, has been reorganized as a commercial entity. State control of illegal circulation of narcotic, psychotropic drugs and precursors is carried out by the Narcotics Control Agency under the President of the Republic of Tajikistan.

The government strengthened the control over the quality and distribution of pharmaceutical products and improved the coordination between public acquisition of medications and donor assistance. A national centre for

centralized public acquisitions of medications was established with the assistance of the Asian Development Bank and Pharmaciens sans Frontières (Republic of Tajikistan, 2005). The Republican Centre for Pharmaceutical and Medical Equipment Services is a non-profit-making organization responsible for the procurement of drugs and medical equipment for the health sector. The Centre has a central warehouse and office that were renovated with the financial support of the European Commission Directorate-General for Humanitarian Aid, and its *oblast* branches in Sughd (Khujand) and Khatlon (Kurgan-Tyube) were renovated with the Asian Development Bank loan for the Health Sector Reform Project. The GBAO branch (Khorog) still needs to be renovated. The Centre carries out procurement, custom clearance, licensing and storage, distribution of drugs and medical equipment, and training seminars.

2.7.6 Regulating quality of care

In November 2008, a State Surveillance Service over Medical Activities was established (now known as State Surveillance Service over Medical Activities and Social Protection). The service is responsible for regulating the quality of medical care in all health facilities irrespective of ownership and including parallel health services, the private sector and providers of alternative medicine. The Ministry of Health and Social Protection has also developed and approved a number of new clinical protocols. In 2013 and 2014, practically all primary health care facilities and large hospitals were provided with a set of clinical guidelines. However, implementation remains challenging.

Tajik State Standard conducts the annual standardization of medical equipment used in large medical facilities. According to current legislation, accreditation is compulsory for all health facilities independent of ownership.

In 2014, the National Centre for Accreditation of Health Care Facilities was established at the State Surveillance Service over Medical Activities and Social Protection, as well as a procedure for conducting the accreditation of medical facilities, organizations and enterprises (Government Resolution No. 600 of 9 September 2014). The first accreditation tool was for mother and child health facilities, while the next set of accreditation tools (for multipurpose hospitals) was developed and submitted for approval. The Ministry of Health and Social Protection has approved the Statement of the Steering Council for Accreditation in the Health Sector and established quality improvement committees in large health facilities. These committees have to organize a self-assessment before accreditation takes place. By April 2015, the national

Research Institute of Obstetrics, Gynaecology and Perinatology, as well as four better-equipped *oblast* or city obstetric houses (in Dushanbe and Khudjand), had undergone accreditation.

2.8 Patient empowerment

2.8.1 Patient information

The Republican Centre for Healthy Lifestyles under the Ministry of Health and Social Protection has the mandate to empower patients and the population. The Centre organizes a series of educational, sports and cultural events in close collaboration with development partners and local authorities. This role is reinforced by the development of different national programmes (e.g. on noncommunicable diseases, HIV and tuberculosis) that promote patient empowerment (Akkazieva et al., 2015). Despite these efforts, the population still has insufficient access to information on health and healthy lifestyles and lacks awareness of the causes of ill health, particularly with regard to noncommunicable diseases, with unhealthy diets contributing substantially to the burden of disease. However, the literacy rate in Tajikistan is high in comparison with other countries with similar levels of economic development and this facilitates the provision of health-related information. During recent years, local communities have become increasingly aware of the responsibility of people for their own health and many have participated in initiatives for raising public awareness about mother and child care, HIV/AIDS, tuberculosis, the importance of improving sanitary conditions of households and many other related issues.

The mass media, including television, radio, newspapers and the Internet, has established its independence from the state and openly and critically discusses a number of health issues, including infectious diseases, HIV/AIDS, healthy lifestyles, health promotion, nutrition and mother and child care. This discourse also includes information for patients with regard to healthy lifestyles, nutrition and mother and child care. Some advanced health care institutions are now advertising their services, thus providing information for patients on where they can access certain services. The Ministry of Health and Social Protection has established a press centre, which has opened an Internet site and publishes news in the regular press.

Following adoption of the Law "on state language" in 1989, all organizations in the country are required to conduct their activities in the state language, Tajik. The 1994 constitution recognized Russian as "a language of interethnic communication" (Republic of Tajikistan, 1994), but this provision was dropped by a new law on state language adopted in 2009. Other minorities, such as ethnic Uzbeks or Kyrgyz, mainly rely on the state language as their main source of information. In some villages, however, where minorities have traditionally resided, the state provides information in their language. There are also villages, in particular in areas bordering neighbouring countries, in which the majority of employees in public schools, organizations or health care facilities are members of national minorities.

Information technologies are underdeveloped but expanding. Following years of underinvestment, the fixed-line telephone network is in a state of disrepair. The use of mobile phones has increased rapidly and Internet technology is also expanding.

2.8.2 Patient choice

Patient choice is protected by the constitution and patients have the right to choose facility or doctor (Law No. 419 "on public health", chapter III, section 22, passed on 15 May 1997). Patients have different degrees of choice, depending on whether they live in rural or urban areas. In rural areas, where poverty levels are higher, patients generally have to accept lower standards of medical care provided in outdated facilities with old or absent equipment. If patients wish to reach more modern health facilities with higher standards of care, they face additional costs for transportation and have sometimes to cover large distances. In addition to having easier access to health facilities, the urban population is also better informed about available services, in particular through the Internet, telephone and newspaper, which are more widespread in urban areas, in contrast to television and radio, which are also common in rural areas.

At the same level of health care, rural patients are more limited in their choice than urban patients, who can more easily change their general practitioner, specialist or hospital physician. As provided for by general consumer protection, patients can choose between doctors, specialists or medical facilities. When patients are not satisfied with physicians or medical facilities, they can ask for a second opinion from another physician or medical facility. There is generally more demand for consultation, diagnostics, laboratory or dental services in urban areas, which increases the competition and offers patients more choice.

Patient choice is also related to the costs of medical services, which become more expensive from the rural to the *rayon* level, from the *rayon* to the city or *oblast* level, and from the *oblast* to the republican level, where all specialized services are located. Outpatient services are much cheaper than hospital care.

In the 14 pilot *rayons* where the state guaranteed package of services has been introduced, only the beneficiary groups under the state-guaranteed benefits package are entitled to free medical services. Most care is envisaged to be provided at the primary care level and patients require a referral for higher levels of care. Otherwise, they are obliged to make OOP payments for the services they receive. It is hoped that the nationwide introduction of the benefits package will increase patient choice.

2.8.3 Patient rights

In Tajikistan, legislation has been enacted to protect patient rights and to provide for patient choice, complaints and reimbursement procedures, plus information on the pricing of medical services. While patient rights are formally recognized, there are still major conflicts with regard to the financial affordability of health services. In order to enhance patient rights, it will be essential to raise public awareness on entitlements and possible redress mechanisms.

Complaints procedures

A complaints procedure for patients has been established that involves regulatory bodies in health care facilities and the Ministry of Health and Social Protection. According to the regulations, complaints need to be signed by the claimant. They are first dealt with at the level of the administration of each health care facility, which usually issues a written answer outlining the measures undertaken to resolve the problem. If the complaint requires actions of higher administrative levels, it is referred to them by the respective health facility.

Complaints which are referred to the Ministry of Health and Social Protection concern usually severe cases of illnesses that are not treatable or require referral outside of the country, access to expensive specialized care or pharmaceuticals, and medical malpractice or low standards of treatment. In this case, the Ministry is responsible for taking and documenting the necessary measures to resolve the identified problems. In addition, the Ministry has a weekly consultation with community representatives to assess specific complaints and problems. The recent establishment of an ombudsman office offers another avenue for patients who wish to complain about the health services they received.

2.8.4 Patient safety and compensation

Every complication or death of a patient that occurs in medical care is registered and evaluated by medical specialists. In each hospital, there is a special steering committee, the "commission for the investigation of fatal outcomes", that evaluates cases that have led to the death of patients. All these cases are discussed by a team of clinicians who draw conclusions and provide recommendations to prevent health care-related harm in the future. This organizational measure aims to ensure that doctors and nurses are held responsible for each clinical procedure they undertake. Unfortunately, liability insurance is not yet common practice and is not obligatory for individual physicians or health care facilities. In cases of proven health care-related harm, the health care provider is obliged to provide the full course of treatment at their own expense.

Medical errors are usually recorded and published. They are discussed at conferences, workshops and seminars, and are presented to medical students. Where appropriate, they are also communicated by the Ministry of Health and Social Protection to the Ministry of Justice and the Prosecutor's Office. State services responsible for the quality of medical care and sanitary epidemiological issues undertake regular inspections in all health facilities.

When physicians notice adverse drug reactions, they usually report the case immediately to the Ministry of Health and Social Protection and the pharmacy that has provided the medication. The State Surveillance Service over Pharmaceutical Activities tests the drug sample and reports the results to the Ministry of Health and Social Protection and the health care provider. Sometimes the State Surveillance Service over Pharmaceutical Activities is also asked directly by the health care provider to test a drug sample. The results of the test are compared with clinical findings and the Ministry of Health and Social Protection is responsible for the appropriate regulatory measures.

2.8.5 Public participation/involvement

There are no mechanisms in place for the participation of patients or the general public in the policy-making process. Surveys on patient satisfaction have only been carried out occasionally and point in contradictory directions. According to a survey of 2000 respondents conducted in 2011, only 16% of respondents were satisfied with ambulatory care and only 19% with inpatient hospital services (Azevedo, Atamanov & Rajabov, 2014). However, in another survey, conducted in 2010, 57% of respondents were satisfied with the quality and efficiency of the publicly run health system (Diagne, Ringold & Zaidi, 2012). Surveys on patient satisfaction were also carried out in the rural *rayons* where

the Tajik–Swiss Health Sector Reform and Family Medicine Support Project (Project Sino) has been implemented. Overall, four surveys were carried out between 2005 and 2014, showing very high levels of patient satisfaction. This somewhat paradoxical finding is in line with what has been reported from poor rural areas in some other former Soviet countries (Footman & Richardson, 2014) and might reflect low patient expectations.

Mechanisms for involving communities in the organization of the local health system that are being tested in some pilot *rayons* have not yet been established at national level. Coordination by local *hukumats* with local NGOs helps to increase engagement of the population in health care issues. The community councils (*mahalla*) at the village, *rayon* and city level play a role in mobilizing communities. However, these are not regular systems and their effectiveness appears to be limited (Republic of Tajikistan, 2002; World Bank, 2005).

2.8.6 Patients and cross-border health care

Few reliable data exist on patients crossing borders to access health services. Richer patients are reported to sometimes seek specialized treatment abroad, such as in the Russian Federation or western European countries. There are also cases where patients from the Badakhshan region of Afghanistan utilize hospital services in the neighbouring GBAO (Walraven et al., 2009).

3. Financing

The most important source of health financing in Tajikistan are private OOP payments (both formal and informal), followed by general government expenditure (mostly from *oblast* or local authorities) and external resources for health. Voluntary health insurance is largely non-existent and the introduction of mandatory health insurance has been delayed several times. Most public expenditure is still spent on inpatient care, although the share of resources devoted to primary health care has been increasing in the last years. When comparing Tajikistan with other countries of the European region, it becomes apparent that its absolute expenditure per capita is by far the lowest, while the share of public expenditure as a percentage of total health expenditure is also one of the lowest. A basic benefit package was adopted in 2007, but it has so far only been extended to 14 *rayons*. The budget formation is still largely based on inputs (in particular the number of beds and health workers), pooling is underdeveloped and there is no real mechanism for purchasing health services. There are pilot projects on capitation-based financing for primary health care but agreement on national roll-out has so far not been reached. Almost all health workers are state employees.

3.1 Health expenditure

Tajikistan has drawn up National Health Accounts since 2009, and in 2013 made it in line with the 2011 System of Health Accounts, allowing it to describe and analyse the financing of its health system according to internationally agreed standards (HPAU, 2013d). According to National Health Accounts data, total health expenditure amounted to 6.8% of GDP in 2013 (Table 3.1). The lion's share (69.4%) of total health expenditure came from private sources, mostly (86.7%) in the form of OOP expenditure. General government expenditure on

health accounted for 30.6% of total health expenditure in 2013, while external resources on health accounted for 10.3% (considered as part of private health expenditure in Table 3.1).

Table 3.1

Trends in health expenditure in Tajikistan, 1995–2013 (selected years)

	1995	2000	2005	2010	2013
THE per capita (international $, PPP)	28.4	43.7	90.2	125.1	169.6
THE (% of GDP)	3.1	4.6	5.9	6.0	6.8
General government expenditure on health (% of THE)	42.1	20.4	19.4	26.4	30.6
Private expenditure on health (% of THE)	57.9	79.6	80.6	73.6	69.4
External resources on health (% of THE)[a]	17.6	2.3	12.0	8.2	10.3
General government expenditure on health (% of general government expenditure)	7.4	6.5	5.9	5.9	7.3
OOP expenditure (% of private expenditure on health)	99.2	99.0	97.2	90.8	86.7
OOP expenditure (% of THE)	57.5	78.8	78.4	66.8	60.1

Source: WHO, 2015.
Notes: [a]Counted as part of private health expenditure; PPP: Purchasing power parity; THE: Total health expenditure.

Most public health expenditure (54% in 2013) was spent on inpatient care, with only 34.8% in 2013 being allocated to primary health care. Salaries of staff were the largest expenditure item, accounting for 83.1% of total public health expenditure in 2013 (Table 3.2).

The share of private sources of funds was higher for inpatient services (71.5% in 2012) than for outpatient services (58.3%); there has been a sustained decline since 2007 for outpatient services, when private sources accounted for 75.0%. In contrast, the share of private sources for inpatient services has more or less stagnated since 2007 (Egamov, Bogadyrova & Akkazieva, 2014c).

When comparing Tajikistan with other countries in the WHO European Region (Figs. 3.1–3.4), it does well in terms of total health expenditure as a percentage of GDP (considering its socioeconomic position as the poorest country in the region), but its health expenditure in absolute terms is by far the lowest in the region (Fig. 3.3) and the share of public sector expenditure is among the lowest (Fig. 3.4).

Table 3.2

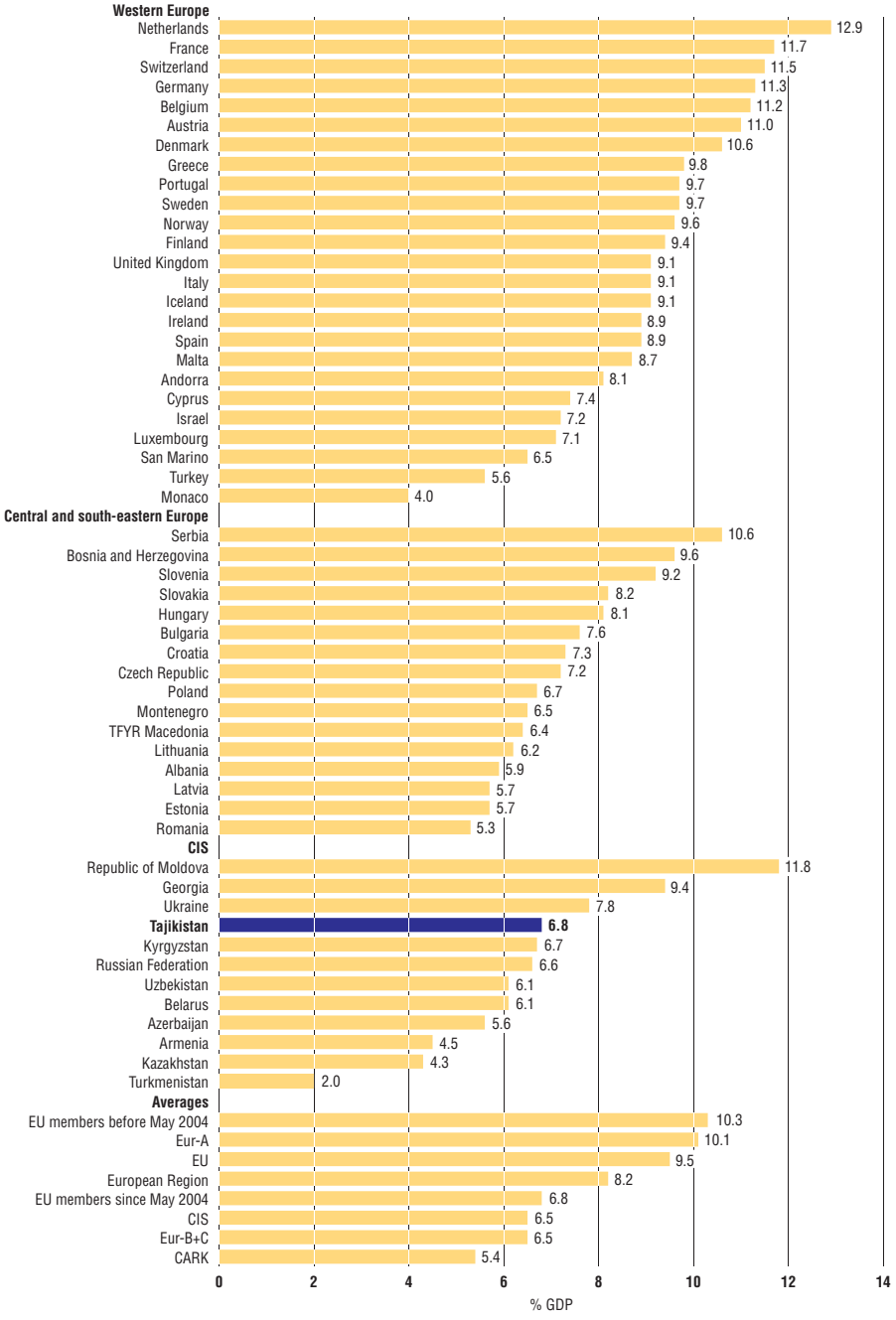
Public health expenditure by provider, function and budget line, 2007–2013

Indicators	2007	2008	2009	2010	2011	2012	2013
Public health expenditure by health care providers (%)[a]							
Inpatient facilities	64.7	61.2	53.3	56.3	55.9	56.1	54.0
Primary health care facilities	22.4	27.1	33.0	31.6	31.5	32.4	34.8
Sanitary-epidemiological service and health centres	6.6	7.4	7.1	6.5	6.9	5.4	6.6
Laboratory and diagnostic facilities	0.8	0.9	1.6	2.1	2.2	2.5	2.9
Health management bodies	5.5	3.5	5.0	3.5	3.5	3.6	1.7
Public health expenditure by health functions (%)[a]							
Curative and rehabilitation care	76.1	76.7	75.5	77.7	78.2	78.7	80.5
Laboratory and diagnostic services	9.1	9.3	8.3	9.1	6.9	8.1	8.1
Sanitary and prevention services	9.1	10.2	10.5	9.7	10.0	10.0	9.7
Health management	5.7	3.8	4.8	3.5	4.9	3.2	1.7
Public health expenditure by budget lines (%)							
Payroll of health workers	46.7	57.2	66.3	70.1	74.3	75.5	83.1
Pharmaceuticals (outpatient and inpatient)	5.2	5.1	4.9	4.4	4.5	3.5	2.8
Remaining budget lines	29.4	25.6	20.7	18.2	15.3	16.7	10.1
Capital expenditure	18.7	12.2	8.1	7.3	5.9	4.3	4.0

Source: Ministry of Health and Social Protection, 2014.
Note: [a]Excludes capital costs, investment projects and special funds.

Fig. 3.1

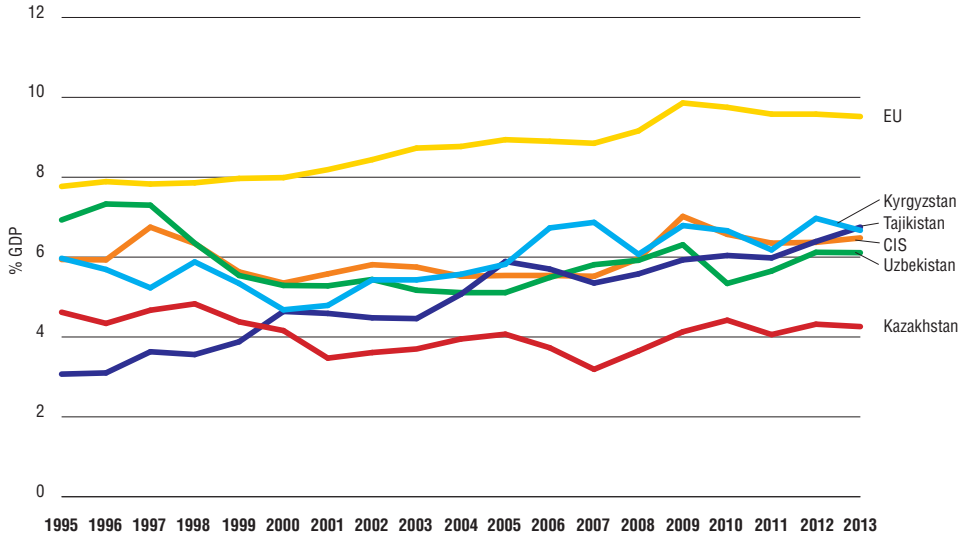
Total health expenditure as a percentage of GDP in the WHO European Region, 2013, WHO estimates



Source: WHO Regional Office for Europe, 2015a.
Notes: CARK: Central Asian Republics and Kazakhstan; EUR-A,B,C: Regions as in the WHO list of Member States, last available year; TFYR Macedonia: The former Yugoslav Republic of Macedonia.

Fig. 3.2

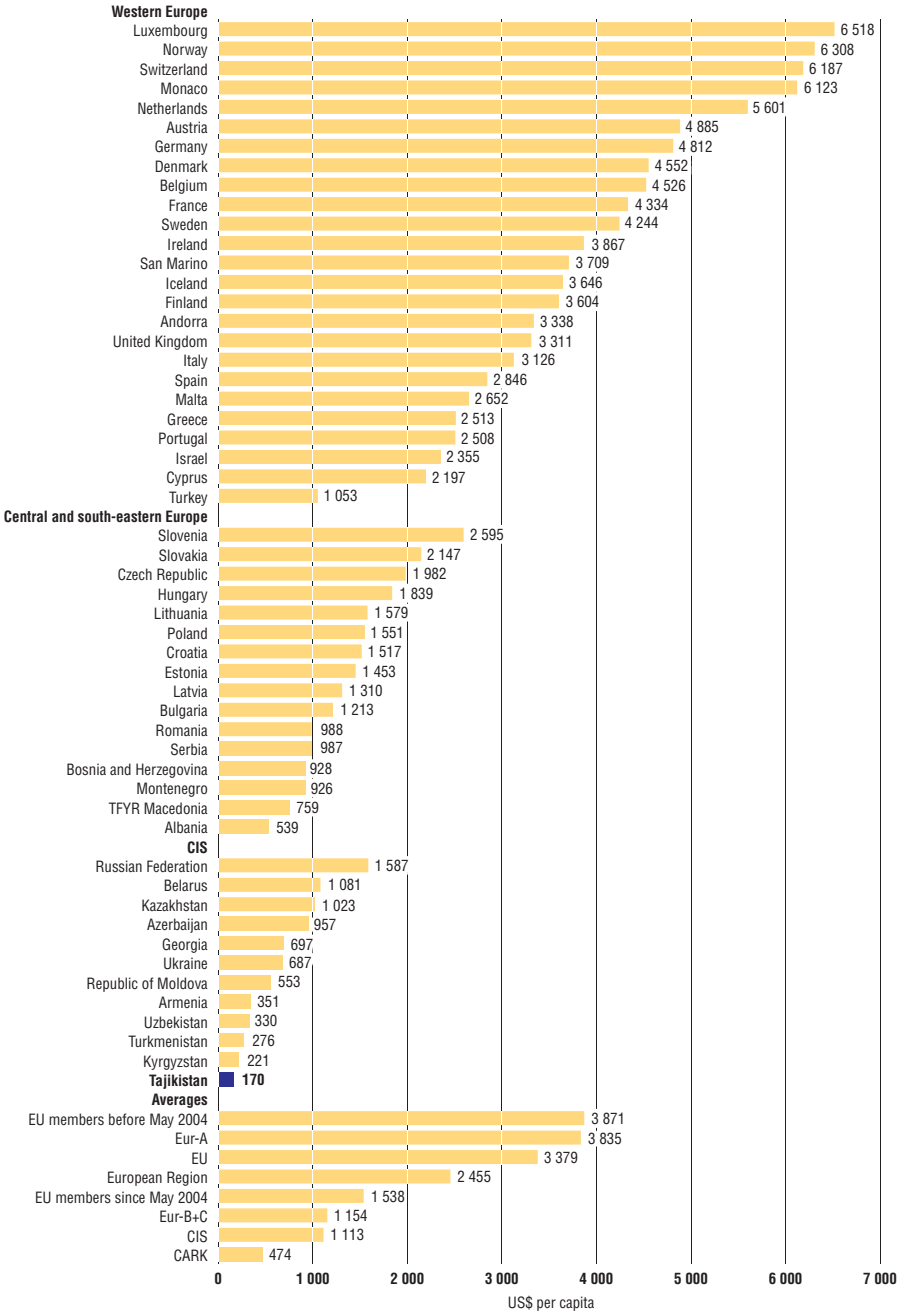
Trends in total health expenditure as a percentage of GDP in Tajikistan and selected countries, 1995–2013, WHO estimates



Source: WHO Regional Office for Europe, 2015a.

Fig. 3.3

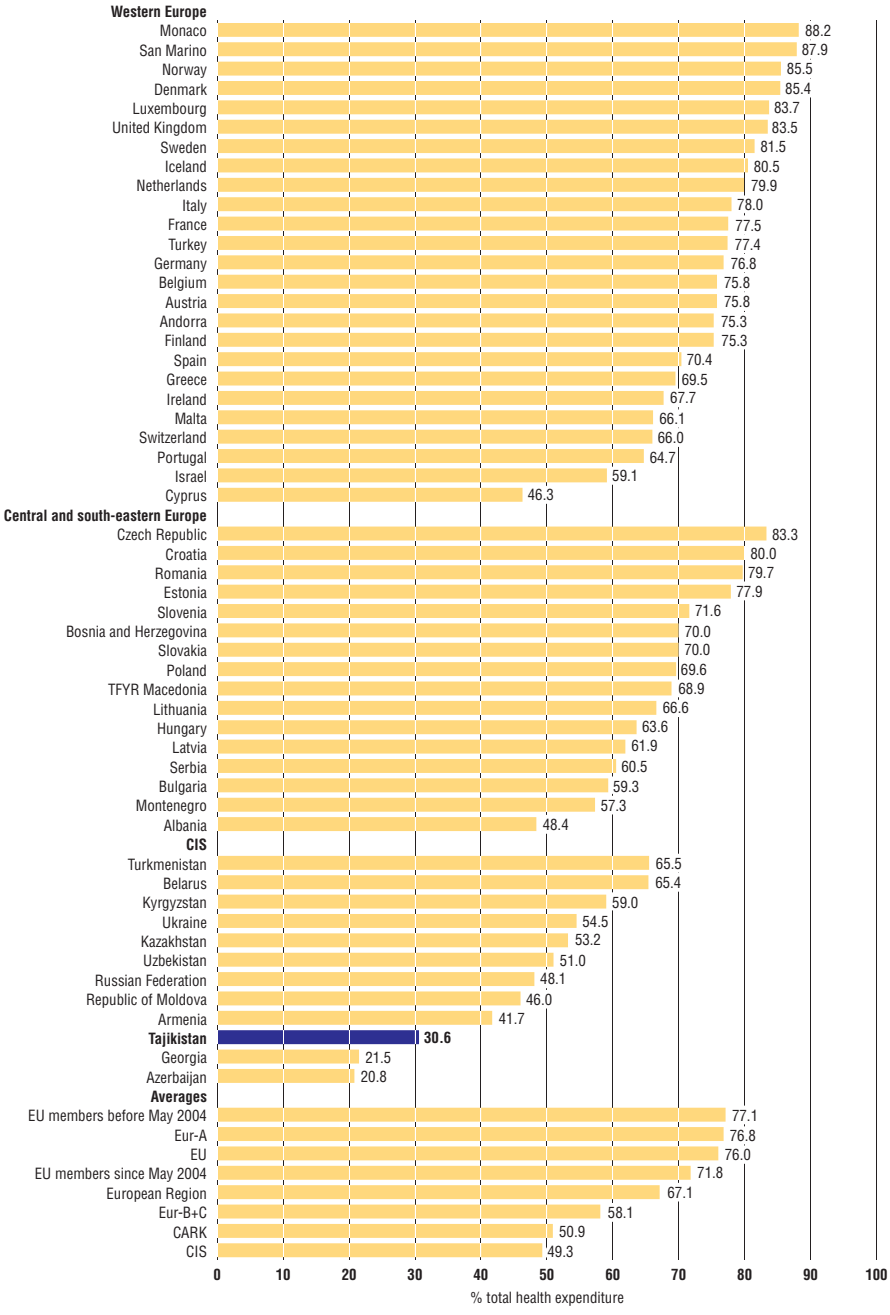
Total health expenditure in United States dollars purchasing power parity per capita in the WHO European Region, 2013, WHO estimates



Source: WHO Regional Office for Europe, 2015a.
Notes: CARK: Central Asian Republics and Kazakhstan; EUR-A,B,C: Regions as in the WHO list of Member States, last available year; TFYR Macedonia: The former Yugoslav Republic of Macedonia.

Fig. 3.4

Public sector health expenditure as a percentage of total health expenditure in the WHO European Region, 2013, WHO estimates



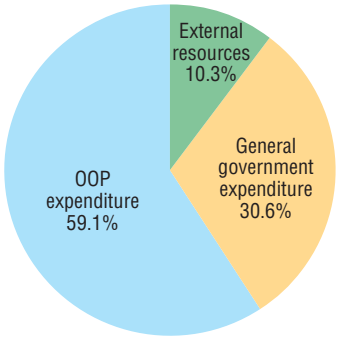
Source: WHO Regional Office for Europe, 2015a.
Notes: CARK: Central Asian Republics and Kazakhstan; EUR-A,B,C: Regions as in the WHO list of Member States, last available year; TFYR Macedonia: The former Yugoslav Republic of Macedonia.

3.2 Sources of revenue and financial flows

Funding for health expenditure comes from three main sources: OOP payments, the state budget and international development assistance (Fig. 3.5). Main payers in the system include national and *oblast* governments, other ministries and patients themselves (Fig. 3.6).

Fig. 3.5

Percentage of total expenditure on health according to source of revenue, 2013, WHO estimates



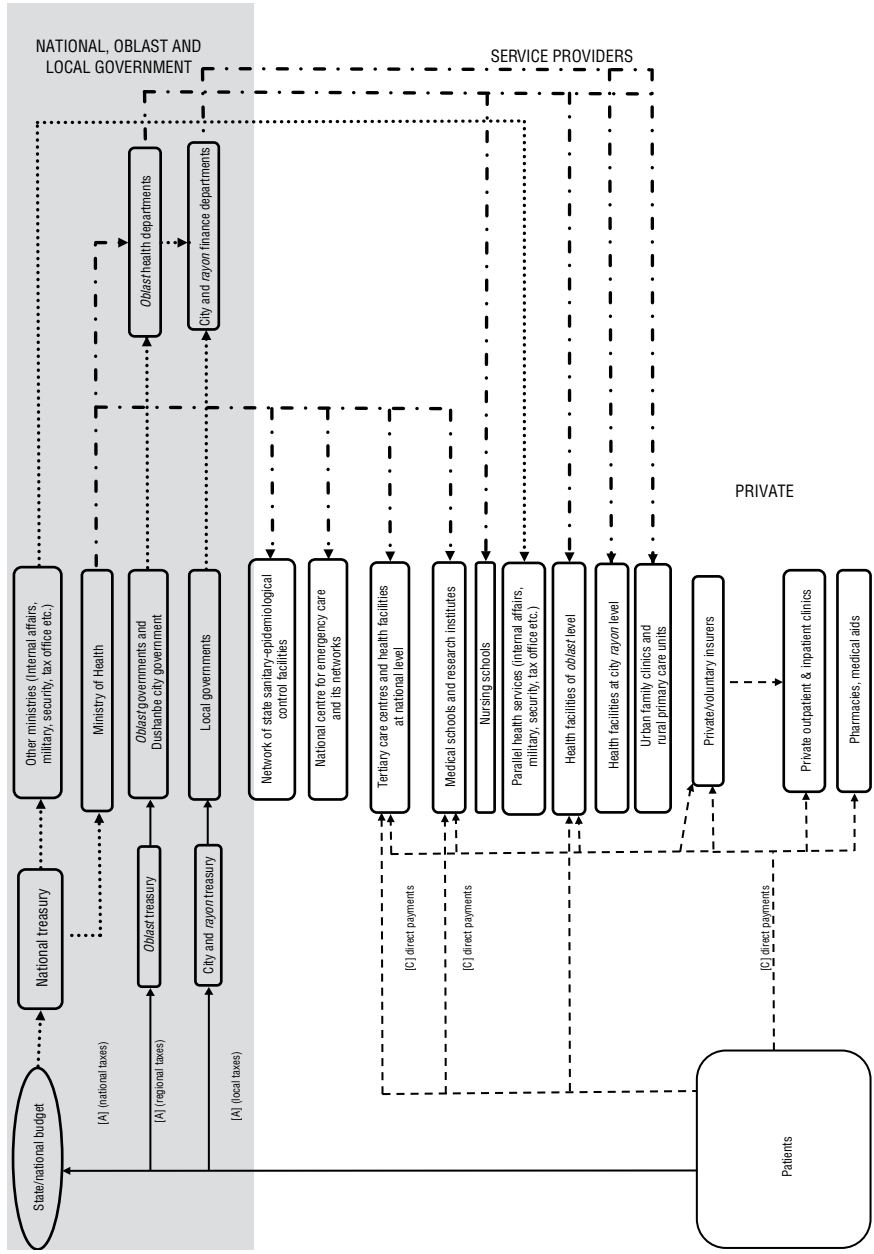
Source: WHO, 2015.

The vast majority of public funds for the health sector comes from *oblast* or local authorities. In 2012, these accounted for 81.2% of total public expenditure on health, with other ministries accounting for 4.6% (Egamov, Bogadyrova & Akkazieva, 2014c).

Government revenue is derived from the collection of national (republican) and local taxes. National taxes include income or profit tax, value added tax, excise duties, taxes on the extraction of natural resources (such as aluminium), taxes for road users and a sales tax on cotton fibre. Local taxes are collected by local government bodies at the *oblast* and city levels and include taxes on vehicles and real estate. The tax legislation was revised and simplified at the end of 2012.

Health financing reform started in 2005. The focus has been on diversifying sources of funding, such as through introducing formal co-payments, defining a guaranteed package of health services to align commitments for free health care with available resources and the step-wise introduction of population and activity-based health budget formation.

Fig. 3.6
Financial flows in the Tajik health system



3.3 Overview of the statutory financing system

3.3.1 Coverage

With the aim of ensuring equitable access to health care and formalizing OOP payments, the Ministry of Health and Social Protection developed a programme that encompassed a basic benefit package (also known as the "guaranteed benefit package") for people in need and formal co-payments for other groups of the population (Ministry of Health and Social Protection, 2005). The document was approved by Government Resolution No. 237 ("on approval of the basic benefit package for citizens of the Republic of Tajikistan and guidelines for the provision of medical and sanitary services by the state", approved 2 July 2005) and implementation started throughout the country on 1 August 2005. The first attempt to introduce the guaranteed benefit package in 2005 had several shortcomings in design and implementation (Saifuddinov, Severoni & Artykova, 2009) and its implementation led to considerable public dissatisfaction; it was suspended after only two months, in October 2005.

A new guaranteed benefit package was introduced through Government Decree No. 199 of 14 April 2007, and implementation in four pilot *rayons* (Tursun-Zade, Rasht, Danghara and Spitamen) began in June 2007 (Jakab et al., 2008). In August 2008, the basic benefit package was extended to four more pilot *rayons* (Varzob, Shahrinau, Nurek town and Sarband). In 2013 the Ministry of Health and Social Protection carried out a feasibility study to explore potential expansion of the basic benefit package to six more *rayons*. The study concluded that existing budgetary allocations would be insufficient to cover the costs of the programme (Kutanov et al., 2013). Despite this conclusion, the Ministry of Health and Social Protection scaled up the basic benefits package in 2014 to six more *rayons* (two *rayons* in each *oblast*): Asht, Fayzabad, Istaravshan, Hamadoni, Pyanj and Shugnan. Consequently, in 2015, 14 *rayons* were implementing the basic benefit package. In the remaining *rayons* of the country where the basic benefit package has not been introduced, health services are provided formally free of charge, in line with the Constitution.

The primary goal of the basic benefit package was to reduce informal payments by establishing a predictable and transparent system of patient rights and obligations and incorporating them into the formal health financing system. In the pilot *rayons* covered by the programme, receipts are provided for co-payments. Four waves of surveys were carried out, in April and October 2007, in 2008 and in 2013, in order to explore the impact of the basic benefits package on the financial burden of the population (HPAU, 2013c). The initial

evaluations found a reduction in under-the-table payments and increased formal salaries of physicians. However, overall OOP costs only decreased slightly (Jakab et al. 2008; Bobokhojaeva et al., 2009). There is general agreement that the basic benefit package is not fully financed. One of the challenges is that the introduction of the basic benefit package was not accompanied by changes in budget planning principles and methods. Furthermore, the levels and methods for establishing exemptions to co-payments are inadequate.

Specified social groups and patients with certain diseases have been exempted from co-payments (Table 3.3). However, the percentage of the population exempt from co-payments in the *rayons* where the guaranteed benefit package is being piloted is very small, constituting, for example, only 4% of the population in Spitamen *rayon* (Schneider, 2009). The types of service included in the basic benefit package and the eligible population groups are shown in Table 3.4.

Table 3.3

List of beneficiary categories entitled to free health services and pharmaceuticals under the basic benefit package, 2014–2016

Group 1: social status	Group 2: health indications (the main disease)
Veterans and invalids of the Great Patriotic War and persons equated to them	Children under 5 years of age with acute respiratory infections and previous diarrhoeal diseases (in the framework of the Integrated Management of Childhood Illnesses programme)
Heroes of the Republic of Tajikistan, the Soviet Union and persons awarded with three classes of the Order of Glory	Haemophiliacs
Heroes of Socialist Labour	Patients with leprosy
Soldier-internationalists, veterans of wars in other states	Hydrophobes
Citizens affected by the accident at the Chernobyl nuclear power plant and their family members who lost their guardianship	Patients with diphtheria
People who were disabled, wounded or maimed during military service	Patients with tuberculosis (under the DOTS programme)
People who are disabled since childhood	Patients with HIV/AIDS
Disabled children under 18 years	Patients with diabetes mellitus (insulin-dependent form)
Orphans living in state orphanages, foster families, boarding schools for orphans and children left without parental care	
Children under 1 year of age	
People with disabilities of groups I and II as a result of work-related injuries, occupational disease or general disease	
Citizens aged 80 years and older	
Citizens living in nursing homes and residential institutions	

Table 3.4
Basic benefit package

Service group	Services included	Eligible population group(s)[a]	Subject to payment?
Ambulance service	Emergency medical service and drugs in case of life-threatening conditions	Entire population	Free to all if conditions for service provision are met
	During pregnancy and delivery complications (drugs from the Essential Drugs List included)	Entire population	Free to all if conditions for service provision are met
Primary health care			
Preventive services	Promotion of healthy lifestyles	Entire population	Free
	Child immunization according to the WHO Expanded Programme on Immunization and national vaccination schedule	Eligible children according to national immunization schedule	Free
	Anonymous consultations about HIV/AIDS and sexually transmitted infections	Entire population	Free
	Child health monitoring	Children under 5 years	Free
	Periodic preventive check-up of school children	Children at school	Free
	Continuous monitoring of patients under dispensary supervision (without additional diagnostic and laboratory services)	Patients under dispensary supervision; exempted population is also entitled to additional diagnostic and laboratory services	Free
Diagnostic consultation	Patient consultation	Entire population	Free
Basic laboratory and diagnostic services	General blood tests	Population in Groups 1 and 2	Free
	General urine test and urine microscopy	Population in Groups 1 and 2	Free
	Blood test for malaria	Entire population	Free
	Sputum microscopy		Free
	Donor blood tests	Blood donors	Free
	Blood and urine sugar tests	Based on medical indication	Free
	Electrocardiography	Based on medical indication	Free
	Urethral and vaginal smear microscopy	Pregnant women, only in case of medical indication	Free
	Ultrasound examination of pelvic organs	Pregnant women, only in case of medical indication	Free
Curative services	Emergency medical services	Entire population	Free
	Immobilization of fractures	Entire population	Free
	Prescribing drugs and other diagnostic or curative interventions	Entire population	Free
	Medical injections (not clear if it includes the cost of drugs that are being injected)	Entire population	Free
	Curative manipulations/services (physiotherapy, massage, pleural drainage, initial surgical treatment of wounds, catheterization of veins, stitching wounds, etc.)	Population in groups 1 and 2	Free
Military draftees	All necessary primary health care	Military draftees	Free

Outpatient consultations			
Specialty consultations	Outpatient consultations including laboratory tests and diagnostics upon primary health care referral and prescription	Population in groups 1 and 2	Free
	Patient consultation and prescription (not including provision of drugs), upon primary health care referral	Entire population	Free
	Outpatient consultations including laboratory tests and diagnostics upon primary health care referral and prescription	Entire population	Co-payment 50%
	Outpatient consultations including laboratory tests and diagnostics *without* primary health care referral and prescription	Population without primary health care referral	Co-payment 80%
Hospital services			
Emergency services	Emergency hospital services are free until the patient is stabilized	Entire population	Free
	After stabilization, hospital services are considered either under planned hospital services or, in case of patient discharge, as outpatient services	Service provision is regulated by the rules of relevant services	See the entries for these services
Planned services	Planned hospital services upon primary health care referral	Population in group 1	Free
	Planned hospital services for major disease and upon primary health care referral	Population in group 2	Free
	Planned hospital services upon primary health care referral	Rest of the population	Co-payment 50%
	Planned hospital services *without* primary health care referral		Co-payment 80%
	Delivery services	Women under regular antenatal care	Free
	Delivery services	Women without regular antenatal care	Free for first 48 hours; beyond with co-payment 80%
Dental services			
Preventive	Check-up twice a year	Children and pregnant women	Free
Emergency	Emergency care	Entire population	Free
Oral sanitary services	Oral health conditions	Children 2–7 years of age and pregnant women	Free
Specialized services	Specialized services	Entire population	Subject to fee for service as established by the Ministry of Health and Social Protection

Notes: [a]Groups as in Table 3.3; Grey areas of the table denote services that will be offered to mothers and children under the guaranteed benefit package.

Additionally, in order to ensure equal access to health services and formalize informal payments, the Ministry of Health and Social Protection introduced in 2008 a policy similar to the basic benefit package, the Government Decree No. 600, which determined which health services in public facilities were provided free of charge and which required patient payments. It was originally envisaged that Government Decree No. 600 would be applied to all types of health service; however in the course of its implementation, it was decided to implement it stage by stage and begin with laboratory, diagnostic, dental and high-technology services. In 2008, the decree was implemented only in a number of pilot facilities, but by 2010 it was extended nationwide.

3.3.2 Collection

The largest proportion of health revenue now comes directly from health care users in the form of both official and unofficial OOP payments. As mentioned above, the guaranteed benefit package aimed to formalize informal payments through official co-payments but has so far only partially achieved this aim in the pilot *rayons* where it was introduced.

Within government financing, local budgets contribute the majority of health financing. The public finance structure consists of the republican budget, budgets of approximately 70 local governments (*oblast* and *rayon*) and two extrabudgetary funds: the Social Protection Fund and the Road Fund. The annual budget determines the fiscal relations between the different levels of government. Fiscal decisions are highly centralized and made in Dushanbe. Taxes are collected by the State Tax Committee and are managed by the Ministry of Finance, while some revenue is redistributed to local authorities. Local authorities receive back most personal income tax collected from their populations plus 85% of land taxes. Around 75% of overall state revenue is generated locally (mainly from income taxes collected by the State Tax Committee) and the remaining 25% from a variety of sources. The collapse of the economy and the protracted civil war have led to a severe government fiscal imbalance, with large budget deficits in most years, caused by falling sources of revenue, weak tax collection and poor controls on expenditure.

Mandatory health insurance does not exist, but its introduction has been envisaged for several years. First steps in this direction were taken on 5 June 2008, when the Parliament of the Republic of Tajikistan adopted the Law on "health care insurance in the Republic of Tajikistan". The law envisaged the introduction of mandatory health insurance in 2010. However, in 2010, the start date was postponed to 2014 (HPAU, 2013c). A feasibility study on the

introduction of mandatory health insurance was conducted in March 2013 (O'Dougherty et al., 2013). The study identified a number of preconditions for the implementation of mandatory health insurance, including the availability of institutional structures, functions and a precise definition of mutual relations between the key interested ministries and agencies (HPAU, 2013c; O'Dougherty, Zues & Akkazieva, 2014). One of the challenges is that the Ministry of Finance does not support the introduction of mandatory health insurance because of a lack of fiscal space and lacking capacity within the health system. A decision was made to postpone the introduction of mandatory health insurance until 2017, while the country tries to put in place the preconditions set out in the feasibility study (O'Dougherty, Zues & Akkazieva, 2014).

3.3.3 Pooling of funds

The process of budget formation in Tajikistan continues to be based on inputs (in particular the number of beds and health workers) rather than outputs (per capita financing for primary health care or case-based payments for inpatient or specialized health services). This perpetuates the incentives for overcapacity and emphasizes structure over content and quality of care (HPAU, 2013b,h). Health care managers have little discretion in how to distribute the budgets they receive as they have to follow strict line-items (HPAU, 2013b).

Across *oblasts* and *rayons*, there is significant inequity in both the absolute and relative level of health care expenditures. *Oblast* administrations can choose whether to top up the health budget from their own funds. The end result is that per capita health expenditure varies across *oblasts* and is not related to social or health needs, with the poorest *oblasts* spending the least per capita.

Since 2008, in line with the National Development Strategy, the Ministry of Health and Social Protection has developed a midterm expenditure framework on an annual basis. However, so far this framework is only partially used as a tool for strategic planning (HPAU, 2013c). Health sector budget planning continues to be fragmented by levels of budgets and by territorial finance planning units.

The Ministry of Health and Social Protection has long held the view that pooling of funds at least at the *oblast* level is a precondition for health financing reform and critical to increasing equity and financial risk protection. However, to date, the Ministry of Health and Social Protection and the Ministry of Finance have not reached consensus on the pooling of funds (Ministry of Health and Social Protection, 2014; O'Dougherty, Zues & Akkazieva, 2014).

3.3.4 Purchasing and purchaser–provider relations

At present, there is no real mechanism for purchasing services in Tajikistan's health system. Most health facilities are government owned, while the "purchasers" of health services include patients, the government and external donors. The current health financing reforms envisage the establishment of a clear purchasing role for the Ministry of Health and Social Protection, led by a purchasing department.

The budgetary process and relations between levels of government are set out in the 1994 Law "on local government" and the 1997 Law "on budget organization and budget process". The health care budget is divided between the central (republican) and local authorities. The Ministry of Finance allocates the health budget within the budget ceiling for the health sector based on the proposal of the Ministry of Health and Social Protection. The Ministry is allocated the republican budget, and the *hukumats* of *oblasts*, cities and *rayons* are allocated the local budgets. The Ministry of Health and Social Protection budget is for republican health care facilities, national health programmes and capital investment; the local budget is for health care facilities of *oblasts*, cities and *rayons* and health development activities at the local level (HPAU, 2013b).

Since 2015, the budgets of health facilities are generally determined on the basis of past expenditures and inputs (see section 2.5). The process of health budget formation, the level at which health funds are generated and maintained, and the resource allocation and provider payment methods pose serious obstacles to improving the performance of the Tajik health system. However, a new population-based budget formation has been piloted in primary health care since 2013 in an effort to move away from the normative-based budget formation characteristic of the Soviet period and to improve the equity and efficiency of public expenditure on health (see section 3.7).

As of 2014, health care providers at the levels of primary and secondary care are funded mainly through *oblast* or *rayon* budgets, according to norms established on the number of beds, staff and other factors. Budgets are set for each of the administrative units: republic, *oblasts*, cities, *rayons* and *jamoats*; the Social Protection Fund and the Road Fund run their own budgets. Local authorities have their own limited sources of revenue but receive substantial earmarked transfers from the republican budget. The national parliament must approve the annual budget for the country, while the representative councils at the regional levels approve their own budget plans.

As of 2015, an annual budget is drawn up for each facility, based on norms such as staff and beds and in large part their historical budgets divided into a few line-items. These budget plans are passed on to the financial departments at each administrative level. The *oblast* plans are also forwarded to the Ministry of Health and Social Protection, which collates the overall health budget for the country. This is then sent to the Ministry of Finance. The Ministry of Finance makes the budgetary decisions, reducing each budget request in line with the available revenue. At each stage of the budgetary process, therefore, the actual funds get smaller: the proposed budget, the estimated budget, the allocated budget and the actual expended budget. The end result is that a health care facility receives far less than its running costs. The resources granted by the Ministry of Health and Social Protection generally only cover a small part of the required budgets and are to a large degree used for paying staff at hospitals, where most health workers are based.

The Ministry of Finance deals with the allocation of central budgetary resources to the three *oblast* administrations. The *oblast* administrations receive funds from the Ministry of Finance for allocation to their facilities, such as *oblast*-level hospitals and polyclinics. The main source of revenue for the 65 *rayons* are local taxes. At the lowest level, the *jamoats* disburse funds that they receive from *rayon* administrations to health houses (*dom zdorovia* or *honahoi salomati*; prior to 1997 called *feldsher*-midwifery posts), rural health centres (*selskaya vrachebnaya ambulatoryia*) and rural hospitals (*selskaya uchastkovaya bolnitsa*).

The chief doctors (*sartabib*) of health facilities have little financial discretion since budgets are tied to line-items, and since managers cannot disburse funds. The finance departments in each administration (republic, *oblast* and *rayon*), not the facility manager, pay salaries and other expenditure such as utility bills. Managers must submit a form to the finance department of the local administration, for example when requesting medical supplies; if there are enough funds in the budget line, the request is approved and funds sent directly to the supplier. The budgetary allocation of the Ministry of Finance to *oblasts* is based on historical budgets but also on political considerations. The *oblasts* vary in terms of what proportion of their budget comes from central revenue.

3.4 OOP payments

3.4.1 Formal payments

Private patient payments were introduced in the second half of the 1990s in some state-run health care facilities, the so-called "self-financing health care centres", which were allowed to charge for services. These include different high-level specialized hospitals and centres located mainly in the capital, Dushanbe. Patients are charged for certain services according to a price list developed by health care institutions and approved by the Ministry of Health and Social Protection and the State Antimonopoly Committee. In addition, there are private health care providers that operate on a fee-for-service basis.

A constitutional amendment removing the right to free health care was approved by a national referendum in June 2003, allowing the government to introduce co-payments for all state-run health services. This marked an important break with the past and indicated the commitment of the government to implement reforms in the health sector. The constitutional amendment allowed the government to prioritize the allocation of health resources in line with the state-guaranteed essential health services and to introduce co-payments for other health services.

As part of the basic benefit package introduced in 2007, eight co-payment categories were created in the pilot *rayons* covered by the programme. For each category, the average amount a patient was supposed to contribute was set significantly lower than that reported for under-the-table payments for the same health care intervention. In addition, a 30% (for patients referred from the primary health care level) and 70% (for self-admission without any referral) co-payment differential was introduced. This differential co-payment was intended to strengthen the role of primary health care and to direct the flow of patients to primary health care units rather than hospitals. In 2009, co-payment levels increased to 50% and 80%, respectively. The same co-payment categories were created and the same policy introduced in 2008 with Government Decree No. 600.

In August 2008, a government decree increased the number of co-payment categories to 10. A joint decree of the Ministry of Health and Social Protection and the Ministry of Finance on 16 June 2009 introduced 12 co-payment categories. After this, the basic benefit package was revised twice more (HPAU, 2013c).

3.4.2 Informal payments

Informal, under-the-table payments are very common in Tajikistan and prevail over formal payments in the private sector, the state-run "self-financing health care centres" and the pilot *rayons* covered by the basic benefit package. Informal payments are made directly as OOP outlay. In a survey conducted in 2010, 39% of respondents reported to have made informal payments, an increase from 33% in 2006 (Diagne, Ringold & Zaidi, 2012). Household surveys in four rural *rayons* (Dangara, Varzob, Shahrinav and Tursunzade) in 2005, 2007, 2008 and 2011 found that OOP expenditure for formally free primary health care was common, with the median amount increasing from US$ 5.3 in 2005 to US$ 10.7 in 2011. Expenditure on pharmaceuticals represented the biggest financial burden. There were substantial variations across *rayon* of residence (with 20.1% of patients paying their doctor in Dangara as opposed to 72.8% in Tursunzade) and economic status, with richer patients more commonly reporting OOP payments than poorer patients (Schwarz et al., 2013).

3.5 Voluntary health insurance

According to National Health Accounts data, private health insurance was estimated to account for only 0.1% of total health expenditure in 2012 (Egamov, Bogadyrova & Akkazieva, 2014c).

3.6 Other financing

3.6.1 External sources of funds

External sources of funds amount to a significant share of total health expenditure, accounting for 10.3% in 2013 (WHO, 2015). Tajikistan's health sector is supported by a large number of international organizations, including NGOs as well as bilateral and multilateral agencies. Key actors include the World Bank, the EU, the Global Fund, the German Government (the Federal Ministry for Economic Cooperation and Development, the German Federal Enterprise for International Cooperation, *Gesellschaft für Internationale Zusammenarbeit*, and the German Development Bank, *Kreditanstalt für Wiederaufbau*; KfW), WHO, the United Kingdom's Department for International Development, the Swiss Development Cooperation, the United States Agency for International Development (USAID), and the Aga Khan Development Network. Other

agencies involved are the United Nations Development Programme, UNICEF and the United Nations Population Fund. Although there are efforts to improve donor coordination, such as through the Coordination Council for International Cooperation and the Joint Annual Review (Ministry of Health and Social Protection, 2012), a formal sector-wide approach is not yet in place (Mirzoev, Green & Newell, 2010).

3.6.2 Parallel health systems

As in many other former Soviet countries (Rechel et al., 2013), parallel health systems outside the system of the Ministry of Health and Social Protection continue to exist in Tajikistan. These include the health systems run by the Ministries of Internal Affairs, Defence, Security, Taxation and Transport; the Tajik Air company; Tajik Railway; the Tajik textile industry; and Talco (the Tajik aluminium factory). In 2012, financing from these parallel health systems accounted for 4.6% of total health expenditure (Egamov, Bogadyrova & Akkazieva, 2014c).

3.7 Payment mechanisms

3.7.1 Paying for health services

In 2015, mechanisms for allocating public resources to health care providers still continued to be based on inputs (in particular the number of beds and health workers) rather than outputs (case-based payments for hospitals), the covered population (capitation payment for primary health care) or quality of care (HPAU, 2013b). Furthermore, financial resources for health care providers are closely tied to a line-item budget system.

Exceptions are still in their pilot phase, although their geographical scope and the depth of reforms have been gradually increasing. Partial capitation-based financing of primary health care (applied only to unsecured line-item expenditure of health facilities) was first piloted in Dangara and Varzob *rayons* in 2005–2006 and by 2010 was scaled out all over the country. However, the main expenditure of health facilities (88–90% in 2007–2010) is associated with staff salaries, which are considered secured line-items in the budgets of health facilities.

In 2013, within the framework of joint Decree No. 98/25 of the Ministry of Health and Social Protection and the Ministry of Finance, adopted on 28 February 2013, work on introducing full per capita financing at primary health care level started in pilot *rayons*, covering all costs of health facilities (including both secured and unsecured line-items). In 2013, per capita financing of primary health care in Sughd *oblast* was expanded to cover all expenses (Ministry of Health and Social Protection, 2013a), although, as mentioned above, the process of budget formation was not affected by this change and allocations are still made according to historic line-items. Since 2014, the Ministry of Health and Social Protection, in close consultation with the Ministry of Finance and with the support of development partners, has been working to develop a national methodology for capitation payment of primary health care, which is anticipated to be applied in a phased manner from 2016, initially with a budget-neutral approach (i.e. not affecting the process of budget formation).

For inpatient care, it has been recognized by the Ministry of Health and Social Protection and the Ministry of Finance that results-oriented purchasing is more efficient than an input-based one. First steps towards introducing output-based financing have been taken and it was planned to introduce case-based funding for inpatient care in 2015–2018 (Ministry of Health and Social Protection, 2014). The Ministry of Health and Social Protection issued Decree No. 188 on 30 March 2009 which approved the "Action plan on introduction of a new financing mechanism based on treated cases" at the hospital level. Based on this decree, hospital reporting form No. 066 (including data on patients by diagnosis-related groups) was improved and software for automated data collection on discharged patients at secondary care facilities of Khatlon *oblast* was installed (HPAU, 2013c). In 2010 and 2011, simulations of hospital budgets based on case-based payment mechanisms were undertaken.

3.7.2 Paying health workers

The main line-item of the state health budget is the salaries of health workers (HPAU, 2013c). At the hospital level this accounted for 77% of overall state funds in 2011, while its share was even higher in primary health care (88.5%). This means that providers' expenses are primarily associated with the remuneration of health workers, with only a very small percentage devoted to the actual treatment of patients (including pharmaceuticals and food), accounting for 5.9% of the cost of inpatient services and 1.8% of the costs of outpatient services in 2011 (HPAU, 2013b).

Almost all health workers are state employees. The salary payments in Tajikistan are regulated in accordance with the Instruction on the Salaries of Health Workers of the Republic of Tajikistan (No. 10, adopted on 8 July 2009), which also specifies how basic salaries differ according to the category of physicians and the years of work experience (HPAU, 2013h). However, a consequence of the decentralized system of paying health workers is that *oblasts* and *rayons* can top up the basic salaries of health workers, leading to significant wage differentials for the same category of health workers across *oblasts* and *rayons*, depending on budgetary resources and the priority given to health by local authorities. The average monthly salary of physicians increased from 58 somoni in 2007 (approximately US$ 17 at the time) to 788 somoni in 2013 (approximately US$ 165 at the time) (Egamov, Bogadyrova & Akkazieva, 2014c). The average monthly salary of mid-level medical staff amounted to 489 somoni (approximately US$ 103 at the time) in 2013, while the average for junior-level medical staff amounted to 289 somoni (approximately US$ 61 at the time) (HPAU, 2013h). This compared with an average monthly salary across sectors of approximately 700–800 somoni in 2013.

In order to improve the coverage and quality of basic health services, especially for women and children, the Ministry of Health and Social Protection has been implementing the Health Services Improvement Project with the support of the World Bank since 2013. Under this project, the use of performance-based financing at the primary health care level is being piloted. Initial guidelines for the implementation of the performance-based financing scheme were outlined in a manual approved by the Ministry of Health and Social Protection (Decree No. 177, adopted on 4 April 2014). The performance-based financing scheme was initially pre-piloted in Spitamen *rayon* in Sugd *oblast* between April and December 2014. Based on the lessons learnt from this pre-pilot, some modifications were made to the scheme, and its implementation was scaled up to seven additional *rayons* in Sughd and Khatlon *oblasts* in January 2015.

4. Physical and human resources

Tajikistan has substantially downscaled its extensive hospital infrastructure, but the number of acute care hospital beds per population is still high compared with many other European countries. Average length of stay in acute care hospitals is comparatively long, while the bed occupancy rate is comparatively low, suggesting scope for improved efficiency. The capital stock has suffered from years of underinvestment, and medical equipment is often insufficient, outdated or lacking altogether. There are fewer physicians and nurses in Tajikistan than in other countries of the region and these are concentrated in the capital. Reforming medical education has been one of the key directions of reform, with upgraded nursing training and the introduction of family medicine. However, family medicine continues to suffer from a low prestige and poor working conditions and most graduates choose other specialties.

4.1 Physical resources

Tajikistan inherited a health system from the Soviet period that was comprehensive but underfinanced and inefficient. After more than two decades of independence, the country still struggles to disentangle itself from this legacy. Facilities are often highly specialized and centralized, with an emphasis on curative and inpatient care, and there is a serious misbalance in the distribution of health facilities across the country.

4.1.1 Capital stock and investments

Capital investment in the health system has been negligible since Tajikistan's independence. Funds for rehabilitation of existing buildings or construction of new ones have been lacking, and modern equipment tends to be obsolete

and dysfunctional. In most health facilities, heating, water supply, sewage systems, sanitation, electricity and communication systems are unsatisfactory. This lack of a technical base fundamentally impedes the provision of care (WHO Regional Office for Europe, 2014b).

Most health facilities in Tajikistan were constructed in the period 1938–1980, and their condition has deteriorated sharply since the country's independence, mainly through a lack of investment in reconstruction or the purchase of new equipment. Since 1990, there has been little investment in modern medical equipment for *rayon* and *oblast* hospitals, while the remaining equipment fell into a state of disrepair. Where investments took place, they were mostly directed at large national-level health facilities in Dushanbe, as well as areas of health care that benefited from donor assistance, such as tuberculosis (supported by KfW and the Global Fund) and mother and child health (supported by KfW). The poor material conditions of many health facilities undermine access to health services, quality of care, and staff and patient satisfaction.

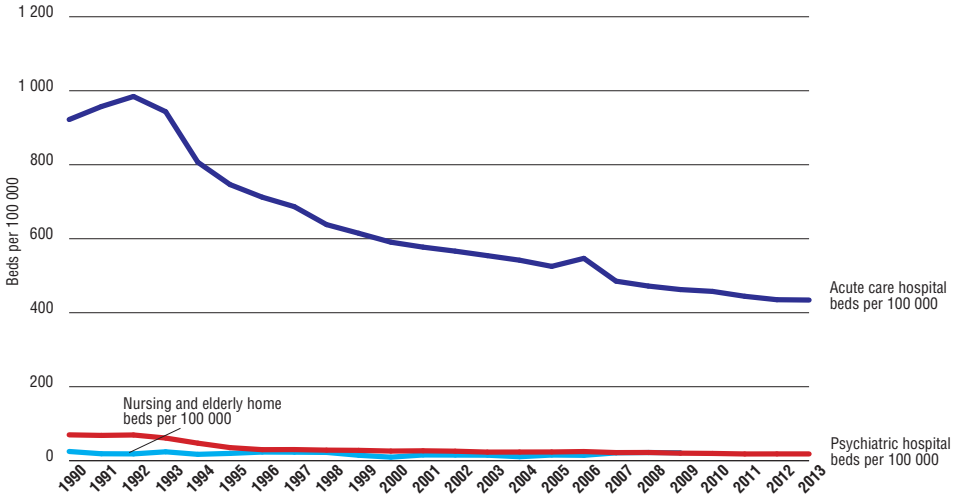
The experience of a Tajik–German project on modernizing initially four central *rayon* hospitals, with funding from KfW, showed that centralizing vitally important services (such as accident and emergency services, admission, diagnostic premises, operation theatres, intensive care units and surgical departments) can help to reduce recurrent expenditure. The central *rayon* hospitals of Huroson, Yavan, Hamadoni and Farhor *rayons* (all in Khatlon *oblast*), after being internally reconfigured and renovated, are able to meet running costs through funds from the local state budget, while equipment is being maintained through a co-payment mechanism from a special hospital budget.

4.1.2 Infrastructure

There has been a significant decline in the number of acute care hospital beds per 100 000 population, falling from 922 in 1990 to 434 in 2013 (WHO Regional Office for Europe, 2015a). The decline in the number of psychiatric hospital beds was even more pronounced, from 70 per 100 000 population in 1990 to 18 in 2013. The number of nursing and elderly home beds declined from 25 per 100 000 population in 1990 to 22 in 2009 (Fig. 4.1).

There were several stages in rationalizing the country's hospital network (HPAU, 2013c). In the first stage (1992–2002), hospital beds were cut by about 30%. In the second stage, starting in 2006, further reductions were achieved. The latest stage was initiated by the Ministry of Health and Social Protection

Fig. 4.1
Number of beds per 100 000 population by type of institution, 1990–2013



Source: WHO Regional Office for Europe, 2015a.

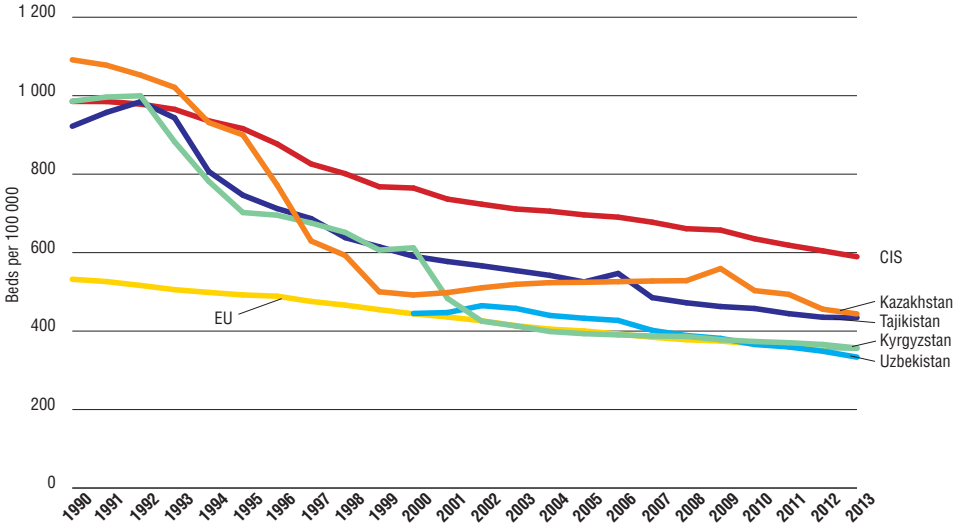
in 2010. The Strategic Plan for the Rationalization of the Health Care Facilities Network of the Republic of Tajikistan for 2011–2020 envisages that the number of *oblast*, *rayon*, city and rural hospitals will be reduced by 30% by 2020, whereas the number of primary health care facilities is envisaged to increase (HPAU, 2013b).

However, when seen in the European context, it becomes apparent that the ratio of acute hospital beds to population is still comparatively high in Tajikistan (Fig. 4.2). At 444 per 100 000 population in 2013, it exceeded the EU average of 356 in the same year, although it was clearly below the CIS average of 590 (WHO Regional Office for Europe, 2015a). The number of acute care hospital discharges per 100 population has declined substantially in Tajikistan in the 1990s and is now below other countries of the region (Fig. 4.3). The average length of stay in acute care hospitals is longer than in Uzbekistan and Kyrgyzstan, but shorter than in Kazakhstan (Fig. 4.4).

The bed occupancy rate in acute care hospitals was 73.1% in 2012, which was lower than in other countries of the region (Fig. 4.5). The comparatively low bed occupancy rate in Tajikistan has been attributed to poor planning and allocation of resources (HPAU, 2013b).

Fig. 4.2

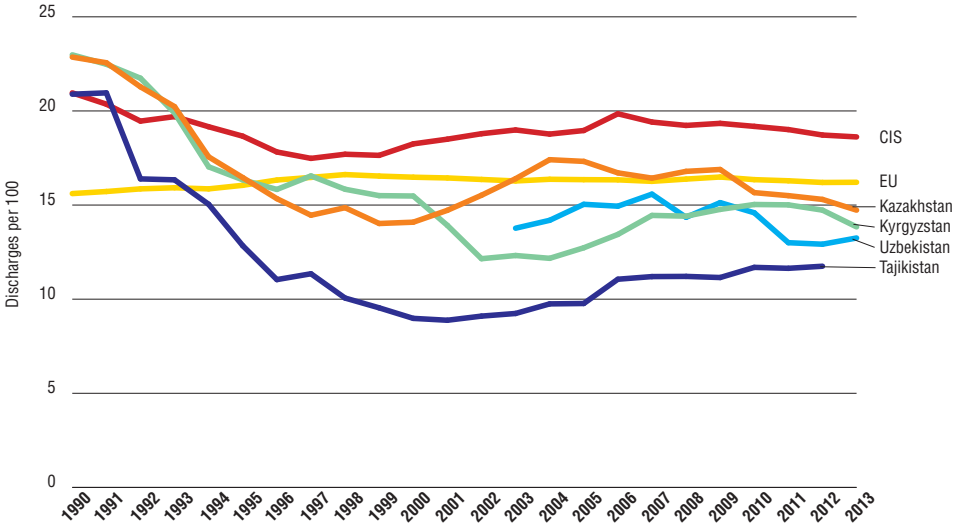
Beds in acute care hospitals per 100 000 population in Tajikistan and selected countries, 1990–2013



Source: WHO Regional Office for Europe, 2015a.

Fig. 4.3

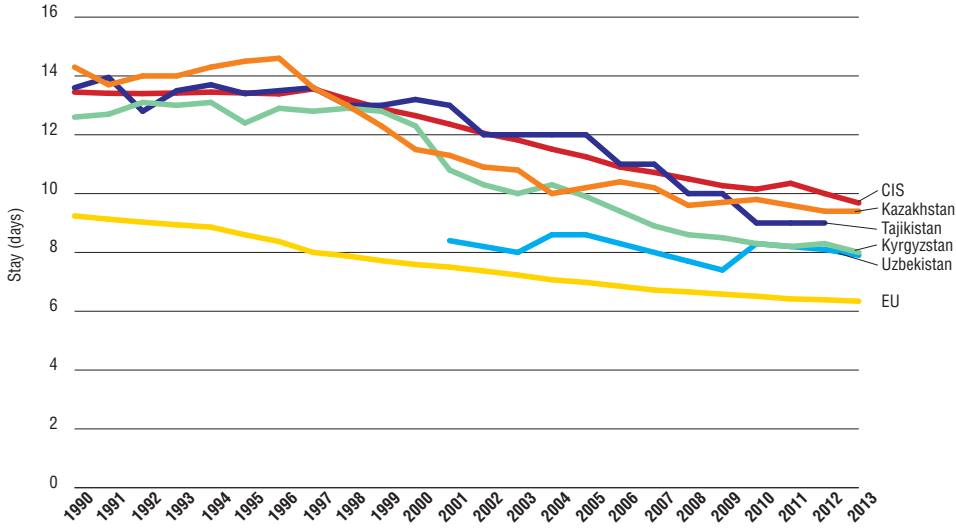
Acute care hospital discharges per 100 population in Tajikistan and selected countries, 1990–2013



Source: WHO Regional Office for Europe, 2015a.

Fig. 4.4

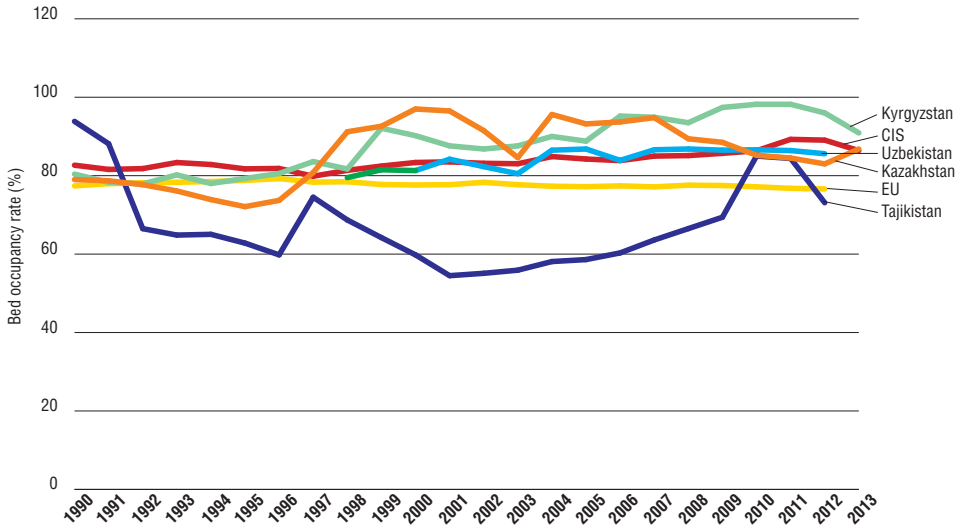
Average length of stay in acute care hospitals in Tajikistan and selected countries, 1990–2013



Source: WHO Regional Office for Europe, 2015a.

Fig. 4.5

Bed occupancy rate (%) in acute care hospitals in Tajikistan and selected countries, 1990–2013



Source: WHO Regional Office for Europe, 2015a.

4.1.3 Medical equipment, devices and aids

Medical equipment is assessed and purchased through the procurement section of the Ministry of Health and Social Protection. In practice, funds have been lacking for the purchase of new technology, or to maintain and repair equipment, although the government and external donors have started to address this through substantial investments.

Local tendering is used for the procurement of basic clinical and nonclinical equipment, while more sophisticated medical equipment is mostly purchased through international competitive bidding and with financing through external donors. Between 1999 and 2013, modern medical equipment was purchased for eight large hospitals: the cardiosurgery hospital, the cardiology hospital, the Research Institute of Obstetrics, Gynaecology and Perinatology, the emergency care hospital in Dushanbe city, the paediatric services of the national clinical centre, the national referral hospital for tuberculosis in Macheton and *oblast* and city obstetric hospitals of Khudjand city (Sogd *oblast*). During this period, only one multipurpose interdistrict hospital was newly constructed and equipped as a turn-key project. External funding agencies included the Government of Germany through KfW, the Islamic Development Bank, the Saudi Fund for Development and the Government of Japan. However, hospitals still lack funds for maintenance and spare parts. In 2015, the Ministry of Health and Social Protection established a national equipment repair centre, Tajikmedservice, in order to support medical facilities in maintaining their equipment.

In 2013, there were six MRI units and 12 CT scanners, as well as four angiography units, but no positron emission tomographs. The transplantation centre gained experience in performing more than 100 kidney transplantations, and started to undertake liver transplantation in 2014. Most national, *oblast* and *rayon* hospitals have started to perform endoscopic surgery, mainly in abdominal and pelvic organs. Since 2014, this technique has also been introduced in neurosurgical and urology hospitals. Each year, more than 1000 angiography procedures with stenting are being implemented in three large state and private hospitals. While modern medical equipment is increasingly being procured, most private medical facilities are not able to purchase such equipment. Apart from the costs, another obstacle is that, since 2007, private providers need to pay value added tax on imported medical equipment. Lack of equipment, devices and aids has also been reported at the level of primary health care, where family doctors and *rayon* physicians consistently report being insufficiently equipped or lacking altogether the necessary laboratory and radiography facilities (WHO Regional Office for Europe, 2014a).

4.2 Human resources

4.2.1 Health workforce trends

The number of health workers per population has declined since 1990 for all professional categories except pharmacists, although no recent data on this category were reported to the WHO Regional Office for Europe (Table 4.1). A particularly drastic decline occurred in the number of midwives per 100 000 population, falling from 129 in 1990 to 54 in 2013 (WHO Regional Office for Europe, 2015a).

Table 4.1
Health workers (physical persons) per 100 000 population, 1990–2013 (selected years)

	1990	1995	2000	2005	2009	2010	2013
Physicians	255.1	213.6	167.0	157.1	162.5	168.9	169.9
Physicians working in hospitals (% total number)	n/a	n/a	73.4	66.2	62.0	n/a	n/a
General practitioners			1.5	6.1	26.6	21.1	27.6
Dentists	14.9	16.9	15.1	14.5	15.4	16.5	15.4
Pharmacists	11.8	7.8	11.0	n/a	n/a	n/a	n/a
Nurses	596.9	510.3	420.1	340.1	489.7	393.2	444.3
Midwives	128.7	84.6	62.8	54.3	51.8	53.2	53.5

Source: WHO Regional Office for Europe, 2015a.
Note: n/a: Not available.

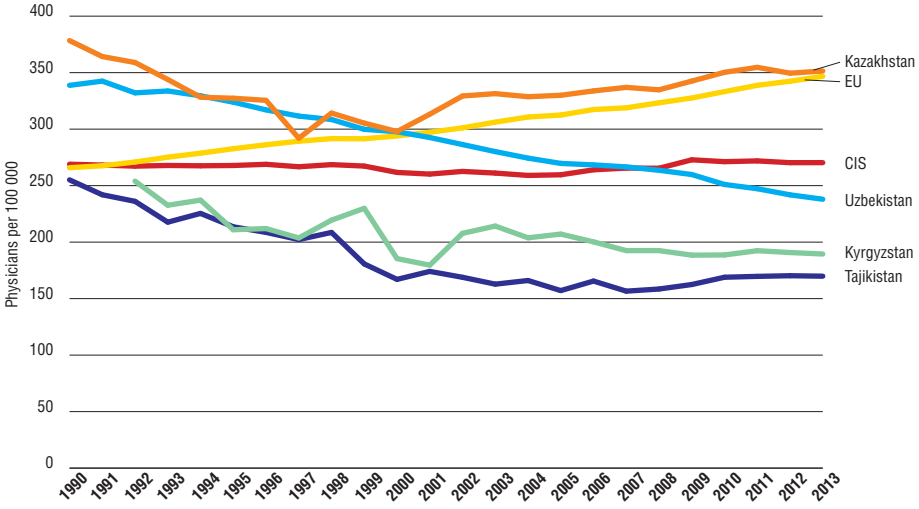
Comparisons with other countries in central Asia and with regional averages illustrate that there are fewer health workers on a population basis in Tajikistan than in western Europe, most former Soviet countries and most other countries in central Asia. The decline in the number of physicians in Tajikistan per 100 000 population, from 255 in 1990 to 170 in 2013, broadly corresponds with a similar decline at a somewhat higher level in other central Asian states, but contrasts with an increase in physicians per population in the EU and a stagnating trend in the CIS overall (Fig. 4.6) (WHO Regional Office for Europe, 2015a).

Some of these trends date back to the Soviet period. Although the Soviet health system aimed to provide health services of uniform quality across the USSR, in practice large variations in the provision of health workers existed. In 1987, for example, there were more than twice as many physicians per 1000 population in Georgia (5.7) than in Tajikistan (2.7) (Rowland & Telyukov, 1991).

The number of nurses per 100 000 population in Tajikistan has also declined, from 597 in 1990 to 350 in 2004, before increasing again to 444 in 2013 (Fig. 4.7). However, the ratio in Tajikistan was still far below the averages for the CIS and the EU.

Fig. 4.6

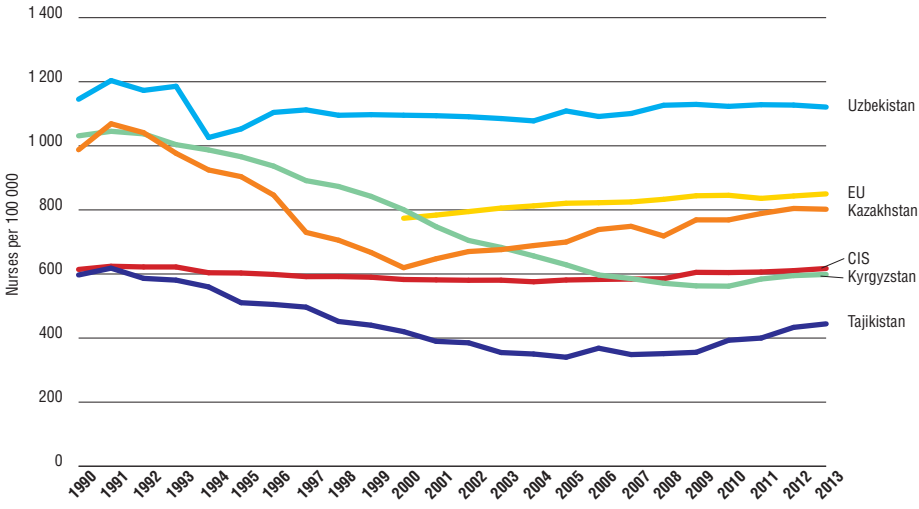
Number of physicians (physical persons) per 100 000 population in Tajikistan and selected countries, 1990–2013



Source: WHO Regional Office for Europe, 2015a.

Fig. 4.7

Number of nurses (physical persons) per 100 000 population in Tajikistan and selected countries, 1990–2013

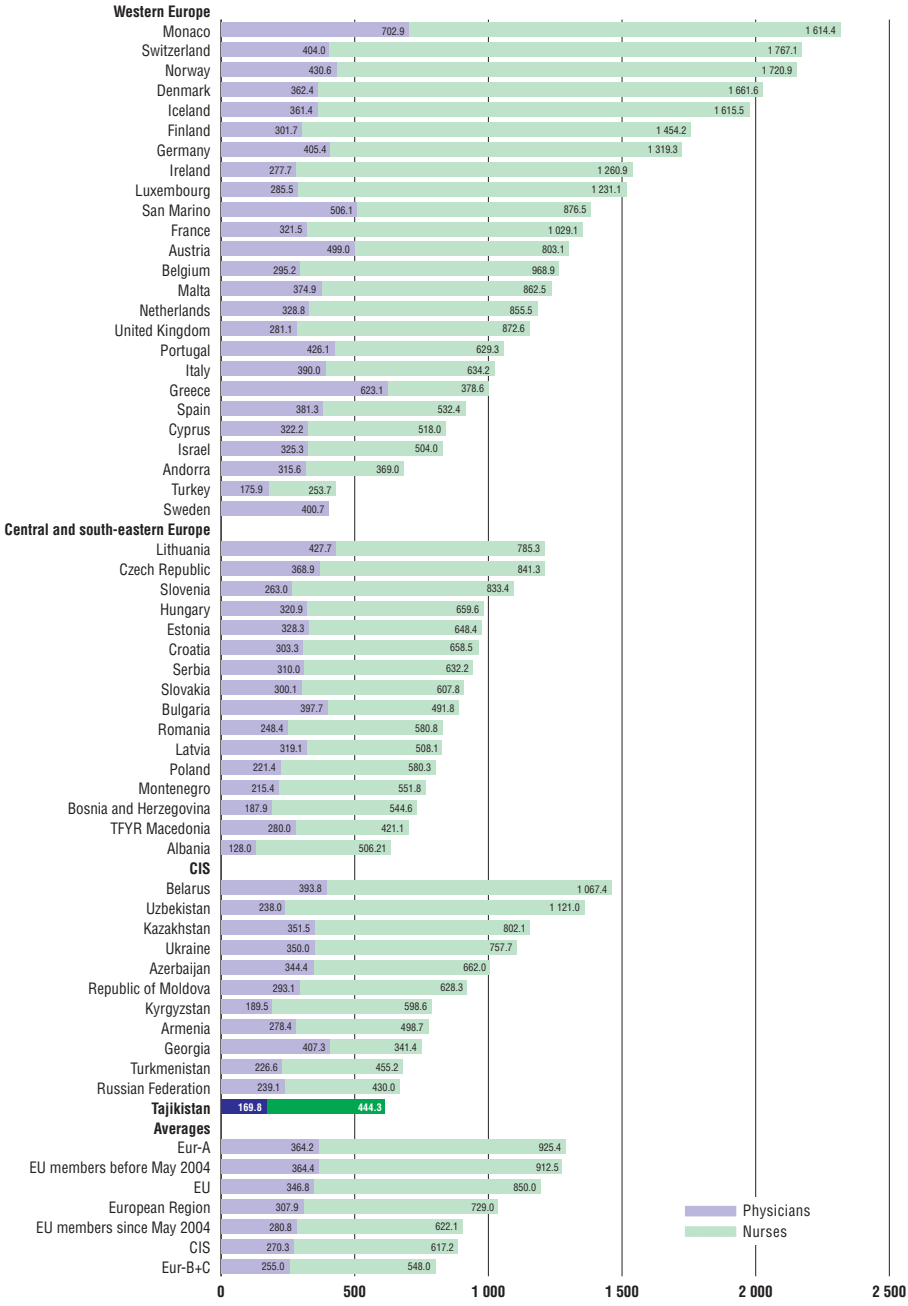


Source: WHO Regional Office for Europe, 2015a.

The combined ratio of physicians and nurses in Tajikistan to population size is one of the lowest in the European Region (Fig. 4.8).

Fig. 4.8

Number of physicians and nurses (physical persons) per 100 000 population in the WHO European Region, 2013 or latest available year

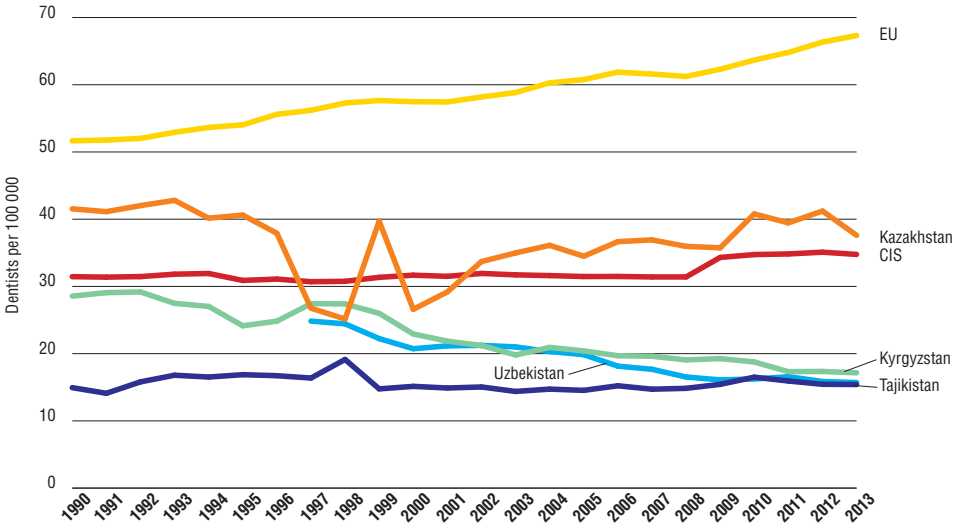


Source: WHO Regional Office for Europe, 2015a.
Notes: CARK: Central Asian Republics and Kazakhstan; EUR-A,B,C: Regions as in the WHO list of Member States, last available year; TFYR Macedonia: The former Yugoslav Republic of Macedonia.

As illustrated in Fig. 4.9, the number of dentists per 100 000 population in Tajikistan is also much lower than in many other European countries, showing a largely stagnating trend since 1990.

Fig. 4.9

Number of dentists (physical persons) per 100 000 population in Tajikistan and regional averages, 1990–2013



Source: WHO Regional Office for Europe, 2015a.

In addition to having fewer health workers on a population basis than other countries in central Asia, Tajikistan also has to tackle pronounced regional imbalances. Physicians are concentrated in the capital, Dushanbe, while the density of all staff categories (except *feldshers*) is lowest in Khatlon *oblast* and the Districts of Republican Subordination. Challenges in rural and remote areas include poor human resource management, low salaries, outdated medical equipment and the poor condition of health facilities.

The Ministry of Health and Social Protection has introduced a range of incentives to improve the distribution and motivation of the health workforce. For example, it has used the allocation of land plots as a nonfinancial incentive to entice recent graduates to rural and remote areas. The Ministry has also adopted a policy that obliges recent graduates to spend the first three years after obtaining their diploma in rural areas (WHO Regional Office for Europe, 2014b), although in practice this policy has not been implemented.

4.2.2 Professional mobility of health workers

Similar to its neighbours Kyrgyzstan (Ibraimova et al., 2011) and Uzbekistan (Ahmedov et al., 2014), Tajikistan has faced substantial outmigration of health workers since achieving independence, in particular to the Russian Federation. In Tajikistan, the resulting brain drain was exacerbated through the civil war in the 1990s. However, no precise data exist on the numbers of health professionals leaving the country. While medical schools remain able to attract students, retention of graduates at health facilities poses a serious problem, and the health system continues to lose qualified workers (Ministry of Health and Social Protection, 2012).

4.2.3 Training of health workers

A single state university, the Tajik State Medical University, is responsible for the training of physicians and pharmacists. Annually, approximately 600–1000 physicians graduate from there. As there is a high awareness of geographical imbalances in the distribution of physicians, students from underserved regions are favoured, but imbalances nevertheless remain. The Ministry of Health and Social Protection has limited the number of new students per year in order to improve the quality of the training provided to students and to avoid a surplus of staff. However, institutions for the training of health workers generally lack appropriate training materials, equipment and infrastructure, as well as sites for practical experience and qualified teachers.

Tajikistan has started to bring its university education in line with the Bologna process. Since 2007, the training of physicians and pharmacists has been divided into bachelor's and master's studies. The bachelor's degree for dentistry and pharmacy takes four years; the bachelor's degree for general medicine, paediatrics and public health takes five years. This is followed by a master's degree with an additional two to three years of studies. Most physicians continue to be trained as specialists. One of the greatest challenges for medical education is year six (the practical year), where students are often not exposed to clinical practice. After receiving a medical diploma, physicians undergo a clinical residency programme which lasts one year (*internatura*) directly after medical university, two years (clinical *ordinatura*) for those who were granted a diploma with honour, or three years for those undertaking practical work in their chosen field.

Physicians are formally required to undergo continuous professional education, with a one-month refresher course every five years. There are also many continuous professional education courses within the framework of donor-funded projects. However, many physicians do not seem to undergo

any continuous professional training. A survey conducted by the World Bank in Tajikistan in 2011 found that only 38% of hospital physicians and 29% of primary care physicians had received any type of continuous medical training in the previous 12 months (World Bank, 2013).

Medical schools have the following faculties: general medicine, obstetrics, dental care, pharmacy, medical techniques and equipment, hygiene, sanitation and epidemiology. Medical colleges have the following faculties: nursing, laboratory studies, hygiene, sanitation and epidemiology.

Nursing is still poorly developed and many nurses are underqualified. Although they constitute the majority of health workers and contribute significantly to the provision of health services, nursing has so far failed to attract sufficient attention. Many nurses carry out a limited number of functions and do not take independent decisions on patient care. There are however some positive developments in the training of nurses. A nursing faculty has been established at the Postgraduate Medical Institute and nurse training has been upgraded to four-year courses.

Feldsher (doctors' assistant) training was upgraded in 1996 to a four-year course in medical colleges. *Feldshers* work mainly in rural areas and fulfil an important function in the absence of physicians in these areas.

The employment of health workers is organized according to the labour legislation of Tajikistan. Graduates are typically enrolled in the public workforce (see section 3.7.2). However, there is a tendency to allocate tasks to physicians that could be performed by nurses.

A Public Health Faculty has been established in the Medical Institute of the Tajik State Medical University in 2005, granting both bachelor's and master's degrees in public health.

The Concept of Reform of Medical and Pharmaceutical Education, approved by Government Decree No. 512 of 31 October 2008, envisaged reforms of the structure, content, duration and quality of medical and pharmaceutical education in Tajikistan. The main objectives of the concept included:

- improving the medical education system in line with the recommendations of the World Medical Education Federation, establishing three consistent stages – higher medical education, postgraduate medical education and continuous professional education;
- introducing the European system of credits accumulation and transfer;
- improving the state standards of medical and pharmaceutical education;

- changing the quality assessment system and level of professional competency; and
- introducing accreditation of medical education institutions.

Strengthening family medicine has been one of the priorities of health reforms in Tajikistan (HPAU 2013e). In 1998, the Ministry of Health and Social Protection adopted an order envisaging the gradual transition of primary health care towards a system based on general practitioners (Ministry of Health and Social Protection, 1998). The National Health Strategy for 2010–2020, adopted in 2010, reaffirmed the importance of developing family medicine. The Law No. 676 "on family medicine" was adopted in December 2006, serving as a basis for the Family Medicine Development Programme for 2011–2015, adopted by the government in 2011.

General practice (family medicine) and general practitioners were included in the list of medical professions in 1998. Departments of family medicine have been established at the Tajik State Medical University and at eight medical education centres throughout the country. Family doctors are trained at the graduate and postgraduate level. Graduate training is provided by the Tajik State Medical University named after Abuali Ibn Sina (TSMU) within a six-year curriculum. For specialists in family medicine, clinical internship is one year, and clinical residency is two years. Postgraduate training is provided by the Tajik Institute of Postgraduate Medical Training (HPAU, 2013e). Family nurses are being trained in medical colleges and schools in family medicine.

Retraining is provided through a six-month continuing medical education course for physicians and nurses who want to retrain in family medicine. The retraining course is provided through the clinical training centres of family medicine at the national, regional and interdistrict (zonal) levels (HPAU, 2013e; Ministry of Health and Social Protection, 2013a).

The retraining of family doctors and nurses has benefited from numerous initiatives and external assistance programmes, with the involvement of the Asian Development Bank, the World Bank, the Aga Khan Foundation, the Swiss Agency for Development and Cooperation, ZdravPlus and others. An 11-month training of trainers programme was initiated by the USAID-funded ZdravPlus project in 2003 in association with the Postgraduate Medical Institute. The training is based at a major polyclinic and includes both theoretical and practical work with polyclinic patients. The model has been replicated by the Swiss Development Cooperation and Aga Khan Foundation at several locations throughout the country.

By April 2013, a total of 8720 health workers had been trained or retrained in family medicine, including 3700 at university level and 5020 at nursing schools (HPAU, 2013e). However, by November 2013, only about 55% of the projected need in doctors trained in family medicine and 44% of the projected need in mid-level health workers trained in family medicine had been met (Ministry of Health and Social Protection, 2013a). One of the challenges is that the prestige of family medicine continues to be low. A survey among medical graduates in 2012 found that only 0.8% had chosen the specialty of family medicine, while 52.2% chose narrow specialties such as obstetrics/gynaecology or surgery and most preferred to work in hospitals in urban areas (HPAU, 2013e). Salary levels are one reason. While the salaries of health workers were increased by 40% in September 2012, the monthly salary of family doctors still only amounted to 513 somoni, which was slightly below the subsistence level of 536 somoni (approximately US$ 112) (HPAU, 2013e). Other challenges include poor working conditions and a lack of medical equipment (WHO Regional Office for Europe, 2014b). Those health workers who do work in family medicine might also face problems in using their working time productively. A qualitative study of 52 randomly selected health workers in family medicine (24 family doctors, 24 family nurses and 4 narrow specialists) from *rayon* and rural health centres in four *rayons*, conducted in July–August 2014, found that health workers spent a considerable time (41.1% of their working time over five consecutive days) on administrative tasks (in particular those related to the health information system), to the detriment of patient care (Bratschi et al., 2015).

4.2.4 Career paths for doctors

Clear career paths rewarding those who perform well are currently lacking in Tajikistan. With the exception of specialists working in urban areas, there are few reward systems in place for well-performing health workers. This is especially true for those who practise in rural areas and for nurses and midwives.

There are few mechanisms in place for performance management of health staff. The output of health workers, for example through regular reviews of the quantity and quality of services, is not evaluated. There are also no performance tools used for the routine monitoring of clinical practice. Occasional surveys indicate that clinical guidelines (where existent) are not universally being used. There is also a lack of management training for decision-makers, who are mostly trained as physicians; consequently, hospital managers tend to have weak professional management skills.

5. Provision of services

Health services are provided by facilities at the republican, *oblast*, *rayon* and village levels. There are different models in rural and urban areas. In rural areas, primary care is delivered through health houses, rural health centres and rural hospitals. In urban areas, primary and secondary care is delivered by *rayon* and city health centres (replacing the former polyclinics), basic secondary care by central *rayon* or city hospitals, specialized secondary care by *oblast* hospitals, and more complex care by national hospitals. Services of central *rayon* and city hospitals, as well as *oblast* hospitals, are often duplicating, limiting the efficiency of health service provision. The number of specialized hospitals has remained largely unchanged since Tajikistan became independent. Primary health care has been one of the main areas of reform, but family doctors and *rayon* physicians are often bypassed by patients and report a very limited scope of services. Public health is mainly delivered through separate vertical programmes.

5.1 Public health

Many public health functions, such as maternal and child health, tuberculosis, HIV/AIDS control, immunization or health promotion, are conceived and provided as vertically organized programmes separated from curative services. Typically, the corresponding republican centres, such as the Republican Centre for Healthy Lifestyles, the Republican Centre for Reproductive Health, the sanitary-epidemiological services, the Institute of Preventive Medicine, or the Republican Centre for Tuberculosis Control, provide technical and methodological support. A major challenge in the provision of health care relates to the need to integrate these vertical programmes into primary health care. With regard to tuberculosis, for example, tuberculosis units are being

integrated into *rayon*/city health centres and health houses, a process that was envisaged to be completed by 2014 (Egamov, Bogodyrova & Akkazieva, 2014a; HPAU, 2014).

The sanitary-epidemiological services are responsible for prevention, monitoring and control of infectious diseases, occupational health, food safety and environmental health. They are financed to 20% by the Ministry of Health and Social Protection and to 80% from the provision of paid services. Sanitary-epidemiological laboratories run tests of stool, blood, air, water and food for clinical centres, primary health care and the sanitary-epidemiological inspectorate.

The aim of the National Immunization Programme adopted by the Ministry of Health and Social Protection is the eradication of six vaccine-preventable diseases: diphtheria, whooping cough, tetanus, polio, measles and tuberculosis. Immunization programmes are the responsibility of the Ministry of Health and Social Protection, which implements them through the Republican Centre for Immunoprophylaxis and its six *oblast* offices.

5.2 Patient pathways

Patient pathways differ in rural and urban areas. In rural areas, primary care is delivered through health houses, rural health centres and (to some degree) rural hospitals. In urban areas, primary care is delivered by *rayon* or city health centres. Many patients access higher levels of care directly without referral from the primary care level. Apart from the issue of gatekeeping at primary care level, there is also very poor integration of primary and secondary care with regard to the continuity of care. A study of referral patterns by family doctors in two *rayons* in 2008 found high referral rates (mostly because of the lack of diagnostic tests at primary care level) and common self-referral to specialists. The routine health information system failed to capture accurate data on referrals (Steinmann, Baimatova & Wyss, 2012).

5.3 Primary/ambulatory care

The structure of the health care delivery system inherited from the USSR is highly complicated and hierarchical. In urban areas, outpatient services are provided at *rayon* and city health centres (the former polyclinics), and through specialized dispensaries that address specific issues such as tuberculosis, oncology and endocrinology. There are also health posts attached to schools, public enterprises and other institutions. In rural areas, the first point of contact are the health houses. Rural outpatient services are also provided through rural health centres and rural hospitals. These rural outpatient services are managed by *rayon* health centres and the central *rayon* hospital administration.

The strengthening of primary health care through the development of family medicine was one of the key priorities of health reform, and training and retraining programmes in family medicine have been implemented (see section 4.2.3). However, the scope of practice and the competencies of family doctors and *rayon* physicians continue to be restrictive, with limited involvement in treatment and preventive services (WHO Regional Office for Europe, 2014a). A survey of 255 family doctors and 225 *rayon* physicians in 2012 found that their role as the first contact point for patients was modest, as was their involvement in the treatment of diseases. Their involvement in the provision of medical procedures and preventive services was even lower (WHO Regional Office for Europe, 2014a). Moreover, the role of health professionals such as midwives and nurses is also underutilized and their scope of practice limited (WHO Regional Office for Europe, 2014b).

Health houses

Health houses are envisaged to serve as the first point of contact in rural areas. They are typically staffed by one nurse, midwife or *feldsher*, with the number in each health house depending on the size of the population served. Health houses provide immunization, basic first aid, home visits, basic prenatal care and medical referrals (although their gatekeeping role is limited, as there is also direct access to physicians at rural health centres and *rayon* hospitals). Health houses cover rural areas with a catchment population of under 1500 people. Health houses are also established in isolated villages of under 300 people if the village is more than 4 km away from other health facilities. Health houses are funded from village administration budgets and from the revenues of local farms. They are affiliated to rural health centres, the next level of the health system in rural areas.

Rural health centres

Rural health centres (formerly rural physician clinics or rural hospitals) are usually staffed by physicians (usually family medicine doctors or therapists not yet retrained in family medicine) in addition to mid-level and junior health staff and provide the next level of primary care. These clinics are subordinate to *rayon* health centres and central *rayon* hospitals and offer diagnostics and basic treatment and minor surgeries. Most have basic laboratory facilities for testing blood and urine.

Rayon and city health centres

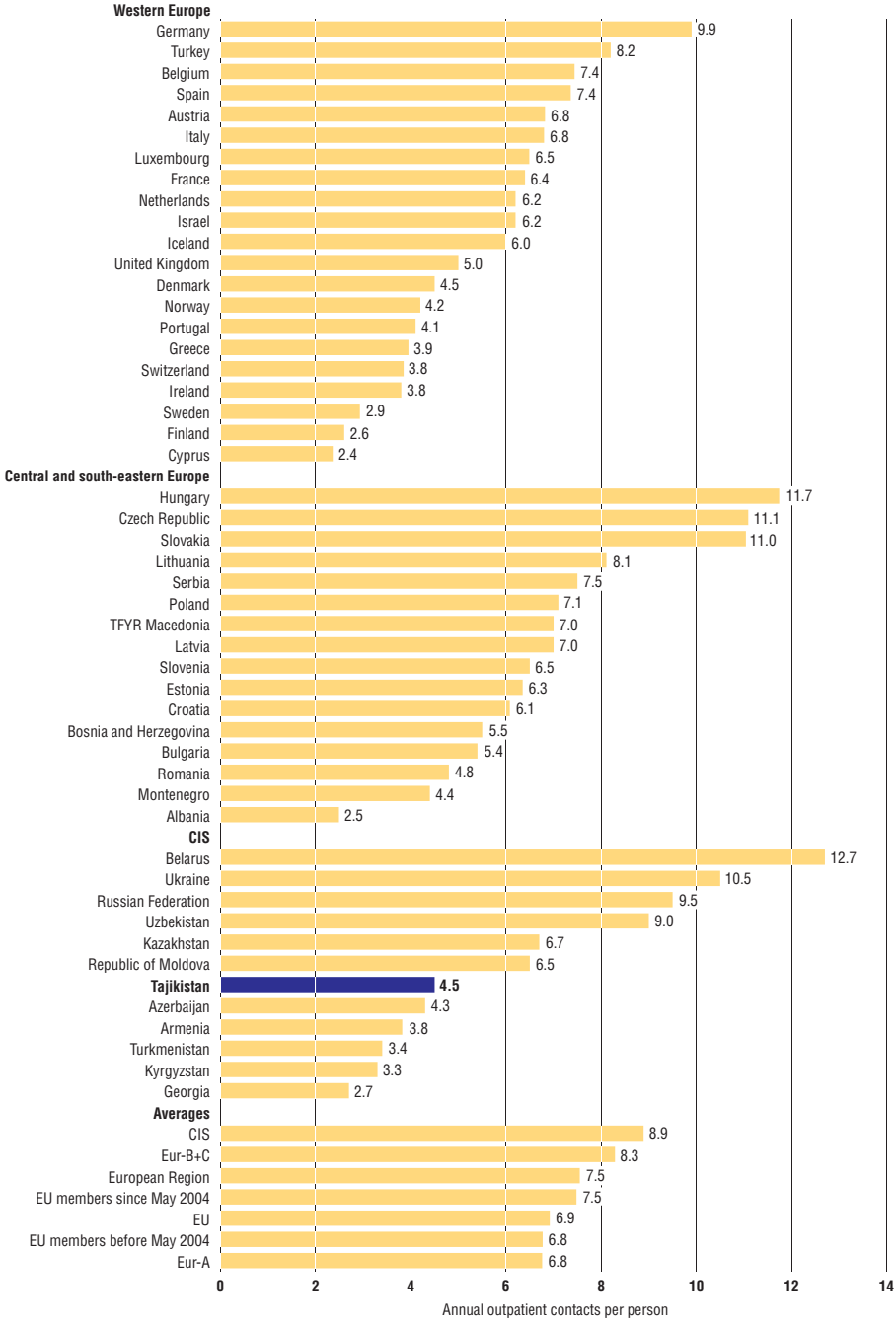
In urban areas, primary and secondary care is delivered by *rayon* and city health centres. These are either free standing or associated with a hospital and offer preventive, diagnostic and rehabilitative services. Services of the former polyclinics used to be very fragmented, with separate polyclinics for adults, children and women's reproductive health, as well as *oblast* level polyclinics, dental polyclinics and family planning polyclinics. This changed with government decree No. 525 on 31 December 2002, restructuring the country's primary health care system. Polyclinics for adults, children and women's reproductive health were merged into *rayon* and city health centres. Fig. 5.1 shows the outpatient contacts per year in Tajikistan compared with others in the WHO European Region.

5.4 Specialized ambulatory care/inpatient care

Like most post-Soviet countries (Rechel, Richardson & McKee, 2014), Tajikistan inherited an extensive hospital-based system from the Soviet period, which has become increasingly hard to sustain. The financing of hospital services on the basis of beds has encouraged excess capacity. Since independence, the system has remained virtually unchanged, with little upgrading or investment and few organizational changes.

Fig. 5.1

Outpatient contacts per person per year in the WHO European Region, 2013



Source: WHO Regional Office for Europe, 2015a.
Notes: CARK: Central Asian Republics and Kazakhstan; EUR-A,B,C: Regions as in the WHO list of Member States, last available year; TFYR Macedonia: The former Yugoslav Republic of Macedonia.

Rural hospitals

Small rural hospitals with 25–75 beds offer basic nursing care and some medical and obstetric services. They are staffed by one doctor, the "therapist". These "hospitals" are in very poor condition and only active outside the autumn or winter season, with rundown buildings, unheated and without electricity in winter, few supplies or bedding, and very little diagnostic and therapeutic equipment. Most beds are unoccupied. At present, patients tend to circumvent rural hospitals and attend directly the central *rayon* hospitals.

The hospital rationalization plan envisages the closure of rural hospitals or their transformation into rural health centres with a limited number of day care beds or into *rayon* hospitals, apart from remote and mountainous areas where they are to be subsumed under the central *rayon* hospital network. The first phase of the rationalization plan was implemented in Khuroson, Yavan, Hamadoni and Farhor *rayons* in the framework of a Tajik–German cooperation project. It is planned to close several rural hospitals in these four *rayons* and to downsize the remaining ones, reducing the number of rural hospitals from 29 to 15.

Central *rayon*/city hospitals

Central *rayon*/city hospitals are located in the largest town of the *rayon*, have about 100–300 beds and are staffed by a range of specialists; many also house a *rayon* or city health centre. There are also subordinate *rayon* hospitals providing a similar range of services. In larger cities and at the *oblast* level, there tends to be a duplication of services of central *rayon* and city hospitals. The hospital rationalization plan envisages to reduce this duplication.

Central *rayon* hospitals generally rely on outdated medical equipment, which is often in poor condition. In some *rayons*, the distance of the rural population from the central *rayon* hospital is considerable and access to services has become problematic with the deterioration of emergency transport.

Oblast hospitals

Oblast hospitals have about 600–1000 beds and offer a fuller range of specialties and more sophisticated technical equipment; they are usually located in the main town of the *oblast*. There tends to be a duplication of services in the catchment area of *oblast* hospitals with those from central *rayon* and city hospitals. In all *oblast* capitals there are also many specialized *oblast* centres and hospitals that are vertically subordinated to national centres and hospitals. Yet, *oblast* hospitals do not have the capacity to integrate all of these services into a single multipurpose hospital that would provide services of higher complexity than central *rayon* or city hospitals.

Specialized hospitals

Specialized hospitals were an integral part of the Soviet hospital system and continue to exist in Tajikistan. Many disease categories and population groups are treated in separate hospitals. There are hospitals for children, cardiology, tuberculosis, psychiatric diseases, neurology, obstetrics and gynaecology, as well as emergency hospitals. The number of specialized hospitals has remained largely unchanged since Tajikistan became independent. There has been a reduction of length of stay, but also a decrease of bed occupancy rates.

National hospitals at the republican level provide more advanced care and usually also serve as teaching and research hospitals. Scientific research institutes also deliver highly specialized health care and carry out research.

There are also specialized dispensaries (many of them with hospitals) at both the *oblast* and republican level for people with long-term illnesses such as tuberculosis, skin and sexually transmitted diseases, endocrinology, oncology and drug addiction.

5.5 Emergency care

All *rayon*, *oblast* and national hospitals have ambulance services for emergency care and there are also separate specialized emergency hospitals. However, the ambulance fleet is old and insufficient and modern means of communication are lacking. Although 43 new ambulances have been recently procured for the capital, Dushanbe, other areas are underprovided, for example there are only two ambulances for a population of 430 000 people in Rudaki *oblast*. Ambulance visits are not tracked nationally, which makes it difficult to assess utilization. However, interviews with *rayon*-level providers suggest that transport by private vehicle is much more common, even for serious conditions such as chest pain and symptoms of stroke (Akkazieva et al. 2015). Under the reformed system of primary care, health houses and rural health centres are envisaged to provide basic emergency care in rural areas.

5.6 Pharmaceutical care

Almost all state pharmacies have been privatized. There has also been an increase in the overall number of pharmacies, as well as an increase in the numbers of low-quality medicines and new drugs unknown to the majority of health professionals of the country. The widespread trafficking and availability

of counterfeit pharmaceuticals is a major area of concern. In 2012, over 28 tons of drugs and medical commodities were withdrawn from circulation and destroyed (Ministry of Health and Social Protection, 2012).

An Essential Drugs List has been adopted and is regularly updated. Procurement of drugs and medical supplies is carried out in conformity with the law "on state procurement of goods, works and services". To establish mechanisms for the procurement of medicines and medical supplies that meet the needs of the population, the Republican Centre for Pharmaceutical and Medical Equipment Services was established (Ministry of Health and Social Protection, 2014). Among other things, the Centre carries out the importation of drugs on the basis of the Essential Drug List, which was developed in conformity with international standards, with costs that are 15–20% less than alternative pharmaceuticals (Ministry of Health and Social Protection, 2014).

In addition, the Unit on State Procurement of Goods, Works and Services was established in the Department of Pharmaceuticals and Medical Goods under the Ministry of Health and Social Protection. The Unit is responsible for the procurement of pharmaceuticals from the state budget through a national bidding process. In the first nine months of 2014, the section placed 40 bids for the reconstruction of medical facilities, and the procurement of drugs, diagnostics, disinfectants, chemical reagents, medical goods and equipment (Ministry of Health and Social Protection, 2014). Health facilities at *oblast* and municipal levels procure drugs and medical goods through the Government Agency for State Procurement of Goods, Works and Services (Ministry of Health and Social Protection, 2014).

Development of the private pharmaceutical industry based on local raw materials forms part of the National Development Strategy for the period to 2015 (Republic of Tajikistan, 2006), but with the exception of some herbal products, nearly all pharmaceuticals are imported. Yet, drug supply is irregular and funding relies to a large degree on donors. Patients cover a substantial share of the costs for pharmaceuticals out of their own pockets. An exception are the pharmaceuticals for the treatment of tuberculosis, HIV/AIDS, malaria and diabetes, which the country has received free of charge until 2015 under agreements with international development partners (Ministry of Health and Social Protection, 2012).

5.7 Rehabilitation/intermediate care

Rehabilitation and intermediate care are still underdeveloped in Tajikistan.

5.8 Long-term care

Tajikistan's health system has inherited the Soviet approach to people with disabilities and there continue to be institutions for people with some types of disability, such as for patients with visual and hearing impairments. These institutions exist separately for children and adults, and those for adults are involved in manual production activities. The facilities have health care arrangements with specialists who are in charge of general or particular health problems of residents. In reality, however, most people with disabilities are taken care of by their families or close relatives, and have difficulties accessing health services for financial reasons. Rehabilitation services are inadequate in both quality and quantity (WHO Regional Office for Europe, 2015b).

The National Development Strategy up to 2015 recognized that the organization of support services for people with disabilities, including those in inpatient facilities, are not in line with generally accepted standards. The qualifications of personnel are quite low, wages are substandard and the overall effectiveness of the social welfare system is inadequate (Republic of Tajikistan, 2006).

5.9 Services for informal carers

Currently there are few support systems for families with children with disabilities, except for limited financial support (WHO Regional Office for Europe, 2015b). Relatives of those receiving mental health care are usually not included in mental health care processes and services (WHO, 2009).

5.10 Palliative care

The development of palliative care in Tajikistan is still in its early stages. An association for palliative care has been set up, as well as a chair for palliative care at the Tajik State Medical University. Palliative care is provided by the chemotherapy department of the Republican Oncology Centre.

5.11 Mental health care

Until recently, mental health has received very little attention from either domestic policy-makers or international agencies/donors. The provision of mental health care was not specifically regulated until 2002, when the Law "on psychiatric care" was adopted. Almost all mental health care currently takes place in hospitals or other institutions, with no functional community services, except in one pilot project for community-based mental health funded by Japan. There are two large psychiatric hospitals for inpatients, but there are no paediatric psychiatrists and there is no emergency psychiatry. Overall, there is a widespread neglect of people with mental illnesses (Latypov, 2010).

5.12 Dental health

Most dental services are now provided by private practitioners, in particular in major cities and *oblast* or *rayon* centres. Dental care is theoretically included in the basic benefit package in the covered pilot *rayons* only for emergency services; all other dental care has to be paid for through OOP expenditure.

5.13 Complementary and alternative medicine

In Tajikistan, traditional healers still play a significant role (Latypov, 2010). They include religious leaders, people believed to have spiritual power, local elders who practise folk remedies, herbalists and naturopathic doctors, and Russian-trained biomedical physicians. Patients often utilize a combination of treatments and approaches by seeking out different healers.

As basic health services have become difficult to access, there has been an increase in self-medications and the use of traditional healers. Recognizing this trend, the Ministry of Health and Social Protection has issued the Statement on Alternative Medicine, which regulates the role of alternative medicine in the country's health system. The statement specifies the scope and a price list of services that can be provided. Practitioners of alternative medicine are required to have a special licence and diploma from the Ministry of Health and Social Protection, in addition to a diploma of medical education. They are trained in the department of traditional medicine at the Tajik Institute of Postgraduate Medical Training. Practioners of alternative medicine are not allowed to treat serious or infectious medical conditions but can work in public sector health

care institutions. They are accountable to the Ministry of Health and Social Protection and have to coordinate their activities with the Republican Centre for Eastern Medicine.

5.14 Health services for specific populations

One of the main priorities of government programmes in the health sector is maternal and child health. This type of health service is provided mainly in the public sector and is part of the basic benefit package in the pilot areas of the country. The organization of services follows the division into levels of care outlined above. Primary health care services at the *rayon* level are provided by health houses and rural health centres in rural areas and *rayon* or city health centres in urban areas. Specialized centres, such as the Reproductive Health Centre or the Centre for Integrated Management of Child Diseases, also operate at the *rayon* level and provide more specialized health services. Inpatient care at the *rayon* level is provided by rural hospitals, *rayon* hospitals and central *rayon* or city hospitals. Some larger *rayons* or cities have dedicated maternal or children hospitals. Specialized hospital care is delivered mainly in tertiary health care facilities at the *oblast* or republican level, such as the *oblast* maternal hospitals or the Research Institute of Obstetrics, Gynaecology and Perinatology.

In 2012, spending for reproductive, mother and child health accounted for 32.7 % of total expenditure on health, with public expenditure accounting for 36.5%, private OOP expenditure for 62.3%, and external sources of funds for 1.2% of total expenditure for reproductive, mother and child health services. In terms of providers, the largest share of spending (about 70%) was on general profile hospitals, followed by specialized facilities (16.5%). Providers of outpatient services only made up 11.6% of total expenditure for reproductive, mother and child health services (Egamov, Bogodyrova & Akkazieva, 2014b).

6. Principal health reforms

The pace of health reforms in Tajikistan has been slow and the country retains many of the elements of the Soviet era. Since 2001, Tajikistan has adopted several documents guiding the direction of health reform. In 2010, the National Health Strategy for 2010–2020 was adopted, providing the framework for the most recent round of reforms. Two of the key areas of reform were primary health care and health financing. There are several ongoing activities to strengthen primary health care based on family medicine. They include efforts to strengthen the material basis of primary health care facilities, improve the qualifications of primary health care workers through training programmes, and reward performance. Reforms in health financing have seen the pilot-based introduction of capitation-based financing of primary health care. Future reforms envisage the roll-out of this provider payment mechanism and of the basic benefit package to more areas of the country, the pooling of funds and the introduction of mandatory health insurance.

6.1 Analysis of recent reforms

The overall aims of health reforms undertaken in Tajikistan were to improve the efficiency of health spending, redirect the limited budgetary means towards primary care, develop and implement national programmes and projects, introduce a basic benefit package that would provide financial protection for vulnerable groups of the population, and create and strengthen the legislative basis of the health system.

The development of the Tajik health system since the country's independence can be divided into several stages. In the first stage of health reform (1993–1996), the key elements of the future reform strategy were identified for the medium and long term. The second stage (1997–2001) was concerned with

the implementation of consecutive plans of actions for the developed strategies. However, in the absence of sufficient financial resources and clear lines of action, this process was protracted and did not achieve the envisaged goals.

In a third stage (since 2001), the Ministry of Health and Social Protection, with the support of external agencies, started to implement a number of reforms, including in the areas of primary health care, hospital care, institutional capacity, health information systems, involvement of the public, immunization programmes and health financing mechanisms. A Health Reform Unit was established in the Ministry of Health and Social Protection in February 2008. Key documents adopted in 2002 were the Health Care Strategy by 2010 and the Conception of Health Sector Reform (Khodjamurodov & Rechel, 2010).

In 2010, the Ministry of Health and Social Protection, in cooperation with other ministries and agencies, development partners and representatives of civil society, adopted the comprehensive National Health Strategy for 2010–2020. The strategy was based on priorities of the National Development Strategy for 2005–2015 and the Poverty Reduction Strategy for 2005–2015. The overall goal of the strategy is to improve the population's health and to create a healthier living environment. It identified priorities for health sector development in four key areas: governance, health financing, resource generation and service delivery. Modernizing health system governance is hoped to facilitate the creation of a results-oriented, socially accepted, sustainable, transparent, accountable, equitable and accessible health care sector; lead to improvements in the accessibility, quality and efficiency of health services; and help the development of health system resources. The strategy furthermore envisages improvements in the prevention of communicable and noncommunicable diseases, the promotion of healthy lifestyles and the provision of modern and high-technology medical care of good quality.

To track progress in implementing the National Health Strategy for 2010–2020, the Ministry of Health and Social Protection developed a framework for monitoring and evaluation. Progress is being monitored through a package of indicators. Initially, 218 indicators were identified, 174 of which were routinely collected. However, this large number was found to be unwieldy and some were also not well defined or had no clear sources of data (Ministry of Health and Social Protection, 2012). By 2013, the indicator package had been revised and the number of indicators reduced to 99 (HPAU, 2013f; Ministry of Health and Social Protection, 2013b).

A joint annual review presents an overview of achievements and challenges during the implementation of the strategy and culminates in a health summit that proposes and discusses corrective actions. The joint annual review and health summit involve key stakeholders, including the Prime Minister's and the President's Offices, line ministries such as the Ministry of Finance and the Ministry of Labour, the heads of *oblast* health departments and managers of health facilities, development partners and civil society organizations (Akkazieva et al., 2015).

Development partners have recognized that the Ministry of Health and Social Protection is gradually increasing the use of evidence-based decision-making to inform policy. With the aim of strengthening capacity for evidence-based policy-making within the Ministry and providing health policy advice to the implementation of health reforms, in 2007 a Health Policy Analysis Unit was established at the Ministry with the support of development partners (Akkazieva et al., 2015).

6.1.1 Primary health care

Primary health care has been one of the main foci of health reforms in the country. There are several ongoing activities to strengthen primary health care, many supported by international agencies. In 2012, the Programme for the Development of Family Medicine for 2011–2015 was adopted. The Programme aims to introduce and develop an integrated system of primary health care based on family medicine and to further integrate services of vertical systems (Ministry of Health and Social Protection, 2012).

6.1.2 Health financing

The country has also embarked on reforms to health financing. In 2005, the government adopted the Health Sector Financing Strategy in the Republic of Tajikistan for 2005–2015, which identified the need to introduce new provider payment mechanisms and to ensure a more equitable allocation of health resources. The strategy set out the following priorities:

- increasing budgetary allocations to the health sector;
- establishing mechanisms for the pooling of funds;
- setting up new provider payment systems;
- rationalizing the structure of health care facilities;
- increasing the salaries of health workers; and

- formalizing informal payments through introducing co-payments within the basic benefit package.

Within the framework of this strategy, financing reforms were initiated in primary and secondary care (HPAU, 2013c).

In 2011, in the framework of implementing the Health Sector Financing Strategy for 2005–2015, the government issued Resolution No. 536 ("approving the plan of activities on introducing a new financing mechanism in the health care facilities of the Republic of Tajikistan for 2011–2014", approved on 2 November 2011). This plan envisaged the pooling of health funds at the *oblast* level as well as the introduction of new provider payment systems (full per capita financing of primary health care) in Sughd *oblast*. However, in the course of developing the methodologies for these new financing mechanisms and when discussing the regulatory and legal framework, no consistent approach towards implementation could be reached. Implementation of the resolution was reviewed and it was decided to introduce the new financing mechanisms over an extended period of time (HPAU, 2013c)

Partial capitation-based financing of primary health care was first piloted in Dangara and Varzob *rayons* in 2005–2006 (see section 3.7.1). This financing mechanism was step by step extended to cover all primary health care facilities in the country (HPAU, 2013c). However, the partial capitation mechanism initially covered only the unsecured line-item expenditures of health facilities, thus excluding the secured budget lines such as for the salaries of health workers, which account for 88–90% of expenditure (HPAU, 2013c). In 2013, following the joint decree of the Ministry of Health and Social Protection and the Ministry of Finance (No. 98/25 of 28 February 2013), work on the introduction of full per capita financing of primary health care (covering all costs of facilities) started in pilot *rayons* of Sughd *oblast* (HPAU, 2013c).

The simulation exercise on the implications of introducing case-based financing of selected hospitals was another major step towards health financing reform. However, many of the activities envisaged in the Health Sector Financing Strategy for 2005–2015 are still at an early phase of planning or implementation (see section 3.7).

In 2013–2014, the Ministry of Health and Social Protection conducted consultations and policy dialogues with other ministries and agencies, the government and parliament, as well as the development partners, on the possibility of implementing mandatory health insurance in Tajikistan, using the results of a feasibility study on introduction of mandatory health insurance

in Tajikistan undertaken in 2013. On 8 January 2014, parliament approved the decision of the government to postpone introduction of mandatory health insurance until 2017, and adequate amendments were made to the Law "on health insurance". In addition, it was recommended to start preparatory work in this area in the near future (Ministry of Health and Social Protection, 2014).

6.2 Future developments

It is planned to expand and deepen health reforms in the coming years, including in the areas of primary health care and health financing. The Health Services Improvement Project, implemented by the Ministry of Health and Social Protection, has been ongoing since July 2013, with an expected closing date in 2019. The project is currently implemented in eight *rayons* in Khatlon and Sughd *oblasts*. It focuses on the following main activities:

- piloting the use of performance-based incentives in primary health care facilities;
- training of primary health care doctors and nurses in family medicine and updated clinical protocols;
- reconstruction of selected primary health care facilities and provision of basic medical equipment; and
- building capacity at the central, *oblast*, and *rayon* levels to manage and implement the performance-based financing scheme.

The Health Services Improvement Project is financed through a US$ 15 million grant from the International Development Association and a US$ 4.8 million grant from the multidonor Health Results Innovation Trust Fund. The Government of Tajikistan contributed an additional US$ 3.2 million to the project. A rigorous impact evaluation of the performance-based financing scheme is also being undertaken to build evidence on the impact and cost–effectiveness of performance-based financing for primary health care in Tajikistan.

A Round Table on Health Financing was held on 2 December 2013 in order to identify next steps in preparation for the implementation of mandatory health insurance on the basis of successful experience in other countries in the region, such as the Republic of Moldova. As a result, it was decided to develop a roadmap for the comprehensive reform of health financing, with the aim of implementing mandatory health insurance in 2017 (Ministry

of Health and Social Protection, 2014). The roadmap was developed in March-April 2014 by the Ministry of Health and Social Protection with technical support by the development partners. The roadmap includes clear milestones for a comprehensive reform of the health financing system up to 2018, which will increase the probability of success of mandatory health insurance implementation in Tajikistan in 2017 (Ministry of Health and Social Protection, 2014). The roadmap envisaged, inter alia, the introduction of case-based payment for hospital care and the pooling of funds at *oblast* level (O'Dougherty, Zues & Akkazieva, 2014). A strategic plan for further reforms of health financing for the period of 2015–2018 based on the roadmap was approved by Government Resolution No. 425 on 2 July 2015.

One of the challenges will be to direct sufficient public resources into the health system. The National Health Strategy of the Republic of Tajikistan 2010–2020 envisages that public expenditure on health as a share of GDP should reach 3.4% in 2015 and 4.4% in 2020 (Ministry of Health and Social Protection, 2014). In 2013, it accounted for 2.1% (WHO, 2015).

7. Assessment of the health system

The performance of Tajikistan's health system faces a series of challenges. The high share of private OOP payments means that many patients cannot afford the care they require, affecting in particular poorer groups of the population. In 2011, 26.7% of households in the lowest consumption quintile faced catastrophic expenditure (OOP spending on health that exceeds 40% of a household's non-subsistence spending). There are pronounced inequities in the level of health care across *oblasts* and *rayons* and public spending tends to benefit the richer more than the poor. Health care utilization is higher among richer segments of the population, despite presumably fewer health problems. Quality of care is a major concern. Allocative efficiency is low, as most health funding goes to inpatient care. Technical efficiency is undermined by outdated provider payment mechanisms and lack of pooling of funds. Challenges for the transparency and accountability of the health system include the widespread existence of informal payments, tax evasion and lacking public participation in the health policy process.

7.1 Stated objectives of the health system

The Constitution of Tajikistan of 1994 guarantees health protection to the population. According to the 1997 Law "on health protection" and subsequent amendments, the population of the country was ensured access to state-owned health facilities and other health care providers regulated by the state, including the emerging private sector. A constitutional amendment removing the right to free health care was approved by a national referendum in June 2003, allowing the government to introduce co-payments in state-run health services.

7.2 Financial protection and equity in health financing

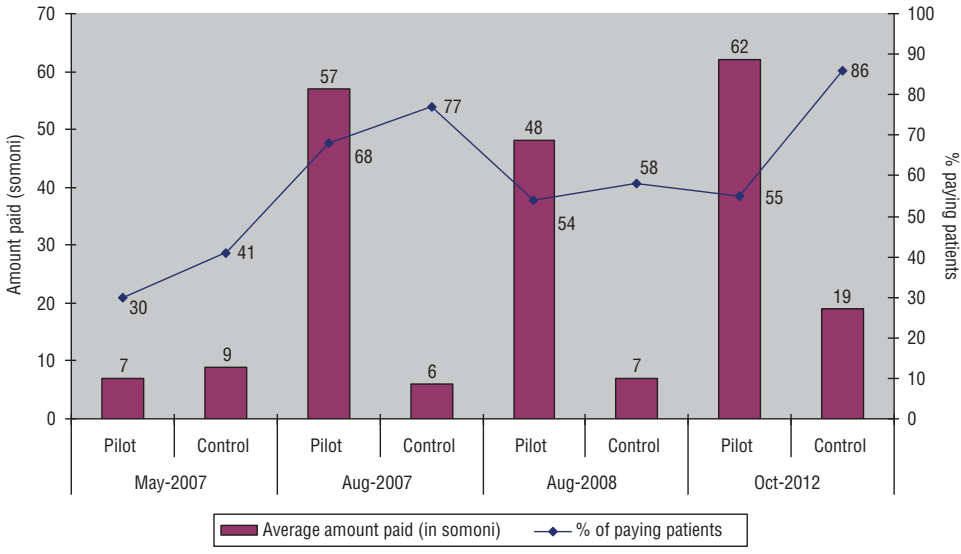
7.2.1 Financial protection

One of the key initiatives of the Ministry of Health and Social Protection to improve the financial protection of the population was the introduction of the basic benefit package in selected pilot *rayons*. The basic benefit package defines a basket of services that should be provided for free and specifies which services require co-payments.

Four waves of surveys have been carried out so far (in May 2007, August 2007, 2008 and 2012) to explore the impact of the basic benefits package on the financial burden of the population. Overall, the findings with regard to the costs of hospitalization are mixed. The proportion of patients who made payments was consistently lower in the pilot *rayons*. At the same time, the average amount they paid was much higher in the pilot than in the control *rayons* in the last three rounds of surveys (Fig. 7.1). In absolute terms, patients in the pilot *rayons* paid more (Ministry of Health and Social Protection, 2013a).

Fig. 7.1

Percentage of patients paying for hospitalization and average amounts paid in pilot and control districts, 2007–2012



Source: Ministry of Health and Social Protection, 2013a.

An analysis of catastrophic OOP payments based on data from the 2003, 2007 and 2009 rounds of the Tajikistan Living Standard Survey and the 2011 Panorama Household Survey (Giuffrida & Postolovska, 2012) found that the proportion of households who faced catastrophic spending seems to have declined over time, with a significant fall in 2007. Table 7.1 shows catastrophic OOP payments relative to total household and non-food consumption measures, with different thresholds that can be used to determine whether OOP spending is catastrophic. The "headcount" represents the proportion of households whose OOP payments exceed the given threshold. The concentration index relates the headcount to the household consumption distribution. A positive value of the concentration index indicates that catastrophic spending is concentrated among the better-off.

Table 7.1

Incidence of catastrophic OOP spending, 2003–2011

Year	Proportion affected	Threshold share of consumption (%)				
		5	10	15	25	40
	Household consumption					
2003	Headcount	30.3	19.8	11.8	5.7	1.6
	Concentration index	0.058**	0.070**	0.101**	0.192**	0.390*
2007	Headcount	17.8	10.0	5.8	2.4	0.6
	Concentration index	0.041	0.086*	0.142**	0.282**	0.587**
2009	Headcount	28.4	17.8	11.5	5.7	1.6
	Concentration index	0.100**	0.114**	0.090**	0.226**	0.323**
2011	Headcount	22.3	11.6	5.1	2.0	0.5
	Concentration index	−0.006	0.040	0.063	−0.036	−0.394
	Non-subsistence consumption					
2003	Headcount	45.6	42.2	38.7	34.9	30.6
	Concentration index	0.065**	0.046**	0.045**	0.039**	0.015*
2007	Headcount	35.1	29.6	26.0	21.5	16.9
	Concentration index	0.000	−0.002	0.006	0.014	0.020
2009	Headcount	42.2	37.5	33.2	27.2	21.6
	Concentration index	0.076**	0.067**	0.054*	0.019	0.052**
2011	Headcount	49.8	40.5	34.9	26.4	18.8
	Concentration index	0.024*	−0.006	−0.031	−0.041	−0.072

Source: Giuffrida & Postolovska, 2012.
Notes: Estimations prepared using ADePT software and data from the Tajikistan Living Standards Measurement Surveys of 2007 and 2009 and the Panorama Household Survey of 2011 (see Giuffrida & Postolovska, 2012); Headcount represents the proportion of households whose OOP payments exceed the given threshold; Concentration index relates the headcount to the household consumption distribution, where a positive value of the concentration index indicates that catastrophic spending is concentrated among the better-off; Confidence interval significance at $*p = 0.05$ and $**p = 0.01$.

When using the most common definition of catastrophic expenditure (OOP spending on health that exceeds 40% of a household's non-subsistence spending), it can be seen that the overall proportion of households affected decreased from 30.6% in 2003 to 18.8% in 2011 (Table 7.2). However, catastrophic payments still affected 26.7% of households in the lowest consumption quintile in 2011, therefore being generally more concentrated among the poor than the rich (Giuffrida & Postolovska, 2012).

Table 7.2

Incidence and distribution of catastrophic expenditure on health

Per capita consumption quintile	Percentage of households			
	2003	2007	2009	2011
Q1 (lowest)	28.6	14.4	20.9	26.7
Q2	29.6	18.1	17.7	15.4
Q3	32.5	19.0	21.3	18.9
Q4	30.5	16.0	23.7	14.1
Q5 (highest)	32.1	17.1	24.5	18.7
Total	30.6	16.9	21.6	18.8
Concentration index	0.015*	0.020	0.052**	−0.072

Source: Giuffrida & Postolovska, 2012.
Notes: Catastrophic OOP expenditure is considered as spending that exceeds 40% of a household's non-subsistence consumption; the concentration index relates the headcount (proportion of households whose OOP payments exceed the given threshold) to the household consumption distribution; Estimations based on the Tajikistan Living Standards Measurement Surveys of 2003, 2007 and 2009 and the Panorama Household Survey of 2011 (see Giuffrida & Postolovska, 2012); Confidence interval significance at $*p = 0.05$ and $**p = 0.01$.

Impoverishment measures the percentage of households pushed below the poverty line as a result of OOP payments for health. Table 7.3 presents the poverty headcount (the proportion of individuals living below the poverty line) corresponding to household expenditure, both gross and net of health payments. Based on data from the 2003, 2007 and 2009 rounds of the Tajikistan Living Standard Survey and the 2011 Panorama Household Survey, the share of the population living below the poverty line declined from 72.4% in 2003 to 42.2% in 2011. If health payments are deducted from non-subsistence expenditure, this percentage rises to 75.9% in 2003 and 45.7% in 2011. This indicates that 3.6% of the population in 2011 was not counted as living in poverty but would have been considered poor if health payments were taken into account. This represents a 8.5% increase in the poverty headcount (Giuffrida & Postolovska, 2012).

Surveys have also found that payments are common for services that should be free. A survey of 1919 households in Sughd and Khatlon *oblasts* in 2012 found that, for their last delivery, women and their relatives paid a median

Table 7.3
Poverty impact of OOP health expenditure, 2003–2011

Year	Poverty headcount			
	Gross of health payments (%)	Net of health payments (%)	Change	Percentage change
2003	72.4	75.9	3.5	4.8
2007	54.6	57.8	3.2	5.9
2009	46.0	50.9	4.9	10.7
2011	42.2	45.7	3.6	8.5

Source: Giuffrida & Postolovska, 2012.
Note: Poverty headcount is the proportion of individuals living below the poverty line.

amount of 190 somoni. Furthermore, almost half of the mothers in Sughd (48.5%) and more than 40% in Khatlon (43.9%) reported having paid for formally free vaccination (Steinmann, Baimatova & Wyss, 2012).

Household surveys in four rural *rayons* covered by the basic benefit package (Dangara, Varzob, Shahrinav and Tursunzade) in 2005, 2007, 2008 and 2011 also found that OOP expenditure for formally free primary health care was common, with the median amount increasing from US$ 5.3 in 2005 to US$ 10.7 in 2011. Expenditure on medicines represented the biggest financial burden. There were substantial variations across *rayons* of residence (with 20.1% of patients paying their doctor in Dangara as opposed to 72.8% in Tursunzade) and economic status, with richer patients more commonly reporting OOP payments than poorer patients (Schwarz et al., 2013).

In terms of expenditure for acute illness, median expenditure in the four weeks preceding the survey of 1919 households in Sughd and Khatlon *oblasts* in 2012 was 72 somoni, with about two thirds of this expenditure (69.4%) going for pharmaceuticals (Steinmann, Baimatova & Wyss, 2012). As a result of this private OOP expenditure, limited household resources are seen by many to be the main barrier to access care, and the poor and vulnerable are accessing care less often (Steinmann, Baimatova & Wyss, 2012).

7.2.2 Equity in financing

There are pronounced inequities in both the absolute and the relative level of health care expenditure between urban and rural areas, as well as across *oblasts* and even *rayons*. *Oblast* administrations can choose to top up the health budget from their own funds, but also have varying tax collection capacities

and purchasing power. Consequently, per capita health expenditure varies across *oblasts* and *rayons* and is not related to social or health needs, to the disadvantage of poor and rural areas (WHO Regional Office for Europe, 2014b).

Data from the 2007 and 2009 Living Standards Survey, the 2011 Panorama Household Survey and the National Health Accounts allow an analysis of the distribution of government health expenditure across consumption quintiles. Public spending for outpatient and inpatient care is generally regressive, benefiting more the rich than the poor. The poorest 20% receive less than 20% of government spending (Giuffrida & Postolovska, 2012).

Fees paid by patients to public facilities also rise with income, suggesting that fee payments are progressive (Table 7.4). The concentration index for both outpatient and inpatient services increased significantly between 2009 and 2011. In 2011 the highest consumption quintile paid 51.2% of total fees for outpatient services and 59.7% for inpatient services (Giuffrida & Postolovska, 2012).

Table 7.4

Inequalities in fees paid to outpatient and inpatient facilities, 2007, 2009 and 2011

Per capita consumption quintile	Percentage outpatient fees paid			Percentage inpatient fees paid		
	2007	2009	2011	2007	2009	2011
Q1 (lowest)	11.5	6.5	8.2	15.0	11.6	4.8
Q2	14.0	7.3	9.4	16.4	12.7	8.3
Q3	18.7	13.2	13.8	19.4	15.3	11.2
Q4	16.3	27.1	17.5	22.0	23.9	16.0
Q5 (highest)	39.5	46.0	51.2	27.2	36.5	59.7
Total	100	100	100	100	100	100
Concentration index	0.281**	0.227**	0.403**	0.124**	0.167**	0.524**

Source: Giuffrida & Postolovska, 2012.
Notes: Estimations prepared using ADePT software and data from the Tajikistan Living Standards Measurement Surveys of 2007 and 2009 and the Panorama Household Survey of 2011 (see Giuffrida & Postolovska, 2012); **Confidence interval significance at $p = 0.01$.

Data from the 2003, 2007 and 2009 Living Standards Survey and the 2011 Panorama Household Survey indicate that the richest quintile spent most on OOP payments for health, while the poorest quintile spent least (Table 7.5). The positive value of the Kakwani index indicates that financing is more concentrated among the better off than income, thus indicating progressivity of OOP payments for health (Giuffrida & Postolovska, 2012).

The survey of 1919 households in Sughd and Khatlon *oblasts* in 2012 confirmed that richer patients paid more for deliveries than poorer patients (Fig. 7.2) but found that mothers from households with lower socioeconomic

Table 7.5

Progressivity of OOP payments for health, 2003–2011 (selected years)

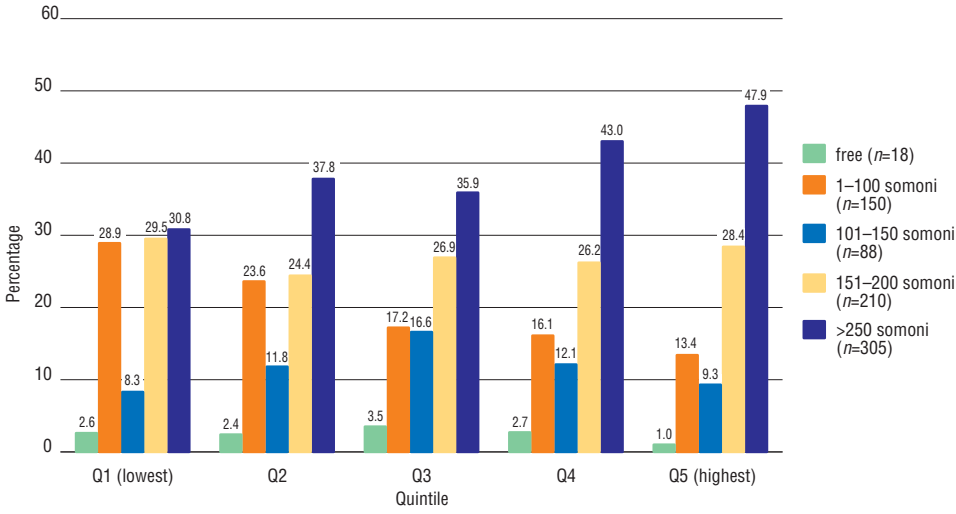
Per capita consumption quintile	Contribution to total OOP expenditure (%)			
	2003	2007	2009	2011
Q1 (lowest)	5.4	5.6	6.4	11.1
Q2	9.4	9.8	7.9	12.6
Q3	16.4	12.9	12.7	16.5
Q4	20.1	17.1	23.5	16.9
Q5 (highest)	48.8	54.5	49.5	43.1
Concentration index	0.411**	0.478**	0.441**	0.296**
Kakwani Index	0.088**	0.184**	0.129**	0.032**

Source: Giuffrida & Postolovska, 2012.
Notes: Estimations prepared using data from the Tajikistan Living Standards Measurement Surveys of 2003, 2007 and 2009 and the Panorama Household Survey of 2011 (see Giuffrida & Postolovska, 2012); **Confidence interval significance at $p = 0.01$.

status had to pay for vaccination more often than mothers from households with higher socioeconomic status (Steinmann, Baimatova & Wyss, 2012). Almost 60% of mothers from households with the lowest socioeconomic status paid for vaccination compared with about 40% of mothers from households with the highest socioeconomic status (Steinmann, Baimatova & Wyss, 2012).

Fig. 7.2

Cost of last birth since 31 May 2007 (excluding non-monetary gifts), stratified by socioeconomic status in Sughd *oblast*



Source: Steinmann, Baimatova & Wyss, 2012.

7.3 User experience and equity of access to health care

7.3.1 User experience

Little is known about the user experience of patients in the Tajik health system. According to a survey of 2000 respondents conducted in 2011, only 16% of respondents were satisfied with ambulatory care and only 19% with inpatient hospital services (Azevedo, Atamanov & Rajabov, 2014). However, as mentioned in section 2.8.5, higher rates of patient satisfaction were found in surveys in the *rayons* covered by the Tajik–Swiss Health Sector Reform and Family Medicine Support Project (Project Sino).

7.3.2 Equity of access to health care

Barriers to equitable access are physical and financial. Physical barriers play an important role in remote mountainous regions, where road conditions are poor, means of transport are limited and many communities are cut off for months during the winter season (World Bank, 2005). However, a more general barrier is lack of financial resources. In the 2012 Demographic and Health Survey, 45% of women aged 15–49 mentioned getting money for treatment as a problem in accessing health services (Table 7.6). This is a particular problem for poorer sections of the population. In the lowest wealth quintile, 69.1% of women mentioned the lack of financial resources as a problem, whereas only 30.8% did so in the richest quintile (State Statistical Agency, Ministry of Health and Social Protection & ICF International, 2013).

The existence of financial barriers to health care for poorer individuals is confirmed by the Tajikistan Living Standards Survey (2003, 2007 and 2009) and the 2011 Panorama Household Survey, where financial reasons represented the most important reason for not seeking help when ill for individuals in the lowest quintile in every year covered (Giuffrida & Postolovska, 2012).

Health care utilization also varies across consumption quintiles. Data from the Tajikistan Living Standards Survey (2003, 2007 and 2009) and the 2011 Panorama Household Survey show that richer groups of the population used health services more often than poorer groups. In 2011, outpatient care utilization by the richest quintile was almost twice as high as by the poorest quintile and utilization of inpatient care was almost three times higher among the richest quintile compared with the poorest quintile (Giuffrida & Postolovska, 2012).

Table 7.6

Problems in accessing health care for women aged 15–49 in the 2012 Demographic and Health Survey[a]

Background characteristics	Problems in accessing health care (%)					
	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Not wanting to go home	At least one problem accessing health care	Number of women
Age (years)						
15–19	18.1	40.6	27.7	33.5	54.0	2 013
20–34	18.9	44.9	30.2	27.3	55.6	4 747
35–49	13.5	46.4	28.4	18.6	54.4	2 896
No. living children						
0	18.8	43.4	30.4	32.5	55.8	3 483
1–2	17.5	41.8	25.6	23.6	52.0	2 588
3–4	13.9	45.2	27.2	19.4	53.8	2 385
5+	18.0	51.9	36.7	25.1	60.8	1 200
Marital status						
Never married	18.4	43.8	29.6	33.2	56.3	2 648
Married or living together	16.5	43.8	28.7	23.4	53.8	6 504
Divorced/separated/widowed	18.0	56.8	32.2	20.9	62.3	5 04
Employed last 12 months						
Not employed	17.3	42.2	27.6	27.1	53.7	6 529
Employed for cash	14.3	48.1	27.8	20.8	55.2	2 295
Employed not for cash	23.4	52.0	44.8	30.8	63.6	823
Residence						
Urban	9.6	36.5	12.4	17.4	44.7	2 413
Rural	19.7	47.1	34.7	28.8	58.3	7 243
Region						
Dushanbe	9.5	45.1	10.6	22.7	55.2	881
GBAO	24.6	47.0	32.6	28.7	60.3	220
Sughd	11.7	37.1	23.4	19.8	47.6	2 872
DRS	16.2	37.7	25.7	22.2	46.9	2 240
Khation	23.8	54.6	40.6	34.2	65.8	3 444
Education						
None/primary	25.4	59.3	45.4	38.9	72.3	567
General basic	20.4	47.0	33.1	32.8	59.4	3 349
General secondary	16.3	44.8	28.3	23.6	54.7	4 474
Professional primary/middle	9.4	35.5	17.1	12.4	40.6	645
Higher	5.7	23.8	10.9	8.3	31.5	620
Wealth quintile						
Q1 (lowest)	32.3	69.1	55.6	42.6	77.9	1 878
Q2	21.0	51.6	38.3	31.1	63.1	1 913
Q3	14.1	40.8	26.7	24.0	52.0	1 904
Q4	11.8	31.4	17.5	18.8	44.1	1 971
Q5 (highest)	7.2	30.8	9.1	14.3	38.9	1 989
Total	17.1	44.5	29.1	26.0	54.9	9 656

Source: State Statistical Agency, Ministry of Health and Social Protection & ICF International, 2013.
Notes: DRS: Districts of Republican Subordination; [a]Table excludes eight women for whom information on employment was missing.

7.4 Health outcomes and quality of care

7.4.1 Population health

The contribution of the Tajik health system to health improvement is modest in some areas and more discernible in others. However, detailed and reliable information on mortality amenable to medical intervention is not available.

Maternal and infant mortality have been an important focus of health policy. Although both are also influenced by wider socioeconomic determinants of health and recorded mortality rates are recognized as underestimating actual mortality, falling official rates seem to indicate some progress in child and maternal health services.

Tajikistan has also made important progress in control of communicable diseases. Campaigns against measles and polio were initially successful and in 2002 Tajikistan was certified by WHO as polio-free. However, a large polio outbreak took place in 2010, with 463 laboratory-confirmed and 47 polio-compatible cases, highlighting the need for continued vaccination efforts (Yakovenko et al. 2014). Within the framework of National Immunization Days, 94% of the population aged 7–21 were immunized, and no new cases of polio were recorded in 2011 and 2012 (Ministry of Health and Social Protection 2012). Malaria control efforts have also been successful. Persisting challenges are HIV/AIDS and tuberculosis, with an estimated tuberculosis incidence of 100 per 100 000 population in 2013 (WHO Regional Office for Europe, 2015a).

The burden of noncommunicable diseases (in particular cardiovascular diseases) has been steadily increasing since the mid-1990s (Akkazieva et al., 2015). They are now the main cause of death, accounting for 63.9% of all deaths in 2010 (Cowling et al., 2015). The Ministry of Health and Social Protection has recognized that noncommunicable diseases present a major challenge for the country, adopting a strategy on control of these for 2015–2025. Now it will be important to improve noncommunicable disease control and prevention in practice. The government could make use of seemingly widespread support for more stringent public health measures. In a World Bank survey in 2011, 81.5% (95% confidence interval, 78.9–83.8) of the 1056 respondents were supportive of higher taxes on tobacco and 82–85% favoured smoking bans in restaurants, bars/pubs, indoor workplaces and indoor public spaces (World Bank, 2013). There was also widespread support for stricter alcohol control measures (Cowling et al., 2015).

7.4.2 Quality of care

Quality of care is a major concern in Tajikistan for a number of reasons. The material conditions in many health facilities have suffered from years of underinvestment, and available technology and equipment are often outdated and obsolete. A survey in the four pilot *rayons* covered by the Swiss-funded Project Sino, covering the *rayon* health centre and 10 rural health facilities in each *rayon*, found that a number of facilities lacked electricity between October and March, that many had no or only inadequate sanitation facilities and that functional washing points with water and soap were generally lacking (Matthys, 2014). Consequently, infection-prevention measures were poorly followed. Provision of pharmaceuticals is another challenge. Because of its limited budget, the government provides only a very limited supply of pharmaceuticals, and the country has relied mainly on humanitarian assistance and private household spending. Quality of care has also suffered from a serious brain drain, beginning with the civil war and continuing into the present, as health workers seek higher wages abroad.

The qualifications of health care workers are another constraint and most have no access to modern periodicals and medical literature. In a small-scale study of selected health care providers in rural areas, physicians and midwives scored on average less than 50% of correct answers on 52 knowledge questions about maternity care (Wiegers, Boerma & de Haan, 2011). The poor integration of primary care and higher levels of care is another factor undermining continuity and quality of care. There is little follow-up for patients after specialist care or hospital treatment and limited exchange of information to allow primary care providers to carry on treatment and clinical management. In only 2 of 17 facilities covered by the study of rural health care providers were staff permanently available for treatment and referral (24 hours a day, 7 days a week) (Wiegers, Boerma & de Haan, 2011).

Finally, at all levels of care, there is little emphasis on quality improvement. While the Ministry of Health and Social Protection has recognized the challenge of improving quality of care, embarking on the revision of existing clinical protocols and developing new ones, much more remains to be done. For most conditions or diseases, clinical protocols are still lacking and those that exist are often outdated (HPAU, 2013h). An evaluation of existing guidelines and protocols undertaken by the Evidence-Based Medicine Centre under the Tajik State Medical University found in 2013 that most guidelines and protocols did not consider the best-available evidence, nor did they convey clear clinical pathways (WHO Regional Office for Europe, 2014b). Implementation of

guidelines and protocols is hampered by a number of factors, including a lack of local funding for dissemination, limited opportunities for capacity-building among health workers, and lack of structures for monitoring and evaluation (WHO Regional Office for Europe, 2014b). In the survey in the pilot *rayons* covered by Project Sino, guidelines were often not available in health facilities, with the exception of tuberculosis treatment guidelines (Matthys, 2014).

7.5 Health system efficiency

7.5.1 Allocative efficiency

The main challenge for improved allocative efficiency in the Tajik health system is that the bulk of funding still goes to hospitals rather than primary health care. In 2012, most public health expenditure (56.1%) was spent on inpatient care, with only 32.4% being allocated to primary health care. Salaries for staff were the largest expenditure item, accounting for 56.2% of total public expenditure on health in 2012 (Egamov, Bogadyrova & Akkazieva, 2014c).

The Joint Decree of the Ministry of Health and Social Protection and the Ministry of Finance "on the management and financing structure of primary care facilities in the Ministry of Health System of the Republic of Tajikistan" (adopted in June 2008) envisaged that at least 40% of city or *rayon* budgets should be allocated to primary health care (Egamov, Bogadyrova & Akkazieva, 2014c). However, as the allocation structure of overall public funds indicates, this goal has not yet been reached, probably because of the overall underfinancing of the health system and the ineffective mechanisms of budget allocation and provider payment (HPAU, 2013b).

It also needs to be kept in mind that government expenditure on health accounted for only 29.6% of total health expenditure in 2012 (see section 3.1). However, total expenditure on health mirrors the emphasis on inpatient care. In 2010, hospitals accounted for 47% of total health expenditure; spending on pharmaceuticals and other medical goods (mostly in the form of private OOP payments for outpatient pharmaceuticals) accounted for 27%, and providers of outpatient care accounted for 19% (HPAU, 2013b). Attempts to rationalize the hospital sector have so far focused on reduction of the number of beds rather than on the closure of facilities, and many health services in Tajikistan are provided in inpatient facilities that could be more efficiently managed at the primary care level.

7.5.2 Technical efficiency

The technical efficiency of the Tajik health system can also be assumed to be low. Financing mechanisms have so far largely relied on inputs rather than outputs and quality, and the country is only slowly moving towards provider payment mechanisms based on the population covered and services provided. The lack of mechanisms for pooling funds at *oblast* level, the high level of private OOP funding, the lack of centralized purchasing of pharmaceuticals and the overall poor quality of care are bound to further diminish the technical efficiency of the health system. A 2014 study of 52 health workers (family doctors and nurses) in the *rayon* health centre (polyclinic) and three rural health centres in each of the four *rayons* covered by Project Sino found that the number of patients seen was very low, amounting to 14 persons per health worker and day; only 25.7% of the overall working time of family doctors and 20.3% of the time of family nurses was spent on patient care (Bratschi et al., 2015).

7.6 Transparency and accountability

A key challenge to the transparency and accountability of the health system is the widespread existence of informal payments. Corruption is another problem, for example in the area of procurement. Tax evasion and lack of public participation in the health policy process are likely to further diminish transparency and accountability. An assessment of the capacity of the Ministry of Health and Social Protection to lead health policy processes, based on qualitative research conducted in 2008, concluded that capacity, while improving, remains overall weak. The study found poor recognition of contextual influences, ineffective leadership and governance, centralized decision-making, limited use of evidence, inadequate participation of key actors and ineffective use of resources (Mirzoev, Green & van Kalliecharan, 2013).

8. Conclusions

Tajikistan's health system has so far not departed dramatically from the way it was organized during the Soviet period. The health system remains largely state owned and administered and almost health workers are state employees. Health policy-making is highly centralized, although financing is decentralized, with most public health financing going through *oblast* and *rayon* health budgets. Hospital care continues to dominate the health landscape, in terms of infrastructure, personnel and public (and overall) expenditure, resulting in poor allocative efficiency. The payment of providers continues to be largely based on inputs (the number of beds and health workers) rather than outputs or the population covered, leading to excess capacity. Parallel health systems outside the system of the Ministry of Health and Social Protection continue to exist, leading to duplication and inefficiencies.

However, the country has also started to reform its health system. Several policy documents guiding the reform process have been adopted, most recently the National Health Strategy for 2010–2020 and the Health Financing Strategic Midterm Plan for 2015–2018. Progress in implementing the National Health Strategy is reviewed annually, with the involvement of external development agencies.

One of the key aims of health reform was to strengthen primary health care. The hospital sector has been downsized substantially, although this has taken mainly the form of reducing the number of beds rather than closing facilities; specialized hospitals in the capital have been immune to closures. Services of central *rayon* and city hospitals, as well as *oblast* hospitals, are often duplicating, limiting the efficiency of health service provision. In order to improve the efficiency of health spending, the country will need to further rationalize its network of health facilities, in particular where services are currently duplicated.

The network of primary health care providers has seen some changes, such as in the establishment of health houses and the merger of previously separate polyclinics for adults, children and women's reproductive health into *rayon* and city health centres. There has also been substantial investment in the material basis of primary health care facilities, as well as in the training of physicians and nurses in family medicine. However, family doctors and *rayon* physicians are often bypassed by patients and their competencies and scope of practice continue to be very limited. Further efforts are required to strengthen family medicine and make this profession attractive to graduates and responsive to patients. More broadly, Tajikistan will need to find ways to train a sufficient number of health workers and retain them in the health system.

One of the key challenges are the high levels of private OOP payments, undermining access to health services, in particular for poorer groups of the population, and jeopardizing other key health system goals. Aiming to improve the financial protection of the population, the Ministry of Health and Social Protection introduced a basic benefit package in 2007. However, the programme has so far not moved beyond selected pilot *rayons*, covering only a small proportion of the population. A roll-out of the basic benefit package across the country will be needed, as anticipated in the current Health Financing Roadmap. This will require the allocation of sufficient financial resources to cover the costs of the benefit package.

In order to achieve its aims, such a roll-out will need to be accompanied by other reforms in health financing. Of particular importance are new mechanisms for paying providers, rolling out the current pilot projects on full per capita payment at primary health care level and introducing case-based payments at the hospital level, in order to improve the allocative efficiency of the health system. As health reforms in neighbouring countries have shown, the pooling of funds at *oblast* or national level is essential to improve the equitable allocation of scarce resources.

Access to pharmaceuticals is another major concern, with most pharmaceuticals being bought by patients through OOP expenditure, and counterfeit pharmaceuticals being widely available. Increased efforts are needed to ensure that generic, high-quality pharmaceuticals are available to and affordable for the population.

International agencies continue to play an important role in supporting health reforms, building capacity and contributing resources. However, donor coordination remains a problem. It will be essential for Tajikistan to build domestic capacity and ensure national stewardship of the reform process.

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9.2 Useful web sites

Ministry of Health and Social Protection
http://www.health.tj/en

President of Tajikistan
http://www.prezident.tj/en

Parliament of Tajikistan
http://www.parlament.tj/en/

Agency on Statistics
http://www.stat.tj/en/

UNAIDS country web site
http://www.unaids.org/en/regionscountries/countries/tajikistan

United Nations Development Programme country web site
http://www.tj.undp.org/

United Nations Population Fund country web site
https://data.unfpa.org/docs/tjk

UNICEF country web site
http://www.unicef.org/tajikistan/

WHO country web site
http://www.who.int/countries/tjk/en/

World Bank country web site
http://www.worldbank.org/en/country/tajikistan

German Federal Enterprise for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit) country web site
http://www.giz.de/en/worldwide/382.html

9.3 HiT methodology and production process

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

Authors draw on multiple data sources for the compilation of HiTs, ranging from national statistics, national and regional policy documents to published literature. Furthermore, international data sources may be incorporated, such as those of the OECD and the World Bank. The OECD Health Data contain over 1200 indicators for the 34 OECD countries. Data are drawn from information collected by national statistical bureaux and health ministries. The World Bank provides World Development Indicators, which also rely on official sources.

In addition to the information and data provided by the country experts, the Observatory supplies quantitative data in the form of a set of standard comparative figures for each country, drawing on the European Health for All database. The Health for All database contains more than 600 indicators defined by the WHO Regional Office for Europe for the purpose of monitoring Health in All Policies in Europe. It is updated for distribution twice a year from various sources, relying largely upon official figures provided by governments as well as health statistics collected by the technical units of the WHO Regional Office for Europe. The standard Health for All data have been officially approved by national governments. With its summer 2013 edition, the Health for All database started to take account of the enlarged EU of 28 Member States.

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

A typical HiT consists of nine chapters.

1. Introduction: outlines the broader context of the health system, including geography and sociodemography, economic and political context, and population health.

2. Organization and governance: provides an overview of how the health system in the country is organized, governed, planned and regulated, as well as the historical background of the system; outlines the main actors and their decision-making powers; and describes the level of patient empowerment in the areas of information, choice, rights, complaints procedures, public participation and cross-border health care.
3. Financing: provides information on the level of expenditure and the distribution of health spending across different service areas, sources of revenue, how resources are pooled and allocated, who is covered, what benefits are covered, the extent of user charges and other out-of-pocket payments, voluntary health insurance and how providers are paid.
4. Physical and human resources: deals with the planning and distribution of capital stock and investments, infrastructure and medical equipment; the context in which information technology systems operate; and human resource input into the health system, including information on workforce trends, professional mobility, training and career paths.
5. Provision of services: concentrates on the organization and delivery of services and patient flows, addressing public health, primary care, secondary and tertiary care, day care, emergency care, pharmaceutical care, rehabilitation, long-term care, services for informal carers, palliative care, mental health care, dental care, complementary and alternative medicine, and health services for specific populations.
6. Principal health reforms: reviews reforms, policies and organizational changes; and provides an overview of future developments.
7. Assessment of the health system: provides an assessment based on the stated objectives of the health system, financial protection and equity in financing; user experience and equity of access to health care; health outcomes, health service outcomes and quality of care; health system efficiency; and transparency and accountability.
8. Conclusions: identifies key findings, highlights the lessons learned from health system changes; and summarizes remaining challenges and future prospects.
9. Appendices: includes references, useful web sites and legislation.

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

- A rigorous review process (see the following section).
- There are further efforts to ensure quality while the report is finalized that focus on copy-editing and proofreading.
- HiTs are disseminated (hard copies, electronic publication, translations and launches). The editor supports the authors throughout the production process and in close consultation with the authors ensures that all stages of the process are taken forward as effectively as possible.

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

9.4 The review process

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

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