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Tajikistan

Health system review

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European Observatory on Health Systems and Policies

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Contents

Preface v
Acknowledgements vii
List of abbreviations ix
List of tables and figures xi
Abstract xiii
Executive summary xv

1. Introduction 1
1.1 Geography and sociodemography 1
1.2 Economic context 4
1.3 Political context 8
1.4 Health status 12

2. Organizational structure 27
2.1 Overview of the health system 27
2.2 Organizational overview 29
2.3 Decentralization and centralization 37
2.4 Patient empowerment 38

3. Financing 43
3.1 Health expenditure 44
3.2 Population coverage and basis for entitlement 49
3.3 Revenue collection/sources of funds 56
3.4 Pooling of funds 64
3.5 Purchasing and purchaser–provider relations 65
3.6 Payment mechanisms 66

4. Regulation and planning 71
4.1 Regulation 71
4.2 Planning and health information management 77

5. Physical and human resources **81**
5.1 Physical resources 81
5.2 Human resources 84

6. Provision of services **95**
6.1 Public health 95
6.2 Patient pathways 99
6.3 Primary/ambulatory care 99
6.4 Secondary care: specialized ambulatory/inpatient care 103
6.5 Emergency care 108
6.6 Pharmaceutical care 108
6.7 Long-term care 112
6.8 Services for informal carers 113
6.9 Palliative care 113
6.10 Mental health care 114
6.11 Dental care 115
6.12 Complementary and alternative medicine 115

7. Principal health reforms **117**
7.1 Analysis of recent reforms 117
7.2 Future developments 126

8. Assessment of the health system **127**
8.1 The stated objectives of the health system 127
8.2 The distribution of the health system's costs and benefits across the population 128
8.3 Efficiency of resource allocation in health care 133
8.4 Technical efficiency in the production of health care 133
8.5 Quality of care 134
8.6 The contribution of the health system to health improvement 136

9. Conclusions **139**

10. Appendices **141**
10.1 References 141
10.2 Web sites 146
10.3 Principal legislation 147
10.4 HiT methodology and production process 152
10.5 The review process 154
10.6 About the authors 154

Preface

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

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

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

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

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

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

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

HiT profiles and HiT summaries are available on the Observatory's web site at www.healthobservatory.eu.

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List of abbreviations

BCG	Bacillus Calmette-Guérin
CARK	Central Asian republics (Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan) and Kazakhstan
CIS	Commonwealth of Independent States
DALE	Disability-adjusted life expectancy
DOTS	Directly observed treatment, short-course
DT	Diphtheria and tetanus vaccine
DTP	Diphtheria-tetanus-pertussis vaccine
EIU	Economist Intelligence Unit
EU	European Union
EU15	Countries constituting the European Union before May 2004
GAVI	Global Alliance for Vaccines and Immunization
GBAO	Gorno-Badakshan Autonomous *Oblast*
GDF	Global Drug Facility
GDP	Gross domestic product
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
Hib	*Haemophilus influenzae* type b
HiT	Health Systems in Transition
HIV/AIDS	Human immunodeficiency virus/acquired immunodeficiency syndrome
IMF	International Monetary Fund
IOM	International Organization for Migration
NGO	Nongovernmental organization
OECD	Organisation for Economic Co-operation and Development
OPV	Oral polio vaccine
OSCE	Organization for Security and Co-operation in Europe
PPP	Purchasing power parity
STI	Sexually transmitted infection
SWAp	Sector-wide approach
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund

UNICEF	United Nations Children's Fund
UNODC	United Nations Office on Drugs and Crime
USAID	United States Agency for International Development
WHO	World Health Organization

List of tables and figures

Tables

		page
Table 1.1	Population/demographic indicators, 1990–2007 (selected years)	3
Table 1.2	Macroeconomic indicators, 1990–2007 (selected years)	6
Table 1.3	Mortality and health indicators, 1970, 1980, 1990, 2000 and 2007	12
Table 1.4	Main causes of death, standardized death rates all ages per 100 000 population, 1990–2005 (selected years)	13
Table 1.5	Disability-adjusted life expectancy (DALE), 1999–2002	15
Table 1.6	Immunization coverage for measles, 1999 and 2005	21
Table 1.7	Access to safe water, 2000	24
Table 1.8	Household sources of water supply by *oblast*, 2003	25
Table 3.1	Trends in health expenditure, 2002–2007	44
Table 3.2	Guaranteed benefit package in 2007	54
Table 3.3	Number of donors in Tajikistan, 1992–2006	62
Table 3.4	Number of project implementation units in Tajikistan, 1997–2007 (selected years)	62
Table 3.5	Average monthly salary (in somoni) of health staff in two *rayons* in 2005	69
Table 5.1	Beds per 100 000 population in acute care hospitals, psychiatric hospitals and nursing and elderly homes in Tajikistan, 1990–2006 (selected years)	81
Table 5.2	Outpatient and inpatient facilities in Tajikistan, 2007	82
Table 5.3	Health personnel (physical persons) in Tajikistan per 100 000 population, 1990–2007 (selected years)	85
Table 7.1	Poverty Reduction Strategy indicators and targets	119
Table 7.2	Targets of the Strategic Plan for Reproductive Health	124
Table 8.1	Percentage of individuals reporting illness who sought health care in 1999 and 2003, by household consumption quintiles	130

Figures

		page
Fig. 1.1	Map of the country	2
Fig. 2.1	Organizational chart of the health system	28
Fig. 2.2	Structure of the Ministry of Health	30
Fig. 3.1	Financial flow chart	43
Fig. 3.2	Public sector health expenditure as % of total health expenditure in the WHO European Region, 2005, WHO estimates	45
Fig. 3.3	Health expenditure as a share of GDP (%) in the WHO European Region, 2005, WHO estimates	46
Fig. 3.4	Trends in health expenditure as a share of GDP (%) in Tajikistan, CARK, CIS and EU15, 1998–2005, WHO estimates	47
Fig. 3.5	Health expenditure in PPP $ per capita in the WHO European Region, 2005, WHO estimates	48
Fig. 3.6	Recurrent public expenditures in the health sector	49
Fig. 3.7	Percentage of total expenditure on health according to the source of revenue, 1999 and 2003	57
Fig. 3.8	Total bilateral aid to Tajikistan, all sectors, 1992–2008 (in current US$ millions)	61
Fig. 3.9	Share of grants and loans in Tajikistan's health sector, 2003–2006	61
Fig. 3.10	Per capita budget in primary health care institutions in pilot *rayons* (in somoni)	67
Fig. 5.1	Beds in acute hospitals per 100 000 population in Tajikistan, CARK, CIS and EU15, 1990–2007	83
Fig. 5.2	Number of physicians (physical persons) per 100 000 population in Tajikistan, CARK, CIS and EU15, 1990–2007	85
Fig. 5.3	Number of nurses (physical persons) per 100 000 population in Tajikistan, CARK, CIS and EU15, 1990–2007	86
Fig. 5.4	Number of physicians and nurses (physical persons) per 1000 population in the WHO European Region, 2007 (or latest available year)	87
Fig. 5.5	Number of dentists per 100 000 population in Tajikistan, CARK, CIS and EU15, 1990–2007	88
Fig. 5.6	Density of health workers per 1000 population according to region, 2004	89
Fig. 5.7	Number of pharmacists per 100 000 population in Tajikistan, CARK, CIS and EU15, 1990–2007	94
Fig. 6.1	Typical patient pathways	100
Fig. 6.2	Outpatient contacts per person per year in the WHO European Region, 2008 (or latest available year)	104
Fig. 8.1	Evaluation of 15 months of patient co-payments in pilot *rayons*: where do patients prefer to pay?	132
Fig. 8.2	Evaluation of 15 months of patient co-payments in pilot *rayons*: do patients see changes in the quality of care?	136

Abstract

The Health Systems in Transition (HiT) profiles are country-based reports that provide a detailed description of a health system and of policy initiatives in progress or under development. HiTs examine different approaches to the organization, financing and delivery of health services and the role of the main actors in health systems; describe the institutional framework, process, content and implementation of health and health care policies; and highlight challenges and areas that require more in-depth analysis.

Tajikistan is undergoing a complex transition from a health system inherited from the Soviet period to new forms of management, financing and health care provision. Following independence and the consequences of the civil war, health funding collapsed and informal out-of-pocket payments became the main source of revenue, with particularly severe consequences for the poor. With the aim of ensuring equitable access to health care and formalizing out-of-pocket payments, the Ministry of Health 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.

One of the main challenges for the future will be to reorient the health system towards primary care and public health rather than hospital-based secondary and tertiary care. Pilots of primary care reform, introducing per capita financing, are under way in three of the country's *oblasts*. There are marked geographical imbalances in health care resources and financing, favouring the capital and regional centres over rural areas. There are also significant inequities in health care expenditures across regions. The quality of care is another major concern, owing to the lack of investment in health facilities and technologies, an insufficient supply of pharmaceuticals, poorly trained health care workers, and a lack of medical protocols and systems for quality improvement.

Executive summary

Introduction

Tajikistan is the poorest of the former Soviet republics. It declared its independence on 9 September 1991, and has not yet fully recovered from the civil war of the 1990s. In 2007, about 74% of its 6.7 million population lived in rural areas. Tajikistan has a very young population. In 2007, 38% were below 15 years of age. Outmigration has been considerable: it is believed that up to 2 million Tajik citizens are currently working abroad, mostly in the Russian Federation.

Although Tajikistan was always one of the poorest countries in the Soviet Union, the country suffered a particularly severe economic decline and collapse of social infrastructure when the Soviet Union dissolved, which was followed by several years of civil war. Tajikistan is one of the few countries that have quickly moved from civil war to internal stability and economic growth. As in the Soviet period, cotton and aluminium production continue to dominate Tajikistan's economy. Poverty levels remain high.

Tajikistan's population faces a double burden of both high noncommunicable and communicable disease rates. Infant and maternal mortality rates are among the highest in the WHO European Region and malnutrition is a major public health concern. In the latest stage of health reform, many policy documents were adopted by the Government in the context of poverty reduction and attempts to reach the Millennium Development Goals.

Organizational structure

Tajikistan's health system has evolved from the Soviet model of health care, with so far few structural changes. The Ministry of Health is responsible for national health policy, but has no control over the overall health budget, and directly manages only (most) health facilities at the national level. Local authorities are

responsible for most social services, including health and education. The *oblast* health departments (Gorno-Badakshan Autonomous *Oblast* (GBAO), Khatlon and Sughd) are responsible for the health care provision of *oblast*-owned health care facilities and, together with the executive local authorities (*khukumats*) of cities and *rayons*, the activities of city and *rayon* health facilities within the respective *oblasts*. Although professional associations have no major role in health policy-making, physicians influence national health policy in more informal ways. Although growing, the number of private health care providers is still low.

Financing

So far, the state remains the main public funder and provider of health care services in Tajikistan. Private out-of-pocket payments, however, are believed to be far larger than public sources of revenue, accounting for an estimated 76.2% of total health care expenditure in 2007, one of the highest percentages in the WHO European Region. In 2008, the total public budget for the health sector was equivalent to only US$ 10.6 per capita. External sources of funds contributed to about 10% of total health funding in 2007.

The use of health care funds has traditionally been biased towards hospital services. 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 to free health care with available resources, and introducing population and activity-based health budget formation. A first basic benefit package was introduced in 2005, but then suspended after two months. A new basic benefit package was introduced in 2007 in four pilot *rayons* and has since been extended to eight *rayons*. In another pilot scheme, fee-for-service payments have been introduced in six hospitals of the country. In 2009, the average monthly salary for health care workers was US$ 38, compared with a workforce average of US$ 65.

Regulation and planning

Since Tajikistan's independence in 1991, the Tajik Government has taken over the role of developing and implementing national health policies. While private medical practice has been permitted, the growth of the private sector has been slow and it has been largely confined to pharmacies, dental care and small

diagnostic facilities. While the Government remains the main provider of health care services, most health expenditure is covered through private out-of-pocket payments.

Tajikistan has a hospital-centred service management structure, and the central management of most health services is located in hospitals. In pilot districts, however, the Government has devolved administrative functions to primary health care providers and has established new channels of financing.

Health planning in Tajikistan remains focused on the budgetary process. The process of budget formation in Tajikistan continues to follow mechanisms inherited from the Soviet period, with an emphasis on inputs and staffing rather than on quality and outputs.

Physical and human resources

Tajikistan has inherited a health system from the former Soviet Union that is comprehensive but inefficient. It is highly specialized, with an emphasis on curative and inpatient care, while primary care has been neglected until recently. There is a serious misbalance in the distribution of health facilities and the allocation of budgetary funds between primary health care and hospital care, with the bulk of funding going to secondary health care, while the services provided there are expensive and out of reach for the poor. The ratio of acute care hospital beds has declined since independence, but still remains above the level seen in western Europe. Most health facilities in Tajikistan were constructed in the period 1938–1980, and their condition has deteriorated sharply since the country's independence, through the almost complete lack of investments in refurbishments or the purchase of new equipment.

Tajikistan has less health care professionals per capita than other countries in central Asia. Physicians are mainly specialized, but more and more are being retrained to become family physicians. The intention is to also upgrade and expand nurse training. There has been a major brain drain, with health care workers moving abroad. Staff are unequally distributed, both functionally and geographically. Physicians are concentrated in the capital, Dushanbe, while the density of all staff categories (except *feldshers*) is lowest in Khatlon *oblast* and the *rayons* of republican subordination.

Provision of services

Tajikistan has started to implement a major restructuring of primary health care. The 2002 Conception on Health Reform envisages a new structure of primary health care, transforming the multi-layered system of primary health care in rural areas into a two-tiered system. Health houses are envisaged as serving as the first point of contact in rural areas. They are affiliated to rural health centres, the second level of the health system. Rural health centres (formerly rural physician clinics or rural hospitals) are staffed by physicians, in addition to mid-level and junior health staff. In urban areas, the polyclinic is envisaged as remaining the first point of contact.

Like most post-Soviet countries, Tajikistan inherited an extensive hospital-based system, which has become increasingly hard to sustain. The financing of hospital services on the basis of beds has encouraged superfluous capacity. Since independence, the system has remained virtually unchanged, with little upgrading or investment and few organizational changes. In 2007, there were still about 426 hospitals in Tajikistan, 153 of which were classified as rural hospitals, often located in remote mountainous regions and operating only in the summer months.

Principle health care reforms

Health reform in Tajikistan has fallen behind reforms in other central Asian countries. The country has now embraced a comprehensive reform agenda, aiming to strengthen primary health care, reform health care financing, develop human resources, rationalize the hospital sector, improve quality of care, strengthen management capacity and foster personal responsibility for health. Major financial, structural and institutional changes will be needed to achieve these aims.

The introduction of the basic benefit package and co-payments signalled a change from an input-based finance system towards a financing mechanism based on capitation and cases. Pilots of primary care reform, introducing per capita financing, are under way in three of the country's *oblasts*.

Assessment of the health system

There are marked inequities in Tajikistan's health system with regard to both finance and the distribution of services and resources. The costs of health care place a major economic burden on the population, and poverty presents a significant barrier to accessing health services. Physical barriers play an important role in remote mountainous regions, where road conditions are poor, means of transport limited and many communities cut off for months during the winter season.

There is a serious imbalance in the distribution of the material base and budget funds between primary health care and hospital services, as a result of which the bulk of funding still goes to hospitals. Plans to increase the budget allocation to the primary care sector have still to be implemented. Quality of care is another major concern, which is affected by the lack of investment in health facilities and technologies, an insufficient supply of pharmaceuticals, poorly trained health care workers, and a lack of medical protocols and systems for quality improvement.

1. Introduction

1.1 Geography and sociodemography

Tajikistan is the poorest of the former Soviet republics. It declared its independence on 9 September 1991 and has not yet fully recovered from the civil conflict of the 1990s. A landlocked country, it is surrounded by Uzbekistan to the west, Kyrgyzstan to the north, China to the east and Afghanistan to the south (Fig. 1.1). Its territory of 143 100 km^2 are primarily mountainous, with the high Pamir mountain range in the south and lowland plains in the west. Most of the population lives in valleys in the north and southwest. During the winter, roads are often impassable, so that travel between some regions has to go via Uzbekistan and Kyrgyzstan. The climate varies considerably according to altitude, with very hot summers in the lowlands and temperatures way below freezing in the mountain towns in winter. The post-independence development of Tajikistan has been badly affected by civil war, interruptions to inter-country trade and its location in a politically volatile region.

In 2007, approximately 74% of its 6.7 million population lived in rural areas (Table 1.1). Contrary to trends in most other countries, the share of the population living in rural areas has increased between 1990 and 2007. Tajikistan's population density was 48.2 people per square kilometre in 2007 (Table 1.1), but considering that much of the country's surface area is mountainous and not arable, Tajikistan's population density per square kilometre of arable land, at 488 people per square kilometre, is one of the highest in the world (EIU, 2006). In 2007, the capital, Dushanbe (called Stalinabad between 1929 and 1961), had a population of 670 000.

Tajikistan has a very young population. In 2007, 38% were below 15 years of age, a decline from 43.2% in 1990 (World Bank, 2009a). The fertility rate, although declining from 5.1 in 1990 to 3.3 in 2007, remains high, and the annual population growth was 1.5% in 2007 (World Bank, 2009a). The average age of women at first marriage increased from 21.5 years in 1989 to 23.0 years in 2005 (UNICEF, 2007a).

Fig. 1.1
Map of the country

Source: United Nations, 2009.

The state-funded education system has deteriorated as a result of a severe decline in resources and the civil war, which destroyed one fifth of Tajikistan's schools (UNICEF, 2007b). Access to education declined in the first years after the break-up of the Soviet Union. Enrolment in upper secondary education for 15–18 year-olds declined to 45.4% in 2002, but has since increased to 57.6% in 2007 (UNICEF, 2009). Enrolment in higher education for 19–24 year-olds increased from 11.5% in 1990 to 15.3% in 2005 (UNICEF, 2007a). Youth unemployment is estimated to exceed 60% in the worst hit rural areas (EIU, 2006).

The ethnic composition of the population has also changed after independence. During the civil war, many left the country, and the Russian percentage of the population, which once stood at 8%, decreased significantly. The population, however, remains ethnically diverse, and there are many languages and dialects. According to the 2000 census, Tajikistan's population is made up of the following ethnic groups: Tajik, 79.9%; Uzbek, 15.3%; Russian, 1.1%; Kyrgyz, 1.1%; other, 2.6%.

Table 1.1
Population/demographic indicators, 1990–2007 (selected years)

	1990	2002	2003	2004	2005	2006	2007
Total population (millions)	5.3	6.3	6.4	6.5	6.6	6.6	6.7
Population aged 0–14 (% of total)	43.2	41.3	40.7	40.0	39.4	38.7	38.0
Population aged 65 and over (% of total)	3.8	3.6	3.7	3.8	3.9	3.9	3.8
Population growth (annual %)	2.5	1.1	1.1	1.2	1.3	1.4	1.5
Population density (per km^2)	37.9	45.1	45.7	46.2	46.8	47.4	48.2
Fertility rate, total (births per woman)	5.1	3.8	–	–	3.5	3.4	3.3
Birth rate, crude (per 1000 people)	38.4	29.4	–	–	28.1	27.7	27.3
Death rate, crude (per 1000 people)	8.1	6.6	–	–	6.5	6.5	6.4
Age dependency ratio (dependants to working-age population)	0.9	0.8	0.8	0.8	0.7	0.7	0.7
Rural population (% of total)	68.5	73.5	73.6	73.6	73.6	73.6	73.6
Enrolments in upper secondary education (% of population aged 15–18)[a]	–	45.4	48.9	53.1	53.8	53.4	57.6

Sources: World Bank, 2009a; [a]UNICEF, 2009.

Outmigration has been considerable. It is believed that up to 2 million Tajik citizens are currently working abroad, mostly in the Russian Federation. According to estimates of the International Monetary Fund (IMF), Tajikistan's annual income from remittances lies between US$ 400 million and US$ 1 billion. The situation of migrants in the Russian Federation, however, has become increasingly precarious, as most have been working without the necessary residence and work permits and the Government of the Russian Federation has begun to take an increasingly strict stance. As many as 50 000 migrant workers were deported to Tajikistan in 2004–2006 and, in January 2007, the Russian Federation refused a request by Tajikistan to grant these workers an amnesty (EIU, 2007).

According to the 1994 Constitution, Tajik is the state language and Russian (the lingua franca in the Soviet Union) a language of international communication and dialogue (Republic of Tajikistan, 1994; EIU, 2006). Tajik is the language most widely used. Unlike the ethnically dominant groups of the other four central Asian republics, the Tajik language and culture are based on Iranian rather than Turkic roots and the Tajik language belongs to the Persian or Farsi language group. In the first years after independence, Russian remained the main language of business, but nowadays it is in many respects being replaced by Tajik, although Russian continues to be used, mainly in urban areas. Uzbek is the main language for approximately 25% of the population. Other

languages spoken by respective minority groups are Kyrgyz, Tatar, Turkmen, Uighur and Korean. Tajik is the main language of instruction in education, but there are also Russian and Uzbek schools (EIU, 2006).

The main religion is Islam, followed by approximately 90% of the population, most of whom are Sunnis, while some Pamiri Tajiks belong to the Shia branch of Islam and are followers of the Aga Khan.

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 Soviet Union dissolved, which was followed by several years of civil war. In 1996, real gross domestic product (GDP) was only 34% of its 1991 level. In 2007, Tajikistan was the poorest of the former Soviet republics and one of the 20 poorest countries in the world (European Union, 2007).

Already during the Soviet period, Tajikistan's GDP per capita was among the lowest of the Soviet Socialist Republics constituting the Soviet Union. For this reason, at 47% before the collapse of the Soviet Union, it received the highest transfers from the federal budget as a percentage of its total government revenue (EIU, 2006). Tajikistan also had the highest levels of poverty among the Soviet republics in 1989, with 51.2% of the population earning less than 75 roubles per month (Pomfret, 2002).

Following the Soviet division of labour among the constituent republics, Tajikistan was an exporter of raw cotton and aluminium and an importer of food products. Budgetary transfers and subsidized imports ceased with the collapse of the Soviet Union in 1991. In conjunction with the effects of the civil war, these disruptions had a devastating effect on Tajikistan's already weak economy. Between 1991 and 1996, GDP in real terms contracted on average by 17% per year (EIU, 2006), while the total volume of industrial production contracted by nearly 70% between 1990 and 1997 (EIU, 2006).

Tajikistan is one of the few countries that have quickly moved from civil war to internal stability and economic growth (World Bank, 2006). 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 an annual increase in GDP between 7.5% and 10.6% between 1999 and 2005, although GDP still

fell short of its 1991 level (Table 1.2). During this period, inflation was brought under control, the exchange rate stabilized and external debt halved (World Bank, 2006).

Tajikistan is rich in natural resources, deposits of minerals, gold and rubies, and has a huge hydroelectricity potential, thanks to a dense network of rivers (EIU, 2006; World Bank, 2006). However, unlike some other countries in central Asia, it lacks natural resources such as oil and gas (European Union, 2007), although some gas reserves were discovered in 2008. As in the Soviet period, cotton and aluminium production continue to dominate Tajikistan's economy, providing 80% of total export earnings in 2004, although with a declining contribution to total output since then (World Bank, 2006). Before independence, Tajikistan produced approximately 11% of the Soviet Union's total cotton harvest (EIU, 2006). Following independence, however, cotton output collapsed and remains at less than two thirds of its pre-independence level (EIU, 2006). Although the cotton sector is associated with problems such as child labour and unpaid work by women (European Union, 2007), it is Tajikistan's main source of farm income, agricultural exports and rural employment (EIU, 2007). However, profitability has declined and the cotton sector has accumulated a sizeable debt. According to the Food and Agricultural Organization, other crops, in particular food, could yield better economic returns for the country (EIU, 2007). Agriculture accounts for approximately 60% of employment (World Bank, 2006).

Aluminium is Tajikistan's main source of export revenue. Production fell sharply during the civil war, but has since started to recover, although pre-independence levels have still not been reached (EIU, 2006) and the market price for aluminium has dropped significantly in the current global economic crisis. Despite a huge potential for producing electricity, Tajikistan has faced problems in continuously supplying electricity to the whole country. In 2007, periodic power blackouts continued to affect much of the country (EIU, 2007). The government pursues major hydroelectric projects, the largest of which is a new dam and hydroelectric plant at Rogun, a project that has stood unfinished since the Soviet era (EIU, 2006).

Remittances from relatives working abroad constitute an important source of income. It is believed that, on average, there is at least one member of every family working abroad. Remittances in 2007 were believed to be equivalent to 45.5% of GDP (International Organization for Migration, 2009).

Despite impressive GDP growth rates in recent years, Tajikistan remains one of the poorest countries of the world (World Bank, 2007). In addition, there are considerable income inequalities, with the highest income quintile receiving 45% of total income and the lowest income quintile receiving only 7% (World Bank, 2007). According to the State Committee on Statistics, the share of the population living below the national poverty line fell from 83% in 1999 to 53% in 2008. The proportion of the population living on US$ 2.15 a day (in purchasing power parity (PPP)) declined from 64% in 2003 to 41% in 2007 (World Bank, 2009b) (Table 1.2).

Table 1.2

Macroeconomic indicators, 1990–2007 (selected years)

	1990	2002	2003	2004	2005	2006	2007
GDP (current US$, billions)	2.6	1.2	1.6	2.1	2.3	2.8	3.7
GDP, PPP (current international $, billions)	11.7	6.9	7.7	8.8	9.7	10.7	11.8
GDP per capita, PPP (constant 2005 international $)	3 066	1 178	1 284	1 403	1 478	1 560	1 657
GDP per capita, PPP (current international $)	2 212	1 086	1 209	1 358	1 478	1 608	1 753
GDP growth (annual %)	-0.6	9.1	10.2	10.6	6.7	7.0	7.8
Gini index	–	–	32.6	33.6	–	–	–
Short-term debt (% of total external debt)	–	5.2	7.0	8.0	7.9	9.2	6.2
Value added in industry (% of GDP)	37.6	39.4	37.4	31.8	31.3	27.4	27.5
Value added in agriculture (% of GDP)	33.3	24.7	27.1	21.6	24.0	24.8	21.4
Value added in services (% of GDP)	29.1	35.9	35.5	46.6	44.8	47.8	51.0
Current account balance (% of GDP)	–	-1.2	-0.3	-2.7	-0.8	-0.8	-13.3
Labour force (total, millions)	2.4	2.0	2.1	2.2	2.3	2.3	2.6
Official exchange rate (LCU per US$, period average)	–	2.8	3.1	3.0	3.1	3.3	3.4
Real interest rate	–	-5.4	-8.9	2.7	12.6	3.4	-3.9
Poverty headcount ratio at US$ 2.15 a day, PPP (% of population)[a]	–	–	64.0	–	–	–	41.0
UNDP Human Development Index[b]	0.66	0.67	0.65	0.65	0.67	–	–

Sources: World Bank, 2009a; [a]World Bank, 2009b; [b]WHO Regional Office for Europe, 2010.
Note: LCU: Local currency unit.

The sharp economic decline and disruption of public institutions have led to a collapse in tax revenues, which remained between 13% and 14% of GDP between 1996 and 2000. The low level of government revenues as a percentage of GDP indicates that the tax collection system remains weak in Tajikistan, but also that a large proportion of economic activity takes place outside the formal economy of the country. Some estimates indicate that the informal economy in Tajikistan may be several times larger than the formal economy.

Budget deficits persisted throughout the 1990s, resulting in pressure to reduce government expenditures. In 2002, Tajikistan embarked on an economic stabilization programme supported by the IMF Poverty Reduction and Growth Facility. Since then, austere monetary and fiscal policies have contributed to increased economic growth and the narrowing of government deficits. Tax revenues increased as a percentage of GDP, reflecting strong economic growth, as well as improvements in customs and tax administration. Total government expenditures have not been permitted to grow, however, and any surplus revenues have been used to reduce the budget deficit.

Although total government expenditures have not been permitted to increase under the economic restructuring programme, a central part of fiscal policy recommendations under the IMF Poverty Reduction and Growth Facility has been a gradual increase in social sector spending as a percentage of GDP. The government has recognized the need to increase social spending as part of an overall poverty reduction strategy and has committed itself to increases in social spending (including on health care and education) tied to revenue performance.

The performance of monetary policy has been judged to be less effective than the fiscal policy reforms that were undertaken in the framework of Tajikistan's economic stabilization programme. As a first step towards monetary policy reform, a currency conversion was implemented on 30 October 2000 to replace the Tajik rouble (introduced in May 1995) with the new currency, the somoni. However, the government has continued to intervene in exchange rate markets, muting the effects of monetary policy reforms.

As in other countries in central Asia, corruption and weak governance are major problems (EIU, 2006). In 2007, Tajikistan ranked 150 out of 157 countries on the Corruption Index of Transparency International (European Union, 2007). In January 2007, President Emomali Rahmon formed a new anti-corruption agency.

The current global economic crisis poses significant challenges to Tajikistan. Many migrant workers in the Russian Federation have lost their jobs in the construction sector, leading to a decline of remittances and the return of migrants to Tajikistan. State revenues are affected by the drop in aluminium prices and, although social spending has been ring-fenced, envisaged increases in social spending have become more challenging at a time when poverty-related illnesses may be on the increase.

1.3 Political context

As a result of regional and ideological cleavages, civil war broke out in 1992 and lasted until 1997, when a peace agreement was reached. On one side of the conflict was an alliance known as the Popular Front, which consisted of followers of the Communist Party and had its main base of support in the northern Sughd and southern Kulob regions. The other side was headed by the United Tajik Opposition, which consisted of Islamists and secular politicians and had its main base of support in the southern and eastern regions (EIU, 2006). In 1994, both sides agreed on a ceasefire. Negotiations, which took place under the auspices of the United Nations, were difficult and prolonged, stretching over a three-year period. The Russian Federation and Iran, among others, participated as guarantor countries. A peace agreement, the General Agreement on Peace and National Accord, was finally signed in Moscow on 27 June 1997. The peace agreement provided for a coalition government, with the United Tajik Opposition – of which the Islamic Renaissance Party was the dominant party – being allocated 30% of seats. The agreement also provided for the return of all refugees, the demobilization of guerrilla groups and the holding of national elections (EIU, 2006).

The civil war was one of the most violent internal conflicts in the former Soviet Union. An estimated 50 000–100 000 people lost their lives and approximately 1 million were forced to flee their homes and became internally displaced or refugees (EIU, 2006). The country also suffered widespread physical damage, amounting to an estimated US$ 7 billion (World Bank, 2006). Of the approximately 70 000 people who fled to Afghanistan during the civil war, nearly all have returned to Tajikistan. Hundreds of thousands more sought refuge in other parts of the Commonwealth of Independent States (CIS), mainly in the the Russian Federation (EIU, 2006).

Following a nationwide referendum, a new constitution came into effect on 6 November 1994, replacing the previous constitution from 1978. The Constitution defines Tajikistan as a presidential republic. A national referendum in September 1999 approved a series of constitutional amendments, which included the introduction of a bicameral parliamentary system and the legislation of political parties based on religion. The latter amendment allowed the Islamic Renaissance Party (the main political grouping within the United Tajik Opposition) to participate in presidential and parliamentary elections. At the time of writing, the Islamic Renaissance Party is the only legal Islamic party throughout central Asia. 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.

First elections to the Assembly of Representatives and local council elections were held on 26 February 2000. Elections to the upper house of parliament were held one month later, on 23 March 2000. New elections for the *Majlisi Namoyandagon* were held on 27 February 2005. It 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. In the single mandate constituencies, candidates must win an absolute majority of votes to be elected, otherwise a second round of voting is held between the two leading candidates two weeks after the first round of elections. For all elections, there must be a voter turnout of at least 50% for the results to be valid. The *Majlisi Milli* has 34 members who are indirectly elected; 26 are selected by local deputies, while 8 are appointed by the president.

In the 2005 elections, six political parties took part: the ruling People's Democratic Party, the Communist Party, the Islamic Renaissance Party, the Socialist Party, the Democratic Party and the Social Democratic Party. Some parties were not registered by the government and were therefore ineligible to participate in the elections, showing that the political party environment remains to some extent restricted. In a positive move, on 1 February 2005, all six registered parties signed a code of conduct with regard to the electoral campaign. About 230 candidates were registered for the 63 seats available, including some self-nominated candidates not affiliated with political parties. The variety of candidates and parties indicates a measure of political pluralism. In the 2005 elections, which the Organization for Security and Co-operation in Europe (OSCE) judged to fall short of international standards, the ruling People's Democratic Party, led by President Emomali Rahmon, and its independent allies won all but six seats in the *Majlisi Namoyandagon* (the lower house of parliament). The Islamic Renaissance Party gained two seats in the *Majlisi Namoyandagon*.

In the first direct presidential elections after the country's independence in September 1991, held in November 1991 and not living up to democratic standards, former Communist Party chief Rahmon Nabiyev became the first president of independent Tajikistan. The office of president was abolished in November 1992, but then de facto re-established in 1994 in advance of the constitutional referendum that legally approved it. In the interim, the Chairman

of the Supreme Soviet Emomali Rahmon (formerly Rahmonov) was the nominal chief of state. In the presidential elections of November 1994, Rahmon was elected as the president. Through a constitutional amendment passed in a referendum in September 1999, the president's term of office was increased from five to seven years. A new referendum in 2003 allowed the president to stand for two further seven-year terms. In the presidential elections in November 2006, Rahmon was re-elected for a third term with 79.3% of the vote, and a turnout of 90%. The OSCE noted improvements over the 1999 presidential elections, but still found the 2006 elections to fall short of democratic standards (EIU, 2007).

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 Supreme Assembly 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 Supreme Assembly. As in other countries in central Asia, 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-Badakshan Autonomous *Oblast* (GBAO) has a regional court, and subordinate courts exist throughout the country at the regional, district and municipal levels. Judges are appointed to five-year terms. They are formally subordinate only to the constitution and beyond interference from elected officials. However, the president retains the power to dismiss judges and, in practice, Tajikistan still lacked an independent judiciary after the adoption of the 1994 Constitution. In June 1993, the Supreme Court acted on behalf of the Rahmon Government in banning all four opposition parties and all organizations connected with the 1992 coalition government. The ban was justified by accusing the parties of complicity in attempting a violent overthrow of the government.

As in the Soviet system, the office of the prosecutor general in Tajikistan has authority for both the investigation and 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/province), *rayon* (district) and *kishlak* (village). The 1994 Constitution defines the administrative duties of the territorial administrative units and their

relationship to the central government. At each level there is an executive body (*khukumat*) and an elected advisory body (*majlis*). There are *oblast*/city and *rayon* level administrations (*khukumats*), as well as village administrations (*jamoats*). The heads of *oblasts* and *rayons* are appointed by the executive arm of the government, usually the president. The *rayon* administrations and *jamoat* councils play an important role in the provision of health services to their inhabitants.

The regional 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 the Gorno-Badakshan Autonomous *Oblast* (GBAO; main city, Khorog). This latter region is geographically inaccessible and operates more autonomously. Dushanbe City also has *oblast* status. In addition, there are 13 special districts (*rayons* of republican subordination) that are independent from *oblasts* and report directly to the central state. The country has 22 towns, 58 districts (*rayons*) and 367 *jamoats*.

The Russian Federation has the largest permanent overseas military base in Tajikistan (EIU, 2006) and is undertaking substantial investment in the energy sector (EIU, 2007). Until 2004, Russian officers controlled Tajikistan's border guard service; handover to Tajik control was completed in September 2005 (EIU, 2006), with the opening of a large cross-border management project, mainly funded by the European Union (EU), the United Kingdom's Department for International Development and the United States, and implemented by the United Nations Development Programme (UNDP). Tajikistan is also pursuing close ties with China and the United States, and a NATO airbase is hosted on Tajik territory that provides support to NATO operations in Afghanistan.

Tajikistan is a member of several international or regional organizations relevant to the health sector. These include the United Nations, the 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 and the Convention on the Rights of the Child. It is currently preparing to accede to the WHO Framework Convention on Tobacco Control, but has yet to join the major international water conventions.

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 and deteriorating access to health services, particularly for poor groups of the population. There has been a significant increase of communicable diseases, such as tuberculosis, as well as of diseases caused by micronutrient deficiencies. One of the main factors affecting the health status of the population is the present socioeconomic situation, characterized by widespread poverty.

According to World Bank estimates, life expectancy at birth in 2007 stood at 69.4 years for females and 64.1 years for males (Table 1.3). Infant and child mortality show declining trends, but remain far higher than in most other countries of the WHO European Region.

Table 1.3
Mortality and health indicators, 1970, 1980, 1990, 2000 and 2007

	1970	1980	1990	2000	2007
Life expectancy at birth, female (years)	62.6	64.9	66.1	67.9	69.4
Life expectancy at birth, male (years)	57.8	59.9	60.9	62.7	64.1
Life expectancy at birth, total (years)	60.1	62.3	63.4	65.3	66.7
Mortality rate, adult, female (per 1000 female adults)	153	129	106	147	139
Mortality rate, adult, male (per 1000 male adults)	217	190	168	219	211
Mortality rate, infant (per 1000 live births)	106	98	91	75	57
Mortality rate, child under 5 years (per 1000 children under 5 years)	138	127	117	94	67

Source: World Bank, 2009a.

Throughout the 1990s and early 2000s, diseases of the circulatory system, diseases of the respiratory tract and malignant neoplasms (cancer) were the main causes of death (Table 1.4). Among the factors causing the spread of acute respiratory infections are the high population density, air pollution and poor living conditions. In 2001, the average living space per person was 8.5 m^2, compared with 9.5 m^2 in 1991, with a decline in rural areas from 8.0 m^2 in 1991 to 6.7 m^2 in 2001.

The age-standardized death rate of external cause, injury and poison, at 33 per 100 000 population in 2005, is much lower than the CIS average of 159 and the central Asian average of 81, and even slightly lower than the EU15 average of 35 in the same year (WHO Regional Office for Europe, 2010). Major reasons for this may be lower alcohol consumption than in most other countries of the

Table 1.4
Main causes of death, standardized death rates all ages per 100 000 population, 1990–2005 (selected years)

	1990	1995	2000	2005
Diseases of the circulatory system	480	628	601	561
Diseases of the respiratory system	139	188	116	79
Malignant neoplasms (cancer)	113	69	78	73
Diseases of the digestive system	39	50	47	46
External cause, injury and poison	57	59	36	33
Infectious and parasitic diseases	43	62	36	29
Mental disorders and diseases of the nervous system and sense organs	7	14	10	11

Source: WHO Regional Office for Europe, 2010.

former Soviet Union and a low degree of motorization. However, motorization is increasing and in view of the poor state of many roads, measures to improve road safety are needed, as well as capacity building for violence and injury prevention, including domestic violence.

Infant, child and maternal mortality are key indicators of the Millennium Development Goals (World Bank, 2003). However, estimates of infant and maternal mortality in Tajikistan vary significantly according to source and methodology, and accurate estimates are difficult to obtain. In Tajikistan, the Soviet definition of a live birth continues to be used for both medical and civil registration, although a transition to the WHO definition of a live birth was adopted by Ministry of Health Decree No. 202 of 28 April 2008. Infant mortality rates are also influenced by low birth and death registration. In Tajikistan, birth registration had declined to only 45% of children under 6 months of age, although according to the Multiple Indicator Cluster Survey in 2005, birth registration had increased again to 88.3% of children less than 5 years of age (State Committee on Statistics, 2006). Among those whose children's births were not registered, cost was the main reason, accounting for 42% of unregistered births (State Committee on Statistics, 2006).

According to official statistics, the infant mortality rate fell from 40.4 to 14.1 per 1000 live births between 1990 and 2005 (WHO Regional Office for Europe, 2010). Results from various household surveys, however, show a significantly higher infant mortality rate. The Demographic and Health Survey of 2002 estimated that an infant mortality rate of around 86.9 per 1000 live births existed during the period 1997–2001, and the Tajikistan Living Standards Survey in 1999 estimated an infant mortality rate of around 78 per 1000 live births during the period 1994–1998. Infant mortality rates vary considerably

by *rayon*. According to the Multiple Indicator Cluster Survey conducted by the United Nations Children's Fund (UNICEF) in 2000, in some areas of the country, actual infant mortality in 1993 was 95 per 1000 live births (UNICEF, 2000). The Multiple Indicator Cluster Survey in 2005 estimated infant mortality at 65 per 1000 live births (State Committee on Statistics, 2006). Although these estimates are generally associated with considerable confidence intervals, they suggest that the actual infant mortality rate is much higher than shown in official statistics. According to WHO estimates, infant mortality in Tajikistan in 2004, at 91 per 1000 live births, was higher than in any other country in the WHO European Region (WHO Regional Office for Europe, 2010).

Officially recorded data also underestimate mortality between the ages of 1 and 4 years of age. According to a verbal autopsy report conducted in collaboration with UNICEF in 2003 (Guerra et al., 2003), there was a mortality rate in children under 5 years of age of 95 deaths per 1000 live births, compared with an official rate of 17.3 in 2003 (WHO Regional Office for Europe, 2010). The Multiple Indicator Cluster Survey in 2005 estimated under-5 mortality at 79 deaths per 1000 live births (State Committee on Statistics, 2006).

The underreporting of infant and child deaths means that actual life expectancy is much lower than captured in official statistics. A recalculation of life tables according to World Bank estimates of infant and child mortality showed that actual life expectancy in Tajikistan might be as much as 13.4 years lower than the official statistics suggest (Rechel et al., 2005). According to a WHO World Health Report, estimated life expectancy in Tajikistan in 2004 was 63 years at birth, approximately 10 years lower than the officially reported life expectancy of 73.3 years in 2004 (WHO Regional Office for Europe, 2010).

Acute respiratory infections, diarrhoea and prenatal conditions are the main registered causes of infant mortality. However, the number of deaths from unknown causes has increased in recent years, indicating shortcomings of death certification. The major causes of death within the first year of life are all preventable: meningitis/encephalitis (20%), acute diarrhoea (17%), severe malnutrition (16%), pneumonia (14.4%), severe anaemia (12.6%), bacteraemia/septicaemia (9.9%) and measles (9.9%). According to a recent UNICEF-sponsored study (Guerra et al., 2003), infectious diseases continue to be a major cause of infant and child mortality. Most of the infant deaths (71%) occur in the first week of life. The Ministry of Health and donor organizations are addressing the high infant mortality rates through programmes directed at the

root causes of infant mortality. According to the UNICEF study, communicable diseases account for 58% and malnutrition for 42% of post-neonatal deaths, and these are two of the priority programme areas for the Ministry of Health.

Maternal health remains another major challenge. As is the case with infant mortality rates, estimates of maternal mortality in Tajikistan differ from official statistics, although both sources indicate a declining trend. According to official data, maternal mortality has decreased by more than half from its peak at 124.4 per 100 000 births in 1993 to 43.4 in 2006 (WHO Regional Office for Europe, 2010). It is likely that these figures underreport actual maternal mortality, as there are a large number of home deliveries. It has been estimated that, in 1995, the actual maternal mortality rate was 123 per 100 000 live births (Hill et al., 2001) rather than the officially recorded 97.7 (WHO Regional Office for Europe, 2010).

According to UNICEF, maternal mortality in Tajikistan can be attributed to poor antenatal care, inadequate health services during delivery, and transportation problems, particularly in rural areas (Guerra et al., 2003). In 2008, 40.2% of all deliveries took place at home, reaching 80% in some of the country's regions. Reasons for the high share of unsafe deliveries at home include the poor health care infrastructure and the lack of telephone communication and reliable means of transport. Out of all home deliveries, more than 60% are carried out without medical assistance, resulting in significant health risks. The high level of maternal and perinatal mortality is also related to the poor quality of antenatal and delivery care, which suffers from a lack of materials and equipment and the poor training of health personnel (Skinnider, 2000; Guerra et al., 2003).

According to WHO estimates, disability-adjusted life expectancy (DALE) in 2002 stood at 53.1 years for males and 56.4 years for females (Table 1.5), some of the lowest estimates for the WHO European Region (WHO Regional Office for Europe, 2010).

Table 1.5

Disability-adjusted life expectancy (DALE), 1999–2002

	1999	2000	2001	2002
Overall	57.3	49.4	50.1	54.7
Male	55.1	46.4	47.0	53.1
Female	59.4	52.4	53.2	56.4

Source: WHO Regional Office for Europe, 2010.

Cardiovascular disease is the largest contributor to the gap in mortality between central Asia and industrialized countries, with rates about five times higher than in western Europe (McKee and Chenet, 2002; Figueras et al., 2004). The reasons for this gap include lifestyle factors, such as smoking and a diet high in fat and extremely low in antioxidants, as well as the poor detection and treatment of hypertension. Household food supply is limited by restricted access to land and markets, but poor quality diet also results from traditional preferences for fatty foods and animal products, rather than fruits and vegetables. In the period of transition, problems of healthy lifestyle have exacerbated. The high rates of infectious and non-infectious diseases in many respects reflect unhealthy lifestyles, such as drug abuse or unsafe sexual practices. Although alcohol consumption and smoking play a smaller role than before independence, they have become more common among adolescents and young people, and there has also been a rise in the use of illicit drugs.

Data on HIV/AIDS, sexually transmitted diseases, sexual behaviour and drug use are only minimally available, yet point to disturbing trends. Alcohol consumption, at 0.25 litres per capita per year in 2003, is far below consumption in other countries of the WHO European Region, as indicated by the average consumption of 8.78 litres of pure alcohol per year in 2003 in the WHO European Region (WHO Regional Office for Europe, 2010). Although the number of officially reported cases of HIV infection is still comparatively small, with 373 new cases reported in 2008, the Joint United Nations Programme on HIV/AIDS (UNAIDS) estimated that the true number of people living with HIV in Tajikistan at the end of 2007 was between 5000 and 23 000 people (UNAIDS, 2008).

Intravenous drug use is assumed to be the major source of HIV transmission. The Sentinel Surveillance Survey conducted in selected districts of Tajikistan in 2008 found a prevalence of HIV among injecting drug users of 19.4%, varying from 7.6% to 30% in different sites. Data from the United Nations Office on Drugs and Crime (UNODC) suggest that 79% of the 5341 registered drug users in Tajikistan in 2005 were using heroin and 70% were injecting drugs (UNODC, 2006). By 2007, the number of officially registered drug users had increased to 8000, although the actual number can be assumed to be several times higher (IRIN, 2007). In 2006, 718 drug users were hospitalized for rehabilitation (IRIN, 2007).

Tajikistan shares a 1344 km long border with Afghanistan, the largest producer of opium in the world. Over 85% of drugs from Afghanistan seized in central Asia are impounded in Tajikistan (IRIN, 2007). The significant increase in the trafficking of drugs from Afghanistan presents serious socioeconomic

and moral dilemmas for individual families and Tajik society as a whole. The trafficking of drugs, which is a key factor for increases in domestic drug use and HIV/AIDS cases, is linked to between 30 and 50% of Tajikistan's economic activity, according to a report on HIV/AIDS and tuberculosis in central Asia (Godinho et al., 2004). The report noted that "some foreign experts in Tajikistan assert that the elimination of trafficking-related economic activity would have a serious impact on living standards in an already very poor country" (Godinho et al., 2004). A dose of heroin, at 5 somoni (US$ 1.45), is cheap (IRIN, 2007), and needle sharing seems to be very common. Although needle-exchange programmes have been initiated for injecting drug users, they have a limited national coverage and it is unclear how far they have contributed to a reduction of HIV/AIDS transmission. According to the 2008 Sentinel Surveillance Survey, only 64% of injecting drug users had been covered by HIV/AIDS prevention programmes.

Other groups at particular risk of HIV/AIDS include the large number of labour migrants and the growing number of commercial sex workers. There are an estimated 8000 commercial sex workers in the country. According to the 2008 Sentinel Surveillance Survey, HIV prevalence stood at 2.8%, varying from 0.7% to 6% in different sentinel sites.

A behavioural survey in 2006 found that 30% of labour migrants were engaged in risky sexual behaviour in the Russian Federation, as did 9% of those who had returned to Tajikistan. Only 16.5% of labour migrants were aware of HIV/AIDS transmission and prevention and only 13% used condoms during sexual intercourse with non-regular sexual partners (GIU et al., 2006). According to the Republican AIDS Centre, labour migrants constituted 11% of the 1045 people registered in 2007 as HIV positive.

Young people in general are also at risk. In Tajikistan, adolescents have the lowest level of knowledge regarding the use of condoms to protect against HIV infection among the countries of central Asia. In 2004, less than one quarter (24%) of people aged 14–17 in Tajikistan were aware of this mode of prevention (Godinho et al., 2004). There is a considerable risk of an HIV epidemic if current efforts of HIV prevention are not intensified.

Prevention, detection and treatment of HIV/AIDS and other sexually transmitted diseases, as well as of the use of alcohol and other drugs, are limited by cultural barriers, a high level of stigma and discrimination, and the limited capacity of the health system. The latter barrier is severe: there are inadequate laboratory facilities, a lack of trained health care workers and no reliable surveillance system for HIV. Only an estimated 4% of people with

advanced HIV were receiving antiretroviral therapy in 2006 (UNAIDS, 2008). However, access to safe injection materials seems to be adequate. According to a nationally representative survey of 2000 respondents aged 15–24 years, over 97% of respondents reported that for any injection they use disposable syringes; 96% of respondents reported that they can find disposable syringes in the pharmacy whenever needed (Centre for Strategic Studies, 2007).

The Government of Tajikistan is committed to move towards universal access to HIV prevention, treatment and care, which is reflected in the national strategic documents of the country. In 2007, Tajikistan developed its first national plan for HIV monitoring and evaluation, supported by a detailed budget and focused on national indicators agreed to by all national partners (UNAIDS, 2008). The multisectoral National Strategy on HIV/AIDS identifies the priorities and directions of HIV intervention for 2007–2010. The National Coordination Committee on HIV/AIDS, Tuberculosis and Malaria plays an important role in the coordination of stakeholders and in consolidating the national response to HIV/AIDS in Tajikistan (WHO, 2008).

Tajikistan has benefited from several successful proposals to the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM). Tajikistan submitted its first successful proposal to the GFATM in 2002, receiving an award of US$ 2.4 million. Currently, three projects supported by the GFATM are being implemented in Tajikistan. The first project, "Reduced burden of HIV/AIDS in Tajikistan", is supported by Global Fund Round 4 (for 2005–2009) and budgeted to US$ 8 million. The second project, "Support to national AIDS response to scale up HIV/AIDS prevention and care services in Tajikistan", is supported by Round 6 and has received an award of US$ 12 million for 2007–2011. The third project, supported by Round 8 for 2009–2013, has an external financial contribution of US$ 49.4 million.

Malaria as a mass disease was eradicated in Tajikistan before independence, but returned in 1992. By 2002, as many as 400 000 cases were estimated to exist in the country, including an increasing incidence of *Plasmodium falciparum* malaria cases. The increase in malaria morbidity can be attributed to population movements, the return of Tajik refugees from Afghanistan after the civil war, as well as to increases in mosquito breeding grounds close to inhabitated areas as a result of rice cultivation and blocked irrigation canals. Since 1993, malaria began to be one of the most serious health problems in Tajikistan. The morbidity rate, at 3.3 in 1990, reached 512 per 100 000 population in 1997. As a result of concerted measures taken by the Tajik Government and international agencies (including the governments of Italy, Norway and Japan, as well as WHO, the

United States Agency for International Development (USAID), UNICEF and the GFATM), the situation began to improve again in recent years, and, by 2007, the morbidity rate had fallen to 9.5 cases per 100 000 population (Matthys et al., 2008; WHO Regional Office for Europe, 2010).

Tajikistan received a malaria control grant of US$ 5.4 million in 2005 and a malaria elimination grant of $13.4 million in 2008 from the GFATM. The national strategy aims to eliminate *P. falciparum* malaria by 2010. In 2008, only two cases of autochthonous (locally acquired) *P. falciparum* malaria were reported in the southern part of the country, and it is likely that the transmission of this type of malaria will be interrupted by 2010. In 2009, the national strategy on malaria was revised to reflect the new elimination challenges, with the goal of interrupting the transmission of *Plasmodium vivax* malaria by 2015.

Tuberculosis re-emerged as a major public health threat during the 1990s. According to Ministry of Health data, the incidence rate skyrocketed between 1993 and 2007, increasing from 11.7 to 94.3 per 100 000 population (WHO Regional Office for Europe, 2010). However, the actual rates are believed to be much higher. According to WHO estimates, there was a tuberculosis incidence rate of 231 per 100 000 population in 2007, which was by a large margin the highest estimated tuberculosis incidence rate in the WHO European Region. The age-standardized mortality rate of tuberculosis was 14.7 in 2005 (WHO Regional Office for Europe, 2010). In 2007, newly registered tuberculosis cases were particularly common among males (60%) and those aged 20–54 years (70%). The challenge of tuberculosis control is particularly acute in prisons, where the incidence rate is 35 times higher (WHO and UNDP, 2009).

Furthermore, there is a rapid increase in multidrug-resistant tuberculosis. An analysis of 500 patients showed multidrug resistance in 16.8% of patients who had not been previously treated and in 61.5% among those who had been treated in the past (Blöndal, 2009).

While the Ministry of Health is committed to implementing WHO notification and treatment methods, including the use of new registration forms and the DOTS (directly observed treatment, short-course) approach recommended by WHO, as evidenced by the National Tuberculosis Control Progammes for 1992–2005 and 2003–2010, its ability to address the significant increase in tuberculosis rates is impeded by the fact that the Soviet approach to notification continues to be used and that the DOTS programme is not fully funded. In addition, qualified health personnel and effective pharmaceutical, medical and diagnostic supplies are generally lacking, and hospitalization of tuberculosis patients remains common (Thierfelder et al., 2008).

Between 2001 and 2007, DOTS coverage was expanded to 100% in all *rayons* of the country. Uninterrupted supply of tuberculosis drugs is organized with the support of WHO, the Global Drug Facility (GDF), GFATM and other organizations (WHO and UNDP, 2009). Treatment of multidrug-resistant tuberculosis is currently only provided in Dushanbe and Vahdat *rayon* (Blöndal, 2009).

The Ministry of Health implements the national tuberculosis control programme in cooperation with external agencies such as the German Bank for Reconstruction and Development, Project HOPE, the GFATM, the GDF, USAID, WHO, the Aga Khan Foundation, Caritas Luxembourg, the AIDS Foundation East–West, the International Federation of Red Cross and Red Crescent Societies, the International Organization for Migration (IOM), the World Food Programme, the Red Crescent Society of Tajikistan and the Swiss Agency for Development and Cooperation. Currently, three tuberculosis projects supported by the GFATM are implemented in the country: Round 4 with a volume of US$ 8 million for the period of 2005–2009; Round 6 for 2007–2011 with a budget of US$ 13.4 million; and Round 8 with a volume of US$ 25 million for 2009–2013.

By the mid-1990s, certain other infectious diseases that had been considered as eradicated or reduced to a minimum many years ago also grew again into epidemic outbreaks. The poor water quality, a result of lack of maintenance of the water supply system, and insufficient health education and health promotion among the population are mainly responsible for periodic outbreaks of typhoid fever and leptospiroses.

The Ministry of Health has initiated the development of a national strategy for children and adolescents for the period up to 2015. Tajikistan had high immunization coverage in the Soviet period, but immunization services suffered substantial disruptions in the 1990s because of financial constraints and the unstable political situation. The breakdown of the vaccination system in the early 1990s led to an epidemic outbreak of diphtheria in 1995, increasing from 0.3 cases per 100 000 population in 1992 to 77 per 100 000 in 1995. A number of other infectious diseases are emerging as significant public health concerns, with regular outbreaks of anthrax and brucellosis in cattle and humans, and an outbreak of cholera in 2004–2005. Each year, there have also been isolated outbreaks of the rare and often fatal Congo Crimea haemorrhagic fever. The latest such outbreak occurred in the spring and summer of 2009, with three patients dying, including the director of the Infectious Diseases Hospital in Turzunzoda. By July 2009, no case of avian influenza had yet been reported in the country.

A National Immunization Programme was adopted and, in 1994, a new immunization calendar, based on the principles of extended immunization, was introduced. A new immunization system was established in 1995 and 1997, with the support of UNICEF and WHO, and a campaign of mass immunization was carried out. As a result of these activities, the diphtheria morbidity rate has steadily declined since 1996, reaching 0.05 cases per 100 000 population in 2001 (WHO Regional Office for Europe, 2010).

The National Immunization Programme addresses the management of immunization operations, capacity building, the safety of injections and the transition to a sustainable system of funding for immunization services. The programme includes target rates for vaccine-preventable diseases and for immunization coverage. It aimed to eradicate polio by 2003 and measles by 2007, and to include hepatitis B in the routine immunization programme (UNICEF, 2007b). The first hepatitis B vaccination started in January 2002, with the support of the Global Alliance for Vaccines and Immunization (GAVI). Tajikistan's routine immunization calendar now includes Bacillus Calmette-Guérin (BCG), diphtheria-pertussis-tetanus (DTP), diphtheria-tetanus (DT), measles, oral polio vaccine (OPV), *Haemophilus influenzae* type b (Hib), hepatitis B and rubella. Most vaccines are procured with external financing. At present, the Government of Tajikistan contributes approximately 4.5% of vaccine costs, primarily for the purchase of DT antigens.

According to administrative reports, the coverage rates for the routine vaccinations of the extended programme of immunization for children under 1 year of age exceeded 90% in 1999, with a slightly declining coverage for measles because of an irregular vaccine supply. However, the Multiple Indicator Cluster Survey conducted in June 2000 by UNICEF and the State Committee on Statistics revealed much lower coverage rates (Table 1.6). The Multiple Indicator Cluster Survey in 2005 found an immunization coverage of 85.6% (State Committee on Statistics, 2006), as opposed to an official rate of 94% of children vaccinated against measles in 2005 (WHO Regional Office for Europe, 2010).

Table 1.6

Immunization coverage for measles, 1999 and 2005

	1999	2005
Reported to UNICEF/WHO	89.9%	94.0%
Survey estimate	61.0%	85.6%

Sources: Republic of Tajikistan, 2000; State Committee on Statistics, 2006; WHO Regional Office for Europe, 2010.

Following on from the Multiple Indicator Cluster Survey in 2000, a second dose of the vaccine against measles for children of 6 years of age was introduced into the extended programme of immunization in 2001, but coverage remains low, as there is a lack of funds and a lack of awareness among health care workers and parents; continuing problems in maintaining the cold chain mean that the vaccines reaching children in certain regions are ineffective. However, a nationwide measles campaign was successfully implemented in September and October 2004, with a reported coverage rate of 97.7% of the targeted 2.96 million children (UNICEF, 2007b). The incidence of measles declined to 0.03 per 100 000 population in 2007 (WHO Regional Office for Europe, 2010).

Tajikistan is the last country of the WHO European Region to include rubella vaccination into their routine childhood immunization programme. A mass measles and rubella immunization campaign among those aged 1–14 years was held in Tajikistan between 28 September and 12 October 2009, with a target population of approximately 3.5 million. This campaign was an important part of the overall measles and rubella elimination strategy in the country.

During the 1990s, vigorous efforts for polio eradication resulted in the eradication of the disease in Tajikistan. In June 2002, the country was certified by WHO as polio free.

Since independence, the prevalence of diseases caused by micronutrient deficiencies (iron-deficient anaemia, iodine-deficiency disorders, vitamin A deficiency) has increased, 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.

According to the 2003 nutrition and water and sanitation study, 8.3% of children between 6 and 29 months of age and 1% of those aged between 30 and 59 months included in the study were acutely malnourished, and 36.2% of children between 6 and 59 months suffered from chronic malnutrition (stunting) (Baronina et al., 2003). A survey in 2002 found that 5% of children were wasted, 0.8% severely wasted and 31% stunted (Galloway, 2003). The Multiple Indicator Cluster Survey in 2005 found that 7.2% of children were wasted and 26.9% stunted (State Committee on Statistics, 2006).

According to the 2003 study, malnourished children had a 1.4 times higher risk of suffering from illness than well-nourished children (Baronina et al., 2003). The increased vulnerability of malnourished children to poor health increases the burden of health care costs for families who often already face severe economic difficulties. Malnutrition, in particular iron deficiency, also contributes to premature births and low birth weight, which are major causes of neonatal mortality. Severe malnutrition and anaemia accounted for 42% of neonatal deaths in Tajikistan according to a UNICEF-sponsored verbal autopsy report in 2002. Both mild and severe forms of malnutrition are also likely to contribute to post-neonatal deaths from communicable diseases. Vitamin A coverage for women who have given birth is low.

Iodine-deficiency diseases are another important public health problem in Tajikistan and have become very prevalent in many regions of the country, especially in the south and the mountainous areas. According to the Multiple Indicator Cluster Survey in 2000 (UNICEF, 2000), 20% of the population used iodized salt, with a higher percentage in urban (32%) than in rural areas (16%). Goitre rates are reported to be on average around 10–15% throughout the country, but as high as 40% in children and 65% in pregnant and breastfeeding women in some areas of the country. Low urinary iodine excretion was observed in 57% of women and 64% of children, with small differences between *oblasts*. The 2005 Multiple Indicator Cluster Survey found that consumption of iodized salt had increased to 46.4% of children (State Committee on Statistics, 2006).

The Micronutrient Status Survey in 2003 found an overall prevalence of anaemia among women of 41% and among children of 37.6% (Branca and Tazhibayev, 2004). A low body mass index was observed in 9% of women included in the survey. The highest prevalence of women's undernutrition was found in GBAO (20%), followed by Khatlon (10%), Sughd (8%) and the *rayons* of republican subordination (6%) (Branca and Tazhibayev, 2004). At the same time, one quarter of the women surveyed (26%) were overweight or obese (body mass index, > 25 kg/m^2), with a higher prevalence in the *rayons* of republican subordination (36%) and Sughd (25%) than in Khatlon (16%) and GBAO (12%) (Branca and Tazhibayev, 2004).

Malnutrition among the rural population in Tajikistan worsened in 2007 and 2008, as a result of the global food crisis and associated increases in the cost of food and, since 2008, the global financial and economic crisis. An estimated 30 000 people in remote rural areas had to reduce their food intake to one family meal a day. The international community intervened with an emergency

appeal, and the World Food Programme initiated food distribution to rural and mountainous areas and, in partnership with UNICEF and WHO, established a national monitoring programme for malnutrition and food prices.

Dental health among children is also a concern. Research conducted in central Tajikistan (Dushanbe and the surrounding Hissor valley) showed that, in 2003, children aged 12 years had an average of 2.9 decayed, missing or filled teeth, and that 53% of this age group had dental caries (Toirov, 2003 [personal communication]; Zohidova, 2003).

The Ministry of Water Resources and Land Reclamation is responsible for urban water supply and waste water. At present, water supply and sanitation facilities in Tajikistan are neither safe nor adequate. With an annual production of over 13 000 m^3 of water per capita, Tajikistan is one of the most wealthy states in the world in terms of water supply (UNDP, 2003), ranking third in the world in terms of water resources per head (EIU, 2006), yet in 2000 the country was able to provide just 59% of its population with access to safe drinking-water (see Table 1.7). As Table 1.8 shows, access to safe water varies considerably across the country's regions.

Table 1.7
Access to safe water, 2000

Access	Percentage of population		
	Total	Urban	Rural
Safe	**59.0**	**92.9**	**46.9**
Piped into dwelling	19.2	49.7	8.3
Piped into yard or plot	21.6	32.3	17.7
Public tap	7.6	5.0	8.6
Borehole with hand pump	6.0	3.6	6.8
Protected spring	3.0	0.9	3.7
Protected dug well	1.7	1.4	1.8
Rainwater collection	0.0	0.0	0.0
Unsafe	**40.9**	**7.1**	**53.0**
Bottled water	0.1	0.1	0.1
Unprotected spring	3.4	0.9	4.3
Unprotected dug well	0.6	0.6	0.6
River or stream	31.6	4.1	41.5
Tanker truck vendor	3.0	0.2	4.0
Cut official pipe	0.0	0.0	0.0
Other	2.2	1.2	2.5
Don't know	0.0	0.0	0.0

Source: UNICEF, 2000.

Table 1.8
Household sources of water supply by *oblast*, 2003

Supply	Percentage					
	GBAO	Sughd	Khatlon	Dushanbe	*Rayons* of republican subordination	Total
Piped water or public tap	41	36	58	99	55	54
Water truck	1	7	2	0	0	3
Spring or well	18	18	4	0	16	12
River, lake, pond or similar	41	29	34	0	27	29
Other	0	1	2	1	2	2

Source: World Bank, 2005a.

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. With regard to sanitation, nearly all households have access to pit latrines, but most of these are of poor construction and pose a risk to public health (Baronina et al., 2003). Of the 390 water samples taken in the National Nutrition and Water and Sanitation Survey in 2003, 41% were classified as unacceptable or grossly polluted (Baronina et al., 2003).

A majority of schools and rural medical institutions lack proper sanitation and water facilities. Where piped water is not available, water is mostly collected by women, and a third of the 1500 people who participated in focus groups in 2003 reported having to walk further than 500 m to collect water (Baronina et al., 2003). The fragile water supply system in Tajikistan was badly damaged by the extreme cold wave that affected the country between November 2007 and February 2008. The daily average temperature dropped to minus 25–27°C, and resulted in the freezing of water pipelines. About 50% of hospitals in Tajikistan were without water supply and electricity for more than two months.

Poor water quality is a major source of waterborne diseases. According to a 2004 report, the incidence of waterborne diseases continued to increase. Outbreaks of typhoid fever occurred in 1997 and 2002, resulting in 383 deaths among the 29 738 infected in 2002, while an outbreak of salmonella infection was registered in 1997. According to an assessment by WHO and UNICEF in 2003, only 39.7% of water pipelines were chlorinated appropriately; 30.2% of water samples did not meet relevant safety standards, and 41.4% of water pipelines did not meet sanitary and hygiene requirements (United Nations, 2004). In 1996–1997, the registered cases of typhoid increased dramatically,

as epidemic outbreaks took place in several big cities, and typhoid morbidity almost reached 500 cases per 100 000 population in 1997. The main reasons for the epidemic were a breakdown of the quality control system for tap water and of the sewerage system, resulting in a deterioration in access to high-quality drinking-water. As a result of measures taken by the government with the support of a number of international agencies, the situation began to gradually improve after 1998 and, by 2002, typhoid morbidity had decreased to 52.2 per 100 000 population (Republic of Tajikistan, 2003).

There are several reasons for the poor state of Tajikistan's water and sanitation services. As in other sectors, the civil war and the hardships of post-Soviet economic transition have taken their toll on the water supply infrastructure. Low budgetary allocations and difficulties in collecting user fees have severely limited domestic financing, which has been insufficient to meet the substantial requirements for capital investment. Even if increased funding were available, it is doubtful whether the water authorities could distribute the resources effectively to the many and pressing needs of the water and sanitation services. In addition to increased investment, structural reforms would be needed to improve the efficiency of service provision and to increase incentives for rational consumption (UNDP, 2005).

The issue of food safety is related to water quality, through, for example, irrigation or washing fruits and vegetables with unsafe water. Food safety is underdeveloped and still largely based on Soviet standards. Many different ministries and authorities are involved and there is currently no coordination mechanism, nor any food safety communication to the general public.

The country also faces a number of environmental challenges. Intensive cotton farming in the Soviet era resulted in high levels of pollution, and the development of the irrigation network has led to water shortages and widespread salination of the soil (EIU, 2006). Radioactive waste in rural areas of Sughd and Khatlon and the widespread use of asbestos for roof constructions are other environmental challenges with as yet unknown consequences for population health.

Tajikistan is also prone to a wide spectrum of disasters, including earthquakes, floods, mudflows, landslides, avalanches and other environmental emergencies. The incidence of natural disasters is very high, because of the country's geographical structure and climate. Every year, natural disasters cause civilian casualties, the destruction of property and immense economic damage. The Ministry of Emergency Situations and Civil Defence is the national body that has been given the responsibility for the management and coordination of all disaster-related activities (United Nations Disaster Assessment and Coordination, 2006).

2. Organizational structure

2.1 Overview of the health system

Tajikistan's health system has evolved from the Soviet model of health care, with few structural changes so far. The Soviet-style health system was generally comprehensive, but highly centralized 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, while 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 is now undergoing a complex transition to a new health system, which comprises new mechanisms of management, financing and functioning. So far, the state remains the main public funder and provider of health care services in Tajikistan. Private out-of-pocket payments, however, are believed to be far larger than public sources of revenue.

The Ministry of Health runs national level health care services, while local authorities (at *oblast* and *rayon* level) administer most regional, district and peripheral health care services. The organization of health services 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:

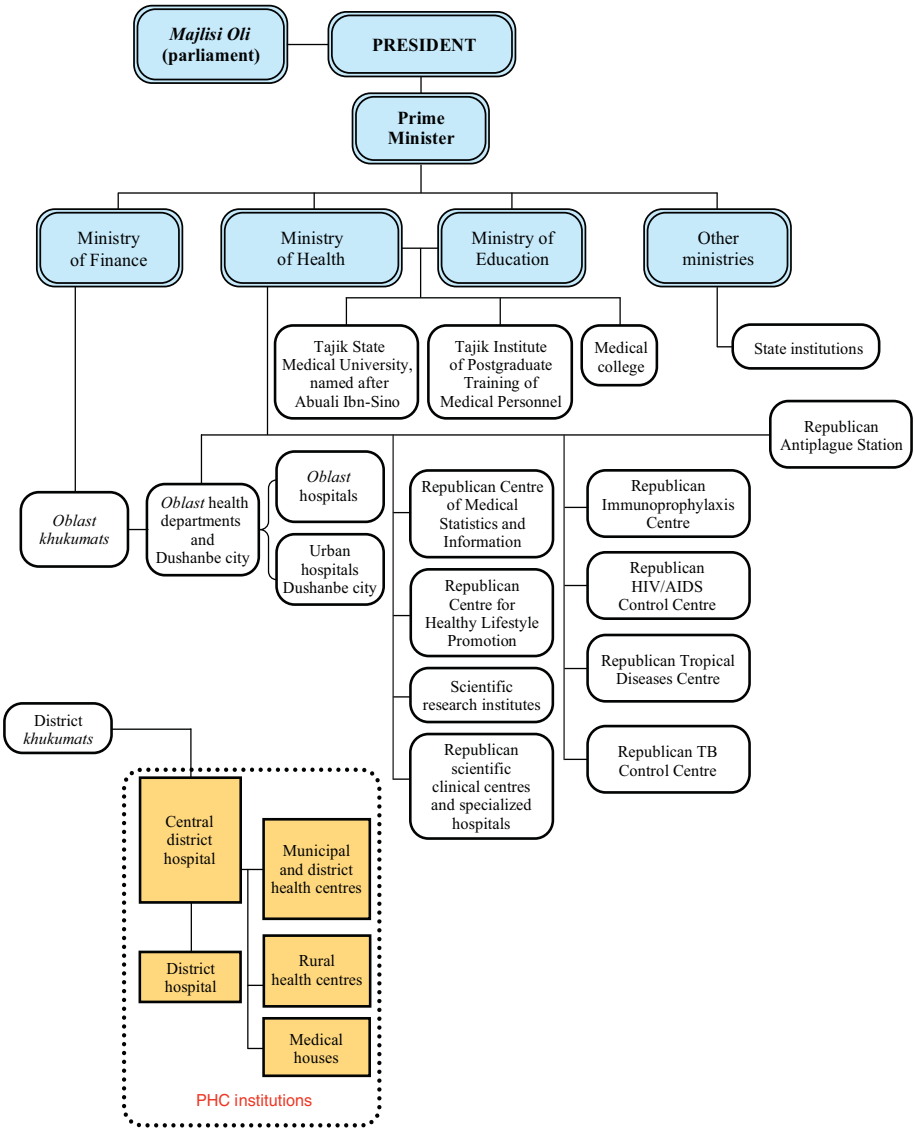
republican level – Ministry of Health;

oblast and city (Dushanbe) level – health departments within *oblasts* and Dushanbe city executive authorities (*khukumats*);

rayon or city level – central, *rayon* or city hospitals that also perform the functions of *rayon* or city health care departments; and

jamoat (village) level – peripheral primary health care.

Fig. 2.1
Organizational chart of the health system



Notes: TB: Tuberculosis; PHC: Primary health care.

The health system in Tajikistan faces a number of significant challenges, including:

- inadequate funds to pay health care personnel, maintain health facilities or purchase sufficient medicines and medical supplies (despite some humanitarian and relief support);
- ageing facilities and equipment, destruction of many buildings and other infrastructure during the war, and insufficient maintenance since then;
- reduced utilization rates, despite a high average length of stay in hospitals;
- a collapse of the referral system and a tendency for people to postpone or defer medical care and/or to rely on self-medication;
- a lack of human resources, partly resulting from a significant loss of health care workers through emigration or taking up jobs outside the health sector;
- a resort to informal payments; and
- a markedly skewed distribution of staff and resources, particularly towards the capital city of Dushanbe.

2.2 Organizational overview

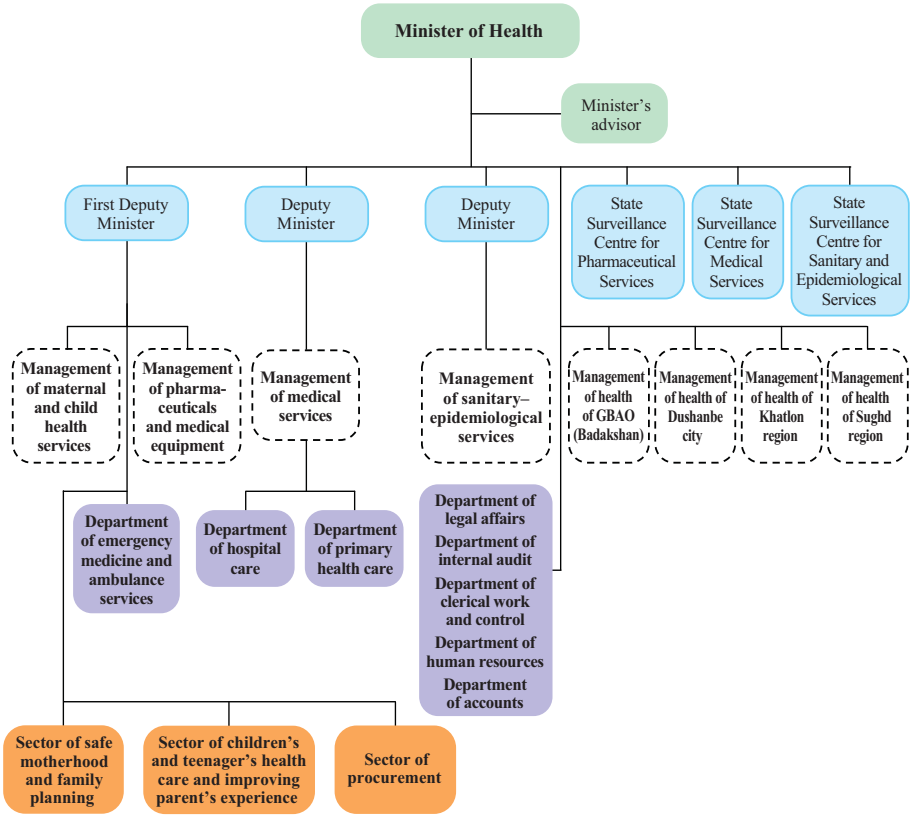
In accordance with the Law on Health Protection of 1997, the executive authorities of the state are responsible for the protection of the health of the population. Although the national Ministry of Health formulates health policy, it is mostly *oblast* and *rayon* level administrations that deliver health services.

2.2.1 Ministry of Health

The Ministry of Health 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 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 are financed through local governments and are not directly controlled by the Ministry of Health.

In 2001, in line with the Presidential Decree on Measures for the Improvement of some Governmental Structures, the government reviewed the statute regulating the activity of the Ministry of Health, its central administrative structure and management system. The Government Decision No. 321 on the Ministry of Health of the Republic of Tajikistan of 29 June 2001 set a maximum number of staff working in the Ministry's central administration (60) and permitted the use of three deputy ministers. On 31 January 2002, the government made some amendments to this resolution and to a statute on the Ministry of Health, establishing a maximum number of staff working at the Ministry of 55. The Ministry adopted a new structure on 30 May 2008 (see Fig. 2.2). It is headed by the Minister, who is assisted by a First Deputy Minister and two Deputy Ministers. In 2008, the Ministry of Health had a contingent of 84 staff members.

Fig. 2.2
Structure of the Ministry of Health



A Health Policy Analysis Unit was established in the Ministry of Health in 2008 in the framework of the World Bank/Sida-financed Community and Basic Health Project. The establishment of the unit aimed to strengthen the policy analysis capacities of the Ministry of Health and provide an input into the implementation of health reforms. In 2009, the unit undertook the 15-month follow-up survey of introducing the guaranteed benefit package, a survey on hospitalization, and a survey on the influence of per capita financing in primary health care. The unit also played a major role in developing the National Health Sector Strategy (see Subsection 7.1.3 *Health Care Strategy by 2010 (2002)*).

The management structure of the Ministry of Health includes the central administration, structural subdivisions on management of local health care departments (within *khukumats*), GBAO, Khatlon and Sughd *oblasts* and Dushanbe.

The Ministry of Health is responsible for the national health policy, but has no control over the overall health budget, and directly manages only the health facilities at the national 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:

- development of a national health policy and identification of priorities in the health sector;
- implementation of national programmes, such as those concerned with disease control;
- coordination of the health system of the country;
- direct management of health institutions at the republican level, of scientific research institutes and of educational institutions for health professionals;
- formulation of policies on pharmaceutical and other medical products and regulation of their registration, licensing, production and sale;
- setting of standards for the quality of care in public and private health facilities;
- provision of sanitary–epidemiological services for the population;
- development of 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. The *kollegia* comprises seven members: the Minister of Health, the three deputy ministers, the head of City Health Management, the rector of the State Medical University, and the head of the sanitary–epidemiological services. There are also informal coordination bodies involving external agencies, such as the Donor Coordination Council (see Section 3.3).

The structure of the Ministry of Health, according to Government Resolution No. 282 of 30 May 2008, is shown in Fig. 2.2.

There are 73 organizations under the direct supervision of the Ministry of Health, including 1 undergraduate medical university, the postgraduate medical institute, 14 republican, regional and district medical colleges, 2 research institutes (the Scientific Research Institute of Obstetrics, Gynaecology and Perinatology and the Scientific Research Institute of Preventive Medicine), 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. The recent establishment of the Academy of Medical Sciences is expected to be a major incentive for the development of medical science and innovation in Tajikistan.

2.2.2 Ministry of Finance

The Ministry of Finance is responsible for the state budget, including financial allocation to the health sector. The Ministry of Health 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 (*khukumats*) and managed by the *oblast* and *rayon* finance departments.

2.2.3 *Oblast* and *rayon* administrations

Local authorities are responsible for most social services, including health and education. Within each local administration (*khukumat*), 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 (on professional matters) and the *oblast* administration.

The *oblast* health departments (GBAO, Khatlon and Sughd) are responsible for health care provision of *oblast*-owned health care facilities and, together with the executive local authorities (*khukumats*) of cities and *rayons*, the activities of city and *rayon* health facilities within the respective *oblasts*. The health care department of Dushanbe *khukumat*, in conjunction with the city *rayon* administrations, coordinates the activities of city health care facilities. In cooperation with *jamoats* (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 specialized and tertiary-level *oblast* 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* and do not provide any financial support to *rayon* health departments, although they advise them on health matters and serve as an immediate contact point on behalf of the Ministry of Health in the region. *Oblast* administration budgets do not include funds for health, except for those health institutions that are under direct *oblast* subordination, but consolidated *oblast* budgets include health sector planned expenditures for *rayons*. An *oblast* health department has limited staff, mainly responsible for inspecting.

Rayon health facilities are administered by central *rayon* hospitals and, in some *rayons* of republican subordination and some *oblast* cities, by central city hospitals. The head physicians of central *rayon* hospitals and central city hospitals act as heads of *rayon*/city health departments and administer all health services in their respective *rayon* or city. They are assisted by deputies responsible for rural clinics, polyclinics, disease prevention and mother and child health services. They also have their own accountants, but on financial and accounting matters work very closely with the *rayon* finance department. A consequence of this hospital-centred service management structure was that in the past budgetary allocations usually favoured hospitals, although in the context of current health reforms more attention is now devoted to primary health care activities. The Ministry of Health aims to establish a new governance structure for both primary and secondary care, with separate budgets and a higher priority given to primary health care.

Until recently, the heads of the *oblast/rayon* health departments were appointed and dismissed by the heads of *oblast/rayon* administrations in agreement with the Ministry of Health and with subsequent submission of the

decision for approval to the *Majlis*. According to Parliamentary Resolution No. 652 of 18 May 2009, entitled "Amendment to the Law on Public Health Care in Tajikistan", the heads of *oblast* and *rayon* administrations are now appointed by the Ministry of Health. The heads of the *oblast* and Dushanbe city health departments report to the Ministry of Health 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.

2.2.4 Parallel health services

Apart from the health institutions managed by the Ministry of Health, health facilities (hospitals and polyclinics) are also run by other ministries or state agencies. In 2010, there were 163 health facilities run by other ministries (Ministry of Defence, Ministry of Internal Affairs, Ministry of Justice, Ministry of Transport and Communication, Ministry of Light Industry) or state committees and agencies. These facilities include 8 large hospitals, such as for military personnel and prisoners. Parallel health services are directly funded by the relevant ministries or companies and, consequently, the expenditure does not appear in governmental statistics on health expenditure. The Ministry of Health coordinates the activities of parallel health services with regard to national programmes and health reforms, but due to their different governance structure, implementation of most Ministry of Health directives is delayed, in particular with regard to the development of family medicine. In most cases, parallel health services duplicate Ministry of Health structures and need to be rationalized.

2.2.5 Professional associations and unions

Professional associations of doctors or nurses existed in the Soviet period, but operated as scientific societies under the umbrella of the federal Ministry of Health. 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 been granted no formal role in accreditation or regulation and have little influence over health policy (Wyss and Schild, 2006), although physicians have nevertheless been able to lobby for policy changes.

Following legislation 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 the regional and local levels, which negotiates salary levels with the government and has achieved several salary increases for health workers, with the latest one envisaging an 8% increase of salaries in 2010.

2.2.6 Private health care providers

The government and the president have aimed to promote the development of a private health sector. They have progressively legalized private ownership of health facilities, introduced private sources to cover health expenditures and allowed private provision of services. A Law on Private Medical Practice was adopted in 2002 and a licensing committee was established under the Ministry of Health for the opening of private medical practices. A Private Sector Development Strategy has been developed in 2007 as part of the Poverty Reduction Strategy (Republic of Tajikistan, 2007a). Private health services have been regulated by the Law on Health Protection of 1997, Art. 14 of which allows physicians to engage in private medical practice, reimbursed through user fees, employer contributions or health insurance companies. The government has recently simplified the licensing of private providers and reduced the registration fee to approximately US$ 60.

However, the development of the private sector in health care delivery has been slow and mostly confined to pharmacies and dentists. Most dental services are now provided by private practitioners, in particular in major cities and regional or district centres. In Dushanbe and other big cities, new private consultation and diagnostic centres have been opened, particularly since 2007, that aim to compete with state-owned outpatient centres (polyclinics) and hospitals, by offering better equipment and services. In 2010, 14 private hospitals operated in the country. However, the share of medical services provided in private health centres still remains low in comparison with the total volume of services provided in budgetary health care institutions.

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. The investment in private health facilities is therefore economically not viable, and there are very limited incentives for doctors to open private practices. In addition, physicians lack the necessary funds and experience, and standards of care are usually very low.

2.2.7 Voluntary/nongovernmental organizations or civil society associations

In the years since independence, a number of nongovernmental organizations (NGOs) have emerged in Tajikistan, although most continue to rely on financing by international agencies. The role of local NGOs in health and social services appears to be gradually expanding in Tajikistan since 1992 (World Bank, 2005a) and a number of international agencies are supporting community mobilization.

The many NGOs that are working in the country's health sector are mainly concerned with community health issues and HIV/AIDS prevention, trying to fill the gaps that are left by the limited human and financial resources of state-run public health care. A survey on community-based health programmes in Tajikistan conducted by the Aga Khan Foundation found that 23 international and 84 national NGOs supported community-based health projects in the country (Hemming, 2004).

The most common project objective for NGOs is to increase community knowledge and awareness of health and nutrition, while NGOs also aim to improve the quality of health services or the access of the population to them (World Bank, 2004a). 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 emergencies to far-away hospitals, for assisting impoverished members of the community or for covering the informal medical costs for those unable to pay (World Bank, 2004a).

Many communities have provided members to act as community health promoters or volunteers, after appropriate training by an NGO. Health workers, community or religious leaders, and women were reported to be the most actively involved community members in the design and implementation of these projects (World Bank, 2005a).

Lack of trust in the Government was found in a survey in 2002 to be one of the main barriers to community participation. Other barriers to community engagement included poverty (either of communities themselves or the reported lack of sufficient funding of NGOs) and traditional beliefs and conservative leaders who resisted change. A number of respondents noted that rural communities are generally more open and responsive than urban communities. Several national NGOs reported that a lack of knowledge/low educational attainment were impediments, and two international NGOs cited high literacy and educational attainment levels as facilitating factors. These findings point to both the fragile nature of community health activities in Tajikistan and potential opportunities that exist to harness these emerging programmes to address the health problems of the community (Hemming, 2004; World Bank, 2005a).

2.3 Decentralization and centralization

While, as in many other countries, the economic, environmental and ethnic characters of Tajikistan's regions differ significantly, the health system remains largely state-owned and administered. As noted above, the financial allocation to the health sector from the national state budget is done centrally by the Ministry of Finance, with only limited involvement of the Ministry of Health. Budgetary funds from the central government are then distributed to the finance departments of *oblast* administrations. In this regard, the Ministry of Health controls only the functional activity of health care facilities.

The structure is generally (though not universally) hierarchical. In recent years, the government has begun work on a new legal framework for decentralization and for local government reform. While Tajikistan is still heavily centralized in terms of health policy and strategy, it is a fiscally decentralized system, including in health financing. Most government revenue is generated locally, and *oblasts* determine to a large degree the formation of (local) health budgets.

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 to allocate resources accordingly.

2.4 Patient empowerment

2.4.1 Patient information

The population has insufficient access to health-related information 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 to other countries with similar levels of economic development, and this facilitates the provision of health-related information. Over 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 now advertise their services, thus providing information for patients where they can access certain services. The Ministry of Health has established a press centre, which has opened an Internet site and publishes news in the regular press.

Following the 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. However, the law recognized Russian as the second official language and allows Russian-speaking residents to use Russian when dealing with public authorities. Furthermore, as mentioned above, the 1994 Constitution recognized Russian as "a language of interethnic communication" (Republic of Tajikistan, 1994). Information in both languages is widely disseminated, although Tajik has become more widely used in recent years. Other minorities, such as the Uzbek 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 number of main telephone lines per 100 population stagnated at 3.75 between 1998 and 2003, which ranks among the lowest in the world. The use of mobile phones has increased rapidly, from 5% of total phone users in 2002 to 16% in 2003. Internet technology is slowly expanding. In 2004, there were around 14 Internet service providers, covering the 12 largest cities and roughly one third of the population. In the largest cities, Dushanbe and Khujand, Internet cafes have started to open, although the number of users remains low (EIU, 2006).

2.4.2 Patient rights

In 1994, WHO launched the Declaration on the Promotion of Patients' Rights in Europe (WHO, 1994). This declaration lays out the principles of human rights in health care, freedom of health and health care information, consent in health care procedures and disclosure of information, protection of confidentiality and privacy, and patient choice in health care and treatment.

In Tajikistan, legislation has been enacted to protect patients' rights and to provide for patient choice, complaints and reimbursement procedures, and information on the pricing of medical services. While patients' rights are formally recognized, there are still major conflicts with regard to the financial affordability of health services.

The introduction of the state-guaranteed package of services in four pilot districts in 2007 entitles patients to claim certain benefits and aims to organize co-payments in a more transparent way. In order to enhance patients' rights, it will be essential to raise public awareness of the benefits package and possible redress mechanisms, including the administrative and judicial responsibilities of doctors and health care facilities.

2.4.3 Patient choice

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 newspapers, 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 of 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.

Patients' choice is also related to the costs of health services, which become more expensive from the rural to the district level, from the district to the city or regional level, and from the regional to the republican level, where all specialized services are located. Outpatient services are much cheaper than hospital care.

In the pilot districts where the state-guaranteed package of services has been introduced, only certain groups of the population are entitled to free health 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 pay out-of-pocket for the services they receive. It is hoped that the nationwide introduction of the benefits package will increase patient choice.

2.4.4 Complaints procedures

A complaint procedure for patients has been established that involves regulatory bodies in health facilities and the Ministry of Health. 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 facility, which usually issues a written answer outlining the measures undertaken to resolve the problem. If the complaint requires the action of higher administrative levels, it is referred to them by the respective health facility.

Complaints that are referred to the Ministry of Health usually concern severe 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 of Health, under the supervision of the Minister, is responsible for taking and documenting the necessary measures to resolve the identified problems. Furthermore, the

Ministry of Health has a weekly consultation with community representatives to assess specific complaints and problems. The recent establishment of an Ombudsman office is likely to offer a new avenue for patients who wish to complain about the health services they receive.

2.4.5 Patient safety and compensation

Every complication or death of patients 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 so far not commonly held and is not obligatory for individual physicians or health 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 presented to medical students. Where appropriate, they are also communicated by the Ministry of Health to the Ministry of Justice and the prosecutor's office. The State Surveillance Service for Medical Activities, established in November 2008, is responsible for patient safety regulations and took the necessary steps to start the accreditation process of health facilities.

When physicians notice adverse drug reactions, they usually report the case immediately to the Ministry of Health and the pharmacy that provided the medication. The State Surveillance Service for Pharmaceutical Activities tests the drug sample and reports the results to the Ministry of Health and the health care provider. Sometimes the State Surveillance Service for 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 is responsible for the appropriate regulatory measures.

2.4.6 Patient participation/involvement

There are no mechanisms in place for the participation of patients or the general public in the policy-making process. So far, hardly any surveys on patient satisfaction have been carried out.

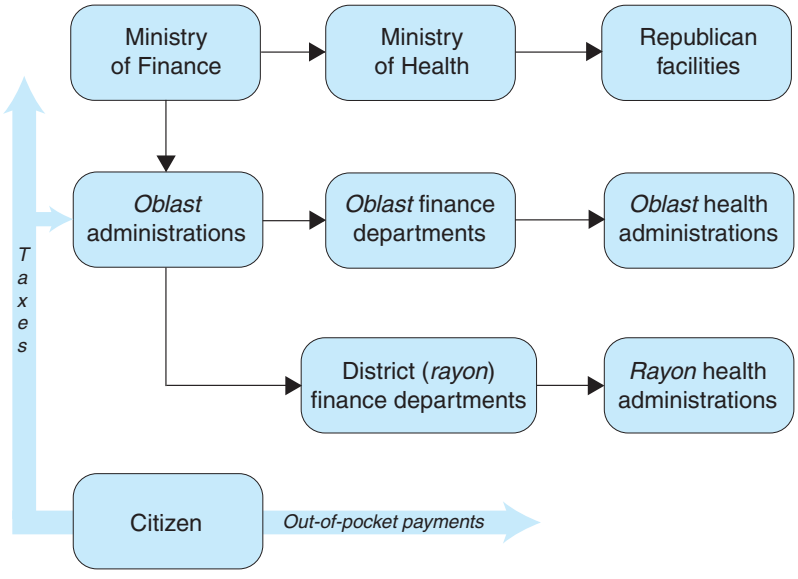
Social participation in health is explicitly articulated as one of the five primary objectives of the Government's 2002 Health Reform Programme. Specifically, the Programme recommends that the population "should be actively involved in planning, operations and supervision pertaining to medical and sanitary aid using local and other resources and opportunities" and that "measures providing comprehensive, precise and timely information of issues with respect to health, medical and sanitary aid through various information channels should be developed" (Republic of Tajikistan, 2002a).

However, 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 the national level. Coordination by local *khukumats* with local NGOs helps to increase the engagement of the population in health issues. The Community Councils (*mahalla*) at the village, *rayon* and city levels play a role in mobilizing communities. But these are not regular systems and their effectiveness appears to be limited (Republic of Tajikistan, 2002b; World Bank, 2005a).

3. Financing

Funding for health expenditures comes from three main sources: the general budget, out-of-pocket payments and international development assistance. Government funding for health care through taxes collected by the national government makes up a relatively small percentage of total health care expenditures, and this limited amount of funding is used inefficiently, with most budget funds directed towards covering salaries in the hospital sector (Cashin, 2004a). As public funding for health care collapsed in the period after the country's independence, private out-of-pocket payments have increasingly filled the health financing gap (Cashin, 2004a; Falkingham, 2004), accounting for an estimated 76.2% of total health care expenditure in 2007 (World Bank, 2009a).

Fig. 3.1
Financial flow chart



Source: Rahminov, Gedik and Healy, 2000.

Health financing reform started in 2005. (Fig. 3.1 shows the current financial flow.) 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 introducing population and activity-based health budget formation.

3.1 Health expenditure

As private out-of-pocket payments constitute the main source of health expenditure (Table 3.1), total health expenditure is not adequately captured in government statistics. According to World Bank estimates, total health expenditure per capita (in current US$) increased from US$ 9 in 2002 to US$ 24.5 in 2007 (World Bank, 2009a). In 2008, the total public budget for the health sector was approximately US$ 74 million, equivalent to US$ 10.6 per capita. The state health budget was 1.7% of GDP and 5.7% of the state budget.

Table 3.1
Trends in health expenditure, 2002–2007

	2002	2003	2004	2005	2006	2007[a]
Health expenditure per capita (current US$)	9.0	11.0	14.0	18.0	21.0	24.5
Health expenditure, total (% of GDP)	4.5	4.5	4.4	5.0	5.0	–
Health expenditure, public (% of Government expenditure)	4.8	4.8	4.6	5.0	5.0	–
Health expenditure, public (% of total health expenditure)	20.2	20.4	21.4	22.7	22.5	23.8
Health expenditure, private (% of total health expenditure)	79.8	79.6	78.6	77.3	77.5	76.2
Out-of-pocket health expenditure (% of private expenditure on health)	98.9	97.5	96.8	96.3	96.6	–

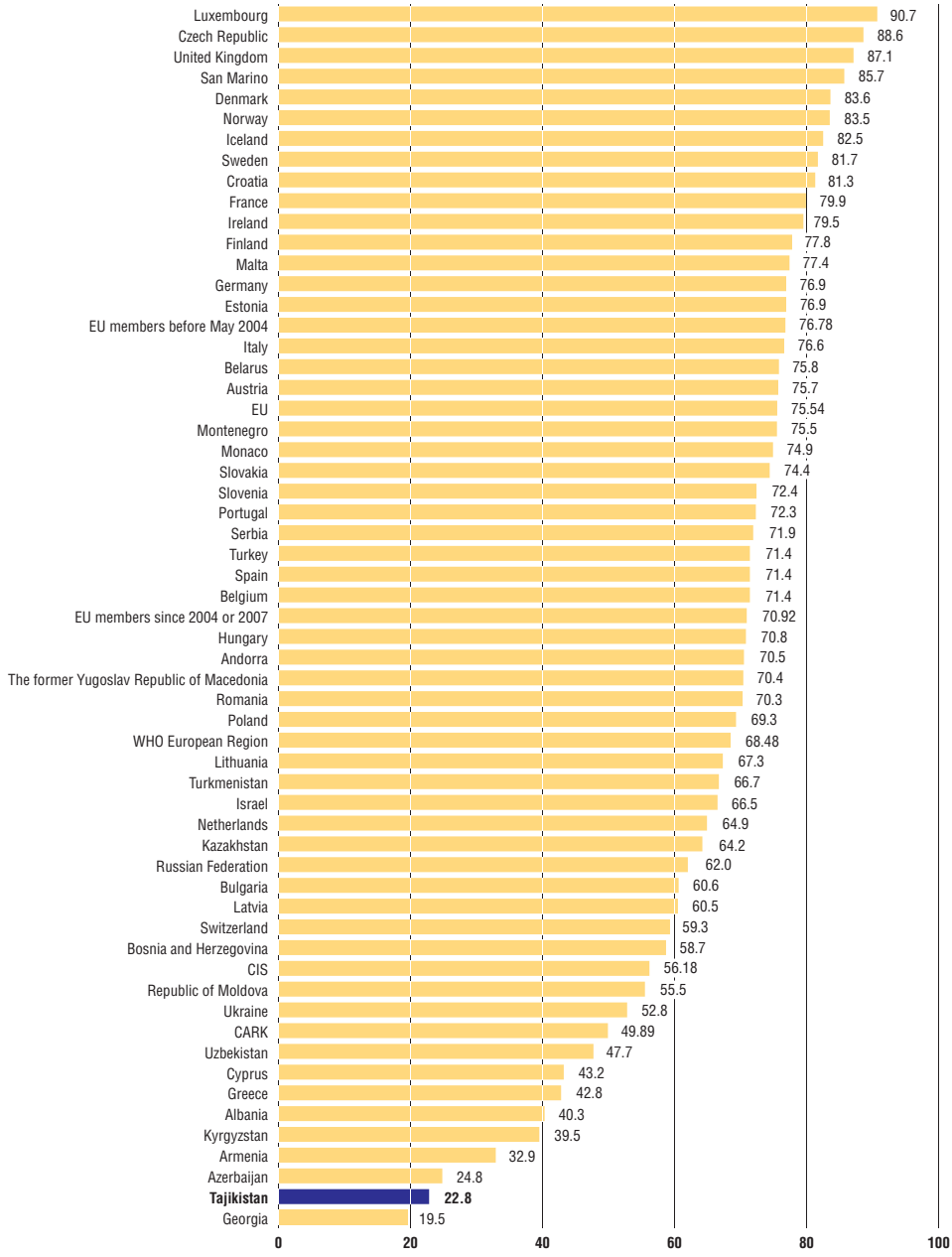
Source: World Bank, 2009a.
Note: [a]Data for selected items only.

Tajikistan ranks among those countries in the WHO European Region with the lowest share of public sector health expenditure as a percentage of total health expenditure (Fig. 3.2). There was a slight increase in the share of public health expenditure, from 20.2% in 2002 to 23.8% in 2007 (World Bank, 2009a).

When seen in the context of the WHO European Region, Tajikistan ranks among those countries with the lowest estimated health expenditure as a percentage of GDP (Fig. 3.3), although the country is broadly in line with other countries in central Asia and the CIS (Fig. 3.4).

Fig. 3.2

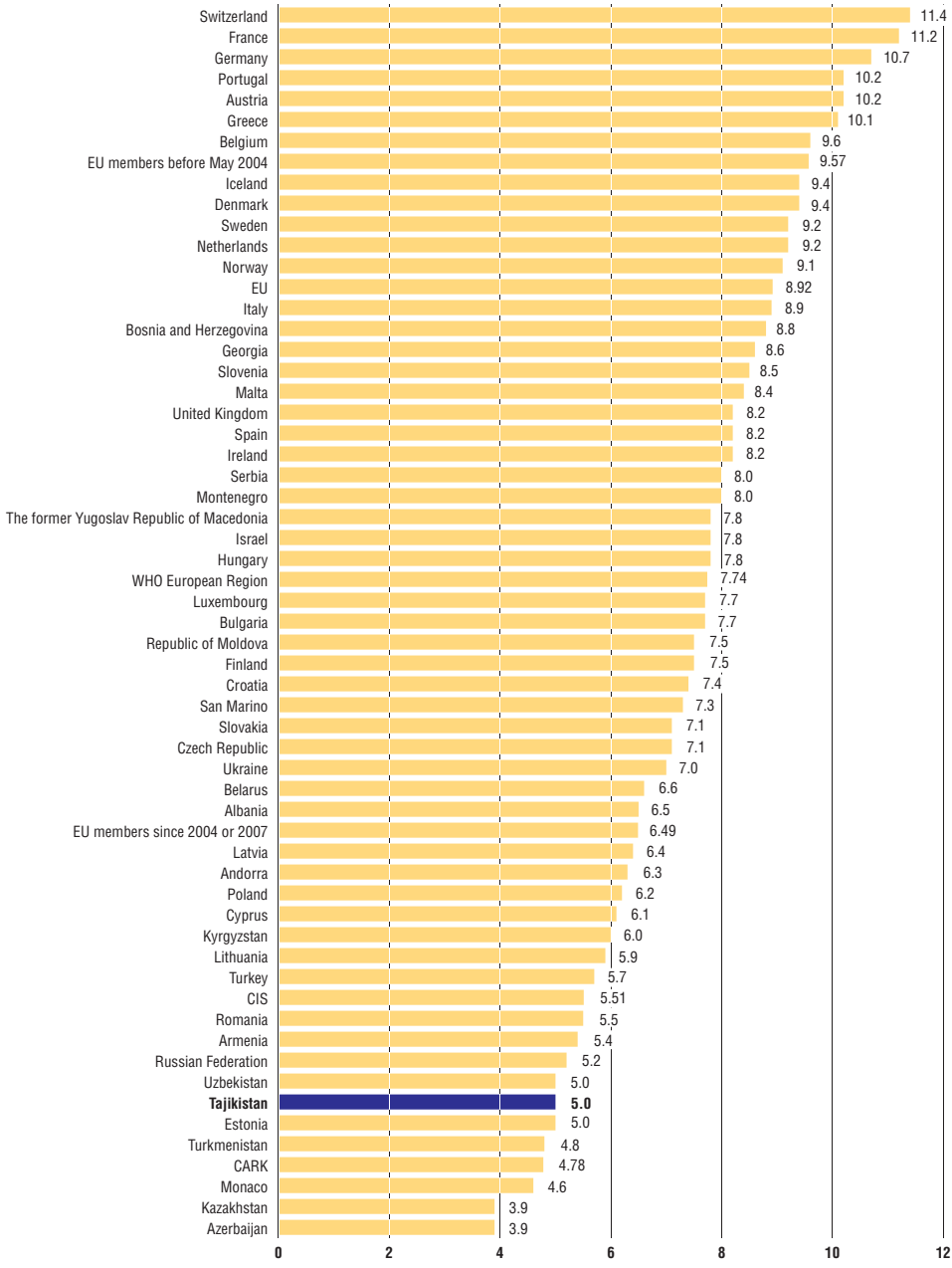
Public sector health expenditure as % of total health expenditure in the WHO European Region, 2005, WHO estimates



Source: WHO Regional Office for Europe, 2010.

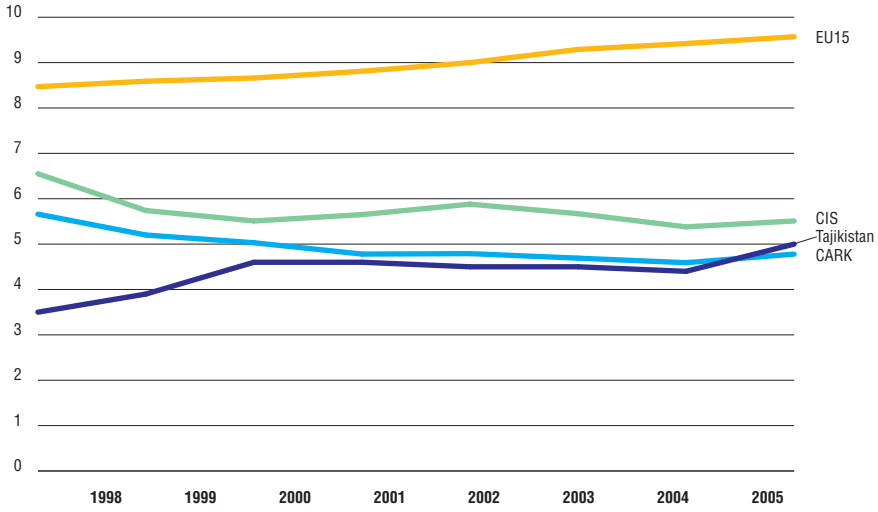
Fig. 3.3

Health expenditure as a share of GDP (%) in the WHO European Region, 2005, WHO estimates



Source: WHO Regional Office for Europe, 2010.

Fig. 3.4
Trends in health expenditure as a share of GDP (%) in Tajikistan, CARK, CIS and EU15, 1998–2005, WHO estimates



Source: WHO Regional Office for Europe, 2010.

In terms of estimated health expenditure per capita, at PPP US$ 67 in 2005, Tajikistan ranked lowest of all countries in the WHO European Region (Fig. 3.5).

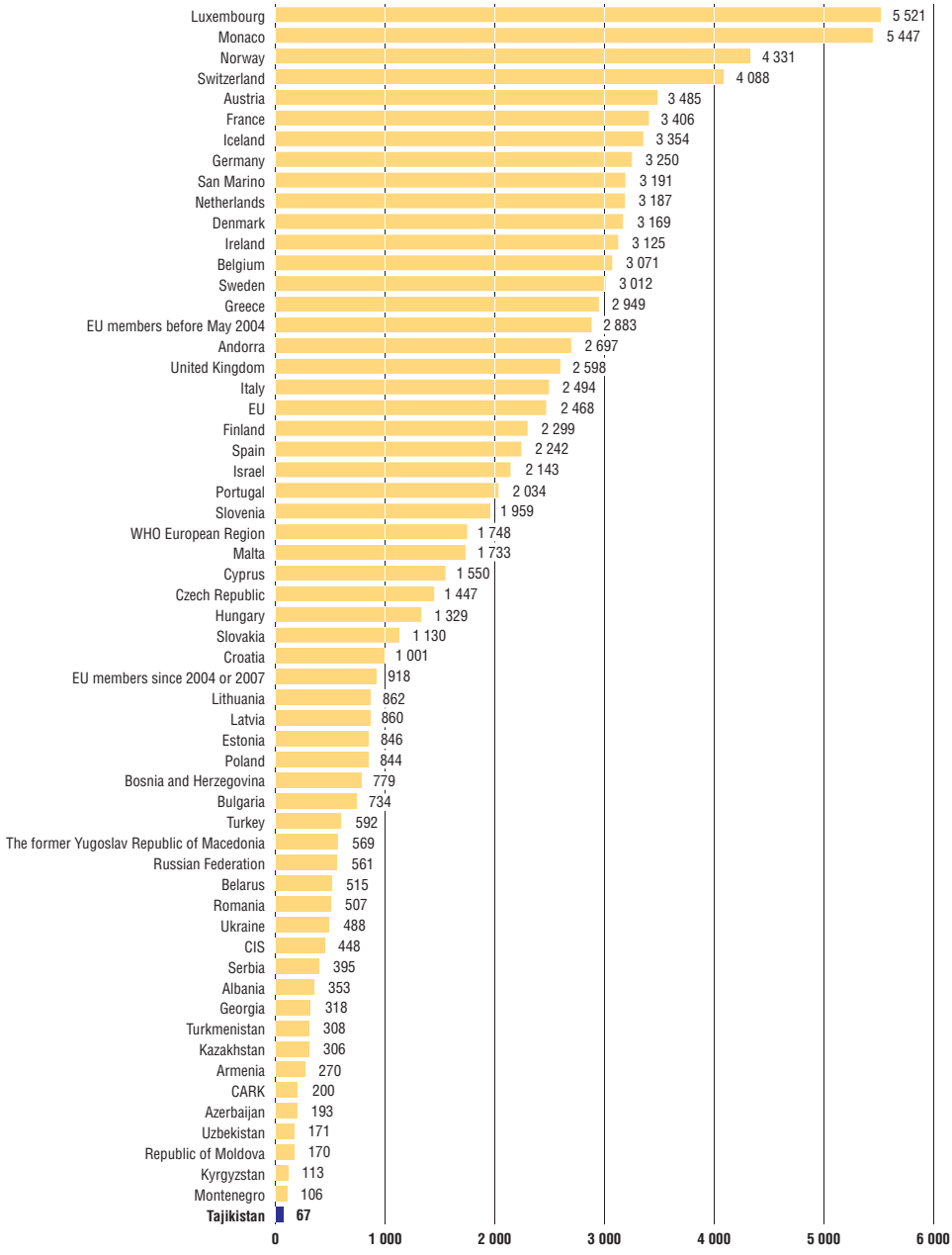
A consolidated health budget that includes all public financing sources for the health sector is not readily available. The level of per capita public spending for the health sector differs from *rayon* to *rayon* even in the same *oblast*, partly a result of the fragmented budget formulation at the *oblast*, *rayon* and *jamoat* levels and different performances in tax collection (Fig. 3.6).

The use of health care funds has traditionally been biased towards hospital services. In 1999, 60% of total health funding was allocated to hospital care (inpatient services and drugs), declining to 56% in 2003 (Cashin, 2004a).

The allocation between hospital and ambulatory services varies by funding source. In 2003, local governments, at 63%, devoted the largest share of their health sector funding to hospital services, whereas households devoted only 12% of their total health expenditures to hospital services. The republican budget and donors each allocated approximately 37% of their total funding to hospital services (Cashin, 2004a). Public health services received approximately 5% of the government health budget, but only approximately 1% of total health care spending (Cashin, 2004a).

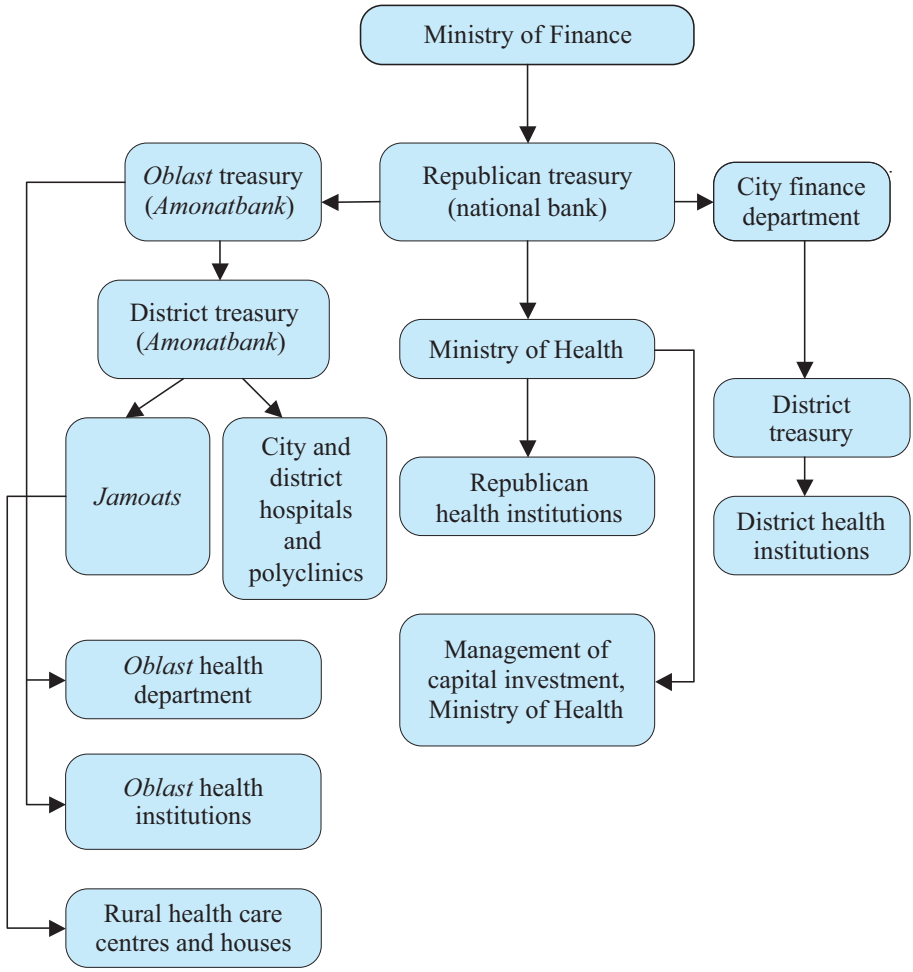
Fig. 3.5

Health expenditure in PPP US$ per capita in the WHO European Region, 2005, WHO estimates



Source: WHO Regional Office for Europe, 2010.

Fig. 3.6
Recurrent public expenditures in the health sector



3.2 Population coverage and basis for entitlement

As with all of the countries of the former Soviet Union, the newly independent Tajikistan inherited a political commitment to provide nearly all health care to the population at no charge at the point of access. As public funding for health care collapsed in the years of transition, however, private out-of-pocket payments have increasingly filled the health-financing gap. In Tajikistan, the increase in out-of-pocket payments has for a long time failed to elicit any

governmental policy to incorporate them in the formal health financing system or to ensure that out-of-pocket payments do not lead to catastrophic household expenditures or exacerbate social inequalities (Cashin, 2004b).

3.2.1 Guaranteed benefit package (2005)

With the aim of ensuring equitable access to health care and formalizing out-of-pocket payments, the Ministry of Health 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. The document was approved by Governmental Resolution No. 237 of 2 July 2005 and implementation started throughout the country on 1 August 2005 (Ministry of Health, 2005a).

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. 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. This amendment also entailed a changed relationship between the state and its citizens: by emphasizing shared responsibilities, citizens were recognized as equal partners in the development of the health system (World Bank, 2004b).

In a preliminary stage in 2004 and 2005, the state-guaranteed package of health services was tested in two pilot districts (Varzob and Dangara) with a total population of approximately 165 000 people. The package specified the type and volume of guaranteed medical services financed by the state budget, but allowed a certain amount of flexibility, according to the budget available to the local administration in each district.

Certain categories of the population (including participants in the Second World War, victims of the Chernobyl catastrophe, "Heroes of Tajikistan", children up to 5 years of age, pregnant women and military conscripts) and certain categories of patients (including those suffering from tuberculosis, mental disorders, oncological diseases, bronchial asthma, diabetes or systemic blood diseases) were exempted from co-payments. Foreign nationals, tourists, short-term visitors and refugees were not included in the benefits package and were charged fully when they accessed medical services at state-run health care facilities.

The benefit basket also provided for the financing of long-term nursing care, long-term care for the elderly and mentally ill, palliative care, occupational health care and prevention, accident-related care, transport, after-hours care, pre-hospital emergency care and patient information. It was envisaged to be drawn up every year by the government and the Ministry of Health according to the available budgetary resources for health. State-guaranteed services took into account the treatment protocols that were elaborated in clinical practice guidelines (Ministry of Health, 2004a) and mainly relied on medicines included in the essential drug list (Ministry of Health, 2004b).

Due to the limitations of the state budget, the majority of health services were included in the co-payment scheme. If fully disbursed, the state budget would have only covered 20% of the medical services provided by health care facilities. The remaining 80% of medical services would have to be covered by co-payments. These included alternative therapy or complementary medicine, optician services (such as eye tests or glasses), pharmaceuticals (including those on the essential drug list), dental care (such as dental inspections, extractions, fillings or dentures) and specific interventions (such as dialysis or abortion). The size of co-payments varied considerably and ranged from small payments for basic and general services to sizeable amounts for services that require the use of modern technology, such as computed tomography, angiography or cardiac surgery. Certain medical services, such as cosmetic surgery or dental prosthesis, were not included in the state-guaranteed package of services or the co-payment scheme, and neither were high-tech health services, such as in vitro fertilization or organ transplantation.

The first attempt to introduce the guaranteed benefit package in 2005 had several shortcomings in design and implementation, including the following (Saifuddinov et al., 2009 [unpublished draft paper]).

- The benefit package lacked a single price list, so that every facility developed a separate price list and service costs varied from one facility to the next.
- The price list of different diseases and conditions was too long and detailed.
- The benefit package had been insufficiently propagated to the population and the health workforce.
- There was evidence that informal payments continued alongside the official co-payments.

The implementation of the guaranteed benefit package led to considerable public dissatisfaction and was suspended after only two months, in October 2005.

3.2.2 Guaranteed benefit package (2007)

A new guaranteed benefit package was introduced through Government Decree No. 199 of 14 April 2007, and implementation in four pilot districts (Tursun-Zade, Rasht, Danghara and Spitamen) began in June 2007. The Government of Tajikistan and international donors and agencies (including WHO, the World Bank, USAID, the Asian Development Bank and the Swiss Agency for Development and Cooperation) drew a number of lessons from the failed first attempt at introducing the guaranteed benefit package. The new benefit package was characterized by (Saifuddinov et al., 2009 [unpublished draft paper]):

- in-depth analysis and detailed design before the start of the pilot projects;
- gradual, step-by-step implementation, starting in four pilot districts, and accompanied by monitoring and evaluation; and
- broad awareness campaigns for decision-makers, health professionals and the public.

The guaranteed benefits package regulates the entitlements of Tajik citizens to medical services through a set of rules for levels of payments and exemptions when accessing such services. The primary goal of the 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 districts, receipts are provided for co-payments, and studies show a reduction in under-the-table payments and increased formal salaries of physicians. However, patient out-of-pocket costs remain unchanged.

For the second introduction of the guaranteed benefits package, to achieve better public understanding and to simplify cost calculations, eight co-payment categories were identified. For each category, the average amount a patient is supposed to contribute is 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 has been introduced. This differential co-payment is intended to strengthen the role of primary health care and to initially direct the flow of patients to primary health care units rather than hospitals. In 2009, co-payment levels increased to 50% and 80%, respectively.

Since one of the aims of re-implementing the guaranteed benefits package was to improve access to health care services for poor parts of the population, the following social groups have been exempted from co-payments (Order No. 191 of 14 April 2007):

- veterans of the Second World War
- people with disabilities
- orphans
- children under 1 year of age
- pensioners over 80 years of age
- elderly people in institutional care.

Patients falling into the following disease categories have also been exempted from co-payments (Order No. 191 of 14 April 2007):

- myocardial infarction (first month following the infarction)
- tuberculosis
- cancer (terminal stage)
- diabetes
- schizophrenia
- haemophilia
- congenital syphilis
- leprosy
- HIV/AIDS
- malaria
- rabies
- meningococcal meningitis
- diphtheria
- acute respiratory infections and diarrhoea among children
- pregnant women, if registered and followed up at the antenatal level.

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 approximately 4% of the population in Spitamen *rayon* (Schneider,

2009). This contrasts sharply with high levels of poverty, estimated at 41% in 2007 when using the US$ 2.15-a-day (PPP) poverty line (World Bank, 2009b) (see Section 1.2).

The services included at the different levels of health care, the eligible population groups and the co-payments required are shown in Table 3.2.

Table 3.2
Guaranteed benefit package in 2007

Service group	Services included[a]	Eligible population group(s)	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 EDL 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 EPI and national vaccination schedule	Eligible children according to national immunization schedule	Free
	Anonymous consultations about HIV/AIDS and STI	Entire population	Free
	Child health monitoring	Children under 5 years of age	Free
	Periodic preventive check-up for schoolchildren	Children at school	Free
	Continuous monitoring of patients under dispensary supervision (without additional diagnostic and laboratory services)	Patients under dispensary supervision; exempted population is entitled to additional diagnostic and laboratory services as well	Free
Diagnostic services	Patient consultation	Entire population	Free
	Basic laboratory and diagnostic services: general blood tests, general urine test and urine microscopy	Population in groups 1 and 2	Free
	Blood test for malaria	Entire population	Free
	Sputum microscopy	Entire population	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 for a medical indication	Free
	Ultrasound examination of pelvic organs	Pregnant women, only for a 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 this includes the cost of the drugs)	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
Services for military conscripts	All necessary PHC services	Military draftees	Free
Specialty outpatient consultations			
	After PHC/FMC referral and prescription, including laboratory tests and diagnostics	Population in groups 1 and 2	Free
	After PHC/FMC referral: Consultation and prescription (not including provision of drugs)	Entire population	Free
	After PHC/FMC referral and prescription: consultations, including laboratory tests and diagnostics	Entire population	Co-payment 30%
	Without PHC/FMC referral and prescription: consultation including laboratory tests and diagnostics	Population without PHC/FMC referral	Co-payment 70%
Hospital services			
Emergency	Free until patient stabilization	Entire population of pilot *rayons*	Free
	After stabilization, services considered to be either planned hospital services or, in case of patient discharge, outpatient services; service provision is regulated by the rules of relevant services	See relevant rules	–
Planned	After PHC/FMC referral	Population in group No. 1	Free
	After PHC/FMC referral and for major disease	Population in group No. 2	Free
	After PHC/FMC referral	Rest of the population	Co-payment
	Without PHC/FMC referral	Rest of the population	Co-payment 70%
	Delivery services	Women under regular ANC	Free
	Delivery services	Women without regular ANC	Free first 48 hours, after which co-payment 70%
Dental services	Preventive check-up twice a year	Children and pregnant women	Free
	Emergency care	Entire population	Free
	Oral hygiene	Children 2–7 years of age and pregnant women	Free
	Specialized dental services	Entire population	Subject to fee for service, as established by the Ministry of Health

Notes: EDL: Essential drugs list; EPI: Expanded Programme on Immunization; PHC: Primary health care; FMC: Family medicine centre; ANC: Antenatal care.
[a]Shading indicates services offered to mothers and children under the guaranteed benefit package.

A survey in August 2008 on the impact of the new benefit package after 15 months of implementation showed that overall patient out-of-pocket costs have slightly decreased. There was an increase in formal payments in the pilot *rayons* and a decline in informal payments to health personnel. In both pilot and control *rayons*, payments for medicines, medical supplies and laboratory tests at the hospital level declined, but the decline was more pronounced in pilot *rayons*, where patient satisfaction with quality of care increased. However, it also became clear that the guaranteed benefit package will not be able to solve all problems of the health system, such as the remuneration of personnel or the allocation of budgetary resources (Health Policy Analysis Unit, 2009; Bobokhojaeva et al., 2009).

The situation changed dramatically in December 2008, when the government issued Decree No. 600, introducing a fee-for-service programme similar to the one discontinued in 2005. The new programme envisaged a price list of formal co-payments or fees-for-service of 1200 items, to be determined by the Ministry of Health. The international development partners raised concerns: they feared that the new scheme based on retrospective payments would lack transparency, give rise to unnecessary treatments and cost increases, would be difficult to administer and would undermine efforts to reform the health sector. Following a heated round of discussions, agreement was reached to amend the regulatory framework once again. A joint decree of the Ministry of Health and the Ministry of Finance on 16 June 2009 introduced 12 co-payment categories rather than the envisaged 1200 (Rechel and Khodjamurodov, 2010).

3.3 Revenue collection/sources of funds

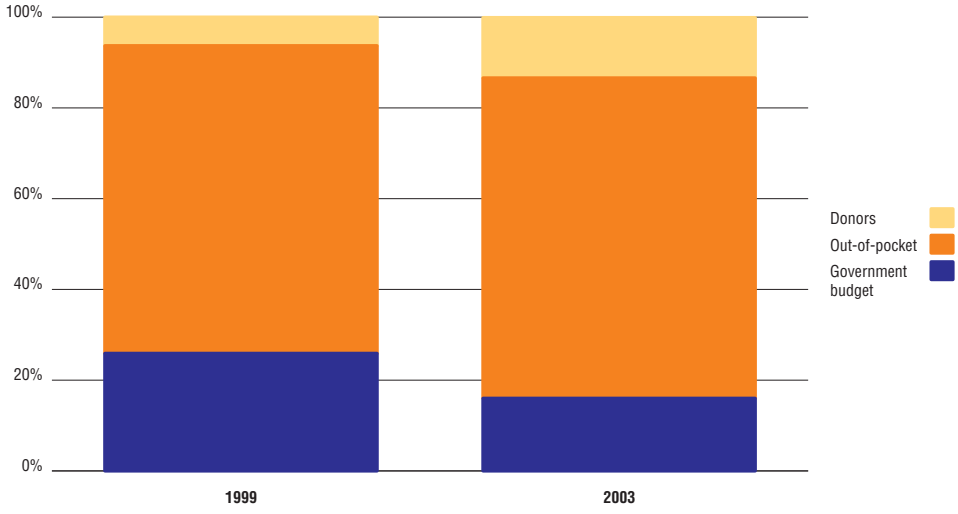
Tajikistan has a compulsory system of health financing based on taxation but, as mentioned above, private out-of-pocket payments have become the main source of health care revenue. International development assistance is the third most important source of health care funding.

In 2003, the overwhelming majority of health care funds (71%) came from private out-of-pocket payments, increasing slightly from 68% in 1999; the vast majority of these expenditures were for drugs. Out-of-pocket payments were the primary source of funds for all health services, except hospital services (excluding drugs) and public health services. Households contributed 96% of funds for outpatient drugs, 61% of funds for outpatient services, 52% for inpatient drugs and 37% of funds for hospital services (Cashin, 2004a). According to

the draft National Development Strategy of 2006, private (mainly unofficial) payments constituted 70% of total health expenditure, budget expenditures 16% and donor aid 14% (Republic of Tajikistan, 2006a) (see Fig. 3.7).

Fig. 3.7

Percentage of total expenditure on health according to the source of revenue, 1999 and 2003



Source: Cashin, 2004a.

The Ministry of Health has now embarked on drawing up National Health Accounts with the aim of establishing health spending across all sectors and sources of funding. According to National Health Accounts estimates for 2007, patients contributed 72% to total health expenditure, the government 18% and external donors 10% (Schneider, 2009). The picture was somewhat different at the *rayon* level, where patients contributed approximately 27% of total *rayon* health expenditure in 2007. This suggests that an important part of patient out-of-pocket payments is devoted to hospital care (including pharmaceuticals) at the *oblast* level and in Dushanbe, rather than for the basic health care that is provided at *rayon* level (Schneider, 2009).

3.3.1 Out-of-pocket payments

The largest proportion of health revenue now comes directly from health care users in the form of both official and unofficial out-of-pocket payments. As mentioned above, the guaranteed benefit package introduced in 2005 and again in 2007 aimed to formalize informal payments through official co-payments.

Private payments have been introduced in the second half of the 1990s in some state-run health care facilities, the so-called self-financing health care centres, meaning that they were allowed to charge for services. These include different high-level specialized hospitals and centres located mainly in the capital city of 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 the State Antimonopoly Committee.

While, until recently, official user charges existed only for the limited range of services in self-financing health care centres, more than 98% of hospitalized patients and more than 70% of ambulatory patients surveyed by Public Foundation Panorama in 2007 reported paying cash or providing gifts (such as food and services) either to a provider as a consultation/prescription fee or for drugs and medical supplies. Only 2% of those surveyed received a receipt for their payment (Public Foundation Panorama, 2007).

This illustrates that unofficial out-of-pocket payments are very common in Tajikistan and prevail over formal payments provided in private and self-financing health care centres. These payments are made directly out of pocket. As government expenditures on drugs have declined in absolute and relative terms, out-of-pocket payments and donor contributions have grown substantially to fill the gap. Expenditure on drugs is a large and increasing share of total health care expenditures, particularly for private households. Although much of the discussion on out-of-pocket payments in central Asia has focused on informal payments, expenditures on outpatient drugs, which always have been legal and required, might be more important in total magnitude and frequency than informal payments (Cashin, 2004a).

3.3.2 Compulsory sources of financing

Within government financing, local budgets contribute the majority of health financing. In 2003, 77% of government financing came from local budgets, while the republican budget provided only 23% (Cashin, 2004a). The disruption of government institutions and functions, as well as strong tendencies towards budgetary decentralization, has created instability in public health financing at the local level. The low level of government revenues as a percentage of GDP indicates that the tax collection system remains weak in Tajikistan, but also that a large proportion of economic activity takes place outside of the formal economy in the country (Cashin, 2004a).

Government financing contributed only 16% to total health care financing in 2003, down from nearly 26% in 1999. In 2003, the government was the most significant source of funding only for hospital services (41%, excluding inpatient drugs), public health services (86%) and administration and research (100%) (Cashin, 2004a).

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.

3.3.3 External sources of funds

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, WHO, the United Kingdom's Department for International Development, the Swedish International Development Cooperation Agency, the Swiss Agency for Development and Cooperation, USAID, German development agencies, and the Aga Khan Fund. Other agencies involved are UNDP, UNICEF and the United Nations Population Fund (UNFPA). International NGOs have largely left the health sector, as humanitarian aid was shifted to development aid. In 2007, 44 external agencies or partners were working in Tajikistan's health sector.

Donor financing contributed approximately 13% to total health funding in Tajikistan in 2003, but donor contributions to several health sub-sectors were more significant. For example, donors contributed 35% of funding for inpatient drugs, 22% of funding for hospital services, including equipment and renovation, 25% for outpatient services, also including equipment and renovation, and 14% of funding for public health services (Cashin, 2004a).

Applications for international assistance are submitted from all ministries and organizations to the Ministry of Economy and Trade. Based on these applications, the Ministry draws up a budget for overall state investment and submits it to the government for approval, following which the budget is ratified by the parliament. These activities are coordinated by the State Committee of Investment and State Property. The Ministry of Finance monitors the amount of external debt for all ministries, including the Ministry of Health. Another channel for the provision of external aid is based on bilateral agreements between the Government of Tajikistan and donor countries.

Tajikistan has benefited from some increased grant aid in recent years, but the gap between investment needs and available funds – grants and loans – remains considerable. The national Public Investment Programme (covering capital expenditures financed by the central government budget and by donors through loans, credits and grants) for 2004–2006 comprised projects totalling more than US$ 343 million (International Development Association and International Monetary Fund, 2002). However, even if carried out in full, this would have fallen short of external funding requirements identified in the Poverty Reduction Strategy Paper. Tajikistan has historically realized only a fraction of the funds committed under the Public Investment Programme. For the three years 2001–2003, for example, Tajikistan received less than half of the funds pledged by donors.

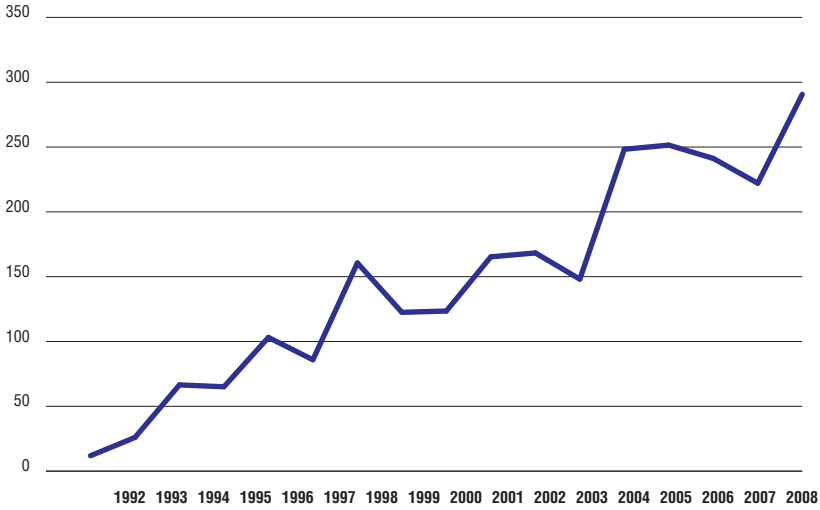
Overall foreign aid has substantially grown, from US$ 12 million in 1992 to US$ 291 million in 2008 (Fig. 3.8). Furthermore, external assistance was transformed from mostly humanitarian aid and food assistance to the financing of reforms and support of National Development Strategies (Aminjanov et al., 2008), with humanitarian aid accounting for only 3% of aid in the health sector in 2003–2006.

In terms of external funds for the country's health sector, an analysis of donor aid to Tajikistan conducted by the WHO Country Office identified 91 externally funded projects in 2007, with an overall volume of US$ 153.8 million for the period 2002–2012 (WHO Country Office Tajikistan, 2008).

Most development assistance in the health sector is given in the form of grants (Fig. 3.9).

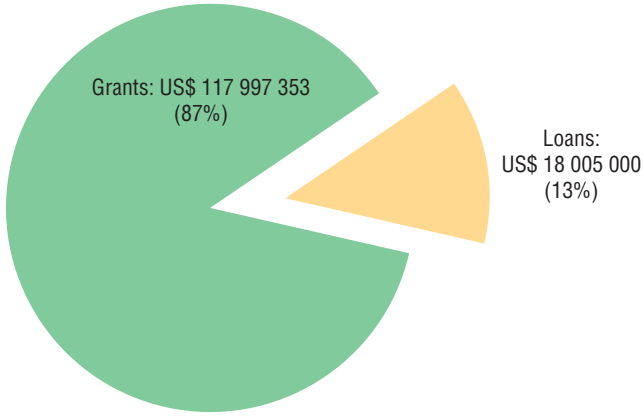
One of the challenges that was associated with increasing levels of external assistance was the increasing number of projects and donors, "all with different approaches, methods, resources, interests and vision" (Aminjanov et al., 2008). The total number of donors increased from 9 in 1992 to 107 in 2008 (Table 3.3).

Fig. 3.8
Total bilateral aid to Tajikistan, all sectors, 1992–2008 (in current US$ millions)



Source: OECD, 2010.

Fig. 3.9
Share of grants and loans in Tajikistan's health sector, 2003–2006



Source: Aminjanov et al., 2008.

Table 3.3
Number of donors in Tajikistan, 1992–2006

Year	Donor			Total
	Bilateral	Multilateral	NGO	
1992	5	1	3	9
1993	12	5	5	22
1994	14	7	12	33
1995	15	7	16	38
1996	15	9	17	41
1997	18	9	18	45
1998	19	10	22	51
1999	19	12	25	56
2000	19	12	26	57
2001	22	13	29	64
2002	25	14	36	75
2003	25	19	44	88
2004	25	19	45	89
2005	25	22	58	105
2006	27	22	58	107

Source: Aminjanov et al., 2008.

There has also been a related increase in the number of Project Implementation Units (Table 3.4).

Table 3.4
Number of project implementation units in Tajikistan, 1997–2007 (selected years)

	1997	2000	2001	2002	2003	2004	2005	2006	2007
No. of project implementation units	1	9	14	17	19	21	22	23	23
of which in health	–	1	1	1	1	2	3	5	5

Source: Aminjanov et al., 2008.

Coordination and harmonization of external assistance are through an in-country consultative group, the Donor Coordination Council, while formal and informal donor meetings for coordination and information sharing are also frequent (European Union, 2007). Nevertheless, there are few formal mechanisms for aid coordination (Wyss and Schild, 2006) and formal government-led donor coordination has been relatively weak (European Union, 2007; Mirzoev et al., 2007). The Government itself noted that the needs of Tajikistan's health sector would be addressed in a more sustainable fashion if

the growing number of donor-supported assistance projects were integrated into a more limited number of large-scale and long-term projects (Republic of Tajikistan, 2005a).

In recent years, the Government, with the assistance of external agencies, has tried to develop strategic directions and reform plans, placed within the Poverty Reduction Strategy paper and a National Development Strategy (Aminjanov et al., 2008). However, these strategic documents were not always realistic and failed to take account of resource availability. As a result, many of the strategic objectives have so far not been reached.

To overcome the problems of aid fragmentation, external agencies in Tajikistan have been moving towards development of a comprehensive health sector strategy and a sector-wide approach (SWAp) in recent years. In the summer of 2009, this was still at a preparatory stage, as no comprehensive health sector strategy had yet been developed on which a SWAp could be based. It is worth noting that the concept for the Tajik SWAp does not currently include budget support because the consensus of external agencies is that the government does not have the fiduciary capacity for management. However, a fiduciary assessment was conducted in 2008 and the Ministry of Health is acting on its recommendations, supported by the main external agencies involved in Tajikistan's health sector. It is envisaged that health sector budget support will eventually take place in the framework of the comprehensive health sector strategy that is currently being developed.

3.3.4 Statutory/voluntary health insurance

Statutory or voluntary health insurance schemes do not yet exist in Tajikistan. However, first steps in this direction were taken on 5 June 2008, when the Parliament adopted a Law on Health Insurance, and on 18 June 2008, when the President issued a Resolution on Implementing the Law in 2010. In view of the weak tax base, the large informal sector and the difficult economic situation, it remains to be seen whether introduction of a mandatory health insurance system is a viable policy option for Tajikistan. In some other countries of the former Soviet bloc, the World Bank has expressed concerns about the premature establishment of health insurance systems (Rechel and McKee, 2009).

3.4 Pooling of funds

The process of budget formation in Tajikistan continues to reflect the normative-based process inherited from the Soviet Union, although changes introduced in 2002 are designed to move towards an activity/population-based method. Nonetheless, health care budget formation continues to be highly centralized and based primarily on inputs, which perpetuates the incentives for over-capacity and emphasizes structure over content of care. Furthermore, the amount of the planned budget defined by the bottom-up budget formation process is typically reduced substantially in the final approved budget, and the ultimate local level allocations to the health sector made in a non-transparent way (Cashin, 2004a).

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 republic and the local authorities. The Ministry of Finance, not the Ministry of Health, determines and allocates the health budget. The Ministry of Health is allocated the republican budget, and the *khukumats* of *oblasts*, cities and *rayons* are allocated the local budgets. The Ministry of Health 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.

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 *oblast* facilities, such as *oblast*-level hospitals and polyclinics. The main source of revenue for the 58 *rayons* is local taxes. The *rayon* finance departments allocate funds for *rayon*-level health services to central *rayon* hospitals, which act as *rayon* health departments. *Jamoats* disburse funds that they receive from *rayon* administrations to "health houses", rural health centres and rural hospitals.

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 need indicators, the poorest *oblasts* spending the least per capita. The 16 *oblasts* and *rayons* of republican subordination and Dushanbe city allocate between 6% and 21% of their local budgets to health care. This dispersion translates into large differences in per capita funding. In 2008, Khamadoni

rayon spent 12 somoni per capita on health care, whereas Shurabad *rayon* spent 51 somoni per capita. The long-term intention is to allocate central funds to the regions using a needs-based population formula. A weighted capitation formula is being developed that includes demographic, health status and socioeconomic factors. Capitation formulas are being tested, with the involvement of the World Bank and the Swiss Agency for Development and Cooperation.

3.5 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 reforms envisage the establishment of a clear purchasing role for the Ministry of Health, led by a purchasing department.

The budgets of health facilities are generally determined on the basis of past expenditures and inputs. The process of health budget formation, the level at which health funds are generated and maintained, and resource allocation and provider payment methods pose serious obstacles to improving the performance of the Tajik health system. The weakening of the public finance system, which had been rigid during Soviet times, and the commitment of the government to modernizing fiscal policy, has, however, created opportunities for new measures to rationalize public health expenditures. For example, a new population-based budget formation methodology is being pilot tested in the health and education sectors, 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 social sector expenditures.

Health care providers are funded mainly through *oblast/rayon* budgets, according to norms established on the number of beds 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 transfer payments from the republican budget. The national parliament (*Majlisi Oli*) must approve the annual budget for the country, while the representative councils (*Majlisi*) at the regional level approve their own budget plans.

Each facility compiles its own annual budget request, based on norms such as staff and beds, and in large part their historical budgets divided into 18 line items. These budget plans are passed to the financial departments at each administrative level. The regional (*oblast*) plans are also forwarded to the Ministry of Health, which collates the overall health budget for the country. This is then sent to the Ministry of Finance. The Ministry of Finance makes the budget decisions, reducing each budget request in line with the available revenue. At each stage of the budgetary process, therefore, the actual funds become smaller: the proposed budget, the estimated budget, the allocated budget and the actual expended budget. The end result is that a health facility receives far less than its running costs and habitually runs up large debts. The resources granted by the Ministry of Health 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 managers of health facilities have little financial discretion since budgets are tied to line items, and since managers cannot disburse the funds. The finance departments in each administration (republic, *oblast* and *rayon*), not the facility manager, pay salaries and other items such as utility bills. Managers must send a form, for example, requesting medical supplies, to the finance department of the local administration; if there are enough funds in the budget line, the request is approved and funds sent directly to the supplier. The Ministry of Finance's budgetary allocation 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.

3.6 Payment mechanisms

3.6.1 Paying for health services

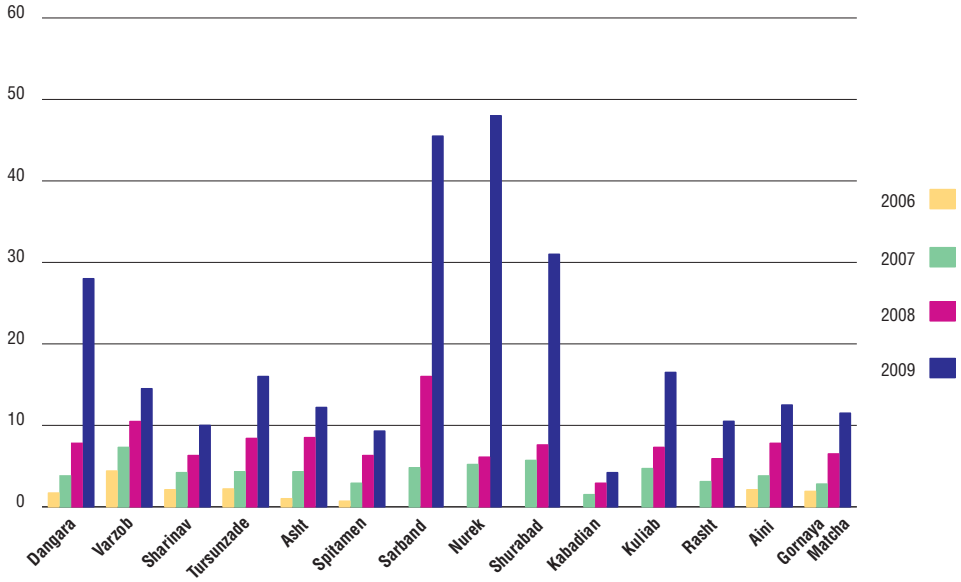
The public financing of health services continues to be dominated by input-based budgeting, based on the number of hospital beds and/or staff. This is only changing gradually, as all financing reforms are still in an early stage of development. The National Development Strategy up to 2015 envisages the introduction of case-based payment of hospitals and per capita financing of primary health care (Republic of Tajikistan, 2006a).

By 2008, capitated payment for primary care had been implemented in eight pilot *rayons*, covering 406 facilities and approximately 14% of primary health care facilities nationally. By 2009, the scheme had been extended to cover all

oblasts and most of the country's *rayons*, although it still covered only a small share of expenses at the facility level (see Fig. 3.10). The Strategy of Health Care Financing in the Republic of Tajikistan 2005–2015 includes a mandate to separate the budget for primary health care from the overall health care budget, creating a buffer for primary health care reform and strengthening.

Fig. 3.10

Per capita budget in primary health care institutions in pilot *rayons* (in somoni)



Source: Health Policy Analysis Unit, Ministry of Health, 2009 [personal communication].

The Government plans to implement a case-based hospital payment system at the *oblast* level, and, supported by the ZdravPlus project, is currently developing a health information system that will support this new type of payment. In accordance with Government Decree No. 199 on the package of guaranteed services and patient co-payments, all hospitals will reorganize their services and financing mechanisms. They will give priority to certain categories of patients or diseases, in line with the agreement concluded between the hospitals and the Ministry of Health, and charge co-payments for others.

3.6.2 Paying health personnel

Almost all health workers are state employees, a situation that is envisaged to continue, as for example family doctors and nurses will continue to be governmental staff after being retrained and set up as family teams (Wyss and Schild, 2006). In 2009, only 218 health workers from a total of 43 000 were registered in private practice.

Across all sectors of the economy, most of the labour force is still employed by the government, with very low wages. According to the State Committee on Statistics, the average monthly wage across the economy was 107 somoni (US$ 34) in December 2005, a nominal increase of 30% compared with the previous year. However, differences across sectors are considerable. Workers in the health and social security sector received a monthly wage of only 46 somoni in December 2005, compared with an average wage of 520 somoni in the financial services sector. In April 2006, the statutory minimum wage was raised from 7 somoni to 20 somoni (EIU, 2006).

In December 2006, the average monthly wage across all sectors of the economy was 163 somoni (US$ 48), an increase in real terms of 40%. However, wages differ considerably across sectors and are especially low in health care, education and agriculture. Although the government is trying to increase salaries in education and health care, wage growth in these sectors barely keeps pace with the average for the economy as a whole (EIU, 2007).

In 2005, the President decreed a doubling of salaries of health care workers (UNICEF, 2007b). Despite this increase, however, salaries remained far below what was needed to survive in Tajikistan (Wyss and Schild, 2006). Low salaries contribute to the low status of health professionals and undermine efforts to improve the quality of services.

A consequence of the decentralized system of paying health care workers is that there are 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.

A survey in two *rayons* of the country in 2005 found that salary differences across different staff categories were relatively modest, with unqualified staff earning nearly as much as physicians (Table 3.5).

Table 3.5
Average monthly salary (in somoni[a]) of health staff in two *rayons* in 2005

	Sample size	Average salary	Minimum salary	Maximum salary	Median salary
Varzob *rayon*					
Physicians	31	31	16	50	31
Dentists	5	20	16	35	17
Nurses	42	24	10	67	19
Midwives	7	24	16	50	17
Feldshers	28	24	16	50	22
Dangara *rayon*					
Physicians	70	42	16	78	45
Dentists	2	31	27	34	31
Nurses	144	31	6	78	28
Midwives	34	29	16	57	28
Feldshers	61	33	17	52	32

Source: Schild, 2006.
Note: [a]At December 2005, US$ 1 = 3.20 somoni.

In 2007, the average monthly salary for doctors and nurses in the health sector was US$ 17 and US$ 11, respectively, compared with the workforce average of US$ 53 (State Committee on Statistics, 2008a). The average monthly salary for health workers increased to US$ 38 in early 2009, compared with a workforce average of US$ 65 (Schneider, 2009). On 8 July 2009, the Ministry of Health, together with the Ministry of Finance and the Ministry of Social Protection and Labour, approved and adopted the "Instruction on wages for health care workers of the Republic of Tajikistan". The document envisages a further increase of salaries.

Health workers pursue different strategies to cope with these very low salaries. Officially, health staff work 48 hours per week, which does not allow staff to pursue other activities to complement their meagre salaries. In practice, working times are typically much shorter, especially in rural areas. Some health workers hold two positions within the health sector or pursue activities outside the health sector, such as farming. There is little documentation on these survival practices, but strategies used by health workers are likely to vary according to their place of residence and the opportunities available to them (Wyss and Schild, 2006).

Highly skilled personnel, especially those with English language skills, also often opt to work for an NGO or international agency, which generally offer better working conditions. In consequence, some of the most capable persons

have abandoned the status of state employee (Wyss and Schild, 2006). Labour migration is a major issue in Tajikistan and this also applies to health workers, many of whom leave the country to find better working and living conditions, with the Russian Federation being one of the main destinations (Wyss and Schild, 2006; Ministry of Health, 2005b).

Health workers who remain in government employment largely depend on informal payments by patients (Wyss and Schild, 2006). According to a baseline survey conducted in 2007 in preparation for the guaranteed benefit package, informal payments and in-kind gifts amounted to 130 somoni (approximately US$ 40) per hospitalized patient and 33 somoni (approximately US$ 10) per ambulatory patient (Public Foundation Panorama, 2007). These findings indicate that out-of-pocket payments are the main source of income for many physicians and nurses (Saifuddinov et al., 2009 [unpublished draft paper]).

4. Regulation and planning

The Tajik health system evolved from the Soviet model, in which the state was the principal provider and purchaser of health services. Health policies were determined in Moscow and the allocation of resources followed rigid central planning guidelines, such as for the ratios of hospital beds or staff to population. Since Tajikistan's independence in 1991, the Tajik Government has taken over the role of developing and implementing national health policies. While private medical practice has been permitted, the growth of the private sector has been slow and it has been largely confined to pharmacies and dental care. The government remains the principal provider of health services, but private out-of-pocket payments are the main source of health expenditure and thus purchase of health services.

4.1 Regulation

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 is ensured access to state-owned health facilities and other health care providers regulated by the state, including the emerging private sector.

A number of actors are involved in the development and implementation of health policies and the regulation, management and financing of health services (see Chapter 2).

- The government establishes total public expenditures on health and regulates and controls the utilization of funds. In conjunction with the Ministry of Health, it develops national health policies and programmes, draft laws, investment projects and a budget for implementation.
- The Ministry of Economy and Trade estimates budgetary funds for health.

- The Ministry of Finance sets the state budget for the health sector, transfers resources to the Ministry of Health, receives and analyses financial accounts, and monitors the utilization of budgetary funds.
- The Ministry of State Income and Taxes is responsible for the collection of taxes.
- The Ministry of Health 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.

One of the latest health policy documents developed by the Ministry of Health is the National Development Strategy, which has been developed in conjunction with a new Poverty Reduction Strategy Paper for 2007–2009. The strategy identifies goals and tasks for the development of the health sector up to 2015, and the internal and external investments required.

The tasks of the Ministry of Health further include:

- analysis, assessment and improvement of population health, health system and health policies;
- coordination of the public health care system of the country, in conjunction with local authorities;
- administration of state funds transferred from the Ministry of Finance, allocation of funds to public providers and monitoring of financial management;
- direct management of republican level institutions, scientific research institutes and educational institutions for health professionals;
- creation of standards for the quality of care in public and private health care providers;
- development of human resources and training policies for health professionals;
- coordination of health information systems;
- licensing and certification of individuals and institutions engaged in health services; and
- formulation of policies on pharmaceutical and other medical products and regulating their registration, licensing, production and sale.

The Ministry of Health regulates the health sector through ministerial decrees, decisions of the advisory board (*kollegia*), guidelines, instructions and recommendations. It also monitors and visits health 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.

The local authorities and finance departments:

- approve expenditures for health from local state budgets and distribute state funds at the *oblast* and *rayon* levels;
- finance regional 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.

As mentioned above, there is only limited policy formulation at the local levels and there is no major involvement of the public in the planning and regulation of the health sector, except through reports in the mass media and some *rayons* where community involvement projects, supported by international agencies, are operational.

4.1.1 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.

4.1.2 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 financed by the limited state budget. The health system in Tajikistan therefore follows the integrated model, in which the vast majority of health services are state-owned and managed and financed from public sources, although a considerable part of health expenditure now comes from informal out-of-pocket payments. At the national/republican level,

health facilities are directly managed by the Ministry of Health, while at the local level health facilities are managed by the respective local authorities at the city, *oblast* or district level.

The Ministry of Health 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 has to ensure the required range, quantity and quality of medical services. The governance and management structure of public providers has not changed much since the Soviet period and most activities are still based on norms and standards developed before 1991. In October 2005, however, the Ministry of Health adopted new standards on family medicine, which describe in detail the responsibilities of health facilities and staff members, and include a list of required equipment, staffing norms and workload (Order No. 584 of 31 October 2005).

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

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

Facility managers have little discretion 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. *Rayon* health departments are accountable to *oblast* health departments (with budgets handled by finance departments). 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 district hospitals. As mentioned in Chapter 2, 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 districts, however, the government has devolved administrative functions to primary health care providers, and has established new channels of financing. As part of the health care reform project supported by the World Bank, the Ministry of Health has, in conjunction with the Ministry of Finance, separated the financial flow to primary care providers in pilot districts from the hospital sector. It has also, on a national scale, increased the salary for primary health care staff more than that for other health care workers, and changed the salary structure for medical personnel. The reform project aims to separate primary health care from the hospital sector and to provide incentives for family medicine and general practitioners involved in primary health care.

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

In recent years, anti-fire precautions have been strengthened. The Ministry of Health and the local administrations at the *oblast*, urban and district levels are responsible for the monitoring of health facilities and the establishment of emergency plans, and report on their activities to the Government. The respective administration responsible for health facilities is also charged with ensuring the preparedness of facilities for harsh winters.

4.1.3 Regulation and governance of the purchasing process

Through the Ministry of Finance, the Ministry of Health 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 faced 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 in meeting recurrent costs and sustaining their activities. Since 1991, some health care providers have only functioned symbolically.

As mentioned in Chapter 2, 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. The experience of these centres will be useful for the introduction of a new, case-based payment mechanism for hospital care.

The Ministry of Health has encouraged health facilities to introduce fee-for-service payments, in particular at the national level institutions in Dushanbe, where the population is generally in a better position to afford co-payments than in many rural areas. Large hospitals and research institutions in the capital 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 expenditures. The majority of large hospitals in Dushanbe have established price lists for medical services and gathered experience of managing the additional financial resources. Their services are now purchased by the Ministry of Health on the basis of fee-for-service arrangements. The Ministry of Health has established a special account from which these hospital services are purchased by the Ministry. The services purchased are mainly for specified disease categories or for poorer patients who have medical conditions requiring complex modern technologies.

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 applies capitation financing to primary health care has now been developed and is being used on a pilot basis in three *oblasts*. It is planned to roll out this financing mechanism to the whole country in the future. However, the continued management of primary health care facilities by district hospitals is a major obstacle to these reform efforts. Despite a reduction of hospital beds, the hospital sector continues to dominate health infrastructure and human resources, while only providing low quality services.

The basic benefits package in the pilot districts 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 at facilitating the establishment of new forms of financing and management, in which health facilities are granted a greater degree of autonomy.

4.1.4 Regulating quality of care

The state agency responsible for quality standards in health is the Tajik State Standard. It conducts the annual standardization of medical equipment used in large hospitals.

Irrespective of the form of ownership, laboratory services have to meet licensing requirements, which cover staff qualifications, the quality of reagents used, services that can be provided with the given equipment and the quality of laboratory services provided. Despite these formal requirements, the laboratory network in rural areas is only able to provide a limited range of low-quality services, except in areas that have been included in international assistance projects.

In November 2008, a State Surveillance Centre for Medical Activities was established. The State Surveillance Centre is responsible for regulating the quality of medical care in all health facilities irrespective of ownership and including parallel health services, wellness centres and providers of alternative medicine. So far, the State Surveillance Centre has undertaken the accreditation and certification of obstetric care in Khatlon *oblast*, where the German development agencies supports the hospital management of maternity houses.

4.2 Planning and health information management

Health planning in Tajikistan remains focused on the budgetary process. The process of budget formation in Tajikistan continues to follow mechanisms inherited from the Soviet period, with an emphasis on inputs and staffing rather than on quality and outputs. While changes were introduced in 2002 with the aim of moving towards a financing system that is based on activities

or the population covered, the formation of health budgets continues to be highly centralized and primarily based on inputs. Using standardized budget lines, budget proposals are developed in all public health care facilities and then passed up the administrative hierarchy for approval. The current system places incentives on overcapacity and an extensive structure of health facilities, while ignoring the content and quality of the care provided. In addition, only a fraction of the requested budget is allocated to health facilities, and decisions on local allocations to health are made in a non-transparent way (Cashin, 2004b).

4.2.1 Health technology assessment

Up until 1991, technology assessment in the health sector was the responsibility of Soviet agencies at the national level. After the break-up of the Soviet Union, many newly independent states, including Tajikistan, lacked the capacity to carry out sophisticated technology assessments. Currently, the Ministry of Health has regulatory powers over the pharmaceutical and medical industry and the purchase of medical technology.

4.2.2 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 Paper (see Chapter 7).

The central governmental agency responsible for the collection, analysis and publication of health data is the 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 approved by the Ministry of Health. However, data from the private sector are poorly captured.

The health information system is focused on institution-based data collection and, at the primary health care level, relies on 15 data recording forms, which do not contain specific data on human resources. The forms are manually filled out by the personnel at the primary care level and then transferred to the *rayon* hospital level. At this level, the forms are entered into a computer. The data are then electronically transferred in accordance with 47 forms to the higher level. The Centre for Medical Statistics and Information is in charge of collecting and analysing the data, as well as compiling an annual statistical report. There are significant amounts of health-related data collected. Although the information

system aims to guide and inform the management of health services, much of the data is not transformed into management indicators or analysed on a routine basis in such a way that the information might be useful for management, monitoring and evaluation (Wyss and Schild, 2006).

The State Surveillance Centre for Sanitary and Epidemiological Services is in charge of providing official statistics on communicable diseases. However, it lacks technical capacity and resources. Its extensive network of laboratories (approximately 100) is understaffed and lacks equipment to perform most of its assigned duties. The government has recognized that official statistics do not provide an accurate picture of the incidence and prevalence of infectious diseases (Republic of Tajikistan, 2006a). 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 on Statistics (*Goskomstat*) 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. Another difficulty in the data collection process is that the Centre for Medical Statistics and Information and the State Committee on Statistics use different data collection methods. The Ministry of Health is currently developing a unified methodology and questionnaire for data collection by the two organizations.

Poor training of staff and the absence of modern information technologies are further obstacles to reliable data collection. Forms continue to be completed manually, making the processing and analysis of data cumbersome.

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 Survey in 1999, 2003 and 2007, the Demographic and Health Survey in 2002 and the National Nutrition and Water and Sanitation Survey in 2003.

Efforts are under way to strengthen and unify the health information system. A Programme for the Development of the Health Management Information System has been adopted for 2006–2010. Software has been developed to improve data collection, processing and analysis and regional centres of medical statistics and information have been equipped with computers. Data collection

and storage are currently being revised with the aim of improving data quality and facilitating monitoring and evaluation. More reliable data are now available, for example, on hospital utilization.

4.2.3 Research and development

A wide range of research institutions and clinical centres are engaged in research activities in Tajikistan's health sector. Their activities are coordinated by the Department for Human Resources and Science at the Ministry of Health. The two most important research institutions are the Tajik Medical University and the Tajik Institute for Postgraduate Education. The Research Institute for Preventive Medicine conducts research on disease prevention and environmental health. National research institutions and clinical centres are mainly concerned with narrowly specialized clinical problems.

The government is the primary source of funds for research and development in Tajikistan. Overall, however, there are hardly any financial and human resources devoted to research on preventive, environmental and public health, and laboratories for environmental factors and food safety are poorly developed and equipped. This situation has been partially addressed through external funding from the World Bank, WHO and the German Government, with the aim of strengthening public and environmental health capacity.

It is recognized that there is a need for data, information and knowledge, which could provide the basis for informed decision-making in health sector reform, and a critical mass of individuals skilled in the production, management and utilization of such a knowledge base (Wyss and Schild, 2006). A lack of coordination has been described as the main weakness of the current Tajik health research system (de Haan and Iskhakova, 2006). Many organizations carry out studies for and within their own health programmes, but the majority of these activities are isolated, with little effort being made to consolidate and coordinate work (de Haan and Iskhakova, 2006). Another weakness of the system relates to the utilization of research results. The health sector is mainly involved in the collection of routine medical statistics; little information is available on how this information feeds back to decentralized health care facilities and if and how this information is being utilized (de Haan and Iskhakova, 2006).

5. Physical and human resources

5.1 Physical resources

Tajikistan has inherited a health system from the former Soviet Union that is comprehensive but inefficient. It is highly specialized and centralized, with an emphasis on curative and inpatient care, while primary care has been neglected until recently. There is a serious misbalance in the distribution of health facilities and the allocation of budgetary funds between primary health care and hospital care, with the bulk of funding going to secondary health care, where the services provided are expensive and out of reach for the poor (Republic of Tajikistan, 2006a).

5.1.1 Infrastructure

There has been a significant decline in the number of acute care hospital beds per 100 000 population between 1990 and 2000, falling from 922 to 591 and roughly stagnating since then. The decline in the number of psychiatric hospital beds was even more significant, from 70 per 100 000 population in 1990 to 25 per 100 000 in 2006. Nursing and elderly home beds are still underdeveloped in Tajikistan, but their number also declined, from 25 in 1990 to 15 in 2006 (Table 5.1).

Table 5.1

Beds per 100 000 population in acute care hospitals, psychiatric hospitals and nursing and elderly homes in Tajikistan, 1990–2006 (selected years)

	1990	2000	2001	2002	2003	2004	2005	2006
Acute care hospitals	922	591	577	566	554	542	525	547
Psychiatric hospitals	70	26	27	26	23	23	24	25
Nursing and elderly homes	25	10	16	15	15	11	15	15

Source: WHO Regional Office for Europe, 2010.

The number of health facilities in 2007 is shown in Table 5.2.

Table 5.2
Outpatient and inpatient facilities in Tajikistan, 2007

Facilities	Number
Health houses	1 692
Health posts attached to schools, public enterprises and other institutions	158
Rural health centres	593
Rayon health centres	52
City health centres	24
Independent general polyclinics	7
Stomatological/dental polyclinics	13
Polyclinic departments within dispensaries	112
Specialized centres: immunoprophylaxis (65), integrated treatment of children's diseases (68), family medicine (17), reproductive health (69), AIDS prevention (25), healthy lifestyle promotion (54) and others (54)	352
Outpatient total	**3 003**
Rural hospitals	153
Maternity houses	15
Central *rayon* hospitals	57
Numbered *rayon* hospitals	45
City hospitals	24
Oblast hospitals	6
Hospital departments within dispensaries	80
Specialized hospitals, including for tuberculosis, infectious diseases, psychiatric diseases and others	44
Clinics of scientific research institutes	2
Inpatient total	**426**

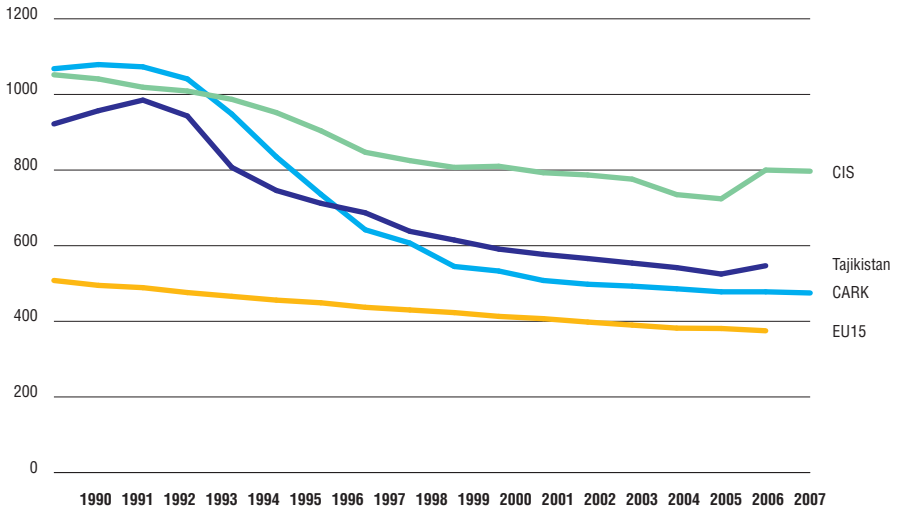
Source: State Committee on Statistics, 2008b.

Although these declines are impressive, when seen in the European context it becomes apparent that the ratio of acute hospital beds to population size is still comparatively high in Tajikistan (Fig. 5.1). At 547 per 100 000 population in 2006, it far exceeds the EU15 average of 375 and the central Asian republics and Kazakhstan (CARK) average of 478 in the same year, although it is clearly below the CIS average of 800 in 2006 (WHO Regional Office for Europe, 2010).

5.1.2 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, sewerage systems, sanitation, electricity and communication systems are unsatisfactory.

Fig. 5.1
Beds in acute hospitals per 100 000 population in Tajikistan, CARK, CIS and EU15, 1990–2007



Source: WHO Regional Office for Europe, 2010.

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 an almost complete lack of investment in refurbishment or the purchase of new equipment. Since 1990, there has been practically no purchase of modern medical equipment for district and regional hospitals, while the remaining equipment has fallen into a state of disrepair. Where investments took place, they were directed at large national-level health facilities in Dushanbe. The poor material conditions of most health facilities undermine access to health services, quality of care, and staff and patient satisfaction (Ministry of Health, 2005b).

A recent analysis of pre-hospital and hospital facilities revealed that the majority of them lack hot water, experience interruptions in cold water supply and electric power, do not provide safe water, have no heating in winter, and lack sanitary and hygiene facilities or have only unsatisfactory ones. Furthermore, medical and diagnostic equipment is either obsolete or in disrepair; the situation is especially serious in rural areas, because of lack of resources and medical staff (WHO, 2007).

5.1.3 Medical equipment, devices and aids

Medical equipment is assessed and purchased through the procurement section of the Ministry of Health. 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 2009, modern medical equipment was purchased for six large hospitals: the cardiosurgery hospital, the cardiology hospital, the national research centre for obstetrics, gynaecology and neonatology, the emergency care hospital in Dushanbe city, the paediatric services of the national clinical centre, and the national referral hospital for tuberculosis in Macheton. External funding agencies included the Islamic Development Bank, the Saudi Fund for Development and the governments of Japan and Germany. However, hospitals still lack funds for maintenance and spare parts.

In 2009, there were one magnetic resonance imaging unit and eight computed tomography scanners in the country, but no positron emission tomography equipment. While modern medical equipment is increasingly being procured, most private medical facilities are not able to purchase such. Apart from the costs, another obstacle is that, since 2007, private providers need to pay VAT on imported medical equipment. In Dushanbe, there are representatives of several international companies that produce medical equipment.

5.2 Human resources

The ratio of health workers to population has declined since 1990 (Table 5.3). While the number of physicians per 100 000 population declined only slightly, from 255 in 1990 to 201 in 2006, the most significant declines were among nurses and midwives, with the number of nurses per 100 000 population declining from 809 in 1990 to 447 in 2006, and the number of midwives from 129 to 57 (WHO Regional Office for Europe, 2010).

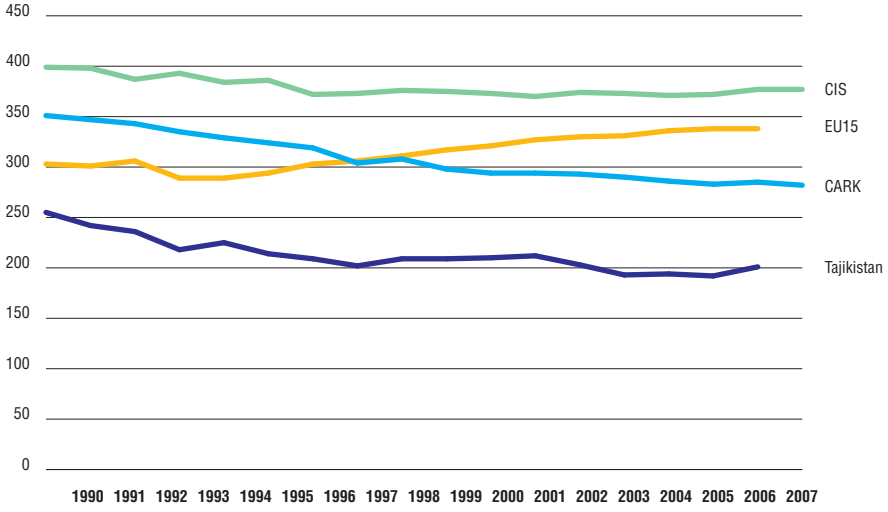
Table 5.3
Health personnel (physical persons) in Tajikistan per 100 000 population, 1990–2007 (selected years)

Type of personnel	1990	2002	2003	2004	2005	2006	2007[a]
Physicians	255	203	193	194	192	201	186
Dentists	15	17	14	15	15	15	15
Pharmacists	12	11	10	–	–	–	–
Nurses	809	470	435	428	418	447	411
Midwives	129	60	58	54	54	57	52

Source: WHO Regional Office for Europe, 2010.
Note: [a]From State Committee on Statistics, 2008b.

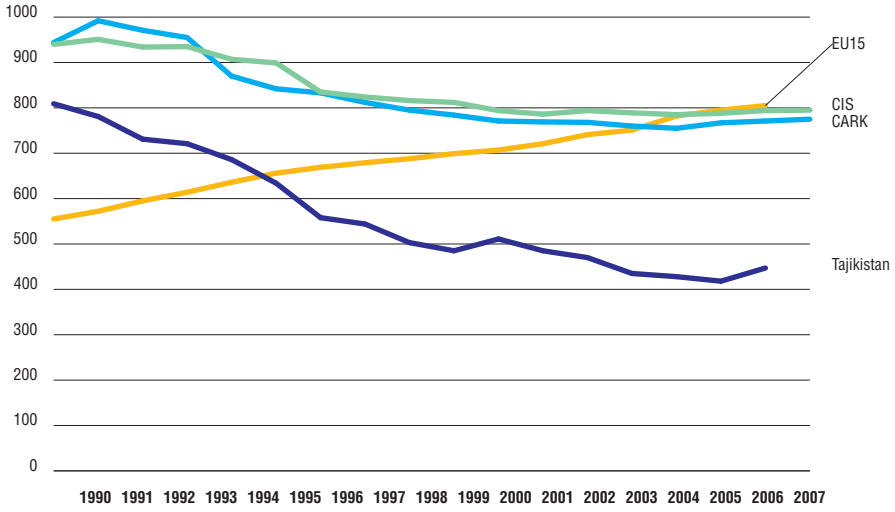
When put in context, it can be seen that the ratio of personnel to population has declined for almost all categories of health workers in Tajikistan (except midwives, although their ratio has also greatly declined over the last two decades) and is much lower than in most other European countries (Fig. 5.2, 5.3, 5.4, 5.5 and 5.6). The decline of physicians in Tajikistan per 100 000 population, from 255 in 1990 to 201 in 2006, 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 EU15 and an only slight decline

Fig. 5.2
Number of physicians (physical persons) per 100 000 population in Tajikistan, CARK, CIS and EU15, 1990–2007



Source: WHO Regional Office for Europe, 2010.

Fig. 5.3
Number of nurses (physical persons) per 100 000 population in Tajikistan, CARK, CIS and EU15, 1990–2007



Source: WHO Regional Office for Europe, 2010.

in the CIS overall (WHO Regional Office for Europe, 2010). 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 Soviet Union, 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 and Telyukov, 1991).

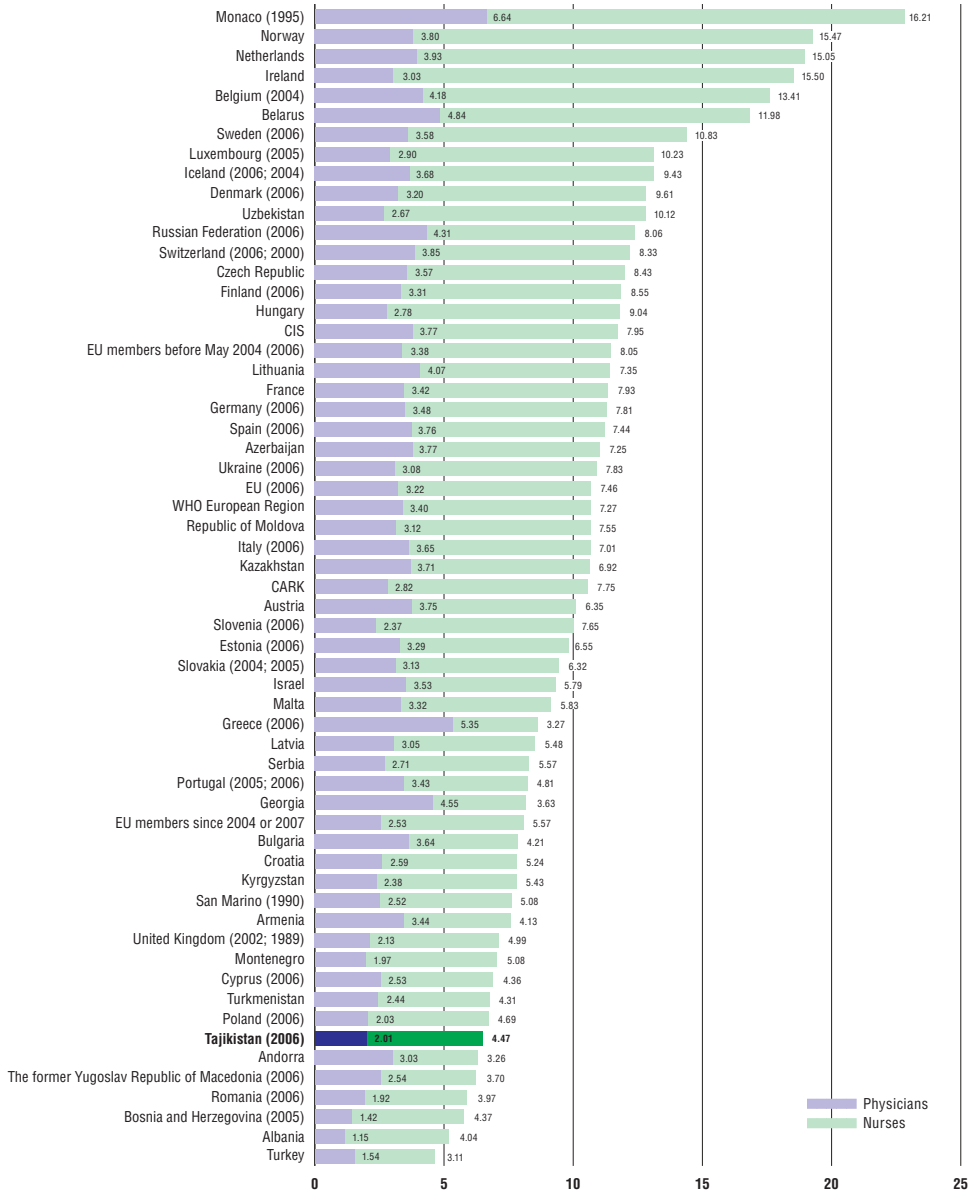
The number of nurses per 100 000 population in Tajikistan declined quite dramatically, from 809 in 1990 to 447 in 2006, a level far below the averages for CARK (771), the CIS (794) and the EU15 (805) (WHO Regional Office for Europe, 2010).

The combined ratio of physicians and nurses in Tajikistan to population size is one of the lowest in the WHO European Region (Fig. 5.4). The ratio of nurses to physicians in 2006 was 1:2.2 (WHO Regional Office for Europe, 2010).

As illustrated in Fig. 5.5, the number of dentists per 100 000 population in Tajikistan is also much lower than in most other European countries. It has shown a largely stagnating trend since 1990, when it stood at 14.9, increasing slightly to 15.2 in 2006 (WHO Regional Office for Europe, 2010).

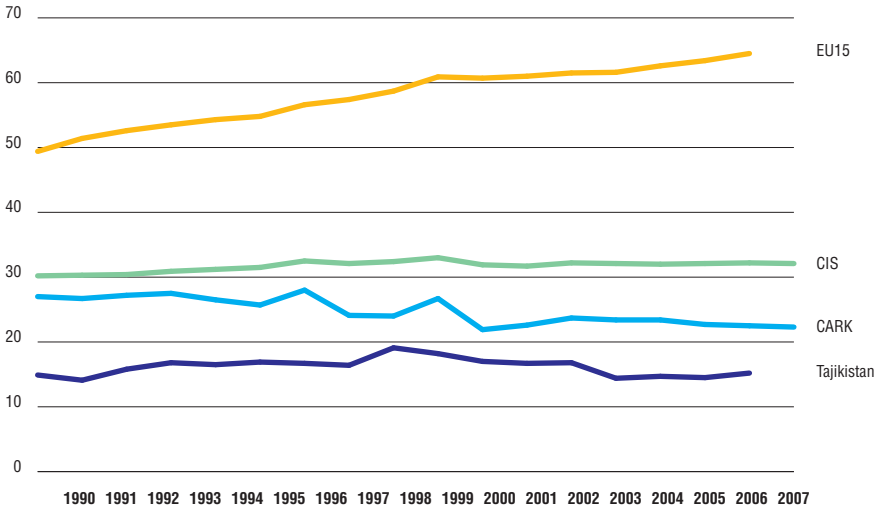
Fig. 5.4

Number of physicians and nurses (physical persons) per 1000 population in the WHO European Region, 2007 (or latest available year)



Source: WHO Regional Office for Europe, 2010.

Fig. 5.5
Number of dentists per 100 000 population in Tajikistan, CARK, CIS and EU15, 1990–2007



Source: WHO Regional Office for Europe, 2010.

5.2.1 Trends in health personnel

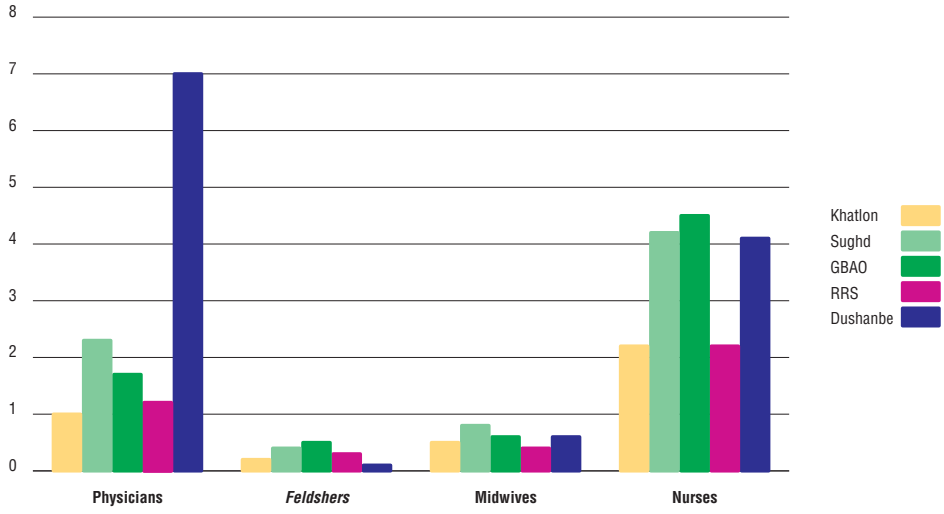
Tajikistan has less health professionals per capita than other countries in central Asia. Physicians are mainly specialized, but more and more are being retrained to become family physicians. The intention is to also upgrade and expand nurse training. *Feldsher* (doctors' assistant) training was already upgraded in 1996 to a four-year course in medical college. These doctors' assistants work mainly in rural areas and, given the scarcity of physicians in rural areas, are an important group of health professionals.

The quality of the health system has suffered from a serious brain drain over the last decade, beginning with the civil war and continuing into the present day as health workers seek the prospect of higher wages abroad. Between 1990 and 1999, nearly 10 000 physicians and 39 000 mid-level health workers left the health sector, especially during the period of civil war. While medical schools remain able to attract students, retention of graduates at the health facilities remains a serious problem, and the system continues to lose qualified workers (World Bank, 2005a).

Staff are unequally distributed, both functionally and geographically. Physicians are concentrated in the capital, Dushanbe, while the density of all staff categories (except *feldshers*) is lowest in Khatlon *oblast* and the *rayons* of republican subordination (Fig. 5.6).

Fig. 5.6

Density of health workers per 1000 population according to region, 2004



Source: Wyss and Schild, 2006.
Note: RRS: *Rayons* of republican subordination.

The shortage of health workers is most acute in rural areas. This can be attributed to poor human resource management, low salaries, outdated medical equipment and the poor condition of health facilities (Republic of Tajikistan, 2006a).

5.2.2 Planning of health personnel

Health reform documents have identified human resource development as a key area. A workforce plan covering the period 2006–2010 was approved by the Ministry of Health in early 2006, and outlines key priority areas, such as human resource information management, the development of career paths, retention strategies, geographical imbalances or the promotion of staffing norms (Ministry of Health, 2006). Other policy documents place emphasis on the retraining of specialists to become family doctors and on improved interactions between physicians and mid-level health professionals. However, the implementation of reform plans is at an early stage, and much of what is

outlined needs to be further detailed. Generally, human resource planning is deficient and few projections are available (Wyss and Schild, 2006). However, this is changing gradually and a human resource strategy is currently being developed within the context of the Community and Basic Health Project.

The policy of the Ministry of Health outlines that there should be one family physician per 1500 inhabitants, equivalent to around 4600 family physicians in 2006, and one family nurse per 750 inhabitants, equivalent to around 9150 family nurses in 2006. A normative approach to setting necessary quotas is a possible means of assessing overall staff requirements, but it is not well suited to accounting for factors such as workload, current availability or production of new health workers (Wyss and Schild, 2006).

Strategic documents of the Ministry of Health 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 (Wyss and Schild, 2006).

In order to oversee the current availability of health workers, the Ministry of Health manages a central database on health staff by category, place of work, age and sex. The database assembles information on the entire workforce and is managed by the Department of Human Resources and Science. This database is regularly updated with information made available by *rayons* and *oblasts*. However, an enquiry conducted in selected *rayons* in 2005 showed discrepancies with the Ministry of Health database, with staff numbers between a quarter (Dangara) and third (Varzob) lower than those indicated by the Ministry of Health database (Wyss and Schild, 2006).

5.2.3 Training of health personnel

A single state university, the Tajik State Medical University, is responsible for the training of physicians and pharmacists. The University is divided into 24 faculties with 68 specialties. Annually, approximately 500–600 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 remain. The Ministry of Health has limited the number of new students to 600 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 (Wyss and Schild, 2006).

Tajikistan has brought its university education into 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 stomatology 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 (Wyss and Schild, 2006).

Nursing is still poorly developed and many nurses are under-qualified. 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 (Ministry of Health, 2005b). Four medical colleges and nine medical schools are in charge of training other staff categories, with 1400–2000 nurses and approximately 300 midwives graduating per year. There are 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.

Medical schools comprise 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.

The training of *feldshers* (doctors' assistants) has also been upgraded to a four-year course in medical colleges. *Feldshers* work mainly in rural areas and fulfil an important function in the absence of physicians.

The employment of health personnel is organized according to the labour legislation of Tajikistan. Graduates are typically enrolled in the public workforce. However, the allocation of newly graduated personnel is not always transparent. Furthermore, there is a tendency to allocate tasks to physicians that could be performed by nurses (Wyss and Schild, 2006).

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. Training in public health is supported by the Soros Foundation Tajikistan, but outstanding challenges include the coordination and costs of student placements in the Public Health Institute.

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

- 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 (ECTS);
- improving the state standards of medical and pharmaceutical education;
- changing the quality assessment system and level of professional competence; and
- introducing accreditation of medical education institutions.

5.2.4 Family medicine

Progress has also been made in strengthening family medicine. General practice (family medicine) and general practitioners were included in the list of medical professions in 1998. At present, a law on family medicine is being drafted, as well as a programme for the development of family medicine. Departments of family medicine have been established at the Tajik State Medical University and at eight medical education centres throughout the country. The programme has started slowly, with only 11 students enrolling in family medicine at the Tajik State Medical University in the first year of the programme in 2004, although 40 student positions were available. By 2006, there was still low interest among students for family medicine because of the lack of financial incentives, as other specialists earned substantially more than family doctors. Family nurses are being trained in medical colleges and schools in family medicine (Wyss and Schild, 2006).

Furthermore, two retraining centres for family doctors and nurses have been created in Dushanbe at the Postgraduate Medical Institute and the Republican Centre for Family Medicine. Retraining is provided through a six-month continuing medical education course for physicians and nurses who want to be retrained in family medicine. However, retraining has generally been slow and

only a limited number of specialists have been retrained as family doctors. There are also difficulties in harmonizing activities across retraining institutions, with a duplication of roles and responsibilities (Wyss and Schild, 2006). By 2005, only 2% (442) of physicians and 3% (412) of nurses had undergone retraining programmes for the acquisition of "family medicine" skills.

Since then, 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, ZdravPlus and others. An 11-month training of trainers programme has been 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 Agency for Development and Cooperation and Aga Khan Foundation at several locations throughout the country. By 2009, the number of health workers trained in family medicine had increased to 1578 family medicine doctors and 1721 family medicine nurses.

5.2.5 Registration/licensing

In the Soviet period, physicians had to undergo mandatory continuing education at least once in 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, 2005b) and non-adherence has no consequences for further medical practice. In the context of the introduction of family medicine, a discussion started in 2005 on whether to introduce new guidelines and accreditation/certification systems for this and other specialties (Reamy, 2005).

5.2.6 Doctors' career paths

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 less qualified personnel, such as nurses and midwives (Wyss and Schild, 2006).

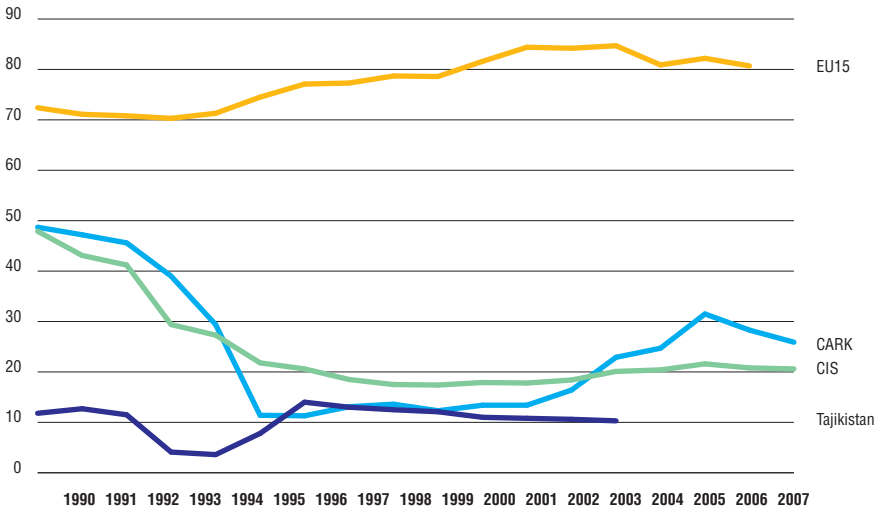
There are few mechanisms in place for performance management of health staff. The output of health workers – for example, through regular review of the quantity and quality of services – is not evaluated. There are also no performance tools used for the routine monitoring of clinical practices. Occasional surveys indicate that clinical guidelines are not universally being used. There is a lack of

management training for decision-makers, who are mostly trained as physicians (Wyss and Schild, 2006), and hospital managers tend to have weak professional management skills (Ministry of Health, 2005b).

5.2.7 Pharmacists

The number of pharmacists in Tajikistan, at 10 per 100 000 population in 2003, was below the CARK average of 23 and the CIS average of 20, and far below the EU15 average of 85 in the same year (WHO Regional Office for Europe, 2010).

Fig. 5.7
Number of pharmacists per 100 000 population in Tajikistan, CARK, CIS and EU15, 1990–2007



Source: WHO Regional Office for Europe, 2010.

6. 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 medical houses, rural health centres and rural hospitals. In urban areas, primary and secondary care is delivered by polyclinics/family medicine centres, basic secondary care by district (*rayon*) hospitals, specialized secondary care in regional (*oblast* or city) hospitals, and more complex care in national hospitals.

The health system has traditionally been hospital-centred, partly owing to the fact that hospital head physicians administer other health services in the hospitals' catchment area and thereby influence resource decisions towards inpatient care. In 2000, the Ministry of Health committed itself to a restructuring of primary health care and other services, with the technical and financial support of WHO, the World Bank and the Asian Development Bank. This entailed strengthening primary health care, rationalizing and modernizing health facilities, and strengthening the training and capacity of health professionals.

6.1 Public health

Historically, health services in Tajikistan have been organized in a vertical way, with some activities delegated to republican institutions. This is especially true for some public health functions, such as maternal and child health, tuberculosis, HIV/AIDS control, immunization or health promotion, which are conceived of and provided as vertically organized programmes separated from curative services (see Section 4.2). Typically, the corresponding republican centres, such as the Republican Centre for Healthy Lifestyles, the Republican Centre for

Reproductive Health, the sanitary–epidemiological services, the Institution of Preventive Medicine or the Republican Centre for Tuberculosis Control, run their own health facilities and infrastructure. Those with curative activities compete for patients by offering services that are as specific as possible. This is particularly the case for tuberculosis control, which still relies in an important way on hospital care and which is not yet integrated into primary health care (Wyss and Schild, 2006). A major challenge in the provision of health care relates to the need to integrate these vertical programmes into primary health care.

The sanitary–epidemiological services are responsible for prevention, monitoring and control of infectious diseases, occupational health, food safety and environmental health. Approximately 20% of their financing comes from the Ministry of Health, and 80% from the provision of paid services. Sanitary–epidemiological laboratories run tests on stool, blood, air, water and food from clinical centres, primary health care units and the sanitary–epidemiological services. The sanitary–epidemiological services face a series of challenges, including a lack of human resources, low salaries, low prestige, lack of career development plans and lack of training. Laboratory capacity is poor and very basic. Equipment is old as there has been little investment since the break-up of the Soviet Union. In many laboratories, there is no budget to procure consumables. Transportation is obsolete: cars are very old and there is no budget to pay for petrol. In 2009, the Ministry of Health, supported by WHO, launched a Public Health Reform Plan to review the current institutional setting and functioning of the State Sanitary–Epidemiological Service. There has also been an upgrading of laboratory capacity of the sanitary–epidemiological services in Dushanbe in 2009, in order to strengthen avian flu preparedness.

The Republican Centre for Healthy Lifestyles was established in 1999 (Ministry of Health Decree No. 352/2) and a Programme of Healthy Lifestyle Formation in the Republic of Tajikistan to 2010 was adopted in 2003.

The Ministry of Health is increasingly addressing nutritional problems, largely in association with international donors and NGOs. Tajikistan is, for example, part of a regional project to support food fortification that is funded by the Japanese Government, while UNICEF and WHO are taking the lead on micronutrient supplementation, in-home fortification and breastfeeding. The Ministry of Health is committed to developing a state programme for the organization of healthy nutrition and physical activity of the population of Tajikistan. However, the Republican Centre for Nutrition, a small and research-oriented institution, has only a small number of staff members who do not have

a full-time commitment to addressing nutrition issues. In the Ministry of Health, there is a working group on mother and child nutrition that coordinates the activities of relevant organizations. In December 2008, the Ministry of Health adopted new child-growth standards and staff training is being conducted across the country. The Ministry has also initiated the nationwide promotion of breastfeeding and 68.1% of maternity hospitals have been certified by UNICEF as baby-friendly.

One of the challenges is that health workers and clients place an exaggerated emphasis on vitamins and it is quite common for people to receive several injections of vitamins when they visit health care providers. Throughout the country, no nutritionists have received training in the delivery of health care services, except perhaps with regard to special diets for patients at hospitals, and little training has been given on the prevention of malnutrition to the medical community. As a result, there has been a focus on curative rather than preventive nutrition activities in the past (Branca and Tazhibayev, 2004). However, in 2009, the protocol for the treatment of severe malnutrition in hospital was updated, and guidelines for treating severe malnutrition at primary care level are now under development. An Anaemia Prevention and Control Strategy has been designed, consisting of multiple interventions that are being introduced in phases. At the national level, the strategy consists of providing iron (and folic acid) supplements to all pregnant women and to begin fortification of wheat flour with iron (ferrous sulfate). The country has also taken steps towards universal salt iodization (UNICEF, 2007b). New approaches for improving complementary feeding with in-home fortification have been tested and national guidelines to scale up in-home fortification are being developed by WHO and the Ministry of Health.

The aim of the National Immunization Programme adopted by the Ministry of Health is the eradication of six vaccine-preventable diseases: diphtheria, pertussis, tetanus, polio, measles and tuberculosis. Immunization programmes are the responsibility of the Ministry of Health, which implements them through the Republican Centre for Immunoprophylaxis. The Centre, which has six regional offices, manages the supply of vaccines, which are currently provided by donors, and the cold chain. More than 2500 health facilities, including maternity services, polyclinics, rural hospitals, small rural ambulatories and medical houses, provide immunizations. Most children (80–85%) receive immunizations through fixed facilities, but two fifths of these children have access to immunizations only on one or two days per week, which presents a barrier to improved immunization coverage. Approximately 15–20% of children receive immunizations through outreach or mobile services.

In line with WHO recommendations and the extended programme of immunization, the number of medical contra-indications to vaccination, the number of administered dosages and the frequency of visits to health facilities have been reduced since the new vaccination schedule was adopted in 1994. It has also been estimated that there has been a reduction of costs. A comprehensive monitoring system of the quality and efficiency of the extended programme of immunization is currently being introduced. Epidemiological surveillance of targeted infections, which had been previously lacking, is also being developed.

An important contribution to the implementation of the National Immunization Programme was made by international organizations, such as GAVI, the Japan International Cooperation Agency, USAID, UNICEF, WHO, the International Development Association, the International Committee of the Red Cross and Médecins sans Frontières, which provided different forms of assistance, including the supply of vaccines, cold chain equipment, disposable syringes and other medical resources. Since 1993, vaccines included in the national immunization schedule for the vaccination of children under 1 year have been supplied by GAVI and UNICEF, with financing from the Japanese Government and the Centers of Disease Control. However, because of insufficient funding, there was hardly any vaccination of children above 1 year of age. For this reason, a pentavalent vaccine (immunizing against five diseases in a single shot) was introduced in 2008 and a measles and rubella mass immunization campaign was conducted in 2009.

A mid-term review of the National Immunization Strategy in 2003 found that deficiencies in immunization coverage, vaccine handling and safety, provider capacity and practice, the absence of a national regulatory authority for vaccines and the instability of funding for immunization are significant problems that need to be addressed. However, the report also noted important progress and achievements, including a recently adopted policy on safe immunization practice, the coverage of vaccines for the extended programme of immunization and safe injection materials, and progress in controlling vaccine-preventable diseases and core surveillance activities.

Between 2001 and 2005, the Government of Tajikistan substantially increased its contributions to the National Immunization Programme. Furthermore, Tajikistan received approximately US$ 8 million in support from the GAVI Alliance and total donor contributions in this period exceeded US$ 16 million (Brenzel, 2008). However, the additional resources did not seem to have a positive effect on coverage rates, with some areas of the country reporting

slight decreases in coverage. An Immunization Resource Tracking Exercise found that the allocation of resources was inequitable and unrelated to needs or programme performance (Brenzel, 2008).

6.2 Patient pathways

As mentioned above, patient pathways differ in rural and urban areas. Moreover, many patients access higher levels of care directly without referral from the primary care level. An estimated 80% of patients bypass primary level facilities and go directly to hospitals (Ministry of Health, 2005b). Apart from the issue of gatekeeping at the primary care level, there is also very poor integration of primary and secondary care with regard to the continuity of care (Ministry of Health, 2005b).

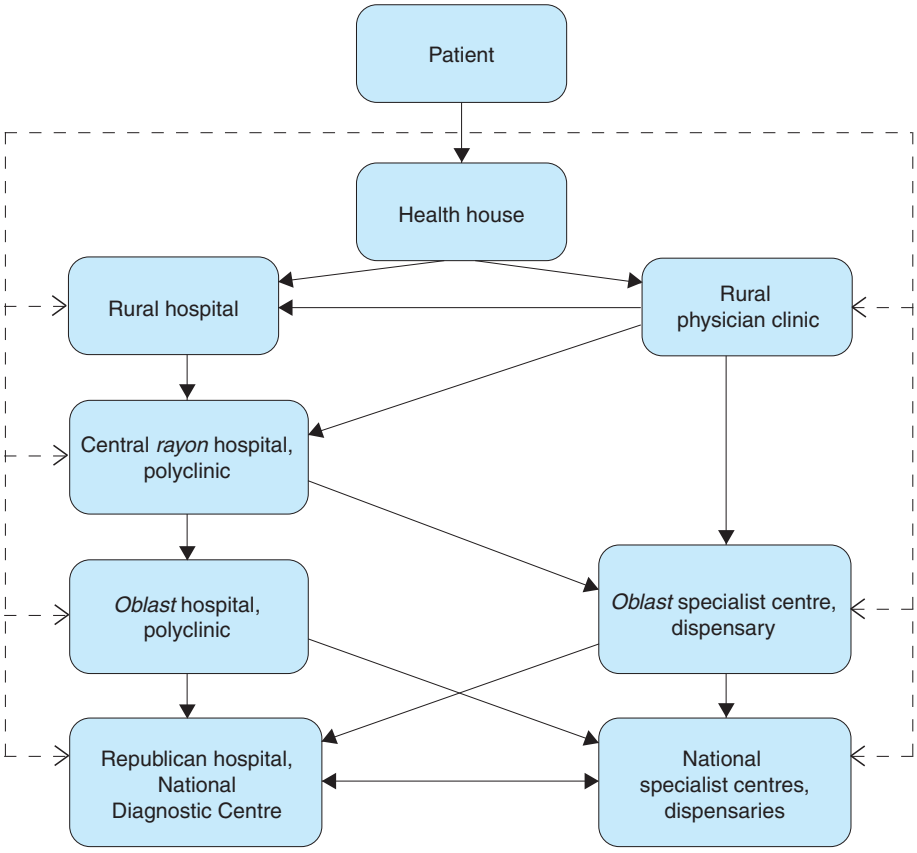
Figure 6.1 illustrates the potential patient pathways of a patient from a rural area, whose first point of contact should normally be the medical house. However, the structure of primary health care is currently being reformed and, in pilot *rayons*, health houses and rural health centres are replacing medical houses, rural physician clinics and rural hospitals.

6.3 Primary/ambulatory care

The structure of the health delivery system inherited from the Soviet Union is highly complex and hierarchical. In urban areas, outpatient services used to be provided at polyclinics that were segmented into separate clinics for adults, children and women's reproductive health, and through specialized dispensaries that address specific diseases, 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 has traditionally been the *feldsher*-midwife posts, which were renamed "health houses" (formerly, *medicinski dom*; now, *dom zdorovia* or *hohahoi salomati*) in 1997. Rural outpatient services are also provided through rural physician clinics (*selskaya vrachebnaya ambulatoryia*) and rural hospitals (*selskaya uchastkovaya bolnitsa*). These rural outpatient services are managed by the central *rayon* hospital administrations (World Bank, 2005a).

Tajikistan is still at an early stage of restructuring and strengthening its primary care system. Legislation has been passed on family medicine, physician capitation, a basic benefits package and co-payments (see Section 10.3 Principal

Fig. 6.1
Typical patient pathways



Source: Rahminov, Gedik and Healy, 2000.

legislation). Pilots of primary care reform are under way in eight of the country's *rayons*, located in three *oblasts* (Decree No. 199 of 14 April 2007). A unit within the Ministry of Health in charge of primary health care has been established, with four staff positions.

The Ministry of Health has started to implement a major restructuring of primary health care, using funds and expertise provided by the WHO European Region, the World Bank, the Swiss Agency for Development and Cooperation and the Asian Development Bank. The World Bank-financed Primary Health Care Project, implemented during 2001–2005, had four components:

- primary health care development
- health facilities rationalization and development
- health care financing system – population-based funding
- capacity building and project management.

The pilot districts included in the primary health care project comprised a total population of approximately 160 000 people. The project improved the physical infrastructure of primary care through the construction or rehabilitation of 27 rural health centres and the provision of equipment. The project also retrained doctors and nurses in family medicine, introduced family medicine practices and tested new financing mechanisms. Project Sino complemented the project by providing analyses of the implementation of the package of guaranteed services within the pilot districts based on 18 parameters.

The second Asian Development Bank financed project, the Health Care Reform Project, started in 2004. The project had three components:

- institutional development of the health sector
- quality control and procurement of drugs
- effective and sustainable provision of the benefit health package to vulnerable poor people.

The project targeted the five poorest and most remote districts of the country, in which the poverty line is much higher than in other districts. The project aimed to improve the infrastructure of primary health care facilities and provide clinical equipment and drugs. The project is hoped to improve mother and child care, the control of tuberculosis, malaria and other infectious diseases, and the access of vulnerable populations to good quality health care.

In 2007, the Community and Basic Health Care project started, supported by the World Bank, USAID/ZdravPlus, the Swiss Agency for Development and Cooperation and the Swedish International Development Cooperation Agency. The project supports primary health care, capitation and output-based payments to providers, and quality of service delivery in primary health care centres. It has produced positive changes in the two pilot *oblasts* and influenced sector-wide reforms in health financing and provider payment reforms. In particular, the project has invested in primary health care facilities and medical equipment and the training of health workers. The project has also, in collaboration with other donors, supported the Ministry of Health in developing a health sector strategy.

In 2007, the primary health care sector consisted of 1692 health houses, 134 health points headed by doctor's assistants (98) or doctors (36), 593 rural health centres, 52 district (city) health centres and 24 urban health centres (State Committee on Statistics, 2008b). The number of outpatient contacts per person per year is shown in Fig. 6.2.

6.3.1 Health houses

In the late 1990s, the Government began to introduce reforms in the primary health care system in selected pilot *rayons*. The Decree No. 236 of the Ministry of Health of 23 June 1998 envisaged the gradual transition towards primary health care in accordance with the principles of general practice for the period 1998–2000, while government resolutions on the reform and new organizational structure of primary health care were adopted in 2002 and 2006 (Resolution No. 525 in 2002 and No. 25 in 2006).

The 2002 Conception on Health Reform (Republic of Tajikistan, 2002b) envisages a new structure of primary health care, transforming the multi-layered system of primary health care in rural areas into a two-tiered system. Health houses are envisaged as serving as the first point of contact in rural areas. They are staffed by nurses and midwives, with the number in each health house depending on the size of the population served. Importantly, while the physical structures of the medical houses will be eliminated, the function of *feldshers* (community health workers) is maintained under the family medicine team (World Bank, 2005a). As mentioned above, in 2007, there were 1692 health houses in the country. They are affiliated to rural health centres.

Health houses provide immunization, basic first aid, home visits, basic prenatal care and medical referrals – although there is also direct access to physicians and *rayon* hospitals. Health houses cover rural areas with a catchment population below 1500. Health houses are also established in isolated villages of fewer than 300 people if the village is more than 4 km away from other health facilities. Health houses are funded from village administration (*jamoat*) budgets and from the revenues of local collective farms.

6.3.2 Rural health centres

Rural health centres, usually comprising specialists, provide the next level of primary care. These clinics are subordinate to central *rayon* hospitals and offer diagnostics and basic treatment and surgeries. Most have basic laboratory facilities for testing blood and urine. Rural health centres (formerly rural physician clinics or rural hospitals) are staffed by physicians, in addition to

mid-level and junior health staff. In urban areas, the polyclinic is envisaged as remaining the first point of contact (Wyss and Schild, 2006). One of the major bottlenecks in the implementation of the rationalization plan is the speed with which family physicians and nurses can be trained to take up these new functions (World Bank, 2005a). In 2007, there were 593 rural health centres.

6.3.3 *Rayon* and city health centres

Rayon and city health centres in towns are either free standing or associated to 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 of 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. In 2007, there were 52 *rayon* health centres and 24 city health centres.

6.4 Secondary care: specialized ambulatory/ inpatient care

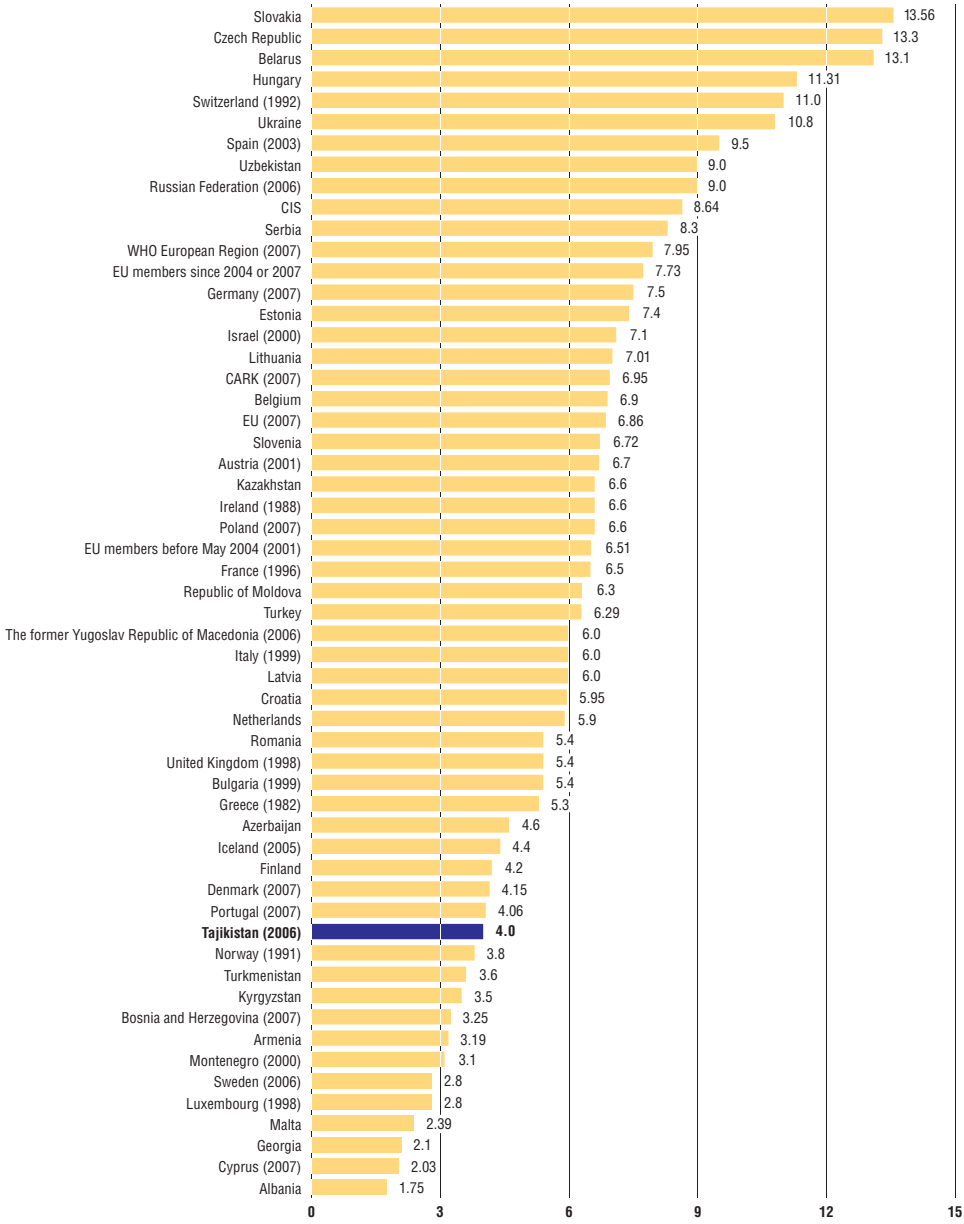
Like most post-Soviet countries, Tajikistan inherited an extensive hospital-based system, which has become increasingly hard to sustain. The financing of hospital services on the basis of beds has encouraged superfluous capacity. Since independence, the system has remained virtually unchanged, with little upgrading or investment and few organizational changes. In many aspects, service capacity and quality have deteriorated (Ministry of Health, 2005b).

Small rural hospitals with 25–75 beds offer basic nursing care and some medical and obstetric services. There are numerous specialist hospitals, providing care to specific groups of the population (such as children and pregnant women) or patients with particular diseases. National hospitals at the republican level provide more advanced care and usually also serve as teaching and research hospitals.

There has been a significant decline in the number of acute care hospital beds per 100 000 population, falling from 922 in 1990 to 547 in 2006 (see Section 5.1). In the first stage of health reform (1992–2002), however, this reduction in the number of beds was not accompanied by a reform of primary health care and resources were not reinvested in the health sector, but absorbed

Fig. 6.2

Outpatient contacts per person per year in the WHO European Region, 2008 (or latest available year)



Source: WHO Regional Office for Europe, 2010.

by the state budget. In the second stage of reforms (starting in 2003), the strengthening of primary health care was started in pilot districts. The current hospital rationalization plan entails a further reduction in bed numbers. It envisages a 33% reduction in the number of beds per population for general profile hospitals (central district and city hospitals) for the period 2005–2010, as well as the rehabilitation of buildings and the purchase of new equipment (Ministry of Health, 2005b).

While the number of acute care hospital beds has been decreasing in recent years, the number of hospitals (both acute and long-term) has increased, from 365 in 1990 to 449 in 2006, although with a stagnating trend per population, with 6.9 hospitals per 100 000 population in 1990 and 6.8 in 2006 (WHO Regional Office for Europe, 2010). A further indication that the limited health resources of the country are not used very efficiently are low bed occupancy rates in acute care hospitals, declining from 93.8% in 1990 to 60.3% in 2006 (WHO Regional Office for Europe, 2010). The average length of stay in acute care hospitals has declined only slightly, from 13.6 days in 1990 to 11 days in 2006 (WHO Regional Office for Europe, 2010).

Utilization rates have dropped from 20.9 acute care hospital admissions per 100 population in 1990 to 11.1 in 2006 (WHO Regional Office for Europe, 2010). This reduction is the result of a deterioration of hospital services rather than a strengthening of primary health care, with insufficient financing of secondary care, outflow of qualified personnel and a lack of medical equipment (Ministry of Health, 2005b). The quality of hospital services has declined. It is characterized by inadequate examinations, outdated or deficient treatment protocols, insufficient provision of pharmaceuticals and unqualified health personnel (Ministry of Health, 2005b). The standardized death rate for appendicitis for all ages increased from 0.35 per 100 000 population in 1990 to 0.47 per 100 000 in 2005, which was the highest rate in the WHO European Region (WHO Regional Office for Europe, 2010).

In 2005, in 77% of hospitals no meals were provided for patients (Ministry of Health, 2005b). There was also insufficient provision of pharmaceuticals, with 70–80% of prescribed drugs being purchased by patients (Ministry of Health, 2005b).

6.4.1 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 "therapeutist". There were 153 rural hospitals in 2007, down from 198 in 1995, 217 in 2000 and 208

in 2005. There were also 45 district hospitals reorganized from rural hospitals, as shown in the above statistics on 2007. These "hospitals" are in very poor condition and only active outside the autumn/winter season, with run-down 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 or transformation of rural hospitals into rural health centres with a limited number of day-stay beds or into district hospitals, except in remote and mountainous *rayons*, where they are to be subsumed under the central *rayon* hospital network (Republic of Tajikistan, 2002b; Ministry of Health, 2005b).

6.4.2 Central *rayon*/city hospitals

Central *rayon*/city hospitals are located in the largest town of the *rayon*, have approximately 100–300 beds, are staffed by a range of specialists, and many also house a polyclinic. There were 57 central *rayon* and 24 city hospitals in 2007, an increase from 52 central *rayon* hospitals in 1995, although the number of beds has declined. There are also subordinate *rayon* hospitals, providing a similar range of services. In 2005, rural hospitals and central *rayon* hospitals combined accounted for 21 589 beds, equivalent to 46.7% of total hospital beds (Ministry of Health, 2005b). In larger cities and at the regional level, there is a duplication of services of central *rayon* and city hospitals. The hospital rationalization plan envisages a reduction in this duplication of services.

Central *rayon* hospitals generally rely on outdated medical equipment, which is often in poor condition. In some *rayons*, the distance of the rural population to the central *rayon* hospitals is considerable, and access to services has become problematic with the deterioration of emergency transport. Bed occupancy rates lie around 60% (Ministry of Health, 2005b).

6.4.3 *Oblast* hospitals

Oblast hospitals have approximately 600–1000 beds and offer a fuller range of specialties and more technical equipment. Usually located in the main town in the *oblast* or city, there were 6 *oblast* hospitals in 2007. While the number of *oblast* hospitals has not changed much since the country's independence, bed numbers have decreased by 36.5% between 1995 and 2004, from 5694

to 3620 beds (Ministry of Health, 2005b). In the catchment area of *oblast* hospitals, there is a duplication of services of *oblast* city and district hospitals, exacerbating the strain on the country's limited health care budget.

6.4.4 Specialized hospitals

Specialized hospitals were an integral part of the Soviet hospital system and continue to exist in Tajikistan, numbering 44 in 2006. 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. National (republican) hospitals provide more advanced care, and usually are also teaching and research 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.

There are also specialized dispensaries (many of them with hospitals) at both the regional and national levels for people with long-term illnesses such as tuberculosis, dermatological and sexually transmitted diseases, endocrine diseases, cancer and drug addiction (Ministry of Health, 2005b).

Scientific research institutes deliver highly specialized health care and carry out research. There are two clinics of scientific research institutes under the Ministry of Health with a total number of 260 beds (Ministry of Health, 2005b).

In Tajikistan, many services are still hospital-based that have almost exclusively moved to outpatient settings in western Europe (Rechel et al., 2009). This includes services for infectious diseases, dermatology, ophthalmology, endocrinology and psychiatric diseases. In Tajikistan, despite moving towards the WHO-recommended DOTS treatment regime, tuberculosis hospitals typically admit patients for several months, where two months would often be sufficient if backed up by active outpatient treatment. In 2005, there were 17 psychiatric hospitals and around 800 dermatology beds, 3800 infectious disease beds, and 2650 tuberculosis beds – most of these services could be provided on an ambulatory basis (Ministry of Health, 2005b). A new National Tuberculosis Programme was developed in 2009, which aims to reduce the overall number of tuberculosis beds to 1800.

6.4.5 Day care

Day care is still underdeveloped. There has been an increase in hospitals offering day care, but the number of patients treated on a day-care basis is very low (Ministry of Health, 2005b).

6.5 Emergency care

All district, regional and national hospitals have ambulance services for emergency care, and there are also separate, specialized emergency hospitals. However, the ambulance fleet is old and incommensurate with requirements, and modern means of communication are lacking (Ministry of Health, 2005b).

Under the reformed system of primary care, health houses are envisaged as providing basic emergency care. Emergency care, including any basic medicines required, is provided free of charge to the entire population within the basic benefits package in pilot *rayons*.

6.6 Pharmaceutical care

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 of the Soviet Union and then delivered to Tajikistan. After independence in 1991, this system collapsed and expenditure on the procurement of medicines was drastically reduced. On the other hand, 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. Key regulatory acts include:

- the Law on Public Health Protection of 15 May 1997;
- the Law on Pharmaceuticals and Pharmaceutical-related Activities of 6 August 2001;
- the Law on Narcotic, Psychotropic Substances and Precursors of 10 December 1999;
- the Health Care Reform Concept of 4 March 2002;
- the National Drug Policy of 28 August 2003; and

- the Medicines and Medical Commodities Procurement and Distribution Strategy of the Republic of Tajikistan of 2 December 2005.

A list of essential drugs was introduced in 1994 and is revised regularly.

The Department of Pharmacy and Medical Equipment of the Ministry of Health is responsible for the development, monitoring and evaluation of the state policy for the pharmaceutical sector. The State Surveillance Service for Pharmaceutical Activities carries out registration and the keeping 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 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 drugs 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 responsible for the development of new drugs based on local raw materials, has been reorganized as a commercial entity. The Republican Centre for Special Controlled Substances is in charge of the legal circulation and control of narcotic, psychotropic substances and precursors. 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 has strengthened controls over the quality and distribution of pharmaceutical products and improved coordination between public acquisitions of medications and donor assistance. A national centre for centralized public acquisitions of medications has been established with the assistance of the Asian Development Bank and Pharmaciens Sans Frontières (Republic of Tajikistan, 2005b). The State Foundation Republican Centre on Procurement of Medicines and Medical Commodities was established by Governmental Decree No. 516 of 30 December 2005. It 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, which were rehabilitated with the financial support of the European Commission Directorate-General for Humanitarian Aid. Its regional branches in Sughd (Khodjent) 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, customs' clearance, licensing and storage, distribution of drugs and medical equipment, and training seminars. In 2007, the Centre sold drugs and medical commodities for an amount of US$ 323 529. Procurement of drugs and medical commodities was carried out according to EU procedures. The list of procured drugs consisted of 103 items, all of which had been included in the essential drug list. However, the list of drugs is insufficient for the proper provision of all health facilities with the necessary pharmaceuticals.

The most recent essential drug list was approved on 7 September 2007 and includes 282 drugs and 14 medical goods. A new essential drug list was being finalized in 2009. 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, Sughd Pharmacy and Khatlon Pharmacy could not 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 existing laboratories of the State Surveillance Service for Pharmaceutical Activities and its regional branches do not meet modern requirements. The Asian Development Bank is currently providing technical assistance for the establishment of a National Drug Quality Control Laboratory.

There has been a sharp decline in public spending on pharmaceuticals (World Bank, 2000). Due to its limited budget, the Government provides only a very limited supply of pharmaceuticals, and the country has relied mainly on humanitarian assistance and household spending (World Bank, 2000). In 2004, the Government budget on pharmaceuticals amounted to just 1% of total health expenditure, and was limited to the most basic supplies. This has had a major impact on quality of care and access to services for the population. The procurement of pharmaceuticals and their supply to health facilities is inefficient, uneconomic and unsafe. As discussed above, most household out-of-pocket expenditures are spent on pharmaceuticals, much of it purchased without prescription or adequate consultation on appropriate uses. Consequently, a significant part of household expenditures on health is going towards ineffective and possibly dangerous uses of pharmaceuticals (World Bank, 2005a).

No drugs are manufactured locally, except for a limited number produced by private drug companies and pharmacies (Rahminov, Gedik and Healy, 2000). The Tajik–Indian Joint Venture, Tajik Ajanta Pharma Ltd., used to manufacture drugs, but is now non-functional because of financial problems. Pharmacon in

Dushanbe, Sughd Pharmacy in Sughd *oblast* and Khatlon Pharmacy in Khatlon *oblast* are state commercial entities responsible for drug procurement, delivery and sale.

A number of state pharmacies have been privatized, and their number has increased during recent years, as have the numbers of low-quality medicines and new drugs unknown to the majority of health professionals in the country. The public supply system collapsed after independence. In its place, a number of NGOs have been providing emergency drugs through a supply system set up, coordinated and maintained by the Pharmaciens Sans Frontières. One of the major strategies of the Government is to incorporate the external drug assistance programme into the national system of drug procurement and management, but it lacks capacity to do so. The Asian Development Bank is currently providing technical assistance to strengthen the coordination of humanitarian and donor assistance into a consistent national pharmaceutical management system (World Bank, 2005a).

Quality control of medicines, including imported pharmaceuticals, is weak (Republic of Tajikistan, 2002c). Because of the Government's inability to control the quality and flow of drugs into the country, fake, counterfeit and low-quality drugs are widespread and have contributed to the prescription of multiple drugs. The result is increased drug expenditure, the emergence of drug resistances and distrust of the health sector among the population. Lack of access to drugs is a major concern (World Bank, 2005a).

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, 2006a), but with the exception of some herbal products, nearly all pharmaceuticals are imported. 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 pockets. Another problem is that numerous unregistered drugs are on the market.

In 1999–2005, pharmaceutical expenditures accounted for an average of 15% of total health expenditure. This meant that budget allocations for the acquisition of pharmaceuticals amounted to far less than US$ 1 per capita, which is clearly not sufficient to ensure the population's access to quality medical care. Many pharmaceuticals are of poor quality and not certified. Prices are high, and acquisitions by medical institutes are often done in an inconsistent way. Domestically produced pharmaceuticals account for only 1% of total demand (Republic of Tajikistan, 2006b).

The absence of a real budget for quality drugs forces the population to look for cheaper alternatives in the local pharmacies that are not supplied by the National Centre for Drug Procurement. A Drug Information Centre has been opened in Dushanbe in 2003. The Centre, funded by USAID, supports efforts by the Ministry of Health to address the issue of inappropriate drug use and create an information resource centre. The centre is a collaborative effort of USAID, the Ministry of Health, the State Tajik Medical University and the WHO Country Office in Tajikistan. It has developed the first Tajik National Medicine Formulary, giving detailed information on the essential drug list.

6.7 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 disabilities, such as for patients with visual and hearing impairments. These institutions exist 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, as is the case in other countries in the former Soviet Union (Vogt, 2007). The special institutions only operate partially or not at all, mainly in the big cities or only in the capital, Dushanbe. Institutions for children under 6 years of age are under the jurisdiction of the Ministry of Health. However, the number of children aged 0–17 years in residential care increased from 197.5 per 100 000 population in 1989 to 416.0 per 100 000 in 2005 (UNICEF, 2007a). More than 80% of the country's 11 000 institutionalized children in 2005 were not orphans (UNICEF, 2007b).

A nursing care hospital was established in Dushanbe in 1998. It provides services to approximately 80 patients, including people with disabilities, elderly people, children with cerebral palsy, and orphans.

A boarding school for children with mental disabilities was established in Chorbog in 2006 and houses approximately 100 children aged 6–16 years with various disabilities. The school is envisaged as becoming a National Rehabilitation Centre. There is a total of 180 staff working in the school, including 4 physicians (paediatrician, psychiatrist, dentist, physiotherapist) and 9 nurses. Technical assistance is provided by UNICEF for in-house training of

staff, and medical care is supported by nearby primary care institutions. Other organizations supporting long-term care in Tajikistan include USAID, the Aga Khan Foundation and the Soros Foundation.

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, 2006a).

There are plans to improve social support for children with special needs, orphans, children from poor families and children with disabilities (Republic of Tajikistan, 2006a). The National Development Strategy envisages programmes for the gradual mainstreaming of children with special needs into regular preschool institutions and to improve the performance of existing specialized children's preschool centres (Republic of Tajikistan, 2006a).

6.8 Services for informal carers

Currently, there is no support system for families with children with disabilities, except for limited financial support. The National Development Strategy up to 2015 envisaged the publication of methodological and teaching aids to encourage the community and parents to get involved in teaching preschool age children with disabilities (Republic of Tajikistan, 2006a). Relatives of those receiving mental health care are not included in mental health care processes and services, despite their crucial supporting role (WHO, 2009).

6.9 Palliative care

There is no information available on palliative care services in Tajikistan. There is a lack of financial and human resources and basic regulatory documents on palliative care in Tajikistan have not yet been developed (International Observatory on End of Life Care, 2009).

In 2004, with the support of the Open Society Institute, the Group of Assistance in the Development of Palliative Care in Tajikistan was established. Some palliative care seminars have been organized and a number of experts/

specialists have attended education and training on palliative care in Poland and Romania (International Observatory on End of Life Care, 2009). Nurses play a crucial role in the provision of palliative care.

6.10 Mental health care

Until recently, mental health in Tajikistan had received very little attention from both domestic policy-makers and international agencies and donors. Activities in the area of mental health care provision were not specifically regulated until 2002, when the Law on Psychiatric Care was adopted. In 2008, Tajikistan launched a mental health programme, which had been developed with the support of the WHO Country Office.

Almost all mental health care in Tajikistan 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. In the medical school, no psychiatrist can advance to the level of professor (Weine, 2007). In 2007, there were only approximately 40 psychiatrists in Tajikistan, receiving an average salary of US$ 10 a month (Weine, 2007).

The current basic benefit package piloted in some districts does not include mental health. There are only a small number of NGOs involved in the area of mental health (Weine, 2007). A Centre on Mental Health and HIV/AIDS was established in 2006 with the support of the Global Initiative on Psychiatry. The Centre has received funding from the EU and aims to support people with mental health problems in developing vocational skills and to better integrate them into local communities. The Centre provides training to psychiatric institutions, hospitals and NGOs.

Tajik society has very little knowledge of the causes, possible treatments and needs of people with psychiatric disorders. Families experience serious stigma with resultant feelings of shame and guilt if a member of the family suffers from a mental illness and, in extreme cases, the mentally ill individual is abandoned by the family and ends up being a permanent resident of a psychiatric hospital (WHO, 2009). There is much gender bias in mental health and psychiatric services, and violence against women is widespread in Tajikistan. Domestic violence is considered the norm in Tajik society, rather than deviant behaviour (WHO, 2009).

Members of the public often try to avoid contact with people with mental health disorders and have many fears, fed by myths about the dangers posed by mentally ill individuals. There is huge discrimination as far as employment and provision of services are concerned. In general, society has many prejudices, leading to the stigmatization of those suffering from mental health problems. People are often reluctant to use the services of psychiatrists (WHO, 2009).

6.11 Dental care

As mentioned in Chapter 2, most dental services are now provided by private practitioners, in particular in major cities and regional or district centres. Dental care is included in the basic benefit package only for emergency services; all other dental care has to be paid for out of pocket.

6.12 Complementary and alternative medicine

In Tajikistan, traditional healers 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. Usually, physical disease is treated by herbal and/or biomedical approaches. A herbalist, physician, religious leader or mystical figure can treat psychological and emotional illness, and the religious leader or mystical figure treats spiritual illness (Koen, 2003).

As basic health services have become increasingly unavailable in recent years, there has been an increase in self-medication and the use of traditional healers. Recognizing this trend, the Ministry of Health 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, in addition to a diploma of medical education, and have to take courses at the Republican Centre for Eastern Medicine. They are not allowed to treat serious or infectious medical conditions, but can work in public health care institutions. Practitioners of alternative medicine are accountable to the Ministry of Health and have to coordinate their activities with the Republican Centre for Eastern Medicine.

7. Principal health reforms

7.1 Analysis of recent reforms

The pace of health reform in Tajikistan has been slow (Republic of Tajikistan, 2006a), falling behind reform efforts in other central Asian countries, such as Kyrgyzstan or Kazakhstan (Mirzoev et al., 2007). The overall aims of health reforms in Tajikistan were to avoid irrational health expenditures, redirect the limited budgetary means towards primary care, develop and implement national programmes and projects, introduce a package of guaranteed services that ensures health care for vulnerable groups of the population, and create and strengthen the legislative basis of public health care.

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 strategies that were developed. 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 the third stage (since 2001), the Ministry of Health, with the support of external agencies such as the World Bank, WHO, UNICEF, USAID, the German Government, the Asian Development Bank, the Aga Khan Foundation, the Swiss Agency for Development and Cooperation and the Swedish International Development Cooperation Agency, started to implement projects for strengthening health care in many aspects, including primary health care, hospital care, institutional capacity, medical information systems, involvement of the public, immunization programmes and an improvement of health financing mechanisms. A Health Reform Unit was established in the Ministry of Health in February 2008.

Key steps in the reform trajectory so far have included the following.

1994: an essential drug list was adopted.

1996: a policy for "Health care reform in the Republic of Tajikistan for 2001" was adopted.

1997: private medical practice was legalized.

1998: a national drug policy was adopted.

1999: the Faculty of Family Medicine opened.

2002: two strategic documents for the reform of the Tajik health system were launched – the Poverty Reduction Strategy Paper and the Conception of Health Sector Reform.

2004: some policy-making authority was delegated to the *oblast* administrations.

2004: the National Drug Procurement Agency was established to ensure quality control of imported drugs.

2005: a state-guaranteed benefit package of services and official co-payments was introduced countrywide, but suspended after two months.

2007: the basic benefit package was reintroduced in four pilot districts, with the simultaneous introduction of per capita financing in eight pilot districts.

As a result of these activities, many positive changes have occurred in the health sector in recent years. Publicly financed health facilities, which previously depended on the state budget, started to experiment with alternative sources of financing, including operation as independent enterprises. The introduction of the basic benefit package and co-payments signalled the change from a budget-based finance system towards a financing mechanism based on capitation and cases.

7.1.1 Poverty Reduction Strategy Paper (2002)

In the latest stage of health reform, many policy documents were adopted by the Government in the context of poverty reduction, which gained precedence over many other problems. In June 2002, the Government adopted the Poverty Reduction Strategy Paper. The Strategy built on the Interim Poverty Reduction Strategy Paper presented to the Boards of the International Development Association and the IMF in October 2000.

The document sets out a strategic vision for social and economic development in Tajikistan. The initiatives for achieving poverty reduction include the efficient and fair provision of basic social services and the targeting of support to the poorest groups of the population. The four main elements of the National Poverty Reduction Strategy are sustaining economic growth, strengthening governance, improving the provision of essential social services and providing targeted support to the poor.

The Strategy identified the health sector as being critical for reducing poverty in the country and improving the well-being of the population. It outlined the following priorities for the health sector: development of a system of primary care, improvement of the quality of services, providing greater access to the poor, ensuring the affordability of services, strengthening public health services and improving medical statistics.

To monitor progress, the Poverty Reduction Strategy Paper outlined nine quantitative targets directly or indirectly connected to health issues (Table 7.1).

Table 7.1
Poverty Reduction Strategy indicators and targets

Indicator	2001	Mid-year target for 2006	Target for 2015
Population below poverty line (%)	83.0	75	60
Primary education coverage (%)	77.7	82	90
Infant mortality rate per 1 000 live births	36.7	32	25
Maternal mortality rate per 100 000 live births	43.1	40	35
Population with access to reproductive health services (%)	21.8	24	30
Share of private sector in GDP (%)	30.0	40	60
Population with access to safe drinking-water (%)	51.2	58	80
Employment rate among able-bodied citizens (%)	56.0	59	65–70
Number of telephones per 100 residents	3.6	4	5

Source: Republic of Tajikistan, 2002c.

The Second Progress Report published in 2005 recognized the Government's efforts to increase the level of funding for health care and to reform the health financing system, but noted that underfunding remained one of the key challenges in the health sector (Republic of Tajikistan, 2005b).

7.1.2 Millennium Development Goals

The Millennium Development Goals adopted by the United Nations in 2000 have been an important focus of donor activity in Tajikistan. Health-related targets include:

- to reduce by two thirds, between 1990 and 2015, the mortality rate among those under 5 years of age;
- to reduce by three quarters, between 1990 and 2015, the maternal mortality ratio;
- to have halted by 2015 and begun to reverse the spread of HIV/AIDS; and
- to have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.

An assessment of progress towards the Millennium Development Goals in 2003 concluded that the targets are unlikely to be met without considerable external support (Republic of Tajikistan, 2003). Although the Millennium Development Goals provide measures of progress in world development and provide an impetus for policy action, they do not address cardiovascular disease, which is the main cause of death in central and eastern Europe, including Tajikistan (Rechel et al., 2005). They also fail to address other important burdens of disease, such as mental illness, contributing to the fact that mental health programmes attract little investment from international donors (WHO, 2009).

In January 2005, the United Nations launched an Appeal for Tajikistan, which focused on poverty reduction and supporting progress towards the Millennium Development Goals (United Nations, 2005). The essential expenditures needed to meet the Millennium Development Goals targets for health were estimated at around US$ 3.6 billion or an average of US$ 42 per capita over 11 years (2005–2015). This figure included the estimated costs of investments in disease control, capital investments in core medical facilities and equipment for the basic health care system, as well as the recurrent and capital expenditures needed to operate and maintain the facilities.

7.1.3 Health Care Strategy by 2010 (2002)

The Health Care Strategy for the Republic of Tajikistan by 2010 was adopted by Government Resolution No. 436 of 5 November 2002. It builds on the WHO Health for All strategy and identifies objectives and strategies for the health and other relevant sectors. Particular attention is paid to the health and well-being of mothers and children. The document proposes a set of strategies for the health,

education and food security sectors, as well as for multisectoral action aiming to improve mother and child health. While being comprehensive, the strategy was rather ambitious in view of the short time scale and the country's limited financial and human resources.

With regard to maternal and child health, the following objectives and targets were identified for the health sector:

- ensure access to comprehensive services for reproductive health and family planning, particularly in rural areas and for the poor;
- ensure access to medical and preventive services of high quality;
- decrease maternal mortality by 25–30% between 2002 and 2010;
- decrease the abortion rate by 30%;
- decrease infant mortality to 20 per 1000 live births;
- decrease most prevalent causes of maternal and child morbidity;
- ensure access to information about healthy lifestyles; and
- improve strategies to protect children.

While the focus on mother and child health is in line with the Millennium Development Goals, the document did not specify how to address other major causes of morbidity and mortality. It also failed to establish resource requirements for implementation.

A new health care strategy, the National Health Strategy for 2011–2020, including cost estimates, is currently being developed by the Government in cooperation with external agencies. It aims to provide a summary statement of Tajikistan's long-term goals in protecting the health of its population, as well as the means of achieving those goals, namely strategies, programmes and resources for modernizing the health sector. The expectation is that the new Strategy could be implemented by using a SWAp (Mahon and Tediosi, 2007).

7.1.4 Conception of Health Sector Reform (2002)

The Conception of Health Sector Reform was approved by Government Decision No. 94 of 4 March 2002, and an implementation plan developed by the Ministry of Health was approved by Ministry of Health Decree No. 83 of 6 April 2002. The document describes the main problems in Tajikistan's health sector and offers a series of broad solutions. It identifies eight main objectives and related strategies for health reform in the country (Republic of Tajikistan, 2002b; UNDP, 2005).

1. *Prioritization – revising the state's role in the health sector.* During the Soviet era and the first decade of transition, the state held the exclusive legal responsibility for providing health services in Tajikistan. In June 2003, an amendment to the constitution abolished the state guarantee of free health care and implicitly recognized the de facto system of private payments that currently supports most health services in the country. The change in the legal framework opens the door for the introduction of new policy measures that would formally recognize and regulate private fee-for-service arrangements.
2. *Strengthening primary health care services.* Strengthening the accessibility and quality of the primary health care system is a key goal for the sector. The provision of improved community health services could have a significant impact on health outcomes in the country by making quality basic health services more accessible to households. At present, many residents bypass low-quality primary care institutions and appeal directly to hospitals for care.
3. *Distributing resources according to need – strengthening health care financing.* Informal fee charging is a main source of funding for health institutions and probably comprises the greater part of payments to labour in the sector. Private out-of-pocket expenditures on health have been estimated to absorb as much as 30% of household expenditures. Authorities are developing new financing norms to better direct resources to where they are most needed. This will mean giving more weight to primary care services and abandoning norms that allocate funds to the hospital system according to an inefficient per-bed formula.
4. *Developing human resources.* The policy emphasis on strengthening general care services underscores the need for new staffing and training norms. The distribution of staff, particularly in terms of deployment to rural areas, should be improved. Redressing extremely low health-sector wages is one of the most pressing needs in the health system. The health service has been weakened by the flight of skilled professionals to other sectors and countries. Remaining personnel have low morale and little training in modern medical practices.
5. *Rationalization of services – rationalizing the hospital sector.* Streamlining secondary and tertiary hospital care is an important complement to the development of the primary health care system. The match between resources and needs in the hospital system needs to be improved. Authorities have already begun reducing the high concentration of hospital beds to save money and consolidate resources. De facto

financing norms continue to concentrate financing in tertiary facilities. Clarifying financing norms for the hospital system will be an important step towards improving overall allocative efficiency in the sector.

6. *Improving quality of care*. Raising awareness on basic public health and hygiene and managing the drug supply. Although spending on medicines is the single largest expense in the health system, most activity takes place in the largely unregulated private market. High levels of spending indicate that resources are available for purchasing medicines, but lack of regulation has, at best, encouraged ineffective use of medicines and, at worst, served to develop drug resistance in the population and allow improper, sometimes harmful use of pharmaceuticals to grow. The availability of vaccines is also a concern, as the population is increasingly exposed to a range of epidemics, including malaria and tuberculosis.
7. *Strengthening management capacity and improving the monitoring and information system*. Raising awareness about diseases, nutrition, hygiene and available medical services is an important element in the strategy to improve health outcomes. Policy formulation and resource allocation are inhibited by weak data collection. Health reforms also aim to improve the dissemination of information about basic public health and hygiene.
8. *Creating personal responsibility for one's own health among the population*. Health reforms should address the needs of the population, and it is important to consider public opinion in developing the structure of the health sector and its activity.

While the Conception of Health Sector Reform accurately describes many of the problems faced by the health sector and identifies key interventions necessary for improving population health, it fails to identify priorities against available resources and does not link the proposed interventions to health outcomes. However, the document provides an important strategic direction for reform.

7.1.5 Strategic Plan for Reproductive Health in 2005–2014 (2004)

The Strategic Plan for Reproductive Health in 2005–2014 was adopted under Government Resolution No. 384 of 31 August 2004. The document identifies the following priorities for improving maternal health in the period 2005–2014 (Republic of Tajikistan, 2004):

- improved access to family planning services and contraceptives;
- improved access to antenatal care and safe delivery services; and

- decreasing mortality and morbidity during pregnancy and improved perinatal outcomes.

The Strategic Plan identifies a number of targets (Table 7.2).

Table 7.2
Targets of the Strategic Plan for Reproductive Health

Indicator	Baseline 2002	Target 2014
Maternal mortality ratio per 100 000 live births	49.6	35.0
Infant mortality rate per 1 000 live births	85.0	28.0
Antenatal care coverage (%)	53.5	80.0
Skilled attendance at home deliveries (%)	43.8	75.0

The document proposes a number of actions to strengthen the health system and improve delivery of services:

- improve the quality of and access to necessary services (including family planning, contraceptives, antenatal and delivery care);
- integrate reproductive health services into primary health care;
- develop adequate human resources; and
- increase information, communication and education activities.

7.1.6 Health Care Financing Strategy (2005)

The Strategy of Health Care Financing in the Republic of Tajikistan for the period 2005–2015 was approved by the Government in May 2005. The main objectives of the strategy are (Republic of Tajikistan, 2005a):

- to separate health financing and provision;
- to establish a single purchaser of health services;
- to ensure the adequate participation of both the private and public sector in the provision of the guaranteed benefit package;
- to change the provider payment system from one based on inputs to one based on outputs or capitation;
- to increase the public share in national health spending from 25% to 75%; and
- to regulate the participation of the population and the private sector in health financing.

7.1.7 Poverty Reduction Strategy (2007)

The second poverty reduction strategy, covering the period 2007–2009, was approved in April 2007 (Republic of Tajikistan, 2007b). It is based on the National Development Strategy of the Republic of Tajikistan for the Period to 2015 (Republic of Tajikistan, 2006a) and takes into account the results of the implementation of the Poverty Reduction Strategy Paper for 2002–2006.

The National Development Strategy of 2006 identified the following priorities for the health system (Republic of Tajikistan, 2006a):

- reform of the health system, including development of the private sector and attracting foreign investment;
- improvement of maternal and child health;
- a significant slowdown in the spread of HIV/AIDS, a reduction in infectious diseases and the eradication of certain infections that can be controlled by vaccination; and
- improved availability, quality and effectiveness of medical services.

The 2007 Poverty Reduction Strategy identifies as the main medium-term goal in the health sector bringing about a gradual reduction in the maternal and infant mortality rate and the burden of infectious diseases, as well as eradicating certain infections that can be controlled by vaccines. It notes that the top priority in health care is strengthening the primary health care system and public health and epidemiological supervision.

The main tasks in the health sector are outlined as (Republic of Tajikistan, 2007b):

- increasing the effectiveness of the management system and financing;
- expanding the role of the private sector in the delivery of medical services;
- improving protection for maternal and child health;
- combating HIV/AIDS, malaria, tuberculosis and other infectious diseases; and
- improving personnel training and reinforcing the material and technical base of the health system.

7.2 Future developments

With the help of external agencies and donors, Tajikistan has established many strategic goals and overall policies for health reform that could serve to guide reform efforts well into the next decade. While the ground for more profound reforms has been prepared, reform implementation has been slow. There are several factors that have constrained the pace of health reform.

One of the most serious challenges is a lack of financial and human resources. The existing resources are insufficient for a comprehensive reform process and need to be supplemented by considerable amounts of external assistance. In particular, there has been a shortage of investment funds for staff retraining and the restructuring of facilities and services. The strategic documents outlined above were not always realistic and sometimes failed to take account of the limited resources available in the country. As a result, many of the strategic objectives have so far not been achieved. It will be essential to set priorities for interventions that are in line with available resources.

Another constraint is the limited institutional capacity available to implement new plans and ideas. The fragmentation of the system between the national and local governments (with the latter responsible for most health services and health spending) has created difficulties for the implementation of reforms. Policy-level engagement has mainly been the domain of the national authorities, and local authorities have not been involved in the reform process. As a result, many changes in primary health care, for example, are only of a notional nature, where the names of facilities have been changed, but the processes remain as before. Another concern is the lack of incentives for the Ministry of Health to improve its allocation of resources under the present budgetary system.

Although some progress has been achieved, improving the standard of health services would require not only increased financial resources, but also major financial, structural and institutional changes to ensure that physical, financial and human assets are allocated more efficiently within the sector. Much will depend on whether the country succeeds in reorientating the health system away from hospital-based care towards preventive and primary health services (UNDP, 2005).

8. Assessment of the health system

A sustainable, efficient and equitable health system is not yet in place in Tajikistan. At present, the health sector is chronically underfunded and characterized by poor quality services and low utilization rates (Hemming, 2004).

8.1 The 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 is 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. 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. This amendment also entailed a changed relationship between the state and its citizens: by emphasizing shared responsibilities, citizens were recognized as equal partners in the development of the health system (World Bank, 2004b).

The overall aims of health reforms in Tajikistan were to avoid irrational health expenditures, redirect the limited budgetary means towards primary care, develop and implement national programmes and projects, introduce a package of guaranteed services that ensures health care for vulnerable groups of the

population, and create and strengthen the legislative basis of public health care. The 2002 Conception of Health Sector Reform (Republic of Tajikistan, 2002b) places emphasis on the development of primary care and human resources.

8.2 The distribution of the health system's costs and benefits across the population

There are marked inequities in Tajikistan's health system with regard to both finance and the distribution of services and resources. The 2002 Conception of Health Sector Reform (Republic of Tajikistan, 2002b) recognized the need to provide more equal access to public health services and identifies strategies to achieve this aim. The National Development Strategy in 2006 also recognized limited access to health services as a key problem, in spite of a growth in budget funding and foreign aid (Republic of Tajikistan, 2006a).

According to a report published in 2001, informal fees were increasingly discouraging people from accessing medical care, and a growing number of people were turning to traditional healers, who charge according to the ability to pay (Penrose, 2003). A report on health care financing in 2004 found that nearly three quarters (71%) of funds in the health system were derived from out-of-pocket payments by patients, a slight increase compared with 1999 (Cashin, 2004a).

The costs of health care place a significant economic burden on the population, and poverty presents a major barrier to accessing health services. The utilization rates of medical services have increased in recent years, but problems of unequal access persist. The utilization of medical services is considerably higher among high income groups, indicating that the poor have problems in accessing health services and that many illnesses may not be identified and registered by public health facilities (Cashin, 2004b). According to a baseline satisfaction survey conducted by the Health Policy Analysis Unit of the Ministry of Health, approximately 54% of the population of the poorest *oblast* postponed seeking health care because of their inability to pay the informal costs of health services.

The main barrier to health care access is the financial burden it entails: out of those who reported in 2003 that they "needed medical assistance but [could] not seek such care", the majority of respondents reported that affordability was the main reason for not seeking medical attention. This contrasts with the position in 1999 (State Committee on Statistics, 1999), where self-medication was cited

as the most common reason for not seeking care (Falkingham, 2002). Thus, over time, financial barriers to access have increased, rather than decreased. In the 2003 Tajikistan Living Standards Survey approximately 60% of the poorest people and over 30% of the richest reported affordability to be the main reason for not seeking health care (World Bank, 2005b).

The country's poor are less likely to report an illness or to seek care. In a study published in 2004, less than 4% of individuals of the lowest income quintile sought health care for any reason during the recall period in 1999 and 2003, which was less than half the utilization rate for the wealthiest income quintile. The poor are also less likely to be hospitalized than the wealthy (1.9%, compared with 5.1%), and hospitalization rates for all income groups declined between 1999 and 2003, from 5.2% to 3.3% (Cashin, 2004b).

A comprehensive analysis of health service access and utilization was undertaken in 2004 by a team of the World Bank, using the results of the Tajikistan Living Standards Surveys in 1999 and 2003 (World Bank, 2004b). The comparison between the surveys in 1999 and 2003 showed two significant trends in access to and utilization of health care services.

The first observed trend was that the percentage of individuals who sought care for a reported illness increased between 1999 and 2003. Whereas only 26% of individuals reporting a chronic illness used services during the recall period in 1999, 36% used services in 2003. In 1999, 46% of individuals reporting an acute illness sought care, a percentage increasing to 55% in 2003. When interpreting these findings, it should be noted, however, that the recall period for service utilization was two weeks in the 1999 survey and four weeks in the 2003 survey (Cashin, 2004b).

The second trend concerns utilization trends relative to poverty levels and is likely to be more statistically robust than the comparison of absolute utilization rates. In both surveys, individuals from the highest income quintile were more likely to use services in the event of an illness than individuals from the lowest income quintile. However, between 1999 and 2003, this gap between high and low income groups widened. In 1999, only 16% of individuals in the lowest quintile used services for a reported chronic illness, compared with 29% of respondents in the highest quintile. In 2003, the respective figures were 19% for individuals in the lowest income quintile and 48% for individuals in the highest income quintile. Among respondents reporting an acute illness, the gap between the lowest and highest income quintiles increased from 13% in 1999 to 15% in 2003. Based on these findings, the proportion of the population lacking access to health care appears to be declining, but inequities in access to care

seem to be increasing. These inequities are most pronounced for those reporting chronic diseases, among whom those in the richest quintile were 2.7 times more likely to seek care than the poorest quintile. Among those reporting acute illnesses, the difference was only 1.3 times (Table 8.1).

Table 8.1

Percentage of individuals reporting illness who sought health care in 1999 and 2003, by household consumption quintiles

Total consumption quintile	1999 (%)		2003 (%)	
	Chronic illness	Acute illness	Chronic illness	Acute illness
1st (poorest)	16.1	36.9	18.7	46.8
2nd	31.4	46.3	39.2	52.4
3rd	21.9	45.7	36.5	59.8
4th	28.6	52.5	37.1	54.5
5th	29.0	49.6	48.4	62.2
Total sample	**25.6**	**46.4**	**35.9**	**55.1**

Source: Cashin, 2004a.
Note: Household total consumption quintiles were only adjusted for regional price indices in the 2003 survey.

These findings are in line with evidence from other countries in central and eastern Europe, where health care utilization generally increases with income, despite the fact that health care needs are more prevalent among those with lower incomes (Suhrcke, Rocco and McKee, 2007). According to the Living Standards Survey in 2003, financial barriers presented the greatest obstacle to access to health services for those who reported unmet needs. Among those who expressed the need for health care, approximately 50% did not access health care services because they lacked the money required. Of those surveyed, 33% decided to self-medicate, while 11% expected the health problem to disappear, a rationalization typically associated with poverty, which contributes to underreporting and under-utilization of health services among the poor. Of those households with reported unmet needs, only 5% indicated that the facilities were too far away, of poor quality or not available at all. Households from Dushanbe and the *rayons* of republican subordination most frequently identified lack of affordability as the main reason for not accessing health care (65%), which may reflect the higher costs of services and the proximity of health care services in the Dushanbe area. Overall, a higher percentage of urban (58%) than rural (48%) residents indicated lack of affordability as the main reason for not accessing health services (Cashin, 2004a).

These findings were corroborated in a survey of 901 patients accessing primary care services in Dankara and Varzob *rayons* in 2005. The survey found that access to basic care is a major concern, particularly among the most needy and vulnerable groups (Tediosi et al., 2008).

Inequities are also present in access to maternal health services. Results from the 2003 Living Standards Survey show that the utilization of maternal health services is negatively affected by poverty, lack of public infrastructure and low educational attainment (Habibov and Fan, 2008; Fan and Habibov, 2009). According to the 2005 Multiple Indicator Cluster Survey, only 43.3% of women from the poorest quintile of households delivered at health care facilities, compared with 80% among the richest quintile (State Committee on Statistics, 2006). Unsafe home deliveries are considered to be a major contributing factor to the high infant and maternal mortality rates in Tajikistan. According to the 2005 Multiple Indicator Cluster Survey, infant and maternal mortality rates are higher among the poorer groups of the population (State Committee on Statistics, 2006).

There are significant variations in out-of-pocket payments by area and type of facility, with the highest costs in hospitals and in regional centres and Dushanbe. The level of unofficial fees rises as the level of specialization increases: hospitals charge more than primary health care facilities, which receive only nominal payments or gifts, if anything (Public Foundation Panorama, 2007). Thus, the poor tend to use primary care facilities more frequently than do the better off, who are better able to afford the higher costs of polyclinic and hospital care (Saifuddinov et al., 2009 [unpublished draft paper]).

Physical barriers play an important role in remote mountainous regions, where road conditions are poor, means of transport limited and many communities cut off for months during the winter season (World Bank, 2005a). Apart from the rural–urban divide, there are also marked disparities across the different regions of the country. Across *oblasts* and *rayons*, there are significant inequities 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 need indicators, the poorest *oblasts* spending the least per capita. The 16 *oblasts* and *rayons* of republican subordination and Dushanbe city allocate between 6% and 21% of their local budgets to health care. This dispersion translates into large differences in per capita funding. Khatlon *oblast* in the south and most of the *rayons* of republican subordination in central Tajikistan not only have the lowest per capita allocations

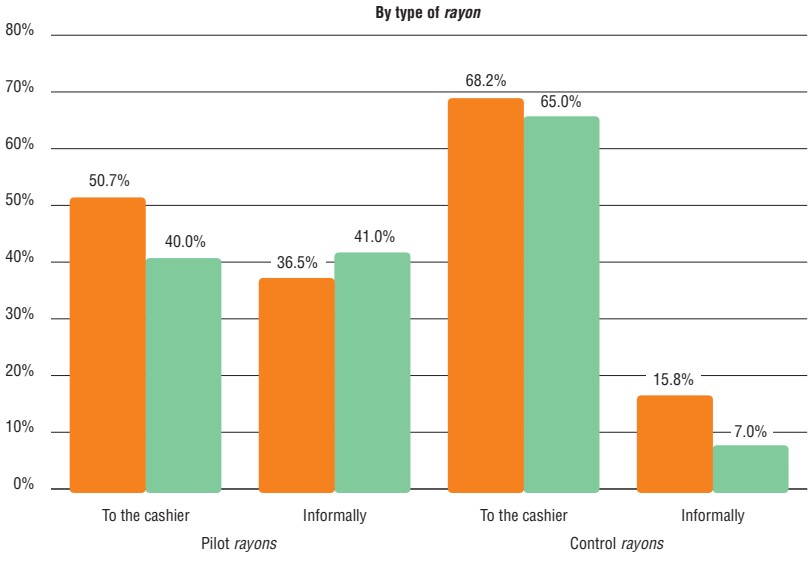
from the public health budget, but also suffer from a more pronounced shortage of health workers and facilities (World Bank, 2005a). In 2008, Khamadoni *rayon* spent 12 somoni per capita on health care, while Shurabad *rayon* spent 51 somoni per capita.

According to an analysis of external funding to the health sector in 2007, the *oblasts* receiving the highest per capita external funds also exhibit the highest informal payments for health care. The reason for this apparent paradox seems to be that the improved quality of care is sold at a higher price to the population (WHO Country Office Tajikistan, 2008).

As mentioned in Section 3.2, informal payments also persisted in the pilot *rayons* where the basic benefit package and official patient co-payments have been introduced, although on a lower level than in control *rayons*. This seems to be because only a portion of the official payment contributes to the wages of health care workers, resulting in an insufficient incentive to stop requests for informal payments. Coupled with weak enforcement of the new scheme, this has led to patient dissatisfaction with regard to the payment system (Fig. 8.1), although, as mentioned above, patient satisfaction with quality of care has increased in the pilot *rayons* (see Section 8.5) (Bobokhojaeva et al., 2009).

Fig. 8.1

Evaluation of 15 months of patient co-payments in pilot *rayons*: where do patients prefer to pay?



Source: Bobokhojaeva et al., 2009.

8.3 Efficiency of resource allocation in health care

With the lowest per capita spending on health in the WHO European Region (WHO Regional Office for Europe, 2010), Tajikistan has barely enough resources to cover the most basic health services (World Bank, 2005a). According to the Commission on Macroeconomics and Health, a minimal health service package addressing the most common communicable diseases would cost around US$ 34 in the least developed countries (Commission on Macroeconomics and Health, 2001). With a public budget for health care of US$ 10.6 per capita in 2008, Tajikistan does not come close to this level of resources. Furthermore, the limited resources of the country are not allocated very efficiently.

There is a serious imbalance in the distribution of the material base and budget funds between primary health care and hospital services, as a result of which the bulk of the funding goes to hospitals, where the services provided are expensive and out of reach for the poor (Republic of Tajikistan, 2006a). With this, the health system increases rather than mitigates inequities, a trend found in many countries of central and eastern Europe (Suhrcke, Rocco and McKee, 2007). Government spending on health still favours tertiary care, with hospitals accounting for the major share of Government health expenditure. Clarifying financing norms for the hospital system will be an important step for improving overall allocative efficiency in the sector (Republic of Tajikistan, 2002b).

Given the differential use of hospital services by poor and rich groups, as well as the decline in hospitalization rates for all groups, it appears that current Government spending patterns are inefficient. Self-referral to higher levels of care is common, with many patients bypassing lower-level facilities to go directly to a specialist. This is inefficient, as patients may be treated more economically and efficiently by primary care providers.

8.4 Technical efficiency in the production of health care

Technical efficiency in the production of health care in Tajikistan can be assumed to be low. Financing mechanisms have so far relied on inputs rather than outputs and quality, and the country is only slowly moving towards health funding based on performance and services provided.

Attempts to rationalize the hospital sector have focused on reductions 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.

8.5 Quality of care

Quality of care is a major concern in Tajikistan, for which a number of factors are responsible. Due to the collapse of health funding in the 1990s and the effects of the civil war, the material conditions in many health facilities deteriorated significantly. Available technology and equipment are often outdated and obsolete, with little capacity for renewal or replacement.

Provision of pharmaceuticals is generally insufficient. Due to its limited budget, the Government provides only a very limited supply of pharmaceuticals, and the country has relied mainly on humanitarian assistance and household spending. In 2004, the Government budget for pharmaceuticals amounted to just 1% of total health expenditure, and even this was limited to the most basic supplies. This has had a major impact on the quality of care and access to services for the population. As discussed above, most household out-of-pocket expenditures are spent on pharmaceuticals, much of it purchased without prescription or adequate consultation on appropriate uses in the largely unregulated private market. Consequently, a significant part of household expenditures on health is going towards ineffective and possibly dangerous uses of pharmaceuticals (Republic of Tajikistan, 2002b; Ministry of Health, 2005b; World Bank, 2005a). Antibiotics are used indiscriminately in hospitals prior to operations (Kassum et al., 2003). They are also available to patients outside of hospitals without prescription, and this is likely to contribute to drug resistances.

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. Between 1990 and 1999, nearly 10 000 physicians and 39 000 mid-level health workers left the health sector, especially during the period of civil war. While the medical schools are able to attract students, retention of graduates at the health facilities remains a serious problem, and the system continues to lose qualified workers (World Bank, 2005a). According to an assessment of the Medical University in 2006, only about 4 out of 10 medical graduates remain in the health sector and take up a position as a doctor.

The qualifications of health workers are another constraint. According to existing legislation, doctors are obliged to pass retraining not less than once in five years. However, Government resources for continuous education are lacking and this has an effect on quality of care (Ministry of Health, 2005b). While nurses could play an important role in improving the quality of health services, nursing is still underdeveloped (Ministry of Health, 2005b). The low salaries of health care workers also undermine efforts to improve quality of care (Wyss and Schild, 2006) and the common practice of informal payments may give rise to unnecessary procedures.

At all levels of care, there is little emphasis on quality improvement (Wyss and Schild, 2006). Treatment protocols and guidelines are generally outdated or lacking, in particular in facilities in rural areas, resulting in inappropriate hospital admissions, long lengths of stay and lack of clarity about treatment effectiveness (Ministry of Health, 2005b). Some of these challenges are currently being addressed in pilot projects, such as in seven maternity services of the country, where WHO standards of evidence-based medicine have been introduced in order to achieve improvements in maternal and neonatal health, and in the projects of USAID/ZdravPlus and the Swiss Agency for Development and Cooperation/Sino that aim to strengthen family medicine. A number of new clinical standards and protocols have been developed, including 4 on maternal health care, 35 on health care for children aged 0 to 5 years, 8 on health care for children aged 5 to 8 years, and 7 on hypotrophy treatment.

Most health care workers have no access to modern periodicals and medical literature (Ministry of Health, 2005b). Increases in self-care and the use of traditional healers are also likely to have impacted negatively on quality of care.

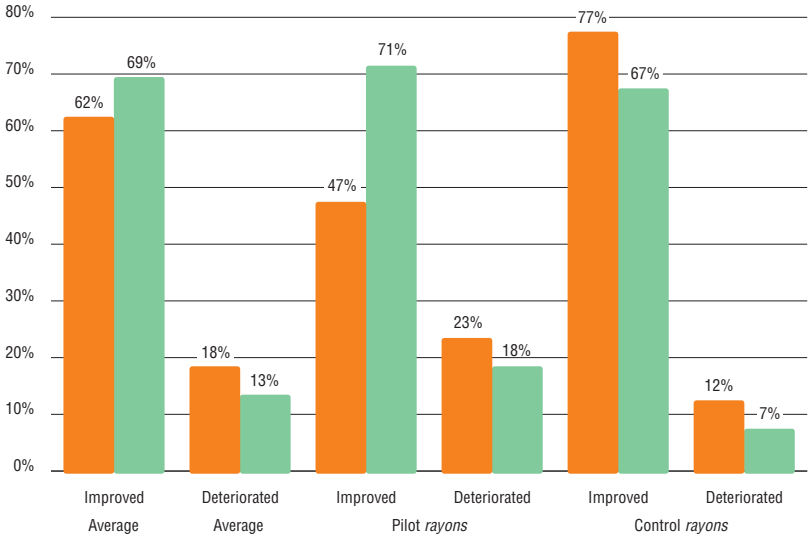
The poor integration of primary care and higher levels of care is another factor undermining continuity and quality of care. There is little follow-up for patients after specialist care or hospital treatment and limited exchange of information to allow primary care providers to carry on treatment and clinical management. Decreases in hospital utilization rates throughout the 1990s and 2000s were generally not backed up by reformed and strengthened primary health care services, and this has resulted in an overall reduced quality of health services (Ministry of Health, 2005b).

An improvement in the quality of health services seems to have been achieved in hospitals in the *rayons* included in the pilot scheme of a basic benefit package and official patient co-payments. A baseline survey and a

survey conducted after 15 months found an increase in perceived quality of care in the pilot *rayons* but deterioration in the control *rayons* (Health Policy Analysis Unit, 2009; Bobokhojaeva et al., 2009).

Fig. 8.2

Evaluation of 15 months of patient co-payments in pilot *rayons*: do patients see changes in the quality of care?



Source: Bobokhojaeva et al., 2009.

8.6 The contribution of the health system to health improvement

The contribution of the health system in Tajikistan to health improvement is modest in some areas and more discernible in others. The standardized death rate for appendicitis for all ages increased in the period from 1990 to 2005, from 0.35 to 0.47 per 100 000 population; the rate in 2005 was the highest in the WHO European Region (WHO Regional Office for Europe, 2010). The standardized death rate for diabetes, at 25.3 per 100 000 population in 2005 (WHO Regional Office for Europe, 2010), was also comparatively high.

However, there have been some improvements in morbidity and mortality amenable to medical interventions. Maternal and infant mortality has been an important focus of health policy documents. 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. According to official statistics, the infant mortality rate fell from 44.5 in 1990 to 14.1 in 2005 per 1000 live births; the maternal mortality ratio decreased by more than half from its peak in 1993 of 124.4 per 100 000 live births to 43.4 per 100 000 in 2006 (WHO Regional Office for Europe, 2010). However, there is much scope for further improvements. About 38% of all deliveries take place at home, and in remote mountainous regions this indicator is almost twice as high (State Committee on Statistics, 2006). Furthermore, since independence, the prevalence of diseases caused by micronutrient deficiencies (iron deficient anaemia, iodine deficiency disorders, vitamin A deficiency) has increased, through deteriorating access to high quality food and iodized salt, especially for vulnerable groups of the population.

Tajikistan has made some important progress in communicable disease control. Following a breakdown of the vaccination system in the early 1990s, diphtheria incidence increased from 0.3 in 1992 to 77 cases per 100 000 population in 1995. A National Immunization Programme was adopted, and, in 1994, a new immunization calendar, based on the principles of extended immunization, was introduced. As a result of these activities, the diphtheria morbidity rate has steadily declined since 1996, reaching 0.05 cases per 100 000 population in 2001 (WHO Regional Office for Europe, 2010). Although vaccination coverage was found in surveys to be slightly lower than recorded in administrative reports, campaigns against measles and polio were successful and, in 2002, Tajikistan was certified by WHO as polio free.

Malaria control efforts have also been successful. The malaria morbidity rate, at 3.3 cases per 100 000 population in 1990, reached 512 per 100 000 in 1997. The situation began to improve again in subsequent years and the rate fell to 9.5 per 100 000 population by 2007 (WHO Regional Office for Europe, 2010).

More concerted efforts will need to be made with regard to HIV/AIDS and tuberculosis. Although the number of officially reported cases of HIV infection is still comparatively small, with 204 new cases of HIV reported in 2006 (WHO Regional Office for Europe, 2010), UNAIDS estimated that the true number of people living with HIV in Tajikistan at the end of 2007 was between 5000 and 23 000 (UNAIDS, 2008). The situation with tuberculosis is alarming. According to Ministry of Health data, the incidence rate skyrocketed over the period from 1993 to 2007, increasing from 11.7 to 94.3 per 100 000 population (WHO Regional Office for Europe, 2010). While the Ministry of Health is

committed to implementing WHO notification and treatment methods, its ability to address the significant increase in tuberculosis rates is impeded by the fact that the Soviet approach to notification continues to be used and that the DOTS programme is not fully funded. In addition, qualified health personnel and effective pharmaceutical, medical and diagnostic supplies are generally lacking. While Tajikistan has received substantial external funds to address the challenges of HIV/AIDS, tuberculosis and malaria, there is still insufficient professional capacity and case management to respond to the rise in tuberculosis, including its multidrug-resistant form.

9. Conclusions

Tajikistan is the poorest country in the WHO European Region, lacking both human and financial resources, with little capacity to meet the health needs of its population. The country faced one of the severest economic declines of any country emerging from the Soviet Union, exacerbated by years of civil war. While Tajikistan has reverted to a situation of economic and political stability, a large percentage of the population continues to live in poverty, and malnutrition is a major problem. Tajikistan will be reliant on external assistance for the foreseeable future.

Unsurprisingly, Tajikistan is falling behind its central Asian neighbours in terms of restructuring its health system away from that inherited from the Soviet period. The civil war in the early 1990s was a major setback to the country and also caused disruption in terms of its health system. There are also capacity problems in terms of health policy development and implementation. Nevertheless, the Tajik health system is now undergoing a complex transition to a new health system, which comprises new mechanisms of management, financing and health care provision. So far, the state remains the main public funder and provider of health care services in Tajikistan. Private out-of-pocket payments, however, are believed to be the main funding source of the health system.

One of the challenges for the future will be to reorient the health system towards primary care and public health, rather than hospital-based secondary and tertiary care. Like most post-Soviet countries, Tajikistan inherited an extensive hospital-based system, which has become increasingly hard to sustain. Since independence, the system has remained virtually unchanged, with little upgrading or investment and few organizational changes. Rationalization efforts have remained limited to reductions in bed numbers. Tajikistan is still at an early stage of restructuring and strengthening its primary care system.

Legislation has been passed on family medicine, physician capitation, a basic benefits package and co-payments. Pilots of primary care reform, introducing per capita financing, are under way in three *oblasts*.

Changes in health financing started with the introduction of alternative sources of financing for certain publicly owned health facilities. With the aim of ensuring equitable access to health care and formalizing out-of-pocket payments, the Ministry of Health developed a programme that encompassed a basic benefit package for people in need and formal co-payments for other groups of the population. The basic benefit package was initially introduced in 2005, then suspended and reintroduced in four pilot districts in 2007. It is envisaged that the basic benefit package will be expanded to the rest of the country.

Human resources will play a major role in the reform process. Tajikistan has much lower ratios of health workers to population than most other countries in the WHO European Region, partly because of emigration. Retraining of staff in family medicine has started, but the numbers of physicians and nurses trained in family medicine are still very low. The system of continuous medical education is underfunded and the salaries of health workers are insufficient.

There are marked geographical imbalances in health care resources and financing. Health workers and facilities are concentrated in the capital and the regional centres, but lacking in rural areas. Apart from the rural–urban divide, there are also significant disparities across the different regions of the country, with significant inequities in both the absolute and relative levels of health care expenditures. Access to health services has become problematic for poorer parts of the population.

Quality of care is another major concern, resulting from a lack of investment in health facilities and technologies, an insufficient supply of pharmaceuticals, poorly trained health workers, and a lack of medical protocols and systems for quality improvement.

With external assistance, Tajikistan has established many strategic policy documents that could guide reform efforts well into the next decade. To succeed, the country will need to set priorities in line with available resources and invest in institutional capacity at both the national and regional levels. Much will depend on whether the country succeeds in reorientating the health system away from hospital-based care towards preventive and primary health services. External assistance so far has been fragmented, but it is hoped that the anticipated SWAp will help in coordinating donor activities and avoiding duplication of efforts.

10. Appendices

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10.2 Web sites

Eurasianet Tajikistan:
http://www.eurasianet.org/resource/tajikistan/index.shtml

European Union's relations with Tajikistan:
http://ec.europa.eu/external_relations/tajikistan/index_en.htm

Global Fund to Fight AIDS, Tuberculosis and Malaria country web site:
http://www.theglobalfund.org/programs/countrysite.aspx?countryid=TJK

Government of Tajikistan: http://www.tjus.org/Government.htm

Ministry of Health: http://www.health.tj

Open Society Assistance Foundation – Tajikistan:
http://www.soros.org/about/foundations/tajikistan

OSCE Project Coordinator in Tajikistan: http://www.osce.org/dushanbe/

President of Tajikistan: http://www.president.tj/eng/index_eng.htm

State Committee on Statistics: http://www.stat.tj/

Swiss Agency for Development and Cooperation: http://www.swisscoop.tj/en/Home/Activities_in_Tajikistan

UNAIDS country web site: http://www.unaids.org/en/CountryResponses/Countries/tajikistan.asp

UNDP country web site: www.undp.tj

UNFPA country web site: http://tajikistan.unfpa.org/stronger.htm

UNICEF country web site: http://www.unicef.org/infobycountry/Tajikistan.html

United Nations Tajikistan Information Platform: http://www.untj.org/library

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

World Bank's Mission in Tajikistan: http://www.worldbank.org/tj

ZdravPlus: http://www.zplus.kz

10.3 Principal legislation

10.3.1 Documents in the health sector approved by *Majlisi Namoyandagon, Majlisi Oli*

Decision of *Majlisi Namoyandagon*, *Majlisi Oli* of the Republic of Tajikistan on the approval of the Poverty Reduction Strategy Paper, No. 666 of 19 June 2002.

Decision of *Majlisi Namoyandagon*, *Majlisi Oli* of the Republic of Tajikistan on amendments to the Law of the Republic of Tajikistan on health care of the population, No. 803 of 26 February 2003.

Decision of *Majlisi Namoyandagon*, *Majlisi Oli* of the Republic of Tajikistan on amendments to the Law of the Republic of Tajikistan on health care of the population, No. 376 of 7 April 2003.

Decision of *Majlisi Namoyandagon*, *Majlisi Oli* of the Republic of Tajikistan on amendments to the Law of the Republic of Tajikistan on health care of the population, No. 19 of 22 April 2003.

10.3.2 List of laws

Law of the Republic of Tajikistan on State Language of 1989.

Law of the Republic of Tajikistan on Local Administration and Economy of 1991.

Law of the Republic of Tajikistan on Local Government of 1994.

Law of the Republic of Tajikistan on Budget Organization and Budget Process of 1997.

Law of the Republic of Tajikistan on health care protection in the Republic of Tajikistan, No. 421 of 15 May 1997.

Law of the Republic of Tajikistan on health protection in the Republic of Tajikistan, No. 622 of 22 May 1998 (amending Law No. 421 of 15 May 1997).

Law of the Republic of Tajikistan on Narcotic, Psychotropic Substances and Precursors of 10 December 1999.

Law of the Republic of Tajikistan on Pharmaceuticals and Pharmaceutical-related Activities of 6 August 2001.

Law of the Republic of Tajikistan on Psychiatric Care of 2 December 2002.

Law of the Republic of Tajikistan on private medical practice, No. 60 of 2 December 2002.

Law of the Republic of Tajikistan on salt iodization, No. 85 of 2 December 2002.

Law of the Republic of Tajikistan on reproductive health and reproductive rights, No. 524 of 31 December 2002.

Law of the Republic of Tajikistan on radiation safety, No. 42 of 1 August 2003.

Law of the Republic of Tajikistan on providing the population with sanitary and epidemiologic safety, No.49 of 8 December 2003.

Law of the Republic of Tajikistan on the licensing of some particular types of activities, No. 37 of 17 May 2004.

Law of the Republic of Tajikistan on Health Insurance of 5 June 2008.

10.3.3 List of documents related to health, approved by the Government of the Republic of Tajikistan

Convention on the equal remuneration of men and women for labour of equal value, No. 100 of 29 June 1951, entered into force 26 November 1993.

Convention on job occupancy and life of nursing personnel, No. 149 of 21 June 1977, entered into force 26 November 1993.

Decision on increasing salaries for workers in science, culture, education, health, archives and some categories of the social sphere, No. 80 of 15 February 1994.

Decision on some measures for realizing a training programme and improving the recognition of the qualifications of the Republic of Tajikistan abroad, No. 32 of 18 January 1995.

Statement of ventures, organization and private health care facilities in the Republic of Tajikistan, No. 162 of 4 May 1998.

Decision on the organization of the project management unit on the credit of the World Development Association on health, No. 99 of 11 April 2000.

Order on the inspection of the condition of legislation of on-time salary payment and the implementation of payment discipline, Nos. 7–16 of 30 October 2000.

Decision on the Ministry of Health of the Republic of Tajikistan, No. 321 of 29 June 2001.

Decision on the realization of the order of the President of the Republic of Tajikistan of 18 November 2000 on increasing the minimum salary of some particular categories in the budget sphere and measures on the strengthening of social protection of the most vulnerable groups, No. 717 of 26 November 2001.

Decision on the conception of health sector reform in the Republic of Tajikistan, No. 94 of 4 March 2002.

Decree of the Ministry of Health, No. 83 of 6 April 2002, concerning the resolution of the Government of the Republic of Tajikistan No. 94, 4 March 2002, on approving the Conception of Health Sector Reform of the Republic of Tajikistan.

Decision on the strategic plan of prevention of the threat and spread of HIV/AIDS in the Republic of Tajikistan for 2002–2005, No. 389 of 1 October 2002.

Order on increasing pensions, stipends and the minimum salary of employees working at organizations functioning under state budget financing, No. 930 of 25 October 2002.

Resolution No. 436 of 5 November 2002, on the health care strategy until 2010.

Decision on the programme for fighting tuberculosis in the Republic of Tajikistan for 2003–2010, No. 524 of 31 December 2002.

Decree No. 525 of 31 December 2002 on medical and pharmaceutical education in the Republic of Tajikistan.

Decision on the Ministry of Health of the Republic of Tajikistan, No. 23 of 31 January 2003, amending Decision No. 321 of 29 June 2001.

Decision on the programme of healthy lifestyle in the Republic of Tajikistan up to 2010, No. 84 of 3 March 2003.

Decree No. 368 of the Ministry of Health on the National Drug Policy, 28 August 2003. Decision on approval of the statement of the State Sanitary–Epidemiological Service in the Republic of Tajikistan, No. 575 of 29 December 2003.

Decision on the regulation providing state health care facilities free of charge and by co-payment to the populations of Varzob and Danghara districts as not effective, No. 279 of 30 June 2004.

Decision on the approval of the strategic plan of the Republic of Tajikistan on reproductive health for the population until 2014, No. 384 of 31 August 2004.

Decision on the conception of the reform of medical and pharmaceutical education in the Republic of Tajikistan, No. 423 of 1 November 2004.

Decision on approval of the implementation schedule of the strategy of the Republic of Tajikistan on public health care until 2010, No. 405, 1 November 2004.

Decision on state service, No. 423 of 1 November 2004.

Decision on approval of the strategy of health care financing in the Republic of Tajikistan for 2005–2015, No. 171, 10 May 2005.

Decision on approval of the basic benefit package for citizens of the Republic of Tajikistan and guidelines for the rendering of medical and sanitary services by the state, No. 237, 2 June 2005.

Decision amending Decision No. 237 of 2 June 2005, No. 388 of 12 October 2005 (not effective).

Order of the Ministry of Health, No. 584 of 31 October 2005 on approving normative and legislative documents on family medicine.

Decree No. 638 of the Ministry of Health on the Medicines and Medical Commodities Procurement and Distribution Strategy of the Republic of Tajikistan, 2 December 2005.

Decision of the Ministry of Health of the Republic of Tajikistan, No. 516 of 30 December 2005, amending Decision No. 321 of 29 June 2001.

Order of the President of the Republic of Tajikistan on measures for strengthening the level of social protection, increasing minimum salaries, and salaries, pensions and stipends of employees working at state-funded organizations, No. 1716 of 20 March 2006.

Decision on savings in the health care sector by financial means resulting from the reform process, No. 140 of 3 April 2006.

Decision amending Decision No. 388 of 12 October 2005, No. 145 of 3 April 2006.

Decision on approval of the programme for fighting sugar diabetes in the Republic of Tajikistan for 2006–2010, No. 123 of 3 April 2006.

Decision on the Ministry of Health of the Republic of Tajikistan, No. 260 of 3 June 2006, amending Decision No. 321 of 29 June 2001.

Decision on the conception of the Republic of Tajikistan on the restructuring of hospital care for the period 2006–2010, No. 407 of 7 September 2006.

Decree on the regulation of the delivery of primary care to the population of pilot districts, No. 199 of 14 April 2007.

Order on providing medical and sanitary care services to the population of the pilot districts in 2007, No. 191 of 14 April 2007.

Decree No. 202 of the Ministry of Health on the step-by-step adaptation and acceptance of WHO criteria for live births in health care facilities in Tajikistan, 28 April 2008.

Decree No. 600 on the Basic Benefit Package to citizens of the Republic of Tajikistan in state health care facilities, of 12 December 2008.

Government Resolution No. 408 on Implementing the Law on Health Insurance in 2009, 18 June 2008. Decree approving the concept of reform of medical and pharmaceutical education, No. 512 of 31 October 2008.

Parliamentary Resolution amending the Law on Public Health Care in Tajikistan, No. 652 of 18 May 2009.

Presidential Decree No. 1713 on Measures for the Improvement of some Governmental Structures, 15 March 2006.

Decree No. 199 of the Ministry of Health on the package of guaranteed services and patient co-payments, 14 April 2007.

10.4 HiT methodology and production process

The Health Systems in Transition (HiT) profiles are produced by country experts in collaboration with the Observatory's research directors and staff. The profiles are based on a template that, revised periodically, provides detailed guidelines and specific questions, definitions, suggestions for data sources and examples needed to compile HiTs. While the template offers a comprehensive set of questions, it is intended to be used in a flexible way to allow authors and editors to adapt it to their particular national context.

Authors draw on multiple data sources for the compilation of HiT profiles, ranging from national statistics, national and regional policy documents, and published literature. Furthermore, international data sources may be incorporated, such as those of the OECD and the World Bank. OECD Health Data contain over 1200 indicators for the 30 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 World Health Organization (WHO) Regional Office for Europe for the purpose of monitoring Health for All policies in Europe. It is updated for distribution twice a year from various sources, relying largely upon official figures provided by governments, as well as health statistics collected by the technical units of the WHO Regional Office for Europe. The standard Health for All data have been officially approved by national governments. With its January 2010 edition, the Health for All database started to take account of the enlarged European Union of 27 Member States.

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

A typical HiT profile consists of 10 chapters.

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

2 Organizational structure: provides an overview of how the health system in the country is organized and outlines the main actors and their decision-making powers; discusses the historical background for the system; and describes the level of patient empowerment in the areas of information, rights, choice, complaints procedures, safety and involvement.

3 Financing: provides information on the level of expenditure, who is covered, what benefits are covered, the sources of health care finance, how resources are pooled and allocated, the main areas of expenditure and how providers are paid.

4 Regulation and planning: addresses the process of policy development, establishing goals and priorities; deals with questions about relationships between institutional actors, with specific emphasis on their role in regulation and what aspects are subject to regulation; and describes the process of health technology assessment and research and development.

5 Physical and human resources: deals with the planning and distribution of infrastructure and capital stock; the context in which IT systems operate; and human resource input into the health system, including information on registration, training, trends and career paths.

6 Provision of services: concentrates on patient flows, organization and delivery of services, addressing public health, primary and secondary health care, emergency and day care, rehabilitation, pharmaceutical care, long-term care, services for informal carers, palliative care, mental health care, dental care, complementary and alternative medicine, and health care for specific populations.

7 Principal health reforms: reviews reforms, policies and organizational changes that have had a substantial impact on health care.

8 Assessment of the health system: provides an assessment based on the stated objectives of the health system, the distribution of costs and benefits across the population, efficiency of resource allocation, technical efficiency in health care production, quality of care, and the contribution of health care to health improvement.

9 Conclusions: highlights the lessons learned from health system changes; summarizes remaining challenges and future prospects.

10 Appendices: includes references, useful web sites and legislation.

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

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

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

10.5 The review process

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

10.6 About the authors

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