

# Health Systems in Transition

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## Moldova

Health system review

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# Health Systems in Transition

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## Moldova: Health System Review

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## Preface

**T**he 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 research directors and staff. In order to facilitate comparisons between countries, the profiles are based on a template, which is revised periodically. The template provides 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.

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. Because of 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](mailto:info@obs.euro.who.int).

HiT profiles and HiT summaries are available on the Observatory's web site at [www.euro.who.int/observatory](http://www.euro.who.int/observatory). A glossary of terms used in the profiles can be found at the following web page: [www.euro.who.int/observatory/glossary/toppage](http://www.euro.who.int/observatory/glossary/toppage).



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

The Observatory team is led by Josep Figueras, Director, and Elias Mossialos, Co-director, and by Martin McKee, Richard Saltman and Reinhard Busse, heads of the research hubs. Jonathan North managed the production and copyediting, with help from Nicole Satterley and with the support of

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# List of abbreviations

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AIDS	Acquired immunodeficiency syndrome
AIDS	Acquired immunodeficiency syndrome
BBPMHI	Basic Benefits Package of Health Care Services under Mandatory Health Insurance
BCG	Bacille Calmette-Guérin vaccine
CARK	Central Asian republics and Kazakhstan
CIS	Commonwealth of Independent States
DOTs	Directly Observed Treatment Short-course
EAPC	European Association for Palliative Care
EG-PRS	Economic Growth and Poverty Reduction Strategy
EOLC-Observatory	International Observatory on End of Life Care
EU	European Union
GDP	Gross domestic product
HiT	Health systems in transition
HIV	Human immunodeficiency virus
ICD	International Classification of Diseases
IDU	Injecting drug use(r)
IMF	International Monetary Fund
MOH	Ministry of Health
NATO	North Atlantic Treaty Organization
NCHM	National Centre for Health Management
NGO	Nongovernmental organization
NHIC	National Health Insurance Company
OECD	Organisation for Economic Co-operation and Development
PPP	Purchasing power parity
STI	Sexually transmitted infection
TB	Tuberculosis
TFYR Macedonia	The former Yugoslav Republic of Macedonia
TRIPS	Trade-related aspects of intellectual property rights
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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# Abstract

**T**he 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.

The Moldovan health care system has undergone significant reform since the country declared independence from the Soviet Union in 1991, although the health reform programme was delayed for a number of years owing to the severe fiscal difficulties faced as Moldova embarked on political, economic and social transition. However, despite the limited resource base, real progress has been made in rationalizing the health care system and reducing the dominance of inpatient care through the restructuring of hospital stock; stabilizing health care financing through the successful introduction of mandatory social health insurance, which was also successful in reducing the level of informal payments in the system; and developing primary health care based on family medicine.

Focus for future reform is on improving the quality of health services available to the population and improving overall population health status. The key challenges in achieving this involve strengthening the stewardship function of the Ministry of Health (particularly in the area of human resources planning) and ensuring broad access to health care services for the whole population. Involving all stakeholders in the development of further reform planning will be key to its success.





## Executive summary

**T**he Republic of Moldova became independent in 1991 with the collapse of the Soviet Union. Since then, the country has become a parliamentary republic and has embarked on an ambitious programme of economic reform. Agriculture and food processing dominate the economy and the country is dependent on imports for its energy needs. Economic transition caused great socioeconomic hardship in the country and the health status of the population fell. Subsequent economic growth has been strongly pro-poor, and average life expectancy has now reached its pre-independence level.

Moldova is experiencing negative population growth as the birth rate is falling, but following independence there was a steep rise in the death rate and there has been large-scale labour migration; about a quarter of the economically active population now works abroad. While remittances account for 20–25% of gross domestic product (GDP) and have boosted the economy, the social impact of such large-scale migration is cause for concern.

### Organizational structure

Since the introduction of mandatory social health insurance in 2004, the basic financing principle of the Moldovan health system is contracting with the National Health Insurance Company (NHIC), while the organization of primary and secondary care is devolved to the rayon (municipal in Chisinau) health authorities. The primary care sector has seen significant reform since 1996 and is now based on a general practice model with family doctors. Secondary care is provided through general hospitals at the rayon/municipal level. Since 1999, secondary care has been reorganized and dramatically consolidated. Specialized and high-technology care is provided through the

republican hospitals and national institutes, which are mostly based in Chisinau and these are directly subordinate to the Ministry of Health (MOH), as are emergency care services for the country. Service providers for emergency, primary, secondary and tertiary levels all contract directly with the NHIC for funding.

## **Financing**

State budget allocations to health care suffered serious decline between 1993 and 2003 and have only been stabilized with the introduction of social health insurance. Health care coverage is provided through a combination of mandatory social health insurance with the NHIC and some health care services through a number of government-funded and internationally funded national programmes, which target specific priority health issues. The economically active resident population is obliged to contribute a proportion of wages through a payroll tax, or pay a flat rate lump sum where they are self-employed. Contributions for the rest of the population are paid by the government from the state budget. Coverage is incomplete, however, particularly for the “self-employed”, who are often rural poor engaged in subsistence farming.

Since the successful introduction of mandatory social health insurance, the balance of private relative to state expenditure is shifting, but private expenditure as a proportion of total health care spending is still high and much of this reflects the cost of pharmaceuticals, which are not generally included in the benefits package.

## **Regulation and planning**

Regulation and governance of the health care system is the responsibility of the MOH and particularly the National Centre for Preventive Medicine and its network of local agents. However, despite the introduction of contracting, the regulatory function is still weak and underdeveloped. There is also limited capacity for strategic planning in the system and there is no national planning agency. Much planning continues to be conducted according to formulae or line-item budgeting rather than needs. Consequently, there is a need to improve the information systems so that data and analysis can inform policy and planning.

## **Physical and human resources**

Moldova inherited one of the most extensive health care systems in Europe, with extreme overcapacity in the hospital sector. The financial hardships

experienced during transition meant that maintaining the scale of this system was impossible as well as undesirable. Reductions in the number of beds for hospital acute care and the consolidation of secondary care hospitals between 1998 and 2000 were dramatic. However, for technical and political reasons, the consolidation has yet to take place in tertiary care, and consequently there is still significant overcapacity in the capital, Chisinau. It was hoped that reduced spending on inpatient care would free resources to be put into primary care services and improving the capital stock, but this has yet to occur on any scale.

There was also extreme overcapacity in the supply of doctors in the Moldovan system, but emigration, the broadening of alternative career opportunities and low wages mean that the country is facing recruitment problems for key health workers, particularly in rural areas and in the primary health care system.

### **Provision of services**

The primary health care network is extensive and geographical access is good; it consists of four types of provider: family medicine centres (based on the former district polyclinics), rural health centres and family doctor offices (based on former rural medical points), and health posts for family doctors' assistants (feldshers) covering villages/areas with populations less than 1000. Most primary health care facilities are integrated into the main health care system and are wholly state owned.

At the secondary level of care, there are rayon general hospitals in rural areas and municipal general hospitals in Balti and Chisinau. These hospitals provide a relatively broad profile of services to the local population, while specialist services are provided through tertiary level republican hospitals, which are concentrated in Chisinau and generally have a highly specialized single profile such as tuberculosis care or oncology. There are few private hospitals in Moldova.

### **Principal health care reforms**

The Moldovan health reform programme faced severe delays because of fiscal constraints throughout the 1990s, and many of the reform ideas that were passed into law at that time could not be implemented. However, the extra time did enable the MOH to work closely with international organizations so that the reform initiatives could be refined before implementation, and some of the pitfalls encountered in other countries with inherited Semashko health care systems have been avoided. The key reform areas have related to the

privatization of some health care services (most notably dental services and pharmacies); hospital restructuring; the reorientation of the system in support of primary care services; and, most recently, the successful introduction of mandatory social health insurance. The focus for future reform is on improving the quality of health services available to the population and improving overall population health status.

### **Assessment of the health care system**

The Moldovan health care system aims to provide the entire population with universal access to a basic package of health care services. It is still too early to assess the impact of the introduction of mandatory social health insurance on the contribution of the health system to health improvement and technical efficiency in the production of health care. However, there is evidence that the reform programme has delivered some improvements in the perceived quality of care (particularly in primary health care services), the efficiency of resource allocation and in the more equitable distribution of the health system's costs and benefits across the population.

# 1. Introduction

## 1.1 Geography and sociodemography

**M**oldova is a land-locked country situated in south-eastern Europe. Ukraine and Romania border the country to the east and west, respectively. It covers 33 843.5 km<sup>2</sup>, approximately 80% of which is dedicated to arable land, crops and pasture on account of the country's rich soil (Government of the Republic of Moldova 2007c). Moldova is the most densely populated country of the former Soviet Union (127 people per km<sup>2</sup>), with a population of around 4.2 million, 752 000 living in the capital city of Chisinau. Approximately 54% of the population live in rural areas (Table 1.1), with agricultural and food-processing activities dominating the economy. There has been uninterrupted net migration out of the country since 1982 and, on average, the population has been shrinking, solely as a result of emigration, by 0.32% per year (WHO Regional Office for Europe 2005). Since the mid-1990s, Moldova has experienced negative population growth; the population aged 0–14 years has been declining through the low birth rate while emigration has adversely affected the working age population. At independence, the population of Moldova was 4.36 million; however, by 2006 it had fallen to 3.6 million to the west of the Nistru river, with an estimated 0.6 million living in Transnistria (WHO Regional Office for Europe 2007). Basic demographic and health data for this largely autonomous region have not been available since 1997 (WHO Regional Office for Europe 2007).

Moldova became independent in August 1991 with the collapse of the Soviet Union. This was the latest in a series of independent reincarnations since the first Moldovan state was declared in 1359. Stefan cel Mare (Stefan the Great), ruler between 1457 and 1504 and a Moldovan hero to this day, characterized the spirit of the republic and the difficulties of maintaining its sovereignty. Moldova's location in central-eastern Europe has meant that

**Table 1.1 Population/demographic indicators for Moldova, 1970, 1980, 1990, 2000, 2006**

	1970	1980	1990	2000	2006
Total population (millions)		3.98	4.36	4.27	3.59
Population female (% of total)		53.2	52.3	52.2	52.0
Population aged 0–14 years (% of total)		26.6 <sup>a</sup>	27.9	23.3	18.2
Population aged 65+ (% of total)		7.7 <sup>a</sup>	8.3	9.4	10.1
Population density (per sq km)			128.9	126.2	105.9
Fertility rate, total (births/woman)	2.6	2.4	2.4	1.3	1.2
Birth rate, crude (live births/1000 people)		20.0	17.7	10.2	10.5
Death rate, crude (per 1000 people)		10.2 <sup>a</sup>	9.7	11.3	12.0
Age dependency ratio (population 0–45 and 65+ years to population 15–64 years)		0.52 <sup>a</sup>	0.57	0.49	0.39
Distribution of population (% of urban population)	31.7	40.0	47.0 (1991)	41.6	46.5 (2004)
Literacy rate (%) in population aged 15+	91.0	94.9	97.5	98.9	98.4

Note: <sup>a</sup>figure for 1981.

Source: WHO Regional Office for Europe 2007.

it has been caught between great military powers over the centuries. In the mid-16th century, it became an Ottoman protectorate. Parts of the country (Bessarabia) were then ceded to the Austro-Hungarian and Russian Empires in 1812, following the Russian–Turkish Wars; Northern Bucovina was ceded to the Austro-Hungarian Empire in 1775. Bessarabia became briefly independent after the collapse of the Russian Empire in 1917, but in 1918, Bessarabia was unified with Greater Romania. Bessarabia was under the rule of the Romanian monarchy until 1940, when the territory was annexed by the Soviet Union following the division of Romania in the Ribbentrop–Molotov Pact between Nazi Germany and the Soviet Union. During the Second World War, the territory of present day Moldova was a significant battleground on the Eastern Front. Following the defeat of Nazi and Romanian forces in 1944, Bessarabia was added to the existing Moldovan Autonomous Soviet Socialist Republic (Moldavskaya ASSR) to form the Moldovan Soviet Socialist Republic. The Moldovan ASSR was created in 1924 within Ukraine to the east of the Nistru River; this area is now often referred to as Transnistria (King 2000) (Fig. 1.1).

Moldova is a multiethnic country, with Moldovans constituting the largest group (64.5%) followed by Ukrainians and Russians at 13.8% and 13%, respectively, most of whom live in Transnistria and the west bank of the Nistru river. Other minority ethnic groups include Gagauz (a Turkic group that is Christian), who are concentrated in the south-west of the country, as well as

Fig. 1.1 Map of the country



Map No. 3759 Rev. 3 UNITED NATIONS  
October 2006

Department of Peacekeeping Operations  
Cartographic Section

Source: UN cartographic section, October 2006.

Jewish, Bulgarian, Roma and many others (King 2000). The majority of the population is Orthodox Christian. The official language is Moldovan, which is the same as Romanian and has been written using Latin script in most of the country since 1991, but with Cyrillic script in Transnistria.

## 1.2 Economic context

Since independence, Moldova has faced serious economic challenges that have impacted on the funding available for health and other social welfare activities. Despite an ambitious economic liberalization and stabilization programme started at independence, external and internal economic difficulties have caused serious falls in the standard of living. Between 1993 and 1999, gross domestic product (GDP) fell by 60% (World Bank 2004). Economic decline translated into falling standards of living through three main mechanisms: the erosion of liquid assets through inflation; the sharp fall in real wages and employment opportunities; and the near collapse of the public social security system, including the pension system (Orlova and Ronnas 1999). By 2000, 90% of the population was living on less than US\$ 1 per day (European Commission 2001).

Economic growth resumed only in 2000 after a decade of decline in GDP, a recovery which was much later than in other countries of the former Soviet Union and central-eastern Europe. However, subsequent strong economic growth (GDP grew by 43% between 2000 and 2005) has been to the advantage of the poor: 73% of the Moldovan population was below the absolute poverty line in 1999, but this fell to 26.5% in 2004 (International Monetary Fund 2006b). Parallel with declining poverty rates since 1999, the degree of inequality has also been decreasing, as reflected in the changing Gini coefficient (which measures the level of inequality in a country), which changed from 0.38 in 2000 to 0.36 in 2004 (Table 1.2). Nevertheless, poverty remains a key concern in Moldova. With the support of the European Union (EU) and other international agencies, the Moldovan Government approved an Economic Growth and Poverty Reduction Strategy (EG-PRS) in December 2004 and the National Indicative Programme 2007–2010 to guide poverty reduction efforts. The National Indicative Programme has prioritized three strategic areas: (a) development of democracy and good governance, (b) regulatory reform and building of administrative capacity, and (c) poverty reduction and economic growth. There are encouraging signs that the EG-PRS is having a positive impact on economic growth. Compared with 2004, GDP grew by 7.1% in 2005 (in comparable prices) to reach lei 36.7 billion, against the EG-PRS target of a 5% increase. Notwithstanding recent growth, Moldova remains the poorest country in geographic Europe, with an estimated per capita gross national income of US\$ 1100 in 2006 (World Bank 2007).

Moldova was a small and highly integrated part of the Soviet economy, so when the Soviet Union collapsed in 1991, Moldova was completely dependent on imports for its energy needs. Excluding agricultural inputs, industrial inputs and all raw materials also need importing (Orlova and



**Table 1.2 Macroeconomic indicators, 1997–2006**

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
GDP (current US\$, millions) <sup>1</sup>				1288.4	1480.7	1661.8	1980.9	2595.0	2906.2	3265.6
GDP per capita <sup>2</sup>		449	255		346	382	463	615	...	...
GDP per capita, PPP (\$) <sup>2</sup>	1500	1947	2037	2109	2150	1470	1510	1729	...	...
Annual GDP growth (%) <sup>1</sup>				2	6	8	7	7	7	4
Gini coefficient by consumption expenditures per capita <sup>3</sup>				0.38	0.39	0.37	0.36	0.36		
Value added in industry (% GDP) <sup>1</sup>					24	23	25	24	24	21
Value added in agriculture (% GDP) <sup>1</sup>				29	26	24	22	21	21	17
Value added in services (% GDP) <sup>1</sup>					50	53	54	55	58	62
Labour force (as % population) <sup>2</sup>		45.4	46.1	45.5	44.5	44.6	40.8	39.6	...	...
Unemployment, total (% of labour force) <sup>2</sup>	1.5	1.9	2.1	2.1	2	1.9	2	1.8	2	1.9
Average exchange rate (leu/US\$) <sup>4</sup>			10.52	12.43	12.87	13.57	13.94	12.33	12.60	
Absolute poverty rate <sup>3,5</sup>		52.0	73.0	67.8	54.6	40.4	29.0	26.5	29	

Notes: GDP, gross domestic product; PPP, purchasing power parity.

Sources: 1, World Bank 2007; 2, WHO Regional Office for Europe 2007; 3, International Monetary Fund 2006b; 4, International Monetary Fund 2006a; 5, International Monetary Fund 2007.

Ronnas 1999). The collapse of the integrated planning system meant that the manufacturing industry, mainly located in Transnistria, largely ground to a halt. Agriculture, food processing, viticulture and tobacco processing are the core aspects of the Moldovan economy (Table 1.2). Large-scale labour emigration and the associated remittance flows also increasingly shape Moldova's economic and social landscape. At least one-quarter of Moldova's economically active population has emigrated and remittances now amount to 20–25% of GDP (International Monetary Fund 2005). Remittances have fuelled economic growth in Moldova as they have boosted final consumption and investment. Moldovans working abroad work predominantly in countries

of the Commonwealth of Independent States (CIS), particularly the Russian Federation, but many have also gone to work in Italy and Romania (Mansoor and Quillin 2007; Orozco 2007). Dual citizenship with Romania has been legal only since 2003, but even prior to this, figures from 2001 suggested that as many as 200 000 Moldovan citizens also held Romanian passports (Roper 2005). The social impact of large-scale migration, particularly on the well-being of children left behind, is cause for much concern (Mansoor and Quillin 2007). Unfortunately, another aspect of the large and unregulated migration flows is increased participation of vulnerable emigrants in the international sex trade.

Through the transition period, the Moldovan economy suffered persistent budget deficits as the tax base contracted while social spending remained high. However, as well as high social spending, servicing national debts, particularly energy debts to Russian companies (notably Gazprom), accounts for much budgetary expenditure as Moldova has no natural energy resources of its own. Moldova is one of the most heavily indebted countries of the former Soviet Union. Debt servicing through the late 1990s was especially hard as the trade deficit grew and this had to be covered by dipping into foreign currency reserves and accepting commercial loans on far from favourable terms (Orlova and Ronnas 1999). The squeeze on public expenditure was reflected in the severe wage arrears for public sector workers and pensioners. The trade deficit is a major cause for concern because, as a small country with few natural resources, Moldova is highly dependent on trade, and the key markets, generally for agricultural produce, are in the former Soviet Union. The country's biggest trading partner is the Russian Federation, which is also the supplier of Moldova's energy needs. This trade dependence made Moldova highly vulnerable to external economic shocks such as the financial crisis in the Russian Federation in 1998. In 1998, the Russian rouble crash combined with the high debt-servicing burden meant that the Moldovan budget could not honour commitments to the health sector, and the wage bill in particular. As a result of revaluation of the Moldovan national currency (the leu) in 1998, the external debt burden in Moldovan grew to 108% of GDP and major debt restructuring became necessary (Orlova and Ronnas 1999). In 1999, Moldova agreed a structural adjustment package with the International Monetary Fund to stem the growth of debt payments, and this package came with strong conditions relating to privatization and cutting social expenditure (Gorton and White 2003).

The pace of market-oriented reform in general and labour market reform specifically has been slow in Moldova, and the privatization and restructuring of large-scale enterprises has been extremely slow. This is one explanation for the relatively low levels of registered unemployment in Moldova (Blanchflower

2001). There is also little incentive to register as unemployed as this involves great bureaucratic effort and the financial benefit to be gained is modest. Consequently, although the International Monetary Fund estimated that there were 21 700 unemployed at the end of 2005, only 1400 (6.5%) were receiving benefits (International Monetary Fund 2006b). A further 33 600 workers were on unpaid leave, which would give an open and hidden unemployment rate of approximately 8.3% at the end of 2005. However, there are other forms of “hidden” employment, where either the employment of an individual is not declared by an enterprise and no taxes or social insurance contributions are paid by worker or enterprise (and access to social insurance benefits are restricted) or only a part of their salary is declared as the “official” income from which taxes and social insurance contributions are deducted and the bulk of their salary is paid informally in cash (Gorton, Ignat, White 2004).

### **1.3 Political context**

The Republic of Moldova was established as an independent state in 1991, following the collapse of the Soviet Union. It is governed by a constitution that was approved in 1994, replacing the old Soviet constitution of 1979. It became a parliamentary republic in 2001. The head of state is the president, chosen by the parliament once every four years. The prime minister is nominated by the president and approved by the parliament, and is the head of government. The parliament is unicameral and has 101 seats. Members of parliament are elected by a popular vote for four-year terms of office. Following independence, the country was ruled by the Agrarian Party, with Mircea Snegur as President until 1996. From 1996 to 2001, the Alliance of Centrist Democrats was in power, with the Moldovan Communist Party winning 70% of parliamentary seats in 2001 and holding a reduced majority of 56% in the 2005 parliamentary elections (Way 2002, Way 2005). Vladimir Voronin, leader of the Moldovan Communist Party, was elected to the presidency in February 2001 and was reelected for this position in 2005. As Moldova is a parliamentary republic, presidential powers are limited by parliament, while the powers of both parliament and the president are constrained by the independent Constitutional Court.

Until 1998, Moldova was divided into 40 districts and 10 towns for administrative purposes. In 1999, the administrative arrangements were reorganized. Twelve administrative regions were established (10 counties (judets), the metropolitan area of Chisinau and the Territorial Autonomous Unit of Gagauzia), each with a regional administration and civil servants.

Special autonomy status was granted to the Gagauz region in 1994, and the Territorial Autonomous Unit of Gagauzia now has power over its own political, economic and cultural affairs. However, with the passing of the Law Regarding the Local Public Administration (No. 123-XV) in March 2003, Moldova was reorganized once more, this time into 32 local districts (rayons), three municipalities and two territorial autonomous units. Local governments have tax-raising powers, but the funding of health services has been recentralized through the National Health Insurance Company (NHIC) (Section 2.4 *Decentralization and centralization*). Laws relating to health care are enacted both by primary legislation after parliamentary discussion and by decree, but the process is negotiated between parliament and the Ministry of Health (MOH). The other key interest groups integrated into the health policy process are the various international partners active in the Moldovan health sector (Section 2.3 *Organizational overview*).

Since Moldova claimed independence, there has been civil strife in Transnistria, which sought to maintain its links with the Soviet Union and declared independence from Moldova shortly after the country seceded from the Union (King 2000). In 1992, there was armed conflict in Transnistria between the Moldovan army and Soviet army troops based there. This conflict has not yet been resolved, and although the self-proclaimed Transnistrian Moldovan Republic has never been recognized internally or internationally as an independent state, it currently has its own parliament, president, constitution, economic system and currency (Roper 2005; Protsyk 2006). The region remains effectively outside central government control, and its status is still being negotiated. Basic health and demographic data for the region are not available, but it would seem that the region has maintained a largely unreformed Semashko style health system for the local population of approximately 0.6 million inhabitants (Section 6.10 *Health care for specific populations*).

Moldova joined the CIS in 1991, and has been a member of the United Nations since 1992. Moldova was one of the first post-Soviet states to join the Council of Europe and the Organization for Security and Cooperation in Europe; it is also in the World Trade Organization and the Stability Pact for South Eastern Europe. The Moldovan Government has expressed interest in joining the North Atlantic Treaty Organization (NATO) and the EU, but formal accession discussions have not taken place. Moldova has been proclaimed a permanently neutral country that will not permit the stationing of foreign military troops on its territory. Moldova is signatory to various international treaties that have an impact on health including the United Nations Convention on the Rights of the Child (1993) and the European Convention on Human Rights (1995). Compliance with the United Nations Convention on Rights of

the Child has been positive in terms of the legislative framework in place, but the key barriers to successful realization of the convention include the high rates of poverty and emigration, which have a great impact on the well-being of children (United Nations 2002).

In 2003, President Voronin announced his goal of strengthening the relationship between Moldova and the EU. The publication of a concept paper aimed at promoting integration of Moldova into the EU was followed by the EU–Moldova Action Plan, which aimed at improving relations in areas of foreign and security policy, resolution of the conflict in Transnistria, promoting economic growth and reducing poverty. Since then, each ministry has established a division responsible for EU integration and coordinated by the Department for European Integration within the Ministry of Foreign Affairs and European Integration. The key external contextual driver for Moldova is the EU–Moldova Action Plan, which has initiated negotiations with the EU to align Moldovan laws and regulations with the EU *Acquis Communautaire* (the body of EU laws that must be adopted by any country that wishes to become a member of the EU). EU laws and regulations governing organization and administration emphasize decentralization of governance and decision-making to the local level. Related to this, two critically important drivers of change in health system organization in Moldova are plans to restructure the public sector and administrative decentralization, which includes a mix of deconcentration and delegation (Atun 2007).

Moldova has a relatively strong record on the protection of human rights, although conditions in the country's prisons and police detention centres have been cause for concern, particularly as they are conducive to the spread of disease, notably tuberculosis (TB), which is rife in the country's prisons (Section 1.4 *Health status*) (United Nations 2003). The main human rights issues that have come to international attention have been cases of police brutality that could amount to torture and cases of discrimination against sexual minorities in their right to assembly and freedom of expression, because the Mayor of Chisinau acted unilaterally to ban gay pride marches in the city in both 2005 and 2006. In 2006, Moldova rated 3.2 on the Corruption Perception Index, which has a range of 0 (highly corrupt) to 10 (highly clean). This is the lowest perceived corruption rating of any CIS country (Transparency International 2006). Nevertheless, there is a real lack of public trust in governing institutions, and both politicians and the judiciary are often seen as being somewhat remote and corrupt (Badescu, Sum, Uslander 2004).

**Table 1.3 Mortality and health indicators 1981, 1990, 2000, 2005, 2006**

	1981	1990	2000	2005	2006
<b>Life expectancy at birth (years)</b>					
Female	69.5	72.0	71.4	71.7	72.4
Male	62.7	65.0	64.0	63.8	64.6
Total	66.2	68.6	67.8	67.8	68.5
<b>Mortality rate (per 1000)<sup>a</sup></b>					
Female, adult	1192	1069	1167	1159	1083
Female adult under 65	481	396	403	399	386
Male adult	1748	1595	1829	1886	1762
Male adult under 65)	820	741	811	862	806
<b>Infant (per 1000 live births)</b>	34.4	19.2	18.4	12.4	11.8

Note: <sup>a</sup> mortality rate within each group.

Source: WHO Regional Office for Europe 2007.

## 1.4 Health status

Following independence, there was a sharp fall in all health indicators in Moldova, and average life expectancy fell from 69.0 in 1989 to 65.9 years in 1995; however, the situation has since improved and life expectancy in 2006, at least for those regions to the west of the Nistru River where data are available, was 68.5 years (WHO Regional Office for Europe 2007). The improvements have been for both men and women, although, at 64.6 years in 2006, male life expectancy has not recovered to pre-independence levels (65.6 years in 1989) while female life expectancy at 72.4 years in 2006 has exceeded its pre-independence level (72.3 years in 1989) (WHO Regional Office for Europe 2007). This has resulted in a significant and growing gender gap in life expectancy (Table 1.3). This gender gap is also reflected in the disability-adjusted life expectancy, which was 62.4 years for women and 57.2 years for men in 2002 (WHO Regional Office for Europe 2007). Nevertheless, despite Moldova being the poorest country in the WHO European Region, life expectancy estimates are 2–5 years higher than similar estimates for considerably richer countries in the CIS (WHO Regional Office for Europe 2005).

Moldova has a double epidemiological burden as rates of communicable diseases have increased since independence while noncommunicable diseases, such as cardiovascular diseases and cancers, have also increased as a cause of premature mortality. Poverty, alcohol and tobacco are the key health determinants for most Moldovans and mortality and morbidity from these factors account for a sizeable burden on society. The main causes of death in Moldova are diseases of the circulatory system, followed by cancer, diseases

**Table 1.4 Main causes of death, all ages per 100 000**

Main causes of death (ICD-10 classification)	Year				
	1990	1995	2000	2005	2006
<b>I Communicable diseases:</b>					
Infectious and parasitic diseases (A00–B99)	11.1	16.0	22.0	23.0	21.1
Tuberculosis (A17–A19)	5.6	11.0	18.0	18.9	17.7
<b>II Non-communicable conditions:</b>					
Circulatory diseases (I00–I99)	583.3	755.4	834.3	858.4	786.4
Malignant neoplasms (C00–C97)	163.7	161.5	147.0	161.2	166.2
Trachea/bronchus/lung cancers (C33–C34)	32.0	28.8	24.0	25.4	26.2
Mental and behavioural disorders (F00–F99)	12.6	10.6	13.7	17.5	16.2
Respiratory diseases (J00–J99)	79.1	93.7	87.1	92.6	79.1
Digestive diseases (K00–K93)	114.4	138.6	120.9	143.2	134.3
<b>III. External causes (V01–Y89):</b>					
Transport accidents (V01–V99)	29.8	17.2	12.2	14.4	13.7
All external causes, injury and poisoning	112.0	125.8	101.0	113.8	109.0

Source: World Health Organization 1994, 2007.

of the digestive system and injury and poisoning (Table 1.4). According to data from the National Centre for Public Health and Management (2006), the incidence of cardiovascular disease increased by almost 80% between 2000 and 2004, reaching 170/100 000 population, while the standardized mortality rate from cardiovascular disease rose by over 30%. In the same period, the incidence of malignant neoplasms also increased by 20% (National Centre for Public Health and Management 2006). However, the levels are estimated to be much higher as the quality of the data captured in the health system is poor (Atun 2007).

These figures also mask significant gender differences. For women, the third most common cause of death is diseases of the digestive system (115.4/100 000 female population in 2006) rather than accidental injury and poisoning (48.5/100 000 female population in 2006). Chronic liver disease and cirrhosis is also a very significant overall cause of mortality in Moldova (116.0/100 000 male population and 99.4/100 000 female population in 2005), which is unquestionably linked to very high alcohol consumption in the country. In 2006, mortality per 100 000 population was 838.7 from smoking-related causes and 227.2 from alcohol-related causes; these rates were among the very highest in the whole WHO European Region (WHO Regional Office for Europe 2007). A recent lifestyle survey of eight CIS countries found that female smoking prevalence in Moldova was only 3.9% and male smoking prevalence was 43.3%, which is low by regional standards (Gilmore et al.

**Table 1.5 Maternal and child health indicators, 1985, 1990, 1995, 2000, 2005, 2006**

	1985	1990	1995	2000	2005	2006
Births (% all live births to mothers, age under 20 years)	8.2	12.8	19.8	17.0	13.6	13.0
Neonatal mortality (per 1000 live births)		9.3 <sup>a</sup>	11.6	10.7	6.9	7.0
Postneonatal mortality (per 1000 live births)		10.0 <sup>a</sup>	9.9	7.7	5.2	4.8
Maternal death rate (per 100 000 live births)	49.8	44.1	40.7	27.0	21.2	16.0
Syphilis incidence (per 100 000)	17.2	15.8	175.0	97.8	69.6	

Notes: <sup>a</sup>figures for 1991.

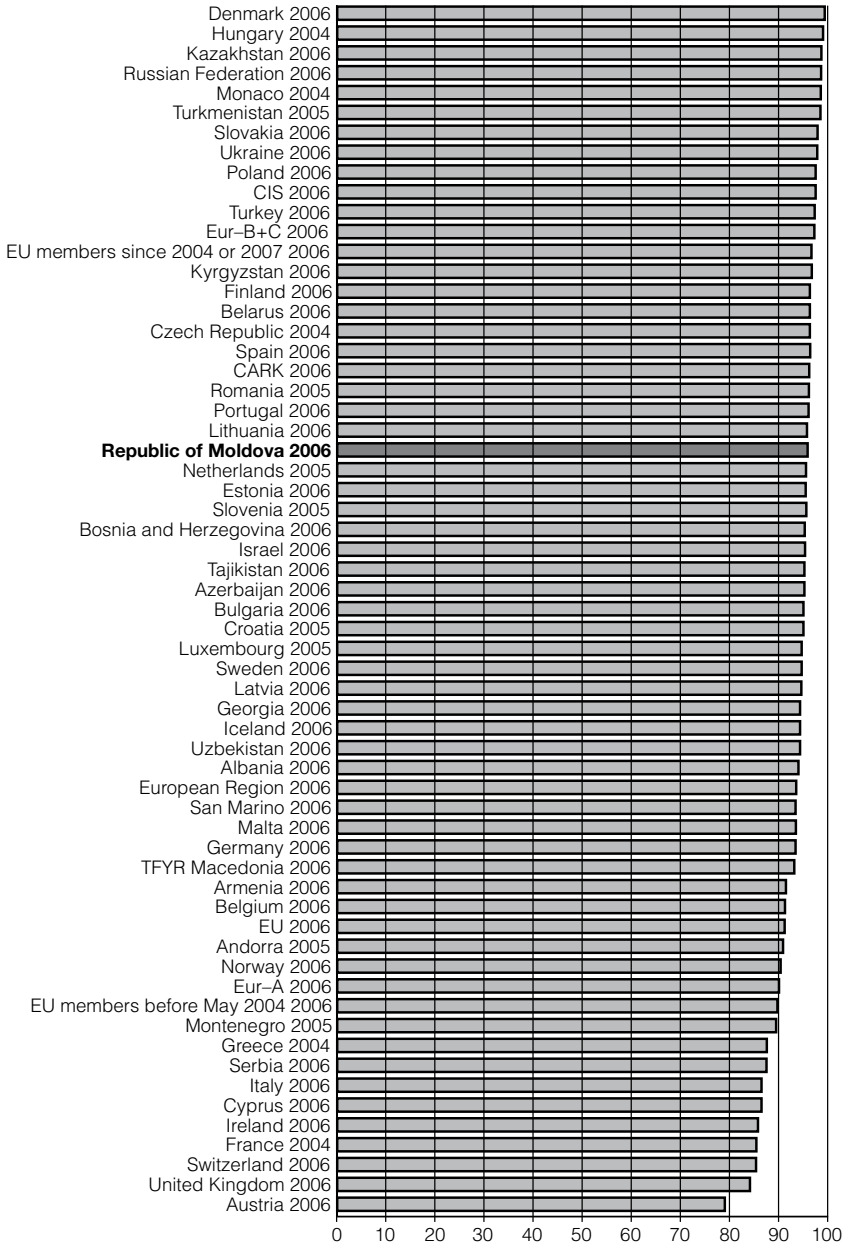
Source: WHO Regional Office for Europe 2007.

2004). Data from the same lifestyle survey also showed Moldovans had the highest mean frequency of alcohol consumption of the eight countries surveyed; the beverage of choice was wine, which would imply a similar drinking pattern to that found in France or Italy (Pomerleau et al. 2005).

The infant mortality rate fell throughout the 1980s, but rose in the early 1990s, from a low of 18.3/1000 live births in 1992 to 22.9 in 1994. However, overall, the rate has been following a downward trend since, and in 2006 was 11.8/1000 live births, which is low for countries of the CIS (the average was 14.0 in 2005) and lower than in neighbouring Romania (13.9 in 2006) but still more than double the EU average of 5.0/1000 live births in 2005 (WHO Regional Office for Europe 2007). In spite of recent improvements, substantial inequities exist, with twofold variations in infant mortality rates between regions. Many estimates put the infant and maternal mortality rates for Moldova higher than officially recorded rates. For example, the World Bank (2005) estimated infant mortality at 16/1000 live births in 2004 and the maternal mortality ratio at 36/100 000 live births. Official maternal mortality rates in Moldova have fluctuated widely, although there would appear to be an overall downward trend. Since independence, the highest maternal mortality rate of 52.9/100 000 live births was in 1993, the lowest, 16.0, was in 2006 (Table 1.5; WHO Regional Office for Europe 2007). However, against a declining birth rate, the maternal mortality rate is still high and further significant reductions are needed to enable Moldova to reach its Millennium Development Goal target for maternal mortality of 11/100 000 live births by 2015. Maternal mortality levels (miscarriages, 30%; haemorrhage, 19%; puerperal sepsis, 18%; embolism, 17%; conditions related to pregnancy, 9%) remain much higher than the European averages. The increasing number of children being registered as disabled has also been cause for concern, especially as health and social services for these children are not well developed (National Centre for Public Health and Management 2006).



**Fig. 1.2 Levels of immunization for measles, WHO European Region (% child population)**



Source: WHO Regional Office for Europe, 2007.

Child immunization levels have been consistently high in Moldova for all vaccine-preventable diseases, and in 2006, 96.4% of children were immunized against measles (Fig. 1.2). It is estimated that 86% of routine vaccines in the WHO and United Nations Children's Fund (UNICEF) Expanded Programme on Immunization were financed by the government in 2004 (UNICEF and WHO 2006). Nevertheless, there was a resurgence in the actual incidence of various vaccine-preventable diseases following independence. Three of the likely causes are increasing poverty, weakened prevention and control programmes in the early period after independence, and increasing international movement of the population. Moldova, like a number of neighbouring countries, suffered a major diphtheria outbreak between 1994 and 1996, peaking in 1995 with over 9 reported cases per 100 000 people. Over 700 people were infected in 1994 and 1995. A cholera outbreak also occurred in 1995 (MacLehose 2002).

Sexually transmitted infections (STIs) also sharply increased following independence, with syphilis showing one of the biggest increases (Table 1.5). STIs, which increase the likelihood of sexual transmission of the human immunodeficiency virus (HIV), are thought to be four to five times more common than the officially notified rates, which show a decline in syphilis but a continuing and substantial increase in gonorrhoea levels (National Centre for Public Health and Management 2006). However, the key challenges in communicable disease control in Moldova are TB and HIV/AIDS, where the situation is worsening. Although coverage with Bacille Calmette–Guérin vaccine (BCG) has remained high, the incidence of TB has been rising since 1990 after decreasing from the early 1980s. In the period 1990 to 2005 (according to officially notified new cases), the incidence of TB has more than doubled, although TB specialists estimate that the current incidence is almost 50% higher than the officially notified cases. The most dramatic increase of TB was registered in children. In 2004, the number of officially registered TB cases in children doubled compared with 2003, although it is likely that some of this increase is the result of improved testing and surveillance as well as improved access to treatment. The TB mortality rate increased from 16.9/100 000 people in 2000 to 17.7 in 2006 (WHO Regional Office for Europe 2007). However, TB rates in prisons are much higher than in the general population. In 1999, a case rate of 2640/100 000 prisoners was recorded. In some prisons, up to 85% of inmates have been found to have TB (MacLehose 2002).

The Joint United Nations Programme on HIV/AIDS (UNAIDS) estimated that 29 000 people in Moldova were living with HIV/AIDS by 2006 (estimate range 15 000–69 000), which indicates a prevalence rate of 1.1% (range, 0.6–2.6) for adults aged 15 to 49 (UNAIDS 2007). The majority of those with HIV are concentrated in the districts of Balti and Chisinau. After initial rapid growth in HIV incidence in 1997–1998, the annual rate of new cases being reported

in the country has stabilized. In 2000, 82% of the cases with documented transmission routes were associated with injecting drug use (IDU) and 17% with heterosexual contact. By 2003, the proportion of IDU amongst newly detected HIV cases had declined to less than 55%, and by 2004 the epidemic had become generalized, with the proportion of new cases acquired through sexual contact increasing from 20% in 2001 to 59% in 2006. By 2005, the incidence of HIV was 8.5/100 000 inhabitants and by 2006, the number of newly reported cases had doubled, reaching 621/100 000 (UNAIDS 2006; UNAIDS 2007). If there is not an effective control programme, HIV/AIDS prevalence is projected to reach 1.9% of the population by 2011 (World Bank 2002a).

At present, heterosexual transmission accounts for new HIV infections almost as often as transmission by IDU (UNAIDS 2007). However, there is a growing body evidence to show that IDU is prevalent and this has major implications for the potential spread of HIV through the Moldovan population – particularly young people (Aceijas et al. 2006). In 2002, the population of IDUs was estimated at 50 000. According to the National Centre for Health Management (NCHM), the number of IDUs in 2004 had increased by 12% from that in 2003, reaching 173.8/100 000. Most of the IDUs are not registered. Hence, estimating true incidence and prevalence is difficult. As part of the HIV/AIDS response measures, there are some 19 harm-reduction programmes across the country, chiefly needle exchange and condom distribution services. Methadone-substitution therapy started in September 2004, when 14 people (including two people living with HIV) enrolled in treatment for half a year; another six from the prison system were enrolled more recently. There is no monitoring of how many IDUs living with HIV are still injecting drugs (UNAIDS 2006). With assistance from the Global Fund and World Bank, antiretroviral therapy to prevent mother-to-child transmission has been available in Moldova since 2002 (UNAIDS 2007), but there have been access problems for those living in Transnistria (Section 6.10 *Health care for specific populations*). For more on the HIV/AIDS response efforts, see Section 6.1 (*Public health*).

While there are no comprehensive studies of socioeconomic differences in health status, particular minority groups do appear to have considerably worse health than the majority – namely the Roma and Gagauz, particularly those living in rural areas (King 2000).

In 2002, only 41% of homes were connected to a mains water supply system: 78% of urban homes but only 9% of rural homes (WHO Regional Office for Europe 2007). Although the 2005 Demographic and Health Survey found that over 92% of urban and 91% of rural households had sufficient access to potable water (National Scientific and Applied Center for Preventive Medicine and ORC Macro 2006), well water is most often used in rural areas.

In 1999, 75% of all well water did not meet sanitary and bacteriological safety standards (MacLehose 2002). There is a similar urban/rural divide in access to hygienic means of sewage disposal, which is available to 91% of the urban population but only 67% of the rural population (WHO Regional Office for Europe 2007). Representative survey data from 2001 found that only 31.8% of rural residents had a toilet inside the home (McKee et al. 2006).

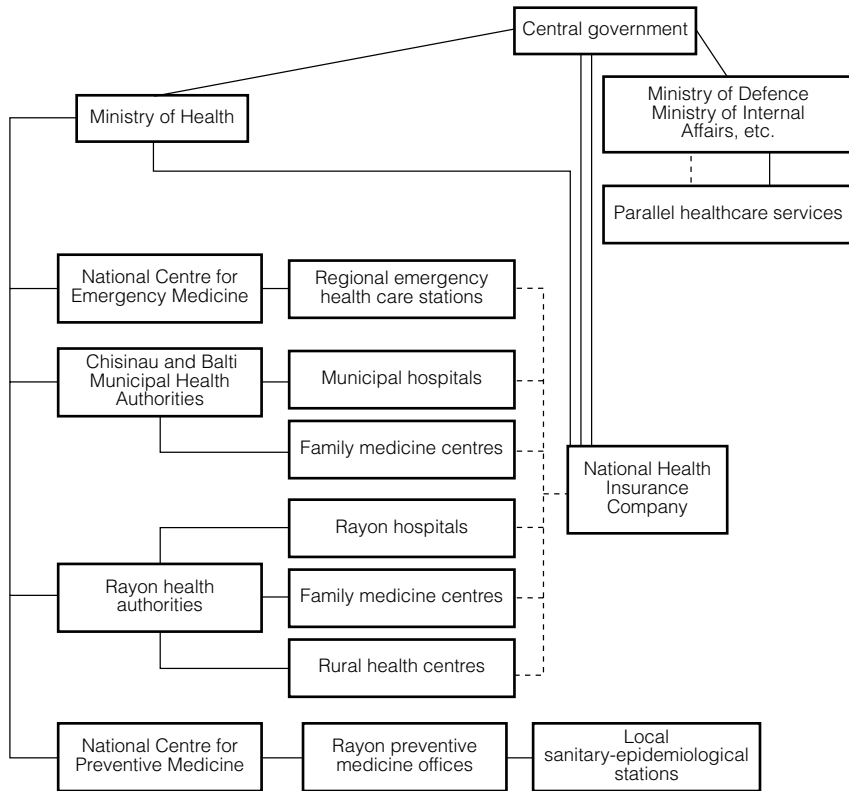
## 2. Organizational structure

### 2.1 Overview of the health system

At independence, Moldova was faced with a health system with numerous facilities and staff but limited resources to sustain them. Despite some reductions in capacity, Moldova in 1997 had one of the most extensive networks of health facilities and health staff in either western Europe or other countries of the former Soviet Union (World Bank 2000). The country attempted to maintain this high level of provision despite the collapse of the economy in the early 1990s. The severe fiscal crisis precipitated by the rouble crash in the Russian Federation in 1998 led to the dramatic consolidation of the health care system, with reductions in the number of hospital beds, activity levels and personnel. However, tertiary care facilities were not consolidated and there is still significant duplication and oversupply in the capital, with both Chisinau municipal facilities and the large specialist facilities serving the local population. The fiscal crisis also stalled the introduction of mandatory social health insurance, which was introduced in law in 1998. However, the necessary legal frameworks and managerial capacity have since been developed and following the success of a pilot scheme using mandatory social health insurance in 2003, mandatory social health insurance was rolled out nationwide and has been operating since 1 January 2004.

As shown in Fig. 2.1, since the introduction of mandatory social health insurance in 2004, the basic financing principle of the Moldovan health system has been contracting with the NHIC, while the organization of primary and secondary care is devolved to the rayon (in Chisinau and Balti municipal) health authorities. The primary care sector has seen significant reform since 1996 and is now based on a general practice model with family doctors. Secondary care is provided through general hospitals at the rayon/municipal level. Since 1999, secondary care has also been reorganized and consolidated,

**Fig. 2.1 Overview chart on health system**



Key: - - - - - contractual relations; ——— administrative relations

but when social health insurance was introduced, the chief doctors at the rayon hospital were made the lynchpin of all primary and secondary health care services in their catchment areas, until the family medicine centres were given their independence from 1 January 2008. Specialized and high-technology care is provided through the republican hospitals and national institutes, which are mostly based in Chisinau, and these are directly subordinate to the MOH. Emergency care services for the country are also subordinated to the MOH through the National Centre for Emergency Health Care. Service providers for emergency, primary, secondary and tertiary levels all contract directly with the NHIC for funding. By contrast, the preventive medicine network (based on the Soviet sanitary–epidemiological station network), which conducts public health monitoring, is subordinated to and directly financed through the MOH. A significant number of parallel health services are also provided through other ministries, which are financed from the state budget via the relevant ministries but which can also contract with the NHIC.

## 2.2 Historical background

Until the 18th century there were no formal health care institutions as such and no structured provision of health assistance or health services on the territory of Moldova. By the early 19th century, an increasing number of hospitals began to open, largely based in Chisinau and in major municipal centres. However, access to health care in rural areas was poor compared with that in the cities, a situation which continues to some extent to the present time. During the 19th century, Moldova was a peripheral Russian gubernia, so its health system was developed as part of the Imperial Russian model. In 1832, a special Constitutional Law was adopted in Imperial Russia that instituted hygiene and sanitary services to prevent smallpox and other contagious diseases. This early concern for public health was followed by further development and expansion of the public health sector. Health care delivery became more systematic and public health services were extended into rural areas. This was particularly marked in the territory of Bessarabia, which is a substantial part of the territory of present day Moldova. The zemstvo local government system was developed in Imperial Russia in the 1880s and its responsibilities covered the development of a local health system. The zemstvo system developed a wide network of health providers and aimed to bring medical care to all rural areas, focusing on practitioner-led services and client-group-specific health care issues. Progressive practitioners investigated rural public health issues and developed new forms of health care delivery. However, the prerequisites for sustainable development were lacking and advances were, at best, patchy. Despite these shortcomings, the role of zemstvo-led health care in Bessarabia was significant in extending the number and scope of both medical centres and physicians operating within the territory (Goroshenko et al. 1996).

Most of the gains made in the 19th and early 20th century were largely overturned by the First World War. Many of the new facilities closed. Private health care provision became increasingly dominant and the progressive momentum of the zemstvo period was lost. The post-war period (1918–1940) saw the unification of Bessarabia with Greater Romania. The union was influential both culturally and in terms of the territorial organization of health care delivery. Health services relied heavily on formal out-of-pocket payments, but at the same time a rudimentary Bismarckian insurance scheme emerged that divided health care delivery into a three-tier system related to ability to pay. The period was one of economic and cultural expansion. Although the population faced increases in a number of infectious diseases, such as bacterial dysentery, scarlet fever and malaria, during this time, the health system's capacity did increase. The number of health institutions and, in particular, the number of medical personnel grew. By 1940, there were 446

health institutions, 1055 physicians and 2400 nurses and midwives. During this period, public health was a focus for the Greater Romanian Government. Two TB sanatoria were opened. The control of malaria and typhus were also important activities. However, over 80% of all health care institutions on the territory of Moldova were destroyed during the Second World War (Goroshenko et al. 1996).

From the inception of the Moldovan Soviet Socialist Republic, steps were taken to control communicable diseases and prevent epidemics. However, the main health care reforms took place only after the Second World War, when the Soviet centralized health care system based on the Semashko model was introduced. This model is characterized by an extensive infrastructure, curative focus and a large number of health professionals. The Soviet period saw an overall expansion in both the funding and provision of health care. Between 1950 and 1960, the number of hospital beds grew from 27 to 44 per 10 000 inhabitants. Capital investment in the construction of health care institutions increased from 3.5 million roubles in 1955 to 40 million roubles in 1978 (Goroshenko et al. 1996). This focus on the provision of bed numbers persisted throughout the Soviet period. The capacity of municipal health care institutions increased from 189 beds in 1970 to 415 beds in 1994, and regional hospitals from 110 to 457 beds in the same period. Indeed, all indices determining hospital service and staff provision to the population increased between 1950 and 1994 (Goroshenko et al. 1996). The high provision of services was related to Soviet norms, which focused on high numbers of doctors and hospital beds rather than on outcomes of health care and other outputs. Alongside this, the centralized management and budgeting systems allowed little flexibility for local service management to improve fund utilization at the local level.

As soon as Moldova declared independence in 1991, new socioeconomic conditions threatened both health status and the inherited expansive health system. The health sector budget was cut dramatically both in terms of the percentage of GDP allocated to health and in real health expenditure per capita. The severe lack of funding for the health sector, combined with an emphasis on tertiary care and continued use of non-standard and more costly treatment protocols for some conditions, threatened the provision of the most basic health services for the Moldovan population. The national vaccination service was severely disrupted between 1990 and 1993 by a lack of resources. Many medical centres faced the physical deterioration of facilities and equipment and a lack of provision of basic drugs (MacLehose 2002). Under the inherited health system, emphasis in terms of facility provision and funding was given to the tertiary sector. Primary health care and preventive health services were relatively underresourced. The World Bank calculated that in 2000, the 17 tertiary level hospitals and 40 district hospitals consumed over 70% of total



health spending (World Bank 2000). Of this, most was estimated to have been spent on the physical infrastructure of the hospital buildings rather than on medical equipment and pharmaceuticals, treatment or staff salaries (World Bank 2000). Yet, many facilities had bed occupancy rates of only 20% and the poorest sectors of the population could not access services because of the prohibitive costs imposed through both formal and informal payment requirements.

## 2.3 Organizational overview

The MOH has overall responsibility for the population's health, but the financing of most services has been recentralized to the NHIC and the organization of primary and secondary care is now devolved to the rayon/municipal level. Tertiary services, highly specialized hospitals and public health institutes are the responsibility of the MOH, but only public health institutes and the blood service are funded directly from the MOH budget (Fig. 2.1).

The main participants in the health system are listed below with their prime functions and roles; however, it should be noted that this is a simplification and “rationalization” of a system that lacks clarity in terms of who actually does what on the ground, and it is likely to vary from one rayon to another. For example, it is not clear what responsibilities the MOH at the national/republican level has in relation to the rayon health authorities. The functions and activities of the sanitary and epidemiological service in relation to the central MOH, and relations between rayon health authorities and rayon health care providers, are also opaque. Clarifying the exact relationship between different participants in the decentralized regulatory system is, therefore, one of the key challenges for forthcoming reform efforts, as underlined in the National Health Policy (Government of the Republic of Moldova 2007b).

### Parliament

Every year, the parliament approves the “Annual Budget of the Republic of Moldova”, which includes the MOH budget and budgetary allocations to health insurance funds. A Parliamentary Committee on Health and Welfare monitors the activity of the MOH and interministerial coordination in the field of health services. The parliament also regulates the strategic direction of the health care system by issuing decrees, which are followed by ministerial orders. With the MOH, the parliament develops the health policy framework, which is then worked into a fully costed strategy and action plans for implementation by the MOH.

## Ministry of Health

The official name of the MOH has varied. In 2005, it became the Ministry of Health and Social Protection, but a separate MOH was re-established from 21 March 2007 (Government Official Decision No. 326). MOH departments are as follows:

- Administrative Apparatus (as a separate unit)
- Department of Policy Analysis, Monitoring and Evaluation
- Department for Health Protection and Preventive Medicine
- Department for Public Medical Services
- Department for Mother and Child Health
- Department of Individual Medical Services
- Department of Medical Technologies
- Department of Quality Management and Standards
- Department for Health Insurance
- Department for Human Resources
- Department of International Relations and External Assistance
- Legal Department
- Department of Economy, Finance, Accountancy and Administration
  - Economic–Financial and Planning Unit
  - Accountancy and Administration Unit
  - Capital Investment and Administration of State Property Unit
- Department for Support
  - Secretariat
  - Service for Complaints and Audience
  - Public and Civil Society Relations Unit.

The functions of the MOH include policy development, quality control and overall stewardship of the health care system and health reform programme. The national preventive medicine network, which has evolved out of the sanitary–epidemiological network, is also subordinate to and directly funded by the MOH. The MOH also directly finances some national programmes related to “socially important” diseases such as TB and HIV/AIDS. Specialized medical institutes, hospitals and clinics are also all directly subordinate to the MOH, although they contract directly with the NHIC for the funding of service provision. The same is true of the national emergency medicine network.

## **Ministry of Finance**

The Ministry of Finance works with the MOH to advise parliament on a suitable level of funding for health care services and to agree the annual health budget. Departments within the Ministry of Finance are also responsible for the auditing of contracts with the NHIC.

## **Ministry of Education**

The Ministry of Education is responsible for the provision of undergraduate medical education for health services staff. The MOH oversees the content of undergraduate education.

## **Other institutions running parallel health systems**

A number of other institutions run hospitals and other health services in parallel to the mainstream provision organized by the MOH. Institutions running parallel systems include the Ministry of Transport, Ministry of Internal Affairs, the Border Guard Department, the Department of Penitentiary Institutions, the Ministry of Defence, the Security Committee, the Trade Union Association and the State Chancellery. Additionally, the “Fourth Department” continues to provide special health services to certain ministry, government and other high-level officials. These parallel services operate within the health policy framework established by the MOH but have their own finance and management arrangements, and the MOH cannot unilaterally decide to rationalize these services (Section 3.3 *Revenue collection/sources of funding*, under *Other sources of finance*). It has been argued that patients using these parallel services should be cared for in public hospitals, but they are accustomed to going to the departmental hospital and these parallel services are often viewed as providing better quality care.

## **Local governments and municipalities**

Rayons and municipalities own and bear responsibility for governing health facilities in their respective areas. They are also responsible for local implementation of health-related policy initiatives, standards and guidelines.

## **National Health Insurance Company**

The NHIC was founded as an independent body in September 2001 to act as a single purchaser of health care services in Moldova. It is answerable

to the government, and a parliamentary representative is its chairperson. The NHIC has worked with the MOH to develop the basic legislative and regulatory framework for the introduction of mandatory social health insurance. Since the introduction of mandatory social health insurance, the NHIC has become the key actor in the health financing system. By law, the NHIC is a government subordinated state agency with an Administrative Council, Executive Board and Control Commission (*Comisia de Cenzori*). The Administrative Council is the supreme body of the NHIC, consisting of 15 members, including one representative of parliament, one representative from the President's Office, five representatives from the government (including representatives from the MOH, Ministry of Finance, and Ministry for the Economy), three representatives from the National Confederation of Employers, three representatives from trade unions, one representative from the medical profession and one representative from patient organizations. The Administrative Council meets at least four times a year in order to make most of the important decisions related to the functioning of social health insurance, including the approval of NHIC reports (Shishkin et al. 2006).

### **National Centre for Preventive Medicine**

Sanitary–epidemiological institutions maintain a vertical hierarchical structure and are accountable to the MOH through the National Centre for Preventive Medicine, which was created following reorganization of sanitary–epidemiological services in 1999. There are 36 branches, situated in each rayon and municipality, and these are responsible locally for implementing standards and guidelines for environmental health communicable diseases and occupational health. The National Centre for Preventive Medicine is also in charge of the immunization programme.

### **National Centre for Emergency Medicine**

Emergency services also maintain a hierarchical structure and are accountable to the MOH through the National Centre for Emergency Medicine, although the four emergency medicine stations covering their specified zones (central, north, south and Gagauzia) contract with the NHIC for funding. In addition to the four zonal emergency stations, there are 43 emergency substations, situated in each of the rayons, municipalities and territorial autonomous units.

## **Professional associations**

The Nurses Association of Moldova was founded in 1994 as a nongovernmental professional organization. It was formerly the Association of Medical Assistants. It is a dynamic organization, affiliated with the European Nursing Forum. There are also a number of professional medical associations, such as the Association of Surgeons, the League of Physicians and the Family Medicine Association. The *Sanatatea* trade union for medical personnel is also active and plays an important role in negotiating salary scales (Section 3.6 *Payment mechanisms*).

## **Patient groups**

Moldova is home to a number of local patient groups and advocacy organizations, including the Patient Rights Group, the Association of Patients on Haemodialysis, the Association of Diabetic Patients and the Association of Handicapped and Paralysed Patients. However, the capacity of patient groups to lobby at the national level remains limited at present.

## **Nongovernmental organizations**

A range of both international and local nongovernmental organizations (NGOs) focusing on health operates in Moldova. Local NGOs are increasingly important participants in the provision of health services. For example, in order to meet the needs of children abandoned in hospitals, one NGO has organized a specific ward for them at a paediatric hospital, with educational materials, toys, support from volunteer staff and a child-friendly environment (Duke et al. 2006).

## **International organizations**

International partners are very active in the health sector in Moldova, providing help in the form of technical assistance, training and aid and with a special focus on health system development, maternal and child health, HIV/AIDS prevention, TB control, and immunization. Multilateral agencies active in the country include the EU and the World Bank Group. The Global Fund to fight AIDS, Tuberculosis and Malaria (Global Fund) supports HIV/AIDS and TB programmes and the Global Drug Facility provides first-line drugs for TB management. Bilateral partners include the governments of Japan, the Netherlands, Switzerland and the United States. The Millennium Challenge Corporation supports efforts in strengthening transparency and accountability

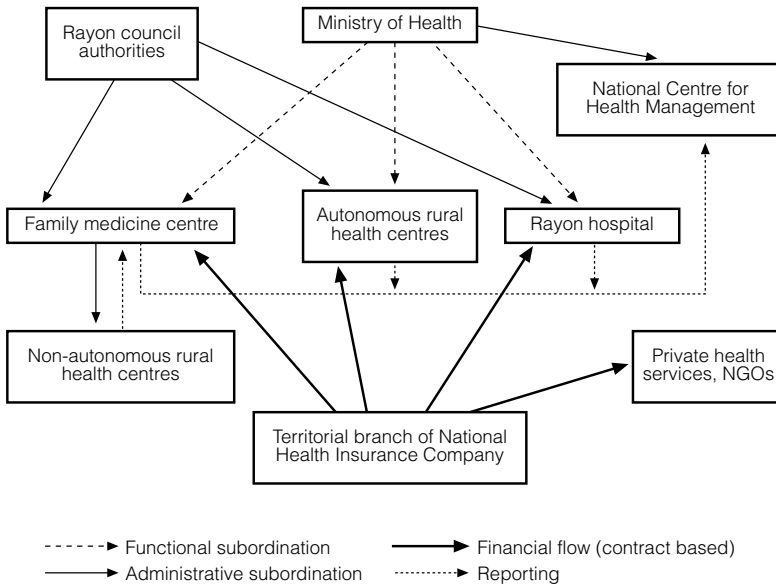
in the health sector. International NGOs such as the Red Cross, Pharmacists without Borders and the Soros Foundation have also made important contributions to health assistance. United Nations agencies are working in poverty reduction, integrated management of childhood illnesses, control of diarrhoeal diseases and acute respiratory infections, reproductive health and family planning, and HIV/AIDS prevention.

In theory, the MOH leads the health policy formulation process, both in terms of development and implementation; however, the devolved nature of the system (see below) means that local governments and health authorities clearly play an important role in the implementation of policy initiatives. The parliament, cabinet and NHIC also play a significant role in the approval of health policy. The policy formulation process is an iterative one, and new policies and strategies are the product of negotiations between the parliament and the MOH. The policy agenda is, therefore, set at the national level, but decentralization, following public sector reforms in 1999, has fragmented the implementation of health policy. Moreover, there is limited capacity at present for assessing policy output and implementation, so impact assessments do not necessarily feed back yet into the policy development process. However, the need for greater capacity in this area is well recognized.

## **2.4 Decentralization and centralization**

Since independence, there have been ambitious moves towards the decentralization of the Moldovan health system. Between 1991 and 1999, Moldova was divided administratively into 40 districts (rayons) and 10 towns. In 1999, the Law on Local Public Administration established 11 regional administrative units, comprising 10 counties (judets), one metropolitan area (the city of Chisinau) and the territorial autonomous unit of Gagauzia. Health budgets were directly allocated to primary health care facilities, judet hospitals and emergency services, which had the authority to independently manage these budgets. However, the Public Administration Law enacted in 2003 abolished the judet structure and replaced this with 32 districts (rayons), three municipalities and two territorial autonomous units, and it led to the reorganization of local health services into a single legal entity (comprising rayon hospital, primary health care and ambulatory specialist services) with budgets for each of the different services managed by the rayon chief doctor (Government of the Republic of Moldova and World Bank 2006). The 37 chief doctors thus had the entire local budget and income from the NHIC contract in their hands. The rayon chief doctor was responsible for budgetary

**Fig. 2.2 Organization of the health system at rayon level from 1 January 2008**



Source: Ministry of Health (2007), order number 404 (30 October 2007), Chisinau, Ministry of Health.

planning and budgetary control, execution of contracts with the NHIC and its 11 territorial branches, service design, procurement of equipment and consumables, and employment of staff. Staff salaries were set according to national norms specified in law (Section 3.6 *Payment mechanisms*).

Under this new unified structure, primary health care facilities no longer operated as separate legal entities but were accountable to the rayon chief doctor, who administered and was responsible for their budget. The funds from the NHIC and local government were transferred to the rayon hospital administration. The rayon chief doctor then allocated these funds to the subunits s/he directly managed according to MOH budgeting norms, which stipulated the allocation of resources to primary health care, specialist ambulatory services and hospital services. Despite the existence of separate budgets for different services, and even different subaccounts (Section 3.4 *Pooling of funds*), in practice, primary health care providers were not able to manage their own resources and the preconditions for open and hidden subsidizing of hospital services from resources allocated to primary health care arose as the contract with the NHIC allowed the rayon chief doctor to reallocate up to 25% of the primary health care budget to hospital care. Although this clause was changed in 2005, sequestration of primary health care funds was still common.

In order to address these deficiencies, increase the quality of primary health care and assure transparency in the utilization of financial resources intended for primary health care, the primary health care service at the rayon level was legally separated from the rayon hospital by Order No. 404 of the MOH (30 October 2007). As of 1 January 2008, the primary health care service at the rayon level consists of family medicine centres located in the rayon administrative centre and rural health centres located in rural areas (Fig. 2.2). Some rural health centres can operate as autonomous health institutions if all criteria for legal separation are met, such as having three family doctors and at least 4500 people registered on the lists of the family doctors. From 1 January 2008, according to the criteria of legal separation, 23 rural health centres started to operate as financially autonomous health institutions. All rayon family medicine centres and autonomous rural health centres are financed through funds from the NHIC.

## 2.5 Patient empowerment

Patients have little input into the health care system and there are no functioning mechanisms to allow the participation of the lay public in the policy-making process through the defining of priorities, financing and delivery mechanisms or in the evaluation of the outcomes of health providers. At present, nearly all health indicators are related to inputs and production and few data are collected or analysed for quality or user satisfaction. Patient complaints and needs are not routinely taken into account in health service decision-making (World Bank 2005).

Patient choice in the formal health care system is limited to their choice of individual practitioner, the choice of facility is fixed by their geographical catchment areas at the primary care level and by the referral system at the secondary or tertiary care levels. Consequently, there is little evidence of patients proactively choosing to register with one family medicine centre over another, for example. In urban areas, patient choice is more realistic, but not within the publicly funded system – if they have the funds, patients have the choice to simply opt out and pay direct fee for service.

After receiving a “referral for specialist consultation” from their family doctor, a patient can then choose a specialist, but only one working at the specific institution to which they were referred. Patients referred for non-urgent inpatient treatment by family doctors or specialists are reviewed by a Consultative Commission of Physicians and if the referral is considered appropriate, they then select the most appropriate hospital for the procedure.



The patient then receives their referral but cannot choose a different hospital for treatment; they have to go to the one they are assigned. However, there is a list of 80 diagnoses for which patients can have direct access to specialist care, these diagnoses include diabetes, asthma, TB, most cancers, some cardiovascular diseases and dermatovenerological conditions including STIs (Shishkin et al. 2006).

A population survey in 2001 showed that the majority of the population was not satisfied with the infrastructure of health facilities. This survey showed that only 13% of the population was “completely satisfied” or “very satisfied” with the health care system, while 84% believed it should be changed. Access was deemed inadequate and those surveyed felt that their complaints and needs were not taken into account when decisions were made about health service changes. On average, 55% of those visiting their family doctor and 46% of patients visiting a specialist paid for the consultation (Cercone and Ortiz 2001).

As reported by Atun (2007), public opinion surveys undertaken in 2002 and 2003 identified poverty, unemployment, rising prices, difficult living conditions, increasing crime rates and corruption as the most important problems for Moldovan society. In 2002, approximately 44% of the respondents surveyed were aware of the health reforms, but in 2003 this number had increased to 60%. In 2003, only 12% of the respondents were satisfied with the quality of medical services, with 46% “generally satisfied”, 28% “more or less satisfied” and 10% “not satisfied at all”. The low level of training of family doctors was of particular concern. In both of these surveys, strengthening of primary health care services and investment in health education (on healthy lifestyles) and preventive care were identified as priorities for the health care sector. The majority of respondents (55% in 2002 and 61% in 2003) supported the idea of having a family doctor, who was expected to provide more personal care with continuity for the person and the family. Both surveys found unofficial payments to doctors, nurses and other medical personnel to be widespread, with over half of respondents in 2003 acknowledging they had “unofficially paid” their physicians and other health professionals (Section 3.3 *Revenue collection/sources of funding*, under *Out-of-pocket payments*). The majority supported the introduction of official user charges to substitute for the unofficial payments, although 48% felt that in addition to official user fees they would have to pay unofficial charges. A large majority (77%) of the people surveyed in 2003 responded that they did not “have a permanent doctor” to consult with or follow a course of treatment free of charge (World Bank 2002b; Mocanu et al. 2003). Surveys conducted as part of the Moldovan Government public information campaign to inform the population of their entitlements under the new insurance scheme also revealed that health providers were not ready to meet the increased demand for health services (Rhodes 2007).

## **Complaint procedures (mediation, claims)**

According to the Law on Patients' Rights and Responsibilities (No. 263-XVI, 27 October 2005), the patient or his/her legal representative or close relative has the formal right to complain when he or she has suffered harm in connection with actions undertaken by health care providers as well as in connection with actions undertaken by state bodies or public employees who violate his/her rights as established by the legislation. Therefore, extrajudicial and judicial claims against the activity of health workers, health service providers and officials responsible for guaranteeing health care may be brought. Nevertheless, there is no wider involvement of citizens' organizations in health care decision-making and mediation of patients' complaints. Action to promote patients' rights and public involvement is now a priority, and there has been a national drive to adopt new specific regulation under the Law on Patients' Rights and Responsibilities.

Patients can address a formal complaint, as appropriate, to the hospital or primary health care unit administration, to the territorial health authorities, to the MOH, to health insurance organizations, to health professional organizations, to patients' associations, and to associations for health care customer protection. Also, patients can write and send a complaint to the government or the Parliamentary Commission for Social Protection, Health and Family. Each health facility is obliged to display information on patients' rights in a visible public place, as well as the methods and terms for making complaints, comments and suggestions. Health authorities should also publish reports at least once a year concerning the observance of rights and measures undertaken in this context. The protection of patients' rights, including complaint procedures, is also guaranteed by the following institutions:

- health insurance companies
- commissions (committees) for medical and bio-medical ethics
- physicians' professional organizations, patients' associations and other legally registered NGOs.

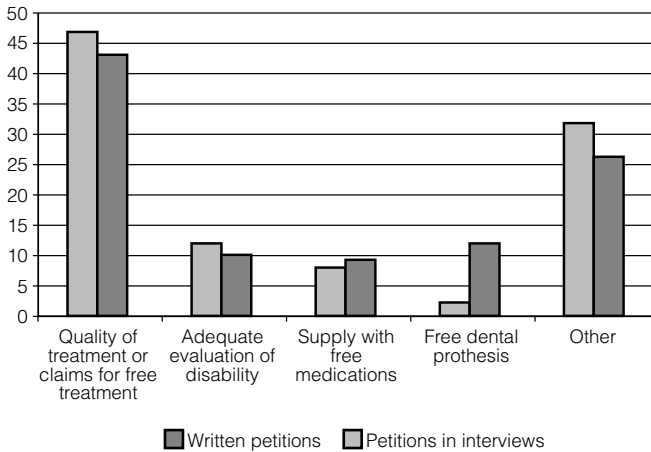
Usually, a complaint is made through standard procedures and is followed up by a written response issued in conformity with the Law on Petitioning (No. 190-XIII, 10 July 1994). According to this law, petitions are examined by the appropriate bodies within 30 days; those that do not need to be studied and examined further are examined immediately or within 15 days from the registration date. In exceptional cases, the examination term is extended by the head of the corresponding body, for a month at most, with mandatory notification of the petitioner. If the petition is within the competence of another body, it is sent there within three working days from the date of registration,

with mandatory notification of the petitioner. The remittal of petitions against the bodies or officials whose actions are being criticized is prohibited.

The petitioner has the right to defend his/her arguments personally to the body of officials that examines the petition, to benefit from the services of an attorney, to present additional materials, to be informed of the examination materials and to claim remuneration for damages according to the legislation. In the process of examining the petition, revealing information about the personal life of the petitioner without his/her consent is forbidden. If the claims expressed in the petition are considered justified, the body or official that took the decision regarding its fulfilment is bound to undertake measures for the remuneration of material damage and to resolve the issue regarding the responsibility of the offender for breaking the law. Administrative liability occurs in unfounded refusal or delay in examining a petition, in taking a decision not in accordance with the legislation, and in divulging information regarding the personal life of the petitioner without his/her consent. Petitioners who consider that their rights were infringed and do not agree with the decision of the body of officials examining their petition have the right to apply to an independent commission of health professional experts operating according to the regulations of the MOH or in court, within 30 days of the date of the decision communication.

If the patient or his/her legal representative disagree with the response or the decision made, they have the right to an independent professional assessment of their case, but so far the specialized body for negotiation (mediation) and health litigation solutions has not been established, and full independence of the expert appointed is not always guaranteed. High-level state officials (the president of the country, the head of the parliament, the prime minister) also allocate time for audiences with petitioners as necessary, but in any event at least once a month. The Board of the MOH organize audiences with petitioners at least twice a month, and the local government administrations and the administrations of health facilities hold them at least once a week. Within the MOH, an Audience Office is always open to visitors, allowing petitioners to resolve their emergency issues. In 2006, 1430 petitions were registered in the MOH, and the administration of the MOH and the officials of the Audience Office interviewed 2494 people to assess the range of petitions being brought (Fig. 2.3). Around half of the petitions were complaints about the quality of treatments or claimed free treatment, followed by petitions regarding the appropriate assessment of individuals' degree of disability, the supply of free medications and the supply of free dental prostheses. An internal health audit is being developed in the Moldovan health system with the support of the Millennium Challenge Account Project. Currently, there is no official aggregated information regarding the frequency with which patients use complaint procedures and mechanisms.

**Fig. 2.3 The structure of issues addressed in written petitions and in interviews with the Board of the Ministry of Health and in the Audience Office of the Ministry of Health, 2006 (in %)**



Source: Previously unpublished internal data from the Ministry of Health of Moldova

The rights of physicians are protected by the Law on Practicing the Medical Profession (No. 264-XVI, 27 October 2005). According to this law, physicians have the right to defend, including by judicial litigation, their right to exercise their profession and their right to protection against interventions of certain individuals and authorities in the exercising of their profession, except in cases of professional incompetence and professional fault. The physician has the right to refuse medical intervention (except emergency cases) and to refer the patient to another physician, if they lack the necessary professional skills; in the presence of adverse counterevidence against the medical intervention; if the intervention contravenes his/her ethical and moral principles; and if it is impossible to make adequate contact with the patient.

## Patient safety and compensation

Formally, medical institutions and health professionals are responsible for the safety of all phases and elements of a medical treatment, but mechanisms are undeveloped for continuously monitoring risks to prevent the poor functioning of health services, medical malpractice and errors. A survey on patient safety conducted in 2006 showed that only 52.1% of the heads of health institutions consider patient safety and health care quality to be a priority in their professional activity; the remainder (47.9%) did not consider it a priority (Ciocanu et al. 2007). Also, 61.7% of respondents felt that health institutions have an inadequate legal and normative basis for developing patient safety

and quality of health care. Most respondents (83.3%) emphasized that there was no structure responsible for health care quality and patient safety within their health institution.

In Moldova, there is no adequate system for reporting unfortunate events, and medical errors are not made public. So far, no mechanism based on the permanent recording of all medical errors with the accumulation of all information in one nationwide database has been implemented. However, at the institutional level, all proven errors should be registered and reported, together with other statistical data, to the National Centre of Health Management (formerly the National Scientific–Practical Centre of Public Health and Management). However, despite the fact that declaring patient safety issues is mandatory, unfortunate events that harm patient health are only included in mandatory reports in 5.4% of instances; medical errors (either the lack of timely medical assistance or actions that adversely impact on patient health) in 5.3% of cases; accidents without serious negative consequences for patient health in 3.6% of cases; and hazards (unsafe treatment methods, broken health devices, etc.) in 1.8% of cases (Ciocanu et al. 2007). Only in 7.3% of cases was the declaration voluntary, and without the application of sanctions in 1.3% of cases; sanctions were applied in 93.9% of cases. This situation indicates that unfortunate events are being concealed by health workers. In 2008, with the support of the Millennium Challenge Account Project, the Concept on Health Service Quality Management in Health Institutions is to be developed and should stipulate the necessary measures on protecting patient safety, health service quality assurance and the registration of unfortunate events. A specialized department in the National Centre of Health Management is also planned for 2008, which should monitor and register all medical errors. The department should then analyse the causes of these errors and publish patient safety reports, including on the web site of the MOH.

At the moment, health care-related harm is not regulated, and medical errors are not compensated. According to the present legislative plan, the MOH is required to prepare draft legislation on physicians' civil liability insurance with the aim of establishing the civil liability for harm done to third parties in the course of their work through negligence. A patient may be harmed because a physician failed to follow appropriate diagnostic and treatment protocols or because a health care facility failed to implement appropriate procedures for ensuring adequate hygiene or proper patient care. Civil liability applies to both physicians and to health care facilities, and this could often involve parallel lawsuits against a physician and against the facility where the physician works. Because of limited resources within the health sector, and the fact that most of the health care system is public, not private, there is a need for the MOH to create strict limits on the level of compensation by establishing guidelines

and norms for determining victim compensation. Although so far it is not clear which state agency would be responsible for setting those limits, it has been decided that the level of compensation paid should be compatible with other programmes that provide compensation – such as the invalidity pensions paid to victims of accidents in the workplace.

Although specialized patient safety agencies are not yet established, these functions are partially performed by the National Council for Health Evaluation and Accreditation and the National Centre of Preventive Medicine. Both institutions are involved in the periodic assessment of health providers, with the aim of reducing risk, improving the quality of services and preventing the repetition of errors for future patients. A new national strategy on health quality management and patient safety improvement has been drafted and should be officially approved in the first half of 2008.

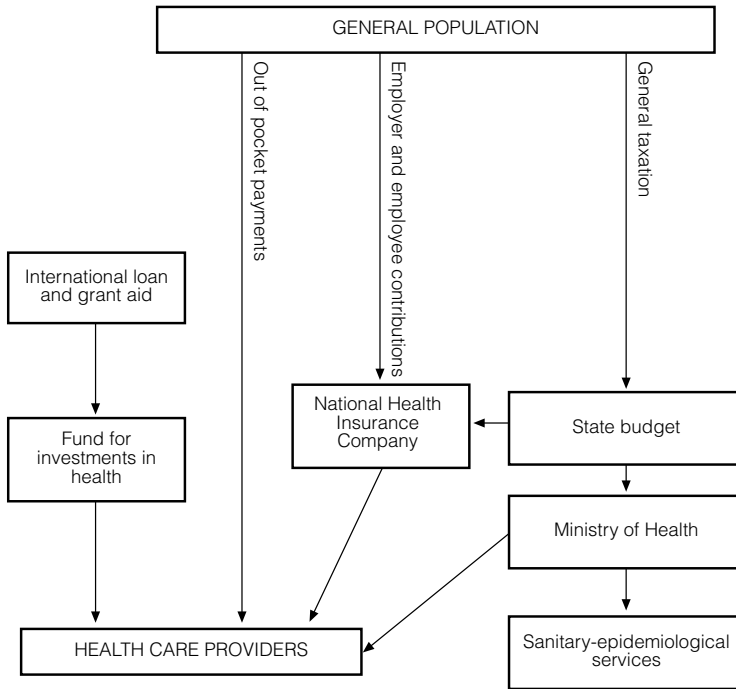
## 3. Financing

The Moldovan Government implemented mandatory social health insurance from 1 January 2004, and this development fundamentally changed the financing of the health care system. Services are now funded through a mix of prepaid employer and employee health insurance contributions, contributions from the self-employed, general taxation revenues to cover basic services for uninsured people and to pay contributions for vulnerable groups, and out-of-pocket payments from patients. There are also central budget transfers to the MOH for preventive medicine services, blood services, national programmes, teaching institutions and system administration (Fig. 3.1).

### 3.1 Health expenditure

Reduced economic activity and the fall in GDP following independence in 1991 adversely affected government budget allocations to the health sector, which suffered a serious decline from 1993 to 2003. Between 1994 and 1997, the Moldovan Government contributed approximately 6% of GDP to financing the health sector, while total health expenditure was approximately 8.3% of GDP (World Bank 2005). In 1999, following the fiscal crisis in the Russian Federation, Moldovan Government expenditure on health fell from 4.3% to 2.9% of GDP, while total health expenditure fell from 7.1% to 5.6% of GDP (Table 3.1). However, the government share of health expenditure and health expenditure overall have been steadily increasing since then (see Fig. 3.3, below), and according to the WHO estimates for 2004, public health expenditure as a percentage of total health expenditure in Moldova was 56.8%, which is on a par with the CIS average of 56.3% (WHO Regional Office for Europe 2007). However, it should be noted that until the implementation of mandatory social health insurance in 2004, a significant area of public health

**Fig. 3.1 Financial flow chart**



expenditure was the payment of arrears in the system. In 1999, only 65% of public funds were actually available to purchase health care services; 35% went to pay arrears (World Bank 2005). The majority of arrears were in salaries and social fund contributions for staff. This had serious implications for revenue generation and for the prevalence of informal out-of-pocket payments, which were levied throughout the system (Section 3.3 *Revenue collection/sources of funding*, under *Out-of-pocket payments*). Private health expenditure is in the form of out-of-pocket payments, both formal and informal charges as well as direct fee-for-service payments; while private health expenditure has been decreasing as a proportion of health expenditure (43.2% in 2004 according to WHO estimates), it was still high compared with the average for the WHO European Region in 2004, which was 25.5% (WHO Regional Office for Europe 2007).

For 2004, WHO estimates put Moldovan public health expenditure at 4.2% of GDP (Table 3.1), and total health expenditure at 7.4% of GDP, which is close to the average for the WHO European Region (Fig. 3.2). For countries of the CIS, total health expenditure as a percentage of GDP in Moldova is high, and



**Table 3.1 Trends in health expenditure in Moldova 1998–2004, WHO estimates**

	1998	1999	2000	2001	2002	2003	2004
Total health expenditure (US\$ PPP per capita)	130	102	115	125	146	166	138
Total health expenditure (% of GDP)	7.1	5.6	6.1	6.1	6.4	6.7	7.4
Public health expenditure (% total health expenditure (% GDP))	60.8 (4.3)	51.4 (2.9)	48.5 (3.0)	48.7 (3.0)	51.8 (3.3)	51.7 (3.5)	56.8 (4.2)
Private health expenditure (% total health expenditure (% GDP))	39.2 (2.8)	48.6 (2.7)	51.5 (3.1)	51.3 (3.1)	48.2 (3.1)	49.7 (3.3)	43.2 (3.2)

Notes: GDP, gross domestic product; PPP, purchasing power parity.

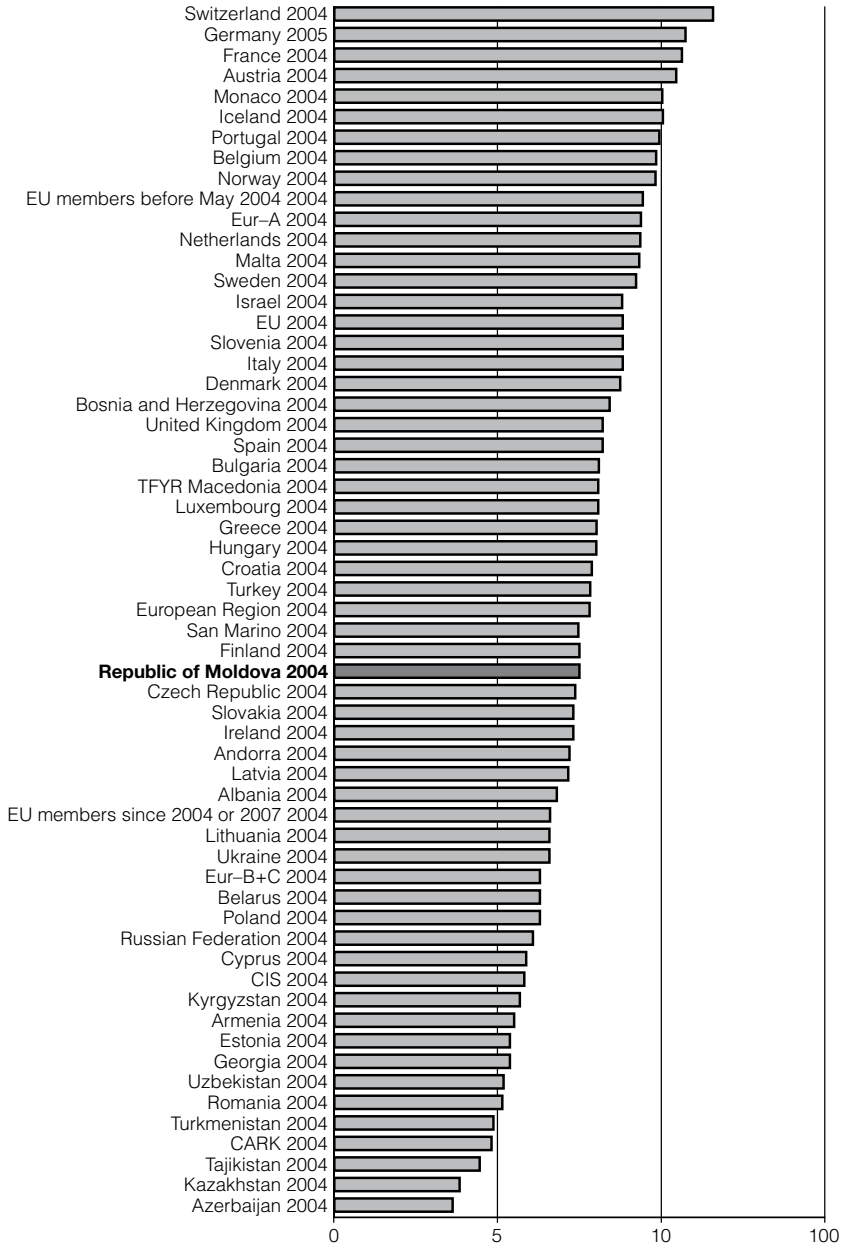
Source: WHO Regional Office for Europe 2007.

increasing at a faster pace than elsewhere in the region (Fig. 3.3). However, in terms of purchasing power parity (PPP), health expenditure in Moldova is one of the lowest in the WHO European Region, and it is significantly below the average for countries of the CIS (Fig. 3.4).

According to official data, Moldova spent 9% of GDP on health in 2005, of which public expenditure accounted for 4.3% of GDP, private expenditure 4.0%, and international grants and loans 0.7%. However, these data do not include informal payments, which are estimated at 1.2% of GDP; if these were included, total health care expenditure would equal 10.2% of official GDP. However, this still does not take into account the significant informal economy in Moldova, as this is not reflected in official GDP calculations (Shishkin et al. 2006).

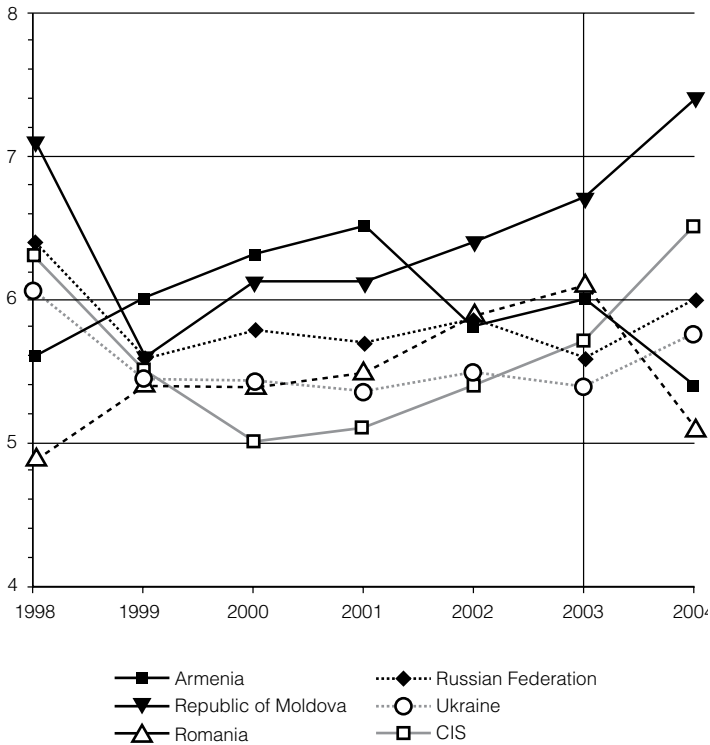
Per capita expenditure on health varies widely across the country. For example, in the city of Chisinau in 2000, per capita expenditure was US\$ 109 while in the wider Chisinau region it was only US\$ 56, although key health indicators such as the infant mortality rate in the Chisinau region were significantly worse than in the city (World Bank 2003). However, the disparity in health expenditure between regions is considerably narrower than it was prior to the introduction of a relatively simple capitation allocation formula. According to this formula, resources from the central budget were allocated to the regional budgets according to the percentages of the population younger than 4 years of age, between 4 and 65 years, and over 65 years. Each age group had a relative weighting in determining resource allocation levels (World Bank 2003). With the introduction of mandatory social health insurance, these budgetary transfers ceased, and per capita and activity-based funding now comes through the NHIC to health care providers in the 32 rayons on the assumption that 20% of the population is uninsured (Section 3.4 *Pooling of funds*). However, beyond the rayon level, line-item budgeting is still being used.

**Fig. 3.2 Health expenditure as a share (%) of GDP in the WHO European Region, latest available year**



Source: WHO Regional Office for Europe, 2007.

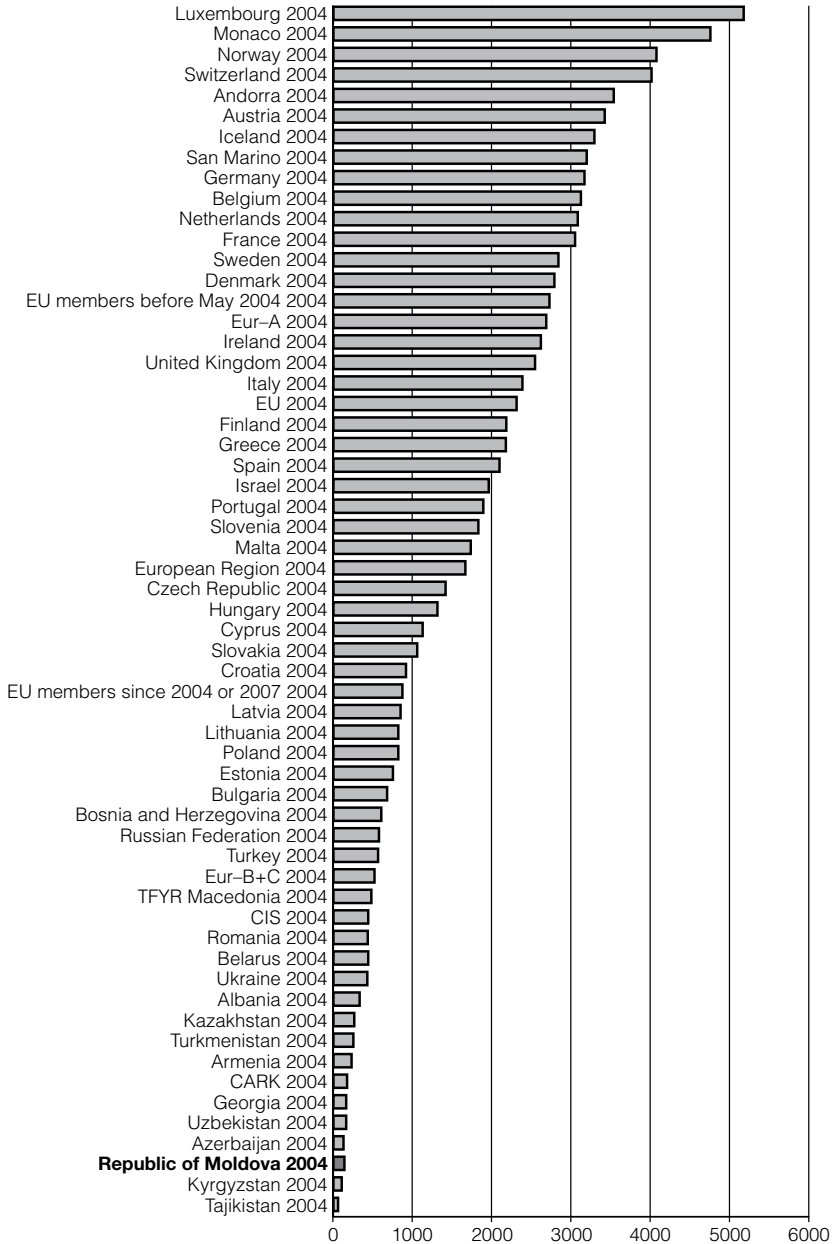
**Fig. 3.3 Trends in health care expenditure as a share (%) of GDP in Moldova and selected countries, 1998–2004, WHO estimates**



Source: WHO Regional Office for Europe, 2007.

There have been concerted efforts to shift the focus of health care expenditure away from curative services in favour of primary health care services, although measuring the scale of this shift is difficult. Between 1998 and 2001, the percentage of expenditure allocated to secondary hospital care declined from over 75% to 58%. The percentage of hospital spending allocated to the tertiary level republican hospitals remained constant (World Bank 2003). The allocation to primary health care services increased in proportion to the decrease in allocations to hospital care – from 10% of total government expenditure on health in 1999 to 26% in 2003. As part of the 1997–2003 Health Sector Strategy, in order to reorientate the system away from curative care to primary health care services, regulations were issued stipulating that 35% of local health care budgets (27% of government expenditure) should be allocated to primary health care, with 45% to hospital services, 15% to emergency services and 5% to specialist hospital services (World Bank 2005). However, there is evidence to suggest that hospitals continued to receive up to 80% of local health budgets (Atun 2007).

**Fig. 3.4 Health expenditure in US\$ PPP per capita in the WHO European Region, latest available year, WHO estimates**



Source: WHO Regional Office for Europe, 2007.

## 3.2 Population coverage and basis for entitlement

**Table 3.2 Health insurance coverage rates by group, 2004**

	Including (%)		From total uninsured (%)		From total working uninsured (%)			
	Insured	Uninsured	Not working	Working (%)	Employed	Non-agriculture self-employed	Agriculture self-employed	Other categories
0–14	100.0	–	–	–	–	–	–	–
15–24	78.2	21.8	39.6	60.4	55.5	7.5	10.6	26.5
25–34	49.2	50.8	32.0	68.0	51.3	9.1	26.3	13.3
35–44	49.3	50.7	25.9	74.1	44.4	10.9	40.0	4.7
45–54	60.5	39.5	23.3	76.7	35.8	3.0	54.4	6.8
55–64	79.0	21.0	33.0	67.0	26.5	7.4	61.7	4.4
65–74	100.0	–	–	–	–	–	–	–
75+	100.0	–	–	–	–	–	–	–
<b>Total</b>	<b>75.7</b>	<b>24.3</b>	<b>29.5</b>	<b>70.5</b>	<b>43.7</b>	<b>7.8</b>	<b>38.5</b>	<b>10.0</b>

Source: Government of the Republic of Moldova and World Bank 2006.

Since 2004, Moldova has provided health care coverage through a combination of mandatory social health insurance with a single NHIC and some health care services provided through a number of government-funded and internationally funded national programmes that target specific priority health issues (Appendix 10.3). The economically active resident population is obliged to contribute a proportion of their wages through a payroll tax, or pay a flat rate lump sum where they are self-employed (the self-insured population) (Table 3.2). Employees are no longer covered if their payroll contributions have not been received by the NHIC for more than two months in a row. Contributions for the rest of the population are paid by the government from the state budget. Initially, the state committed to insure the following categories, which were deemed vulnerable populations: children of preschool age, children in full-time education, students in full-time vocational or higher education, and postgraduate students on mandatory study programmes. In 2004, this was expanded to include pensioners, pregnant women and those in postpartum care, and officially registered unemployed persons – in essence the state pays the contribution for all the registered non-working population.

While ensuring coverage of the whole population has been a key aim of the recent implementation of mandatory social health insurance, some vulnerable population groups are not covered either through payroll or government transfers. The number of self-employed (individual farmers, individual entrepreneurs in the service sector and small commerce) was estimated to be

400 000 in 2005, or 33% of the working age population permanently living in the country, which is a very high proportion of the general population. Only 30 000, or 7.5%, of self-employed people bought the mandatory social health insurance policies in 2005 (Shishkin et al. 2006). Since economic reforms in rural areas have “decollectivized” the large state-owned farms of the Soviet era, many households engaged in subsistence farming would be considered self-employed (Gorton and White 2003). According to survey data, more than half of those who did not have a social health insurance policy in 2005 said it was because it cost too much, while a third reasoned that they did not need it (Shishkin et al. 2006). There is anecdotal evidence to suggest that there is a preponderance of people with chronic diseases among those without mandatory social health insurance coverage, so it could also be argued that adverse selection has taken place. The estimate used in official calculations is that 20% of the population is not covered by health insurance, but this does not take into account wide regional variations. For example, the NHIC has found that coverage levels in 2004 varied from a maximum of 85% in Chisinau municipality to only 58% in the rural Cahul rayon (Government of the Republic of Moldova and World Bank 2006). The overall proportion of uninsured among the population was found to be 24.3% (see Table 3.2).

Table 3.2 shows that all pensioners aged over 65 years and all school-age children were covered by mandatory social health insurance in 2004, but only half of those aged 25–44 were in the system, although most were in employment. Of the uninsured in this age group, 82% were permanent and occasional employees or self-employed farmers; for older age groups, self-employed farmers progressively became the most important group of uninsured workers (Government of the Republic of Moldova and World Bank 2006). Data from the NHIC also show that women had higher health insurance coverage rates than men (78.5% versus 72.4%). For men, the critical cohorts were those aged 25–44 years, where more than 55% were not covered by health insurance, while unemployed women were more seriously affected by lack of insurance than unemployed men (Government of the Republic of Moldova and World Bank 2006; Table 3.3). In total, more than 33% of the uninsured women had no formal employment in 2004, while among men the figure was 23%. This situation suggests that women face higher barriers to being insured when they are unemployed than men. In spite of their work status, a large number of male workers were uninsured: three-quarters of the uninsured men worked. The composition of unprotected workers was similar between men and women (Government of the Republic of Moldova and World Bank 2006).

**Table 3.3 Health insurance coverage rates by age and sex, 2004**

Sex, age range (years)	Including (%)		From total uninsured (%)		From total working uninsured (%)			
	Insured	Uninsured	Not working	Working	Employed	Non-agriculture self-employed	Agriculture self-employed	Other categories
<b>Men</b>								
0–14	100.0	–	–	–	–	–	–	–
15–24	74.2	25.8	27.2	72.8	57.1	8.9	7.1	27.0
25–34	45.0	55.0	20.1	79.9	54.7	7.8	28.0	9.5
35–44	42.1	57.9	24.8	75.2	48.9	10.0	40.2	0.9
45–54	58.2	41.8	19.0	81.0	40.7	4.8	52.3	2.3
55–64	73.8	26.2	30.8	69.2	34.4	2.7	62.9	–
65–74	100.0	–	–	–	–	–	–	–
75+	100.0	–	–	–	–	–	–	–
<b>Total</b>	<b>72.4</b>	<b>27.6</b>	<b>23.2</b>	<b>76.8</b>	<b>48.4</b>	<b>7.4</b>	<b>37.0</b>	<b>7.2</b>
<b>Women</b>								
0–14	100.0	–	–	–	–	–	–	–
15–24	82.0	18.0	56.3	43.7	51.8	4.5	18.3	25.3
25–34	53.0	47.0	44.7	55.3	46.0	11.0	23.8	19.1
35–44	55.4	44.6	27.1	72.9	39.3	11.8	39.9	9.0
45–54	62.8	37.2	27.9	72.1	29.9	1.0	56.9	12.3
55–64	83.0	17.0	35.6	64.4	16.3	13.5	60.2	10.1
65–74	100.0	–	–	–	–	–	–	–
75+	100.0	–	–	–	–	–	–	–
<b>Total</b>	<b>78.5</b>	<b>21.5</b>	<b>36.6</b>	<b>63.4</b>	<b>37.4</b>	<b>8.4</b>	<b>40.5</b>	<b>13.8</b>

Source: Government of the Republic of Moldova and World Bank 2006.

There is also significant geographical disparity in coverage rates. On average, coverage rates in urban regions were almost 8% higher than in rural settlements (80% versus 72.6%). Coverage rates also differed significantly between different sizes of urban settlements. For example, the coverage rate in 2004 was 85% in big towns but only 72% in smaller towns (Government of the Republic of Moldova and World Bank 2006). In urban areas, uninsured workers in formal employment represented 76% of the total uninsured workforce, while in rural areas, self-employed farmers accounted for 50% of the uninsured workers. In other words, 20% of the rural population and 12% of the urban population were uninsured despite being in formal employment at the time the NHIC made these estimates (Government of the Republic of Moldova and World Bank 2006). Coverage gaps also tended to affect rural men much more than rural women. First, the gap in health insurance coverage rates was narrower between urban and rural female cohorts than between male

cohorts (5.3% versus 9.7%). Second, the difference in coverage rates between women and men was narrower in urban rather than in rural areas (3.3% versus 7.7%) (Government of the Republic of Moldova and World Bank 2006).

Article 36 of the Constitution of Moldova (1994) guarantees a minimum provision of health services to the population that is free of charge (Minimum Package of Services). This minimum level, which the state is responsible for financing, was defined in the “Basic Law on Health Care” enacted in 1995. The Minimum Package of Services includes the following (Atun 2007):

- primary health care services provided by a family doctor in an ambulatory care unit or at home;
- consultations with specialists in polyclinics and hospitals (when patient is included on the family doctor’s list and is referred by the family doctor);
- a limited range of diagnostic tests and elementary investigations conducted in ambulatory laboratories (when prescribed by the family doctor);
- immunization (through the National Immunization Programme);
- urgent and emergency services for life-threatening situations; and
- hospital care for the treatment of TB, mental disorders, cancers, asthma, diabetes, HIV/AIDS and some other infectious diseases.

This Minimum Package of Services is available to the whole population whether or not they are currently insured; the reorientation of the health care system to one based on primary health care meant that ensuring broad access to primary health care services was of key importance. In addition, there are the national programmes, available to all Moldovan citizens regardless of insurance status (Appendix 10.3).

Benefits for the insured were stipulated in Government Resolution No. 1591 passed in December 2003, which defined the Basic Benefits Package of Health Care Services under Mandatory Health Insurance (BBPMHI), and the Statute of the NHIC (approved by Government Resolution No. 156, 2002). Benefits include (a) emergency prehospital medical assistance, (b) primary medical assistance, (c) specialized ambulatory medical assistance, (d) inpatient medical assistance, and (e) other services related to medical assistance. The services stipulated in the BBPMHI and the contracts between the NHIC (or its territorial branches) and health care providers follow the Minimum Package of Services approved by the government, which was changed to include (a) antiepidemic prophylactic measures and medical services within the national programmes stipulated in the state budget; (b) prehospital medical assistance, in case of major medicosurgical emergencies that endanger the life of the person; (c) primary medical assistance provided by family doctors, which covers clinical examination (subjective and objective) and recommendations



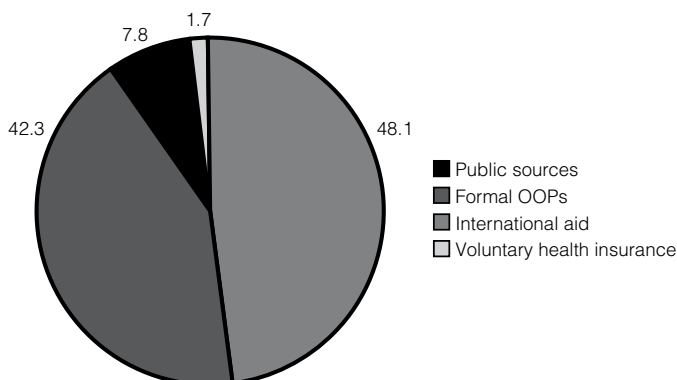
for investigations and treatment; and (d) medical assistance, stipulated in the BBPMHI. In 2005, this was expanded to include the services of specialized care professionals, dentists and financial subsidies for drugs for patients with hypertension (World Bank 2005). Under the NHIC contract with the rayon primary health care authorities, primary health care services delivered by the family doctors cover observation of the development of children under five; implementation of the vaccination programme; regular preventive checks of adults; and detection, treatment and supervision of patients with chronic and socially important diseases (TB, cancer, cardiovascular diseases, diabetes, hepatitis, cirrhosis and HIV/AIDS).

The benefits package for the insured population was defined by the MOH in collaboration with the NHIC. These bodies decide on which services to include on the basis of affordability (i.e. whether NHIC revenues are sufficient to actually cover a service) and health benefit to the population. For this reason, the emphasis has been on developing primary health care as the cornerstone of the health care system and ensuring broad access to primary health care services. The targets for the National Health Policy and the health sector overall relate to achieving Millennium Development Goals but are also strongly influenced by “Health for All” policies and the Moldova–EU Plan of Action (Government of the Republic of Moldova and European Union 2005; Government of the Republic of Moldova 2007b).

However, the relatively large number of people who are not covered by mandatory social health insurance, the very high levels of informal payments and the cost of pharmaceuticals all act as major barriers to large sections of Moldovan society in accessing health care services. It should also be noted that procedures which are not included in the Minimum Package of Services, the BBPMHI or one of the national programmes must be paid for out of pocket. This includes some high-technology diagnostic procedures (such as magnetic resonance imaging) and some treatments, but it also affects access to basic services. For example, it has been argued that increasing financial constraints have negatively affected women’s access to obstetric care as some reproductive health services, including abortion, have become fee based and are not covered by social health insurance (Comendant 2005). From 1955 to 1998, abortions were performed nominally free of charge, although nearly all women made unofficial payments to medical personnel. In 1998, official charges were introduced for termination of pregnancy (37–65 lei; US\$ 5) and as this procedure is not covered by health insurance, the price has risen to 170–250 lei (US\$ 20). In the private sector, prices are between 300 and 900 lei (US\$ 25–70) (Comendant 2005). There are no official categories of women for whom fees are waived.

### 3.3 Revenue collection/sources of funding

**Fig. 3.5** Percentage of total expenditure on health according to source of revenue, 2005



Source: Ministry of Health and Social Protection/National Bureau of Statistics data cited in (Shishkin, Kacevicius et al. 2006).

**Table 3.4** Sources of revenue as a percentage of total expenditure on health, 2000–2005

	2000	2001	2002	2003	2004	2005
Public expenditure on health (% total health expenditure)	33.2	36.0	40.6	42.3	46.7	48.1
Formal out-of-pocket payments (% total health expenditure)	64.7	60.8	53.2	51.5	45.8	42.3
International loan and grant aid (% total health expenditure)	1.3	2.0	3.5	3.3	5.8	7.8
Voluntary health insurance contributions (% total health expenditure)	0.7	1.2	2.6	2.9	1.8	1.7

Source: National Bureau of Statistics/Ministry of Health and Social Protection data cited in Shishkin et al. 2006.

Before 2004, funding for the health system came from two principal sources: general revenues allocated to the health sector through central and local budgets and out-of-pocket payments made by patients directly at the point of service. However, following the successful piloting of mandatory social health insurance in the Hincesti region, mandatory social health insurance was extended nationwide from January 2004. Consequently, there is now an additional channel for health care funding through employer and employee contributions to the NHIC (Fig. 3.1) as well as general revenues allocated to the health sector through central budgets and direct out-of-pocket payments. International donor and loan aid to the health care system has also been substantial (Fig. 3.5 and Table 3.4).

## Compulsory sources of finance

The main source of funding for the Moldovan health system remains budgetary transfers from general taxation: value added tax, income tax, excise duty, foreign trade tax and others. Moldova has 0% profit tax but it taxes 15% of dividend. Value added tax is 20% and accounts for two-thirds of revenue collection. There are no earmarked “health” taxes, such as on tobacco products. In the past, tax evasion was a persistent problem for the Moldovan Government in trying to cover the costs of the population’s basic health and welfare needs (Cashu 2000). The tax system was inconsistent and there was poor institutional capacity for revenue collection. Moreover, raising taxes to increase revenues had served to push people further into informal employment, while raising the level of social welfare contributions served to further weaken the financial discipline of Moldovan enterprises, which simply sought out new evasive strategies (Cashu 2000). However, revenue compliance has increased significantly since 2005, and appropriate reforms to improve this sector have been under way. The implementation of mandatory social health insurance in January 2004 would appear to have improved the financing of the health system in Moldova.

When mandatory social health insurance was first mooted on paper in 1998, it was hoped that the scheme would open up a new stream of funding for the health system and so increase revenues. However, it was fiscally impossible to implement mandatory social health at that time. The process was revived in 2002, but this time rather than mandatory social health insurance being used as an extra stream of funding it was seen as a good instrument for improving quality and efficiency in the system by reforming the contracting and purchasing of services (Section 7.1 *Analysis of recent reforms*). Since 2002, the MOH has worked with the NHIC (founded in 2001) to define the basic package of services that would be guaranteed to the whole population (see above). The NHIC now contracts with health facilities to provide the services defined in the basic package, with family doctors paid on a capitation basis plus performance bonuses for reaching specified public health targets (such as immunization rates in their catchment areas) and hospitals paid according to a case-based rate. The contracting has meant a change in the status of health care organizations from budget-dependent agencies to autonomous public organizations.

As part of a UNICEF project, mandatory social health insurance was piloted from July to December 2003 in the Hincesti region. During the pilot, mandatory health insurance contributions were established at a 2% payroll tax for employers and employees in the region. The contributions for pensioners, children, students and officially registered unemployed were established at

169.68 lei (US\$ 12.8) for a half-year, and the total amount of public funding of the rayon health care system increased 1.8 times (World Bank 2005). All health care facilities were merged into one legal entity and primary health care was expanded through the employment of physicians in residency training as family doctors. The pilot was deemed a great success and the nationwide roll-out began in January 2004, with appropriate amendments in 2003 to the Law on Mandatory Social Health Insurance of 1998. The contributions nationwide are set by the government at a flat rate of 2% of monthly salary payable by the employee and 2% payable by the employer. Contributions for all categories of the non-working population (pensioners, registered unemployed, schoolchildren, registered students, people with disabilities, etc.) are made from the central state budget. In order to offset the cost of these compulsory payroll contributions to the employees, income tax was reduced by 2%.

Moldova has avoided the mistakes of some other transitional countries that introduced mandatory social health insurance schemes where contributions for the non-working population were supposed to all come from regional budgets and the level of the contributions were not strictly regulated by law. In Moldova, the implementation of mandatory social health insurance has meant a strong recentralization of budget funding for health, and the share of central government expenditure in general government expenditure on health was 95% in 2005 and estimated at almost 100% in 2006. The principle of equivalency is also fixed in law so that the contributions for different kinds of insured are equivalent amounts, thus binding budget contributions to the health insurance company for the nonworking population with employee/ employer contributions (Shishkin et al. 2006).

The strong relationship between the amount of insurance contributions for different categories of insured to the average per capita cost of the universal minimum benefit package has also been central to the successful implementation of social health insurance in Moldova. According to the Law on Mandatory Social Health Insurance amendments of 2003, the rate of payroll tax paid as a contribution for the working population and the per capita contributions for nonworking populations and self-employed persons have to be equivalent to each other and to the average per capita cost of the guaranteed BBPMHI. This mechanism stipulated the clear financial responsibility of the government for the population insured by the state and allows for annual increases in the NHIC to cover the growth in the cost of the BBPMHI. The introduction of this mechanism has been very positive for linking free health care guarantees with public health funding and assuring the stability of the latter. At the same time, this has also forced increases in the budget contribution according to the growth in payroll contributions, where the rate of the latter remains unchanged. As a result, from 2007, the budget contribution for people insured

by the state has to be not less than the ratio of the three-year average of public health expenditures to the general government expenditure, which is 12.1% (excluding the funds collected from payroll contributions). The contribution from employers and employees increased to 2.5% of wages each in 2007, and 3.0% in 2008.

## **Out-of-pocket payments**

In Moldova, out-of-pocket payments include direct payments for goods and services not covered by mandatory social health insurance, cost-sharing co-payments or official user fees for goods and services covered by mandatory social health insurance, and unofficial informal payments direct to health care providers for services that should actually be fully funded. Informal payments and gifts were a feature of the system in the Soviet era and expanded following Moldovan independence in order to fill the funding gap for health care during times of fiscal crisis (Allin et al. 2006). According to a UNICEF household survey, average per capita out-of-pocket expenditure by 2000 was 15.2 lei (US\$ 1.2) per month per household, amounting to approximately 220 million lei (US\$ 17 million) and 50% of total health expenditure in 2000. Approximately 80% of out-of-pocket expenditure was for pharmaceuticals, 12% for investigations, 6% for consultations and 3% for transport (World Bank 2005). Out-of-pocket payments grew as public financing of the health care system contracted. In 1999, formal user fees were introduced for some diagnostic procedures (e.g. laboratory tests, X-ray films, etc.) and inpatient care (a certain amount per bed-day). Formal user fees were introduced in order to improve transparency in the system for payments to service providers and to reduce informal payments, as well as providing an additional stream of funding. However, patients did not always know what the official rates of co-payments were and could be informally overcharged. Consequently, there has been much emphasis on improving transparency in the system by raising awareness of the formal co-payment prices for different services and procedures and ensuring that these are clearly displayed in all facilities.

Although the balance of payments is shifting, private expenditure as a proportion of total health care spending in Moldova is still very high, and 1402 million lei (US\$ 109.7 million) or 42.3% of total health expenditure in 2005 was from formal out-of-pocket payments (Table 3.4). These payments included 1224 million lei (US\$ 95.8 million, or 36.9% of total health expenditure) on drugs and medical goods for self-treatment and outpatient care and 178 million lei (US\$ 13.9 million, or 5.4% of total health expenditure) of formal payments for services provided in medical facilities, predominantly dentistry services, which are now almost entirely private. However, these official figures

seem too low as the World Bank has estimated the total amount of informal payments to be 408 million lei (US\$ 33.3 million) in 2004 and 444 million lei (US\$ 34.7 million) in 2005, based on national survey data (Shishkin et al. 2006). Expenditure on health care derived from out-of-pocket payments is significantly higher in urban areas than in rural areas and highest in the large cities of Chisinau and Balti (World Bank 2003). Public opinion surveys financed by the World Bank in 2002 and 2003 found that the unofficial payment of doctors, nurses and other medical personnel was widespread, with over half of respondents in 2003 saying they had made such unofficial payments. Respondents were in favour of introducing official user fees to replace these informal payment but 48% thought that they would end up having to pay both formal and informal fees to access treatment (World Bank 2005). A survey by Transparency International in 2006 found that 65.4% of respondents sometimes, often or always had to pay unofficially for health care.

The high cost of out-of-pocket payments acts as a significant barrier to accessing health care for members of poor households. Paying for pharmaceuticals out of pocket is particularly expensive as patients have to pay full costs for drugs prescribed in outpatient care and sometimes for drugs needed for inpatient care, although officially drugs prescribed in secondary and tertiary care are covered by core funding. There is some reimbursement of costs for insured patients in outpatient care, but this only covers pharmaceuticals included on the Reimbursed Drugs List (Section 6.5 *Pharmaceutical care*).

## **External sources of funds**

External sources of funding are also significant in the Moldovan health sector. The health sector receives project-based funding and assistance from the EU, the Japanese International Cooperation Agency, the Millennium Challenge Corporation, UNICEF, the United Nations Development Programme, the United Nations Fund for Population Activities, the Global Fund and WHO. There are several NGOs that are active in Moldova, including, among others, the International Red Cross and the Open Society Institute. The World Bank has also approved a number of structural adjustment loans (the last being in 1999). The World Bank Health Investment Fund Project to help to reorientate the health sector towards primary care ran from 2001 to 2005. The project was funded by a World Bank loan of US\$ 10 million, complemented by a US\$ 10 million grant from the Government of the Netherlands and co-financing by US\$ 1.6 million from the Moldovan Government. The project has established a “Health Investment Fund” to upgrade emergency and primary health care centres and reduce excess capacity in the hospital sector (World Bank 2005). Currently, the World Bank’s Health Services and Social Assistance Project

focuses on supporting the Moldovan Government's efforts of reducing premature mortality and morbidity rates among the population by providing access to high-quality health care and improving social transfers and services to the poor (World Bank 2008).

### **Voluntary health insurance**

Voluntary health insurance has played a very minor role in health financing in Moldova: the collected premiums were approximately 0.7% of health care funds in 2004 and the number of persons insured was less than 57 000, or 1.7% of the total population (Shishkin et al. 2006). The market for voluntary insurance is not well developed and, generally speaking, those who could afford the premiums are able to pay out of pocket for private services. Paying for voluntary health insurance does not exempt the payer from national or local taxes.

### **Other sources of finance**

There are still parallel health services in Moldova that are organized by other ministries and financed from the state budget. In 2006, this network of health institutions consisted of 10 hospitals (with 2044 beds) and 91 outpatient health institutions. In 2006, 42 million lei (US\$ 3.15 million, or 3.3% of general government expenditure) were allocated from the state budget for the maintenance of these institutions. Ministries with the largest network of health institutions are as follows: the Ministry of Defence has one hospital with 250 beds and nine outpatient health institutions; the Ministry of Internal Affairs has one hospital (160 beds) and 16 outpatient institutions; the Ministry of Justice (Penitentiary Department) has two hospitals (879 beds) and seven outpatient institutions; the Ministry of Transportation has three hospitals (380 beds) and six outpatient institutions; and the Border Officers Department has one hospital (110 beds) and 11 outpatient health institutions. All health institutions, except those under the Ministry of Transportation, serve people who, according to the legislation, are covered by the mandatory health care insurance scheme (soldiers, police officers, prisoners, etc.). The hospital of the Ministry of Transportation is part financed (28%) by funds from the NHIC for serving the employees of the enterprises subordinate to this ministry. The remainder (72% of funds) comes from the budget of the Ministry of Transportation and out-of-pocket payments.

Bed utilization efficiency in the parallel services is very low, with the exception of the hospital of the Ministry of Internal Affairs. There demand for beds exceeds 100% since retired policemen are more used to visiting this

department hospital, which serves them from the budget of present working employees of the Ministry of Internal Affairs, instead of using a public hospital (Shishkin et al. 2006). In parallel health systems, there are 112 departmental ambulatory institutions, 41 of which are staffed by medical assistants only. In 2005, these ambulatory institutions had 906 625 visits, 30% of which were preventative. In total, departmental health facilities are staffed by 1168 physicians, 827 working as clinicians and the rest working in administrative and epidemiological functions (Shishkin et al. 2006). These parallel health systems mean that approximately 10% of health facilities in Moldova are outside the reform programme.

### **3.4 Pooling of funds**

In the Soviet era, the health care system was under the centralized control of the state, which financed services using general government revenues as part of national social and economic development plans. However, following independence in 1991, the Moldovan Government decentralized the health care system. Local authorities gained ownership of most medical facilities and were expected to fund them through their own budgets, which were derived from local taxes and revenues. Pooling funds was one of the responsibilities decentralized to the rayon level, and this partly overlapped with pooling at national levels. There was a system of local budget revenue equalization, using a formula that included norms for per capita budget expenditure on health education and welfare services, but this was not specific to the health sector. In addition, the equalizing transfers from the national budget to regional budgets were not earmarked for different services, so the municipalities were free to allocate these transfers. As a result, public funding for health was very unevenly distributed across the country (Section 3.1 *Health expenditure*).

#### **Pooling agencies and mechanisms for allocating funds**

The NHIC was launched in January 2004 to act as the main pooling agency, collecting resources from government, employers and employees and transferring them to territorial branches that would act as purchasing agencies. In this way, the rayon pooling was completely eliminated, although the right to allocate resources to health at the local level has remained. The government has delegated all budget funds targeted to the purchasing of any health care services to the NHIC.



The main legal and regulatory mechanism for collecting contributions from the insured population for the NHIC is the Law on Mandatory Social Health Insurance (1998, amended 2003, 2004, 2005 and 2007). According to this law, all contributions are paid into a single “treasury account” for social health insurance in the Moldova National Bank. Payroll taxes for the working population and their employers are paid in through the State Tax Office, and the Ministry of Finance is responsible for state contributions from general revenues to cover specific vulnerable population groups covered by the state. Collected funds are divided into four subaccounts automatically, from which payments to providers are made directly: 94% of revenues go to the Main Fund, while the Reserve Fund, Preventive Fund and Administrative Fund get 2% each. The Main Fund is designed to reimburse health care services provided in the BBPMHI. In 2006, 52% of the Main Fund was allocated to hospital care, 31% to primary care, 9% to emergency care, 6.5% to specialized outpatient care, 1.4% to high-performance health care, and 0.1% to health care provided in the home. The overall balance of allocations was the same in 2005, and projections for 2007 also look similar (Shishkin et al. 2006). It is difficult to compare the structure of the budget given the different budget structures before and after the introduction of social health insurance; nevertheless, it would seem that there has been a positive shift towards primary care after the introduction of social health insurance, if only on paper.

Two main sources of funding for health care services are provided for uninsured persons: the social health insurance Reserve Fund and direct budget funding for the treatment of socially important diseases. According to the “Criteria for the Contracting of Health Care Providers within Mandatory Health Insurance” (2003), up to 50% of the Reserve Fund resources could be used as a source of reimbursement for emergency prehospital care and primary health care provided for uninsured persons. Purchasing these services for the uninsured is the responsibility of the NHIC. The problem is that, because of the absence of an adequate health information system, there are not yet reliable data on the number of uninsured persons across different rayons. The NHIC estimates the coverage rate to be 80%, so it is estimated that the ratio between insured and uninsured persons is 80:20 in each rayon. These calculations are used for the allocation of money designed for the reimbursement of services provided for both the insured and uninsured population. However, the number of insured and uninsured people varies significantly from one rayon to another (Section 3.2 *Population coverage and basis for entitlement*) (Shishkin et al. 2006).

In 2005, a new state budget vertical programme was introduced to cover inpatient care for uninsured patients with socially important diseases (psychiatric care, oncology, TB and other communicable diseases). The amount allocated to this

programme increased from 30 million lei (US\$ 2.35 million) in 2005 to 36 million lei (US\$ 2.7 million) in 2006 (Shishkin et al. 2006). In this programme, the MOH contracts with republican-level specialized institutions, which are predominantly in Chisinau. All of the inpatient cases covered under this programme have to be validated for payment by the NCHM, which is under the MOH.

There is still some allocation of funds to health care at the local level, although the local authorities are no longer obliged to allocate money to health services. Such spending from local budgets has been falling, from 626 million lei (US\$ 44.3 million) in 2003 to 53 million lei (US\$ 4.3 million) in 2004 and to 50 million lei (US\$ 3.9 million) in 2005. The majority of funds since 2004 has been spent on renovations and procuring medical equipment (Shishkin et al. 2006). However, from 2006, some local authorities (most notably in Gagauzia) have been purchasing social health insurance policies for some uninsured local people. Whether to make local authority payments obligatory for health care for uninsured inhabitants is currently being considered.

### **3.5 Purchasing and purchaser–provider relations**

Before 2001, the old-style Soviet input-based budgeting was still in place so payments to service providers were based on the number of beds and staff. However, from 2001 there was a shift away from historical budgeting to capitation-based budgets in order to equalize allocations, and there was some progress towards equalization; however, capitation payments ended in 2004 with the introduction of contracting as part of the introduction of social health insurance. The introduction of contracting has radically altered the incentive environment for service providers, particularly for inpatient hospital care and emergency medicine services, as a method of payment per case for inpatient hospital care and payment per visit for ambulances was introduced, which has improved productivity. Another important factor for improving productivity has been the stabilization of financial flows, including the introduction of advance funding and shortening transaction procedures.

Contracts are concluded between the NHIC (and its 11 territorial agencies) and health care institutions (or pharmacies in the case of reimbursed drugs). Contracts with republican hospitals must be co-signed by the MOH while contracts with municipal and rayon level health facilities must be co-signed by local government authorities as the “founders” of these institutions. The health care facility is obliged to present a business plan for the coming year in order to sign a contract, and the remuneration of medical staff is the only parameter in the business plan that is fixed in the contract. For 2006,

the limit was 60% for primary health care and 50% for inpatient care. This limit was put in place in order to ensure some resources were kept to pay for investigations, medications and other necessities.

The contracts themselves are relatively simple, consisting of a general part and separate annexes for each different type of care, and they could be classed as “cost-and-volume” contracts. According to these contracts, the NHIC has the right to audit health care facilities and refuse reimbursement if the services provided were unjustified. Contracting criteria are developed in accordance with the BBPMHI, which is approved by the government each year. The contracting criteria are the result of negotiations between the MOH and the NHIC and their provisions aim to regulate the process of contracting health care services included in the BBPMHI and to ensure the transparency of this process to all subjects of mandatory social health insurance.

The contracting criteria thus establish (a) basic principles for the contracting of health care services, (b) the distribution of funds for the payment of different kinds of health service, (c) the characteristics for contracting different types of health service and the basic indicators for the negotiation of contracting criteria, (d) the methods of payment for health care services, and (e) a negotiation and litigation procedure.

### **3.6 Payment mechanisms**

In Moldova, the pricing of health care services is regulated by Special Decree No. 1128 (2002, amended 2003, 2007). The decree sets the method of tariff calculation, the procedure for pricing approval and revision and the bodies responsible for setting tariffs; most health services are thus reimbursed prospectively. The calculation method approved in this decree was based on the price levels of 2001, and they have remained unadjusted. This is one reason why existing tariffs are so heavily criticized by service providers. According to the decree, the tariffs for health services are first calculated by health care facilities and submitted to the MOH. The proposed tariffs are then put before a special committee appointed by the government for approval. Once they are approved, the MOH sets the tariffs for health care services and publishes them in a catalogue. The tariffs set are ceiling tariffs, so the NHIC has the right to negotiate lower tariffs with health care providers in the contracting process. However, the NHIC very rarely does this in practice, only where capitation-based allocation of resources results in an obvious discrepancy with real needs. At this early stage, it is difficult to evaluate how different payment mechanisms work in practice.

## Paying for health services

Under the Semashko model, the level of funding a hospital received often bore little relationship to its output or the population's needs, as incentives encouraged increased capacity and long hospitalization. Before the introduction of social health insurance and contracting, it was difficult to classify the method of payments to hospitals as payments were made on an ad hoc basis, depending on the financial resources available. At the local level, budgets were not actually managed by the rayon health authorities, and hospital managers had even less control. In reality, spending continued to follow the old Soviet model of line-item budgeting, and adjustments reflected changes in staffing, priorities or investment needs, and, in some areas, spending did not taken into account the large-scale consolidation that had taken place. There was chronic underfunding for pharmaceuticals and the maintenance of equipment, particularly in emergency care. Financial managers at the local level rarely projected spending, managing accumulated expenditure on a month-to-month basis or petitioned for changes in expenditure among categories, and there was little oversight of local budgets by the MOH or the Ministry of Finance (World Bank 2003).

The introduction of social health insurance and contracting with the NHIC has gone some way to making payments and budgets more output oriented. Primary health care and emergency care providers are currently paid mainly according to a per capita contract, and hospitals are paid per discharged patient (World Bank 2005). The services stipulated in the BBPMHI and the contracts between the NHIC (or its territorial branches) and the providers follow the Minimum Package of Services (World Bank 2005). From 2004, the NHIC agreed an annual contract with the rayon hospital with pre-specified prices and volume of services to be provided. The territorial purchasers of the NHIC contract with the chief doctors and hospitals are paid according to block volume of services based on the number of cases and performance indicators regarding quality, user satisfaction and organizational change. Hospitals can levy additional formal charges for services not included in the state-guaranteed Minimum Package of Services or the BBPMHI (Section 3.2 *Population coverage and basis for entitlement*), on a fee-for-service basis at prices set by the MOH.

The NHIC and its territorial branches allocate 30% of available funds for routine health care to primary health care; this total sum being divided by the total number of insured persons (including those whose contributions are paid by the central government or local authorities) to give the amount of funds available per person entitled to primary health care services. This forms the basis for the per capita rate, which determines the amount paid to primary health

care providers. There is currently no risk adjustment; the capitation rate paid is based on the number of insured persons on the family doctor's list multiplied by the per capita rate and it is paid monthly in arrears (World Bank 2005). The contract with primary health care providers stipulates the attainment of certain targets and performance indicators in relation to monitoring the development of children under 5 years; implementation of the vaccination programme; regular preventive checkups for certain adults; and the detection, treatment and supervision of patients with chronic and socially important diseases (TB, cancer, cardiovascular diseases, diabetes, hepatitis and cirrhosis, HIV/AIDS). The insured persons have the right to change their family doctor after three months of registration, but only once in a year.

### **Paying for emergency care**

In 2004 and 2005, emergency services were paid on a per-case basis in order to increase the productivity of providers and guarantee sufficient access. This was achieved, and the number of cases increased by approximately 25% each year; consequently, there has been a switch to capitation-based payments. For 2006, the payment methods for emergency care provided to insured persons were as follows:

- per capita payment of 42.44 lei (US\$ 3): 88.4% of the total resource allocation to emergency care;
- annual bonus for achieving quality indicators of 5 lei per capita (US\$ 0.4): 10.45% of the total resource allocation; and
- global budget for the Republican Helicopter Ambulance Service (Aviasan) (1.15% of the total resource allocation).

For the uninsured, there is an additional per capita payment of 6.8 lei (US\$ 0.5) (in total 6.1 million lei; US\$ 0.46 million), which is financed from the Reserve Fund. The capitation rate is based on the population size in the catchment area (from 170 000 in Gagauzia to 800 000 in Chisinau) and the estimate that 80% of the population are insured while 20% are not (Section 3.4 *Pooling of funds*, under *Pooling agencies and mechanisms for allocating funds*). Bonus payments for the achievement of quality indicators were introduced from the beginning of 2005. The quality indicators applied were oriented towards decreasing the number of unjustified case refusals, the number of justified complaints and improvements in diagnostics and feedback to primary health care providers. When the payment mechanism changed to capitation-based funding, the quality indicators were adjusted to stimulate productivity. Quarterly bonus payments are now made at 100% of the amount allocated in the budget in territories where, on average, 250 or more cases per 1000 insured persons are dealt with by an emergency health care unit.

Quarterly bonuses for territories dealing with 225–250 cases, on average, are paid at 50%. The specification of quality indicators, indicator value and the criteria for achievement are established by regulations approved by the MOH and the NHIC. Reporting is made quarterly. Therefore, the annual contract sums for the emergency care territorial stations consist of the sum allocated per capita (calculated by multiplying the annual tariff per capita for insured and uninsured persons with the relevant population for the territory served and adjusted according to the 80:20 quota) and the bonus for the achievement of quality indicators. See also Section 6.4 *Emergency care*.

### **Paying for primary health care**

Before 2000, primary health care services were integrated parts of hospitals and were financed according to the number of staff at a given facility on the basis of historical budgeting. From 2000 to 2003, primary health care centres had independent legal status and were funded through a global budget based on capitation. In 2003, primary health care providers were reintegrated into the rayon hospitals, and an annex in the contract between the NHIC and the rayon hospitals set the payment of primary health care services. However, since reintegration, funds allocated to primary health care services were often used to subsidize other hospital services (Section 6.2 *Primary/ambulatory care*). Consequently, primary health care services were granted independent legal status again from 1 January 2008 and they now contract directly with the NHIC.

In 2006, the payment methods for primary health care were structured as follows.

- Per capita payments were 84.6 lei (US\$ 6.3) for primary health care services provided by family doctors to insured persons; 25 lei (US\$ 1.9) for paraclinical services on referral from the family doctor; and 13.5 lei (US\$ 1.0) for prescribed medicines on the essential drugs list (78% of the total resource allocation to primary health care).
- Annual bonuses of 18 lei (US\$ 1.3) per capita were available for achieving quality indicators (13%).
- Case payments of 250 lei (US\$ 18.7) covered patients treated within day-care institutions and for home care. The ceiling for these payments was calculated at 23.5 lei (US\$ 1.8) per capita (10%).

Per capita payments are based on the number of insured patients registered to the service provider and no risk adjustments are applied; it is estimated that 80% of the population are insured and 20% are not. Payments for services provided to uninsured persons are per capita payments of 6.8 lei (US\$ 0.5) for a limited package of services (essentially just a preliminary

examination and recommendations from a family doctor). These payments total 6.1 million lei (US\$ 0.5 million) and come from the Reserve Fund. It is envisaged that payments will be based on population and health needs through risk-adjusted capitation payment schemes in the future. Paraclinical services are a kind of partial fund holding as services are paid from the total amount allocated to primary health care. Because of mixed incentives, there is chronic underreferring of patients for paraclinical services, and this is quite an important problem in primary health care. There was a need for the payment structure to reflect other performance incentives to encourage health promotion and the management of many chronic conditions at the primary care level by encouraging doctors to act as gate-keepers to hospital care and reducing referrals to hospitals and specialists. Therefore, primary health care bonus payments were introduced in 2005. In order to encourage the development of preventive activities, three composite indicators were introduced: the Immunization Indicator; the Pregnant Woman Surveillance Indicator and the Prophylaxis Indicator. For 2006, these indicators were refined in terms of both their content and the financial mechanism for stimulation (Box 3.1).

There was also an important change in the level of incentives for primary health care service providers through quality indicators. In 2005, health care providers received different payments for quality depending on the performance of the facility as a whole. Where a primary health care facility underperformed, the financial resources allocated to them for the bonuses were retained by the NHIC. Therefore, for 2006, the MOH was forced to change the system so that now all providers receive equal amounts set in the contracts for

**Box 3.1 Quality indicators for primary health care services in Moldova, 2006**

- Indicator 1: monitoring the health of pregnant women until the 12th week of pregnancy (350 lei (US\$ 26.2) for each reported case)
- Indicator 2: evidence of family doctor monitoring the health of children under 1 year of age (400 lei (US\$ 29.9) for each child)
- Indicators 3 and 4: detection of TB and the subsequent treatment using the directly observed treatment (DOTs) standards (1500 lei (US\$ 112.1) for each case for both indicators)
- Indicator 5: primary detection of cancers (1500 lei (US\$ 112.1) for each case of cancer identified/suspected in early stage primarily by the family doctor then confirmed by a specialist)
- Indicator 6: treatment of patients with restricted mobility in outpatient conditions (250 lei (US\$ 18.7) per patient).

Source: Shishkin et al., 2006.

bonuses. Currently, the manager of the primary health care facility distributes these amounts to family doctors according to their individual performance.

### **Paying for inpatient care**

Before 2000, all hospital care was funded according to input-based budgeting, so payments were based on the number of hospital beds and staff. From 2001 to 2004, in order to equalize allocations, there was a shift from historical budgets to capitation-based budgets in rayon hospitals. Some equalization was achieved, but the funding of municipal and republican hospitals remained unchanged until 2004. The reforms in 2004 changed the funding of hospitals to activity-based funding, and current methods of payment for inpatient care are as follows:

- case payments: for the total volume of hospital services provided during one hospitalization (within limits on provision covered in the BBPMHI);
- global budgets: for the volume of care provided in the admissions department without further hospitalization and the haemodialysis section (including transport costs for patients on haemodialysis); this is contracted separately at a limit of 1% of the annual contracted sum for inpatient care.

Case payments are, therefore, the main method for reimbursing hospital services in Moldova. All inpatients are grouped into 90 case-mix groups based on hospital structural departments. This is combined with a hospital-specific cap on allocations, which is fixed annually in their contracts. Republican and municipal hospitals are contracted according to the existing profile of hospital services as approved. Rayon hospitals are contracted according to five basic profiles: internal medicine, communicable diseases, surgery, obstetrics and gynaecology, and paediatrics. Three rayon hospitals also have a TB profile. Case-based payment for inpatient care is under permanent development in Moldova, and the number of case-mix groups is gradually increasing. In order to adjust payments to actual costs, basic profiles are divided into several, more specific, case-mix groups: surgery I (surgical case, no operation); surgery II (surgical case, with operation) and orthopaedics. The obstetrics and gynaecology profile is also divided into three groups: delivery, pregnancy pathology and gynaecology. The gradual development of inpatient care funding is paralleled by development in managerial and information technology capacities.

In order to reduce incentives for providers to hospitalize surplus inpatients over the contracted volumes, and to contain costs to within NHIC resources, a regressive annual payment is applied. This means that there is an inverse dependence between the degree to which the contracted sum is exceeded and the applied value of the tariff for the case treated. The formula for the regressive payment for inpatient care is presented in Table 3.5.



**Table 3.5 Regressive payment for inpatient care**

Degree of surplus services for certain case-mix group (%)	Rate of tariff deducted from the standard tariff for this case-mix group (%)
up to 5	40
5–10	20
10–20	10
20–40	5
Over 40	No reimbursement

Source: Shishkin et al., 2006.

Prices for inpatient care are based on a calculation of all actual and present costs, excluding capital investment and the procurement of medical equipment. The pricing of inpatient services is based on bed-days, which reflect the case-mix group or “treated cases” (*caz tratat*). First, the costs generated by each inpatient section in a hospital are calculated by taking into account basic costs such as salaries, utilities and administrative overheads and auxiliary costs such as equipment maintenance and laundry. Then the costs generated by the inpatient section are divided by the number of bed-days it provides in order to calculate the cost of one bed-day. This cost is then multiplied by a standard number of days for each category. Next the costs of medication and nutrition are assessed using a normative formula for each diagnostic category. The costs of investigations are broken down to a common measure of “cost per minute of investigations” and then allocated. The formula for calculating the “cost of a treated case” is

$$(\text{Cost 1 bed-day} \times \text{No. days}) + \text{Cost of medication} + \text{Cost of investigations.}$$

The case-mix group tariff varies by administrative level: rayon, municipal and republican.

### **Paying for specialized care**

In 2004, specialized outpatient care was separated from hospital care. After the implementation of social health insurance, historical budgeting continued to be used to fund specialized outpatient services. This meant that reimbursement was not related to the care provided, and resource allocations were only sufficient to cover staff remuneration. Consequently, existing capacities were underfunded and had to be subsidized by other kinds of health care or through out-of-pocket payments. However, from 2006, the following methods of payment for outpatient specialized care have been introduced:

- historical global budgets for republican level and specialized institutions;
- per capita payments and bonus payments for the quality of territorial health institutions, with the insured to uninsured ratio estimated at 80:20; and

- specialized outpatient dental care has been allocated 12.1 million lei (US\$ 0.9 million), and all other specialized outpatient care (both per capita and global budget) has been allocated 20.1 million lei (US\$ 1.5 million).

Before 2004, republican hospitals were funded directly from the MOH and the high-technology diagnostic and treatments services they provided were mostly paid for out of pocket, with only some groups, (pensioners, children, registered disabled) eligible for free services. High-technology services are still predominantly fee for service following the introduction of social health insurance. The NHIC contracts for high-technology services on the government-approved list of services included in the BBPMHI.

### **Paying health care personnel**

Despite recent increases, salaries for medical personnel are still low on international standards. In 2000, the average monthly salary for doctors was approximately US\$ 30 and the average for other medical personnel was approximately US\$ 24; there is also considerable wage compression and so the different level of professionals is not reflected in salaries (World Bank 2004). Low salary levels contribute to the prevalence of informal payments, which allow health care workers to close the gap between salaries in the public and private sectors. However, the severe wage arrears suffered by health sector personnel throughout the 1990s undoubtedly also contributed to the growth in informal payments. In 2006, salary levels reached approximately US\$ 100–150 per month, which was inadequate to sustain a family. In the transition period, the widening wage differentials between the public and private sectors led many public health sector employees to leave their positions for the private sector (Grant 2001). While there have been efforts to reduce salary arrears and increase wages, these efforts have not changed the basic salary scale. Members of the medical staff are salaried and the rayon or municipal health authorities pay their salaries.

Health professionals' salaries are still determined by the Law on Remuneration of Moldova (1994) and salary levels reflect years of service, qualifications held and current position (see below). Salaries are not linked to group or individual performance, and salaries are not used as incentives for improving the quality of care or efficient use of resources. However, there are individual bonuses for family doctors if they meet certain quality indicators (see Box 3.1). The system of bonuses mean that doctors working in emergency care now earn considerably more than doctors working in any other sector, although emergency care faces severe shortages of medical personnel, particularly in rural areas (Shishkin et al. 2006). A government resolution, which came into force on 1 January 2004, also changed the procedure for

salary calculation at public health institutions. This resolution indicates the maximum rates of remuneration for employees at public health institutions, as agreed by the MOH, the NHIC and the *Sanatatea* trade union, and proposes that the executives of the public health institutions involved in the statutory system should allocate 50% of the revenues accumulated from chargeable medical services to remuneration of health professionals, by increasing pay levels and by giving additional pay in the form of bonuses and monetary assistance based on performance, complexity and quality of work (World Bank 2005). A number of doctors at the tertiary care level supplement their earnings with salaries from teaching posts at universities.

The “initial salary” for family doctors, from March 2007, was 515 lei per month. At the start of each year, the “Special Tariff Commission” (composed of the manager of the primary health care facility, the chief of the family medicine department in the institution, a syndicate representative, a human resources officer, economists and accountant) agrees coefficients for each doctor based on his or her performance (health indicators, personal attitude, conflicts, etc.) for the whole year. The coefficients used are related to the number of years of experience the doctor in question has and whether they work in a rural or urban area (the coefficients for those working in rural areas can be much higher than for urban areas). The “initial salary” and the coefficient used to increase this leads to an amount known as the “basic salary” and is the “starting point” for adjustments based on the number of years of experience and an annual bonus. The bonus is paid to the entire team (family doctors and family nurses) taking into account the contribution of each team member. The NHIC verifies whether the bonus payment was justified but not how the money was shared. Final salaries for family doctors are also adjusted according to their level of qualification (an additional 30, 40 or 50% of the basic salary). Family doctors do not have the right to charge for consultations, even for uninsured persons. Only investigations and consultations with specialists can be charged for and 50% of the revenues generated from paid services are distributed by the primary health care centre to support salaries of doctors (Atun 2007). Salaries of nurses are also low. The basic salary of a nurse is approximately 300–350 lei. The payment of nurses working in primary care is the same as for family doctors but coefficients vary and there is no payment for experience (Atun 2007).



## 4. Planning and regulation

### 4.1 Regulation

Regulation and governance of the health care system is the preserve of the MOH and its subordinates, particularly the National Centre for Preventive Medicine and its network of local agents (Section 2.3 *Organizational overview*). However, since the introduction of contracting arrangements for the purchasing of health services, the NHIC now also has a significant regulatory role.

#### **Regulation and governance of third-party payers**

The organizational relationship between purchasers and providers has been based on contracts since the introduction of the BBPMHI in 2004. The NHIC is the centralized sole purchaser for publicly funded health services in the Moldovan health care system. The NHIC is wholly state-owned although it has considerable autonomy; it is answerable to the government and the chairperson of its administrative board is a parliamentary representative. It was founded in 2001 as the first step towards implementing the introduction of mandatory social health insurance. The package of services covered by mandatory social health insurance was defined and developed by the NHIC in collaboration with the MOH. This means that the purchasing plans and incentives, while realistic in terms of financial capacity, reflect public health priorities and national priorities such as Millennium Development Goals. The private for-profit voluntary health insurance companies are such a minor part of the current system that they have not been covered in detail here (see Section 3.3 *Revenue collection/sources of funding*, under *Voluntary health insurance*).

As part of the regulation process, the NHIC is obliged to provide the following reports to different branches of the executive:

- monthly financial report (revenues and expenditures) to the Ministry of Finance
- weekly short financial report to the Ministry of Finance
- monthly financial report for the government, and debriefings
- monthly report for the President's Office
- monthly report for the State Tax Office and National Office of Statistics
- biannual debriefing for the Parliamentary Health Commission
- annual financial reporting for the Financial Control Department, MOH
- annual debriefing at the plenary session of Parliament.

Although decisions are under the strict control of the main state financial institutions and state authorities, everyday financial operations are executed by the NHIC autonomously and from a legal perspective, the NHIC is quite autonomous in its purchaser policy. According to the Law on the Budget System and Process (1996, amended 2003, 2005), and the Law on Mandatory Social Health Insurance (1998, amended 2003, 2004, 2005, 2007), the MOH and the Ministry of Finance direct overall policy and the NHIC is an implementing agency. However, NHIC purchasing policy is directed more by the MOH and special interest groups such as republican hospital managers and the chief doctors. The contracting criteria, which are negotiated between the NHIC and the MOH, stipulate the distribution of social health insurance resources for various kinds of health care service, contracting procedures as well as payment methods and procedures. The NHIC receives its budget directly from the centralized single treasury account into which funds flow from various sources, such as government, employers and employees, and transfers them to the territorial branches of the NHIC (Section 3.4 *Pooling of funds*, under *Pooling agencies and mechanisms for allocating funds*).

## **Regulation and governance of providers**

Health care services are provided through a mix of public sector hospitals and health centres, with smaller doctor's surgeries and health centres in more remote rural regions. Private health service provision is relatively limited. Specialized tertiary level hospitals are directly governed by the MOH and managed by the chief doctor. The chief doctors of local hospitals are appointed by and answerable to local government. The family doctor centres are now independent participants as they were granted greater autonomy and were made responsible for their own budgets from 1 January 2008.

The previous arrangements allowed covert and overt redistribution of funds away from primary health care towards inpatient hospital care (Section 2.4 *Decentralization and centralization*).

The accreditation and governance of health care providers in Moldova is currently fragmented and insufficiently rigorous. Consequently, it is a key area for future planned reform. A Quality Assessment Authority is being developed under the NCHM in order to improve the regulation of providers. Currently, the National Centre for Preventive Medicine, with its extensive network of what were sanitary–epidemiological stations, is responsible for setting hygiene norms for facilities and conducting inspections, as they were in the Soviet era. Accreditation of providers is still conducted according to past criteria and mainly based on structural criteria set by the Sanitary Epidemiological Department. However, these structural criteria are not wholly adequate to identify the ability of current providers to provide high-quality services or to deliver the state guaranteed Minimum Package of Services or the Basic Benefits Package covered by the NHIC (Atun 2007).

There is no accreditation or medical auditing system for health services or pharmacies to establish and enforce quality standards in Moldova yet. There are currently no licensing procedures for nonmedical, medical or pharmaceutical activities. However, a Pharmaceuticals Agency has now been set up in the MOH for market authorization and licensing for new pharmaceuticals. The licensing of doctors is also currently insufficient and cannot be used as a tool to improve quality of care. The only regulation is through the “attestation” (Section 5.2 *Human resources*, under *Trends in personnel*), so the process is essentially unchanged from that used in the Semashko system.

## **Regulation and governance of the purchasing process**

The contractual relationship between purchasers and providers is relatively new to the Moldovan health care system, as it was introduced as part of the reforms introducing social health insurance in 2004. The introduction of contracting has radically altered the incentive environment for service providers, particularly for inpatient hospital care and emergency medicine services, as a method of case-based payment for inpatient hospital care and payment per visit for ambulances was introduced, which has improved productivity. For full details of the contracting process see Section 3.5 *Purchasing and purchaser–provider relations*.

## 4.2 Planning and health information management

One of the achievements of 2007 was the development of a new National Health Policy for Moldova, 2007–2021 (Government of the Republic of Moldova 2007b). The policy emphasizes the importance of intersectoral working in improving population health and the centrality of population health to economic development. The development of such a document is significant as there is limited capacity for strategic planning in the Moldovan health system and there is no national planning agency. For example, planning for infrastructure and human resources is still based on formulae rather than needs. The MOH has also recently completed a “Mid-term Strategy for the Health Sector” but no strategic plans at any operational levels – rayons, hospitals, vertical programmes, primary health care facilities or the Pharmaceutical Institute – are elaborated. Where plans exist, they do not adequately articulate strategies and elements to achieve health system objectives or performance targets. Rayon level strategic plans developed by the rayon chief doctors incorporate limited performance indicators or metrics relating to quality, efficiency and effectiveness targets. Much of the planning and metrics relate to the line item budgeting. Consequently, there is a suboptimal alignment of corporate and operational levels. This seriously hampers the stewardship function of the MOH and prevents the system functioning as a coherent whole (Atun 2007).

The absence of a strategic plan at operational levels has meant that there has been no sharing or alignment between performance objectives of the MOH, NHIC, republican institutes, hospitals, primary health care level, emergency services and allied organizations, vertical programmes, and the Pharmaceutical Institute. Instead, each level and each institution operates in isolation and not as part of a coherent whole. Nevertheless, there is a great willingness to develop better planning processes, although there is a severe shortage of capacity. For example, the NCHM collects a huge amount of data on every detail of the health care system, but it lacks the capacity and time to analyse the data well and to provide a sound evidence base to inform policy development (see below). Aggregate data are used, which lack the regional detail needed for interregional comparisons. Also the use of historic morbidity and mortality data reinforces historical budgeting patterns rather than supporting responsive planning and policy-making. Similarly, there is a lack of capacity to support research into the outcomes of policy initiatives.

The NCHM has the lead responsibility for health monitoring. The NCHM collects a vast amount of data and generates a large number of reports (see below). However, most of the reports consist of descriptive statistics. The NCHM does not have an analytical unit that can perform detailed analyses of the trends and changes which would be necessary for these descriptive



statistics to be used to inform policy and planning; it has limited analytical capacity because of the shortage of people with appropriate technical skills. Delays in reporting routine data, limitations with data analysis and lack of a unit to provide analyses on policy and operational issues on a regular basis mean that information is not readily available to inform decisions. Although the NCHM provides detailed statistics on demographics, morbidity patterns, mortality, health service activity and financing to the MOH, there is no analytic capacity at the MOH to analyse these further or to incorporate the emerging information into strategic planning. Consequently, decisions are often not informed by evidence. The demand for information and analysis also appears to be limited and rather basic. Although the service providers generate copious amount of data and supply these to NCHM, there is little indication that they are interested in analysing or using this data to inform their own management decisions. However, there is a strong demand for timely and relevant information on the health system from the President's Office, in particular relating to the infant mortality rate, maternal mortality rate, death rate and life expectancy as well as the emerging epidemics such as TB and HIV. The data on these areas are supplied by the NCHM on demand (Atun 2004).

The Prime Minister's Office receives reports of the annual statistics related to the health system from the NCHM and the MOH; it also requests data from the NCHM as and when needed and are satisfied with the responsiveness of the NCHM. The Prime Minister's Office needs to have regular and reliable information on a number of priority areas in order to track progress against the Poverty Reduction Strategy Paper, the Medium-Term Expenditure Framework, the Millennium Development Goals and overall health system performance. In this capacity, the Prime Minister's Office supports initiatives towards establishing an integrated national information system but is concerned about the analytical capacity of the NCHM to make sense of the data collected and the information emerging from this system once it is operational. The Prime Minister's Office has, therefore, identified four major problems regarding their needs and the information received (Atun 2004).

- *The lag time between the data collection and reporting.* By the time the statistical reports or data reach the Prime Minister's Office, they are 18 months out of date and hence not useful for situation analysis or forward planning.
- *Data volume.* There is a large volume of data made available to the Prime Minister's Office (which staff there have limited time to interpret) and a lack of synthetic metrics for succinct information transfer for the Prime Minister and policy decisions.

- *Availability of well-designed metrics.* While there are well-defined metrics for tracking Millennium Development Goals and the Medium-Term Expenditure Framework, those for the Poverty Reduction Strategy Paper and the health system are less well developed and need enhancing.
- *Need for a core data set and indicators.* There are not core data sets and indicators that have been agreed and against which there is routine reporting to track the performance of the health system.

Data collection is centralized and extensive, but managers at the local level rarely use health indicators collected at the central level as the basis for decision-making. The absence of reliable surveillance systems and robust data-collection processes also mean that certain diseases are likely to be underreported, in particular HIV/AIDS. Shortcomings in the current health information system in Moldova also means that the capitation payment instruments are blunted by the application of a standard 20:80 estimated ratio of uninsured to insured population in a catchment area (Section 3.6 *Payment mechanisms*). Given that particular geographically concentrated population groups are most likely to be uninsured (e.g. rural poor who are officially self-employed as farmers), this could leave some facilities underresourced if the ratio of uninsured to insured is actually greater than 20:80, and it would occur in those areas where needs are higher.

## **Health technology assessment**

There is currently no health technology assessment agency in Moldova, although a department with responsibility for health technology assessment has been established in the newly restructured MOH. Health technology in its broadest sense includes all types of treatment protocol and not just medical equipment and pharmaceuticals. Health technology assessment is a cornerstone of evidence-based medicine, which is severely lacking in the Moldovan health care system as it is elsewhere in the CIS (Duke et al. 2006). Technologies are outdated even in tertiary care institutions and this, together with the absence of treatment protocols, gives rise to serious concerns about the quality of care. A survey of paediatric care in Moldova (as well as Kazakhstan and the Russian Federation) found that several conditions were overdiagnosed and overtreated – often using expensive and potentially dangerous combinations of pharmaceuticals (Duke et al. 2006). The survey found that there were common national diagnostic criteria for many conditions but their treatments were not standardized; in addition, where there were national guidelines, they usually did not accord to international standards and involved the use of drugs not available in the hospital pharmacies (Duke et al. 2006). However, in the new National Health Policy strategy there are plans to use health technology

assessment to inform policy decisions (Government of the Republic of Moldova 2007b).

## Information systems

The Moldovan health system has data-collection mechanisms dating back to the Soviet period and a number of institutions that collect data on a regular basis, but the existing monitoring and evaluation systems are heavily oriented towards the monitoring of inputs, activities and administrative control. The monitoring and evaluation systems are characterized by (a) an excessive amount of data generated at the operational level, (b) paper-based data-collection systems, (c) fragmented data-collection systems with precarious links between different data sets, (d) multiple agents involved in data collection and analysis with evident duplication, and (e) limited analytic capacity (Atun 2007).

Moldova has a number of line ministries and institutions that collect data related to the health system. These include, amongst others, the National Centre for Preventive Medicine (with links to the sanitary–epidemiological system), the National Statistics Institute, the NCHM and the NHIC. In addition, a number of international agencies collect data on a regular basis (e.g. UNAIDS for indicators set for the United Nations General Assembly Special Session on HIV/AIDS and UNICEF for maternal and child health).

The NCHM is the key institution for data collection and analysis, but its efforts are hindered by the excess data, reporting requirements and resource constraints. The NCHM regularly collects data and publishes information on demographics, morbidity and mortality levels (from infectious and noncommunicable diseases, accidents and non-accidental injuries/deaths), health service financing (including user fees), health service activities and pharmaceuticals. The data are disaggregated by gender, age and urban and rural areas but not by socioeconomic status (Atun 2007). The NCHM provides 48 sets of reports (covering 6000 indicators) on infectious diseases (monthly, quarterly and annually) and noncommunicable illnesses (annually) to the MOH and the National Statistics Office. Reports on demographics and mortality are presented monthly to the president, the parliament and the Prime Minister's Office, as well as to the MOH. The National Statistics Office publishes a *Statistical Yearbook* annually, albeit with an 18-month lag between data collection and publication. The NCHM also collects data on selected health indicators related to the World Bank Health Investment Fund Project and submits these to the Health Investment Fund on a quarterly basis.

Huge amounts of data are collected at the rayon level. Each rayon has a statistical office, staffed by a team of three to four people (statisticians,

an economist and an information technology specialist) with one person responsible for collecting data on primary health care. The rayon chief doctor, who is also the chief doctor of the rayon hospital, monitors referrals and admissions to and discharges from rayon and national hospitals, service utilization levels and payments from the NHIC and expenditures; economic and utilization data related to the contract are monitored weekly. Rayon-level data are sent to the NCHM. In turn, once a year, the rayon chief doctor receives an aggregate report on health service statistics. There is no comparative benchmarking of performance with other rayons, as there are no performance targets or metrics used to identify good practice. There are no indicators to measure the effectiveness of health services and user satisfaction. Consequently, although a lot of information is collected on health service activities, there is limited information on quality and outcomes. To achieve this level of detailed monitoring, no less than 435 different types of form need to be filled in at hospital and primary health care levels on an annual basis. In addition, primary health care doctors fill in a further 35 forms. Most doctors complain bitterly about the amount of paperwork and bureaucracy in their job as it hinders them in their clinical duties. In turn, this reduces the motivation of doctors and their support for the health reforms (Atun 2007).

Through a commission established by the MOH, the NCHM monitors the quality of the data collected by providers by carrying out selective checks on data integrity, consistency and robustness using comparisons of data at source with data/reports supplied to the NCHM. Data quality assurance is better established in hospitals where diagnoses are coded using ICD-10. Mortality and birth data are checked by three sources: the NCHM, the National Statistical Office and the Information Department of the MOH. Although the NCHM collects and regularly submits information to the WHO Regional Office for Europe *Health for all Database*, the data sets and the indicators within these are not harmonized with internationally accepted data sets and indicators to allow intercountry comparisons. Similarly, the electronic information systems used in the health sector do not utilize internationally recommended architecture, technological platforms and standards (Atun 2007).

The NHIC has an important role in collecting and analysing data related to financing, expenditures and activities of providers. The NHIC has also established its own monitoring and evaluation system and each month collects data on provider activity levels (based on invoices submitted), which are used to track service volumes and inform payment decisions. Using these data, the NHIC is able to track, on a daily basis and by institution, where funds are spent (Atun 2007).

A number of other institutions collect data related to the health system, including the National Statistics Institute, international agencies and

other line ministries. For example, the Ministry of Internal Affairs collects sociodemographic data and the Ministry of Finance collects socioeconomic data. The Ministry of Finance collects data to monitor achievements against the Millennium Development Goals, but much of the health information is provided to the Ministry of Finance by the NCHM as well as the National Statistics Office, which collects data on health determinants and undertakes studies on the poverty profile of citizens. The National Statistics Office also undertakes an annual Household Expenditure Survey, the results of which are disaggregated by quintiles. The National Centre for Preventive Medicine is responsible for sanitary/epidemiological control. Based on the Soviet sanitary–epidemiological system, the National Centre for Preventive Medicine has a countrywide organizational network and collects detailed data relating to sanitary and epidemiological matters. The National Institute of Pharmacy, which has its own monitoring and evaluation unit, collects prescribing and pharmaceutical market data (Atun 2004).

A concept published in October 2004 recommended the creation of an “Integrated National Medical Information System” to link the health information systems used by the NHIC, the preventive medicine system, immunization services, emergency services, primary health care, the TB system, the HIV/AIDS programme and the pharmaceuticals programme, and to provide telemedicine links between providers, training institutions, accreditation agencies and the NCHM. The government Information Technology Department was charged with implementing the new system, which will use the unique identity number given to each citizen at birth to link data from all the various sources (Atun 2007). However, information technology is not pervasive in the Moldovan health system and successful implementation of such a project would require a strong emphasis on building user capacity and definition of core data sets for health care providers and other institutions in order to achieve a substantial reduction in the volume of data collected, particularly at the primary care level.

The National Strategy on Information Society Technologies for Development aims to improve the information technology infrastructure in medical institutions, enhance access to the Internet and augment the information technology capacity of healthcare professionals and staff. Between 1995 and 2003, several pilot projects have been completed to help to develop epidemiological databases (to improve the estimation of causes of mortality and the incidence of TB, HIV and STIs) and to improve management information systems in hospitals, pharmacies and other medical institutions. Although a number of policy documents (“A Concept and a Model of Medical Information System”, “An Integrated Concept of Medical Information Systems”, “Concept and Task Book of the Single Information

System for Mandatory Medical Insurance Policies”) all aimed to develop integrated information systems, their implementation has been hampered by limited resources (Atun 2007).

Current data-collection systems are organized in a way that prevents linkage of broad health determinants, activities (such as utilization of primary health care and hospital services) with outputs and outcomes (such as service quality, morbidity and mortality levels). Hence the system is unable to generate appropriate intelligence on cause-effect relationships and identify impact of policy interventions. This is unfortunate as each citizen has unique identity number, so Moldova is in the enviable position of being able to track the user journey through the health system and analyse how changes in activity levels impact on outcomes (Atun 2007).

### **Research and development**

The MOH does allocate part of its budget for research and development, and this accounted for 1.7% of total health expenditure in 2005 (see Table 3.5). However, research and development is a relatively minor feature of the health system at present.

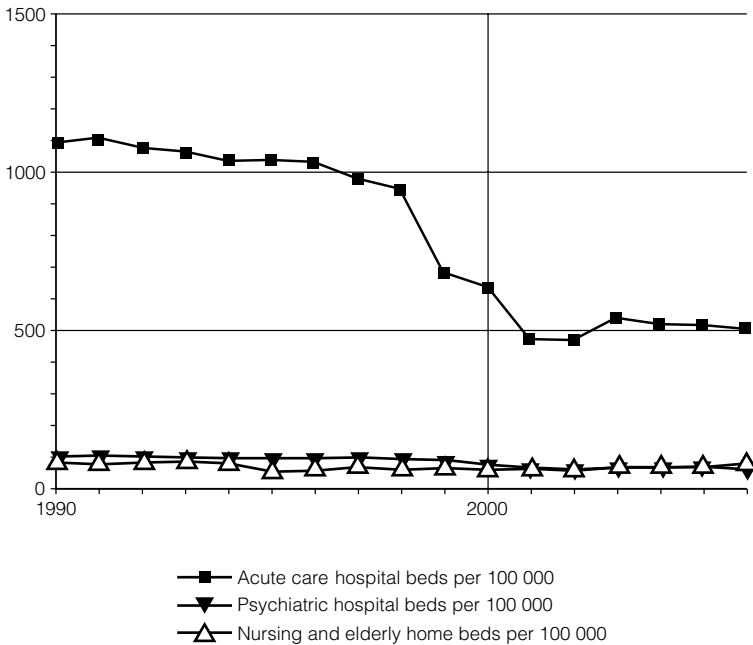
## 5. Physical and human resources

### 5.1 Physical resources

#### Infrastructure

Figure 5.1 shows the change over time in the number of beds available in acute, psychiatric and long-term care institutions per 100 000 population. The number of beds available in psychiatric hospitals and long-term care institutions has remained relatively stable over time, albeit at a comparatively low level. However, the number of beds available in acute care has fallen dramatically since independence, the biggest reduction being between 1998 and 2000. Following the Russian rouble crash in 1998, severe economic constraints meant that the Moldovan Government had to reduce surplus capacity in the health sector in order to contain costs. Several regulations relating to restructuring of the hospital sector were issued between 1998 and 2000, and the 2006 restructuring proposal called for even more extensive consolidation and rationalization of the hospital sector. These regulations required the MOH and the judet health authorities (as they were then) to initiate hospital rationalization and health sector restructuring to reduce hospital expenditures and release much-needed resources to invest in primary health care. The Medium-term Restructuring Plan, agreed between the MOH and judet health authorities, required the judets to reduce the number of hospitals and halve the number of hospital beds on their territory. The government also elaborated and approved a 10-year hospital restructuring plan for hospitals in the Chisinau municipality and republican facilities in the capital. This restructuring plan was established as one of the conditions for disbursement of the third tranche of the Structural Adjustments Credit provided by the International Monetary Fund (World Bank 2005).

**Fig. 5.1 Mix between beds in acute care hospitals, psychiatric hospitals and long term care institutions in Moldova, from 1990 to present**



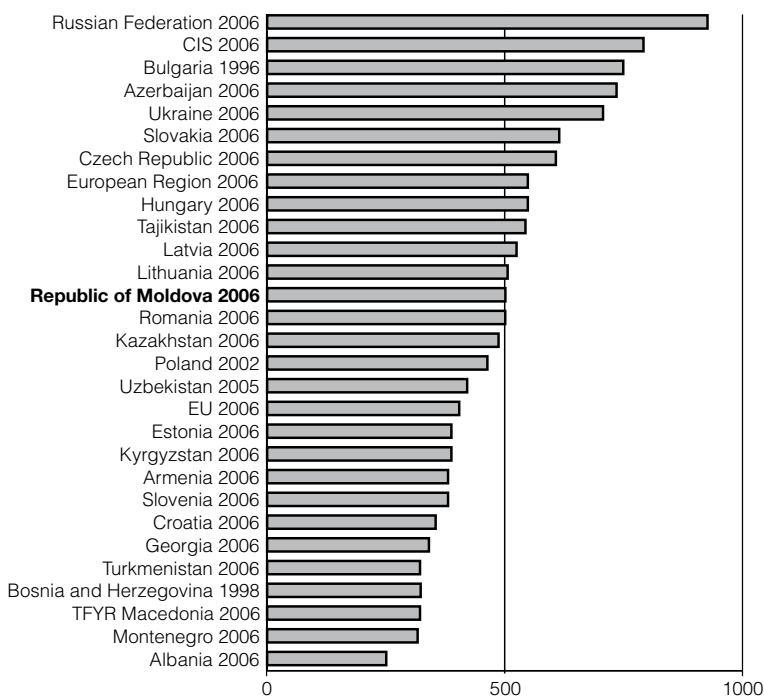
Source: WHO Regional Office for Europe, 2007.

In 1991, there were 335 hospitals with 57 000 beds (131 hospital beds per 10 000 population) in Moldova. Between 1995 and 2002, the number of hospitals (including republican facilities) declined from 335 to 110. In the same period, the number of beds was reduced from 53 000 to 24 000. By 2006, the total number of hospitals declined to 84, while the total number of beds fell to approximately 22 000 (WHO Regional Office for Europe 2007). In 2006, there were 506 acute care hospital beds per 100 000 population, which is higher than the EU average of 410 but well below the CIS average of 707 in the same year (Figs. 5.2 and 5.3). The annual savings from cutting excess bed capacity are estimated to be approximately US\$ 10 million, or approximately 25% of total health expenditure, and these savings have gone towards reducing arrears, increasing allocations to primary care, increasing salaries and improving the stock of medical equipment and devices (World Bank 2005).

Between 1990 and 2004, in line with reduced hospital capacity, the number of hospital admissions fell from 23.5 to 16.3 per 100 persons and although this crept up to 16.7 in 2006, it is still below the EU average of 18 (in 2005) and the current CIS average of 20.5 (2006). Decline in the number of hospitalizations



**Fig. 5.2 Beds in acute hospitals per 100 000 population in CCEE and NIS, latest available figures**



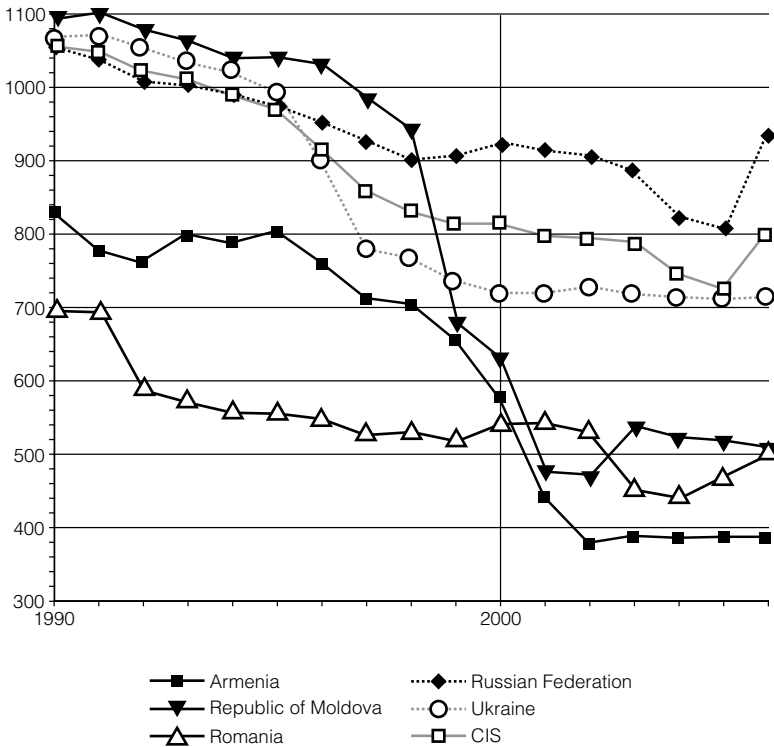
Source: WHO Regional Office for Europe, 2007.

in Moldova has been accompanied by a fall in the average length of stay for acute hospital admissions, which peaked at 16 days in 1996 but then almost halved to 8.2 days in 2006 (WHO Regional Office for Europe 2007). This means that acute hospital stays in Moldova are still longer than the average for countries of the EU (6.7 days in 2005) but considerably shorter than the average in countries of the CIS (11.0 days in 2006). Following reductions in the number of hospitals and bed capacity, the hospital utilization level (as measured by bed occupancy levels in acute care hospitals) in 2004 was 62.9%, which suggested that further capacity reductions were possible, and in 2006, bed occupancy in acute care hospitals was 72.9% (WHO Regional Office for Europe 2007).

### Capital stock and investments

Until the late 1990s, the Moldovan health network was one of the most extensive in the world, despite consistent efforts to reduce capacity by closing unnecessary infrastructure (World Bank 2003). All towns or settlements with

**Fig. 5.3 Beds in acute hospitals per 100 000 population in Moldova and selected other countries, 1990 to present**



Source: WHO Regional Office for Europe, 2007.

a population of over 3000 people had a polyclinic, and settlements with a population of under 3000 had a combination of health centres, health posts and feldsher services. In total, the delivery network included at least 305 hospitals, 1011 health posts and 189 health centres. However, nearly 30% of hospital spending was directed to the 20 or so republican institutes in Chisinau that provide highly specialized care. Hospital rationalization focused on rayon hospitals, and many of the reductions have been made through the closure of rural hospital facilities; for this reason, restructuring has been uneven across the country and many hospitals still operate at less than half of their operational capacity. The restructuring to date has focused on cutting costs by cutting overcapacity, but this has not necessarily been strategic and focused on improving efficiency.

While great progress has been made in the consolidation of service provision in the provinces by reducing redundant infrastructure, the rationalization of tertiary care and provision in the capital has not been so straightforward, for both

political and technical reasons. To date, none of the republican hospitals have closed despite dramatic oversupply in Chisinau through the double provision of both “republican” and “municipal” services. In 2002, a comprehensive restructuring programme was approved for the municipality of Chisinau, but this has not yet been implemented (World Bank 2003). Consequently, there is still overcapacity and significant duplication of hospital services in Chisinau, particularly in gynaecology, trauma and paediatrics.

Hospital and primary health care infrastructure is poor, except for those that have been refurbished by the World Bank Health Investment Fund Project or with support from other international agencies (Doganov and Araujo 2003). Most capital stock investment has been in the development of primary care centres throughout the country, and routine maintenance of capital stock has not been a priority since the mid 1990s. Local governments or rayon health authorities provide the buildings where family doctors work and are responsible for the renovation of family medicine centres, but they allocate few resources to infrastructure and equipment. Between 2003 and 2005, rayon authorities devoted less than 1% of their budget to major renovations and the purchase of equipment (Atun 2007).

## **Information technology**

Information technology is central to the development of the information management and analysis systems that can facilitate moves to a performance-based system; however, few health care providers in Moldova use computers for data collection and management. Consequently, the development of suitable information technology systems is a key area for future reform (Section 4.2 *Planning and health information management*, under *Information systems*).

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

Throughout the 1990s, investment in and maintenance of medical equipment did not occur and equipment purchased or received through donations more recently has not always corresponded to national priorities. There is also a lack of clear criteria for health technology assessment to promote cost-effectiveness (Section 4.2 *Planning and health information management*, under *Health technology assessment*). A significant proportion of Moldovan health care centres contain obsolete equipment. A key issue related to technology in the health system is also obsolescence. As with the infrastructure, much of the equipment in medical institutions dates back to Soviet times and needs to be replaced. For instance, a survey in 2005 revealed that approximately 60% of the equipment in republican institutions was obsolete and a further 10%

was not working, while in the rayon facilities these figures reached 80% and 20%, respectively (Government of the Republic of Moldova and World Bank 2006).

## **Pharmaceuticals**

Pharmacies were privatized in 1993 with the aim of overcoming the critical shortage of drugs in the country. The supply of pharmaceuticals is the only part of the health care system in Moldova that has significant private ownership and operation. The lists of pharmaceuticals covered under mandatory health insurance since 2005 are publicly available in all health care facilities. Most pharmacies are now private and concentrated in the towns, while a number of rural settlements do not have access to a pharmacy at all.

The MOH intends to improve regulation of pharmaceuticals by setting up a central Pharmaceutical Agency, updating existing procurement procedures and expanding the network of state-owned pharmacies in rural areas in order to improve access. The Pharmaceutical Agency is also tasked with establishing certification and licensing mechanisms and regulations for pharmaceuticals and for medical equipment and technology.

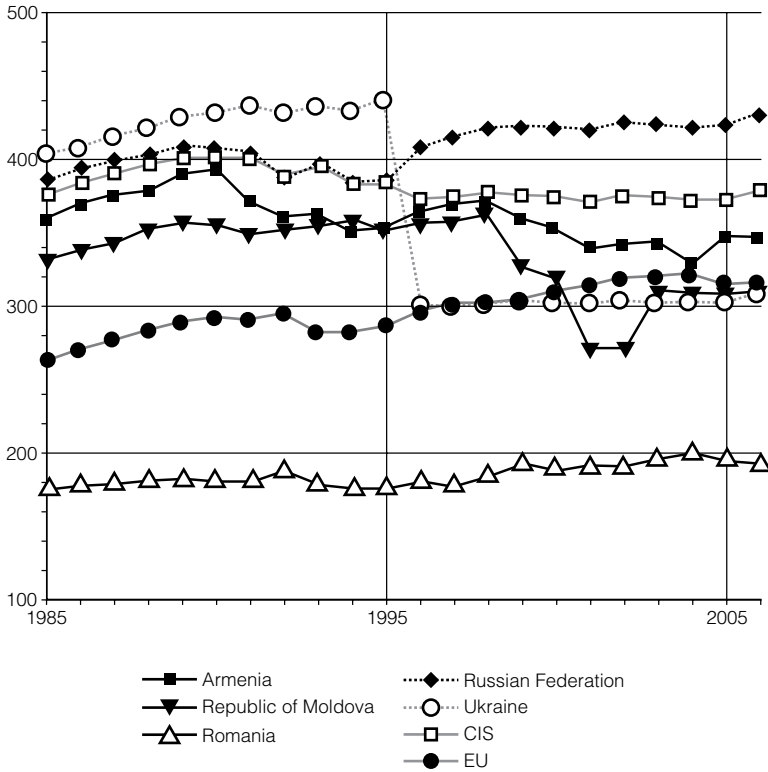
## **5.2 Human resources**

### **Trends in health care personnel**

According to official statistics, there were approximately 15 500 physicians in 1990 (355/100 000 population) and 42 700 nurses (978/100 000). By 2006, the number of physicians had declined to 11 100 (311/100 000) (WHO Regional Office for Europe 2007), and according to the Moldova Nursing Association the total number of nurses had declined from 48 000 in 1995 to 22 000 at the end of 2006, although, official figures put it slightly higher at 25 200 (703/100 000) (WHO Regional Office for Europe 2007) (Figs. 5.4 and 5.5).

The number of doctors working in the health system only fell after restructuring reforms in 1998, and the number of doctors per capita in 2006, while comparable to the EU average of 315/100 000, was considerably lower than the CIS average of 377/100 000 (Fig. 5.4). The number of nurses working in the system began to fall much earlier, in 1993, reaching a low of 629/100 000 in 2002 (Fig. 5.5). This has followed a pattern in all countries of the CIS, which have seen falling numbers of nurses in the system while in the EU there has been a steady upward trend (Fig. 5.5). The imbalance between

**Fig. 5.4 Physicians per 100 000 population in Moldova and selected other countries, 1985 to present**

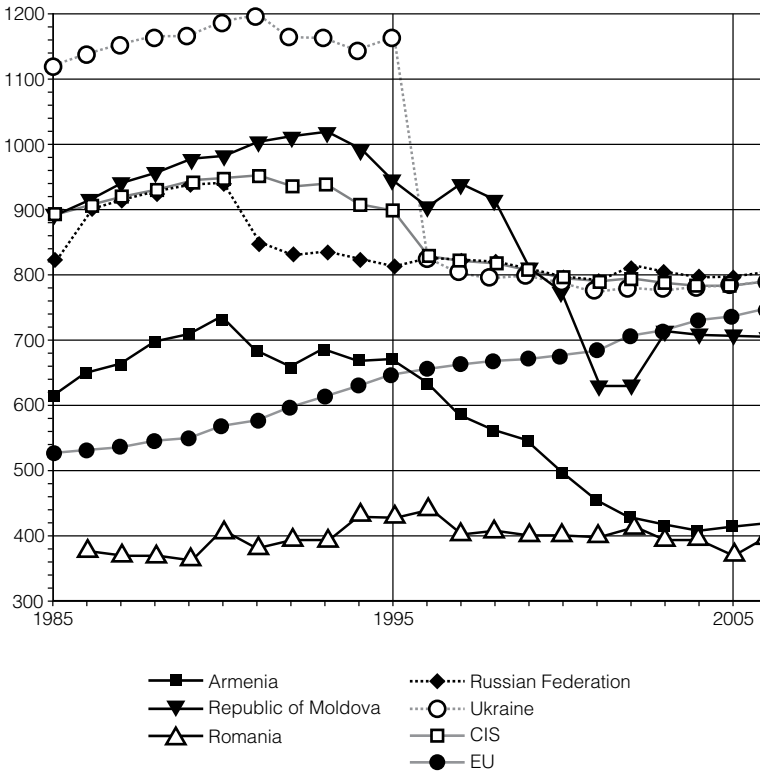


Source: WHO Regional Office for Europe, 2007.

the number of nurses relative to doctors working in the Moldovan health care system per 100 000 population is not as severe as in other countries of central and eastern Europe or the CIS, but it is still not ideal (Fig. 5.6). Despite the substantial fall in the numbers of health workers through migration and other factors, there is an excess of staff in the health system, in particular the number in narrow specialties, whose per capita levels are still higher than the average figures for the EU, while the number of doctors working in primary care is still very low (WHO Regional Office for Europe 2007).

It is very difficult to attract and retain doctors and nurses in rural areas. Although a medical rural worker receives additional money for their post depending on the number of years that they have been working there, and other benefits such as free accommodation, it is clear that this is insufficient to retain medical staff in rural areas. The biggest shortages in medical staff are in the emergency health care stations and rayon hospitals; consequently, the highest salaries are now paid to emergency care staff, while the lowest are

**Fig. 5.5 Nurses per 100 000 population in Moldova and selected other countries, 1985 to present**



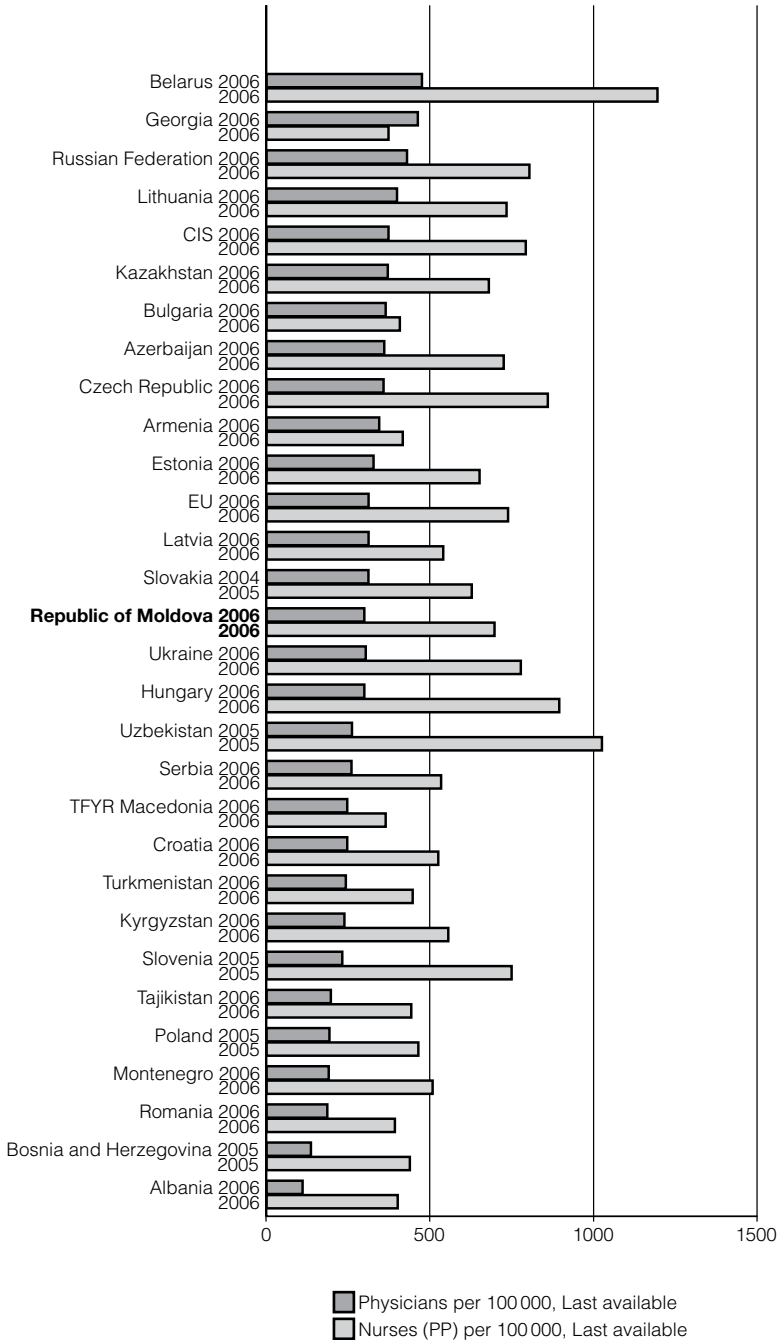
Source: WHO Regional Office for Europe, 2007.

paid to outpatient consulting staff in rayon hospitals and municipal facilities (Fig. 5.7).

Although the number of dentists working in Moldova fell following the economic crisis of 1998, there were 42/100 000 population in 2006, which is similar to the pre-independence level of 44/100 000 in 1991 (WHO Regional Office for Europe 2007). While this is considerably lower than the EU average of 62/100 000 in 2006, it is significantly higher than the numbers working in neighbouring Romania (Fig. 5.8). However, it should be noted that nearly all dentists working in Moldova work in private practice, and the number of full-time equivalent dentists was just 25/100 000 in 2006 (WHO Regional Office for Europe 2007).

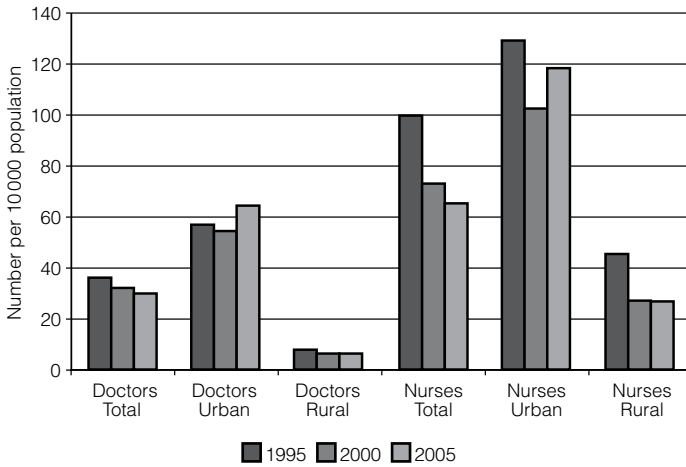
As with dentists, most pharmacists work in the private sector and, contrary to the situation elsewhere in the CIS, the number of pharmacists has actually increased since independence, to 81/100 000 (Fig. 5.9). This means that the

**Fig. 5.6** Number of physicians and nurses per 100 000 population in selected countries, latest available year



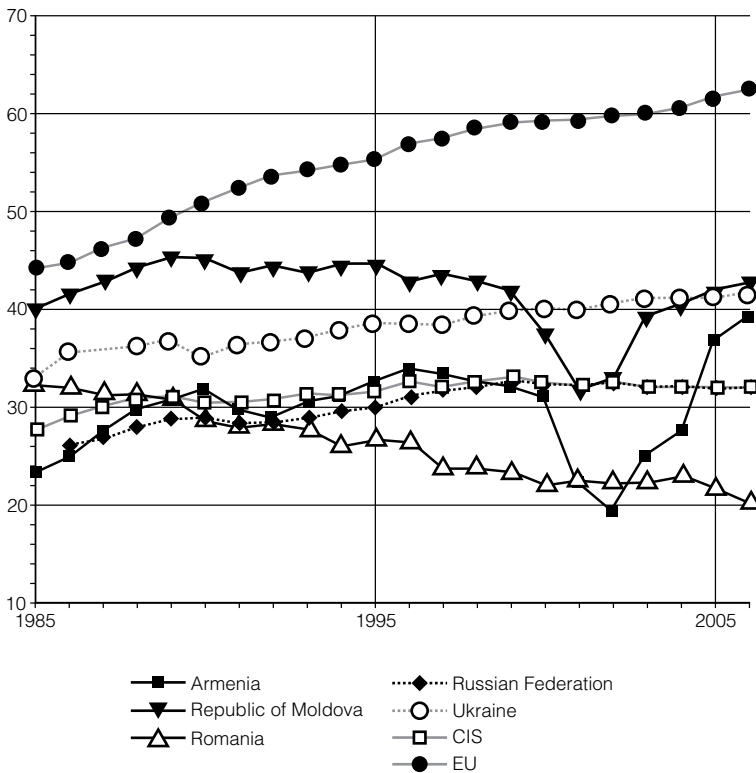
Source: WHO Regional Office for Europe, 2007.

**Fig. 5.7** Number of doctors and nurses per 10 000 population in urban and rural areas



Source: National Centre for Public Health and Management, 2006.

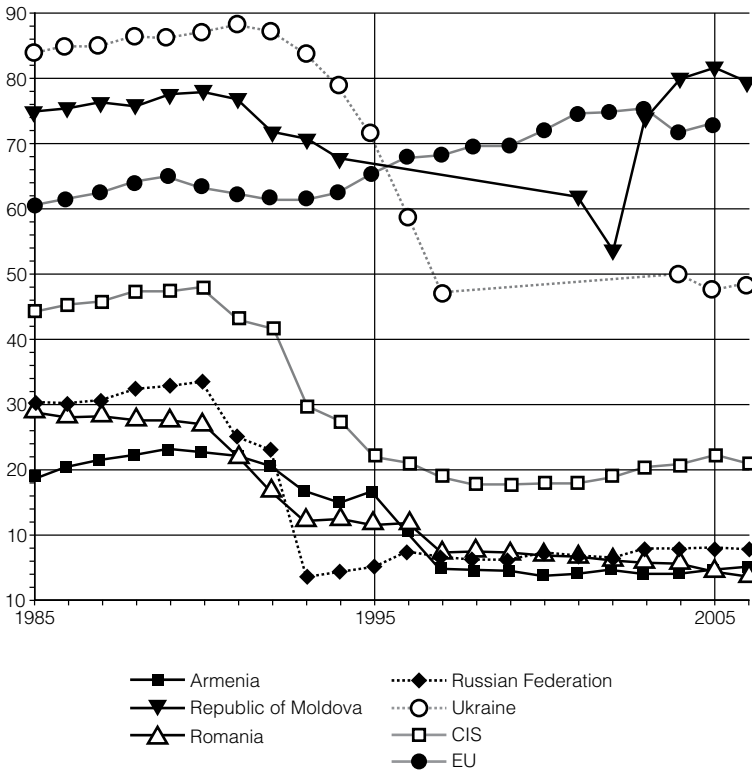
**Fig. 5.8** Number of dentists per 100 000 population in Moldova and selected other countries, 1985 to present



Source: WHO Regional Office for Europe, 2007.



**Fig. 5.9** Number of pharmacists per 100 000 population in Moldova and selected other countries, 1985 to present



Source: WHO Regional Office for Europe, 2007.

number of pharmacists working in Moldova is comparable to the number working in western Europe. However, as with other medical personnel, pharmacists are not evenly distributed across the country, and there is a shortage of pharmacists and pharmacies in rural areas, which has serious implications for access to medicines outside the towns and cities (Section 6.5 *Pharmaceutical care* and Section 5.1 *Physical resources*, under *Pharmaceuticals*).

### Planning of health care personnel

The Department for Human Resources in the MOH is responsible for determining the system’s staffing requirements, and it does so using central planning methods. However, human resources planning is inadequate and consequently there is an excess of professionals in certain disciplines and in urban areas, while there is a shortage of family doctors in rural communities. Geographic distribution of staff is highly inefficient and inequitable and poses

a major challenge for the health system. Attracting and retaining appropriate staff is critical to the functioning of the Moldovan health system and, in particular, for primary health care, which has traditionally been underprovided in relation to the hospital sector (Atun 2007).

Despite oversupply of qualified people, retaining them in the system has also proved difficult given the low remuneration they receive for their work. Low wages also contributes to the prevalence of unofficial charges to patients as a means of supplementing income. For this reason, there have been changes to the salary model used in Moldova in order to improve incentives. To address the lack of coverage in rural compared with urban areas, higher remuneration rates now reflect higher demand. In 2005, the average monthly doctor's salary increased by 17.6% in the republican health care facilities, and by 30.7% in the rayon hospitals, while the average nurse's salary increased by 12.5% in the municipal facilities and 23.2% in the rayon facilities (for details on incentives see Section 3.6 *Payment mechanisms*, under *Paying health care personnel*). Nevertheless, wages are still relatively low for family doctors.

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

Doctors from all parts of the country are trained at one of five state-certified medical colleges and at the State Medical University. The training and accreditation of doctors through the official State Medical University is strictly regulated. Doctors must also undertake continuing professional development at five-year intervals. All doctors must pass state medical examinations before doing their residency and further training. However, there have been concerns in recent years that standards in basic medical training and the examination procedures may have been somewhat reduced. Improvements have been made, however, in postgraduate training in health management and family medicine. Nursing training takes place through the five colleges of "secondary medical training". The number of nursing colleges was reduced from eight to five in 1999 to reduce the perceived overproduction of nursing staff. Approximately 600–700 nurses enter training annually, but it is not clear that the current number of nurses in training is adequate given that many nurses leave the profession each year. In order to raise the profile of the profession, a Department of Nursing was opened in the State Medical University in October 2000. Based on the new four-year course, a high-level training of nurses in management, research, teaching and administration is offered in this department. However, while postgraduate nurse training is being strengthened, concerns have been raised about the content and quality of basic nurse training (MacLehose 2002).

The main challenges faced in improving the training of health sector personnel include:

- a lack of evidence-based teaching materials for the training of physicians;
- an absence of well-educated trainers in medical schools;
- the absence of modern curricula that emphasize preventive aspects and disease management rather than curative aspects of health care;
- the need to develop continuing professional development to upgrade the skills of physicians already in the health system; and
- the lack of adequate quality and quantity of training centres, trainers and programmes to facilitate access to modern technologies and medical protocols.

Following recent reforms, training of family doctors and health care managers has received particular attention, and training programmes have developed considerably. Family doctor training began in Moldova in 1993 with the internship programme initiated by the Faculty of Family Medicine at the State Medical University. The Faculty of Family Medicine was established at the State Medical University in 1998 and the first Chair in Management Training and Public Health was subsequently created in 2000. In this period, two model family practices were established in Chisinau and have been used since as training practices. One of these, the University Family Practice Training Centre, has been refurbished and equipped with support from the World Bank Health Investment Fund Project, which also provided funding to establish regional Family Medicine Training Centres in Orhei, Balti, Lapusna, Ungheni and Cahul. The Faculty of Family Medicine, which enjoys strong support from the State Medical University, has 15 faculty members, including four associate professors and eight assistant professors (Atun 2007).

The faculty has provided three different programmes to train specialist family doctors as well as a short training programme for upgrading skills. An internship programme, which began in 1993 and ended in 2002, awarded a Family Doctor Certificate on completion. Graduates from this programme had an equivalent job description and status as the doctors who trained as specialists in family medicine. On graduation, the family doctors worked in primary care. Approximately 1600 doctors were trained on the internship programme and of these approximately 40% are still working in Moldovan health system as family doctors. From 1998 to 2006, there was also a four-month retraining course for specialists (in particular paediatricians and internists) working at primary health care level (Atun 2007). The aim was to create a critical mass of family doctors to support the introduction of primary health care reforms in Moldova, and approximately 2000 specialists were retrained as family doctors (World Bank 2005). Between 2000 and 2006, approximately

500 doctors graduated from a three-year specialist residency programme in family medicine. However, it has been difficult to attract young doctors to this programme as the certificate received by the graduates of the residency programme is equal to those received by those who have completed the one-year internship or four-month retraining programmes, and therefore provides these graduates with few incentives to train in this way (Rhodes 2007).

Overall, the health system is still led by specialists, and family medicine has low status in the system. This, along with low salaries, has dampened the enthusiasm of doctors to enter residency or retraining programmes in family medicine, despite the demand in this area. Between 1993 and 2005, approximately 4219 family doctors were trained. But by 2005, only 2066 of these were working in the system – lower than the estimated required number of 2438 (Rhodes 2007). A key problem, which creates difficulties in attracting doctors to and retaining them in family medicine, is that they have to work longer hours than specialists and undertake excessive administrative tasks without commensurate pay or professional recognition (by peers or citizens). Another factor that deters potential recruits is the prevailing punitive culture inherited from Soviet times, which means that family doctors feel they are working to keep the bureaucrats happy rather than improving the quality of services in order to benefit the patient (Atun 2007). Between 2003 and 2005, there were 245 new family medicine graduates in Moldova (17% of the total medical school graduates), representing two new family medicine graduates per 100 000 population, which by current projections is insufficient to meet the needs of the country (Rhodes 2007). However, as there is no national register of family physicians and data from various sources differ, it is difficult to estimate with certainty the numbers trained and the attrition rate. As of January 2006, there were 5075 nurses working in primary health care, which is also lower than the estimated 5930 needed to meet current needs (Rhodes 2007).

In 2005, the average age of family physicians was 47 years. In 30% of the rayons, the average age was above 48 years. With very few of the young residents entering family medicine, the prevailing attrition rate and the looming retirement of the existing cadre of doctors there is likely to be a substantial shortage of family physicians to meet needs. An analysis undertaken during the evaluation of the World Bank Health Investment Fund Project, which estimated the annual attrition rate of family physicians to be 5.5%, projected that the health system needs would only be met around 2050 if the current intake of doctors to family medicine residency programmes continues (Atun 2007).

Training in health system administration and management is also an area of increasingly significant need as there is a lack of such capacity. Managers

currently lack the experience to respond to the challenges that reform in the system have brought, and most managers are from a clinical background and have never had formal training in health care management. Improving the quality of care depends on improving the professional level of medical personnel and health care managers. The training of health care managers began in earnest in 2003 in the School of Public Health at the State Medical University, and the programme is co-funded by the Open Society Institute and the Soros Foundation of Moldova. In addition, between 2002 and 2004, the World Bank Health Investment Fund Project supported the development of a Training of Trainers programme in health management to train 26 trainers and 300 managers. Increasing the skills base of health sector managers was vital for the successful introduction of mandatory social health insurance, as it completely changed the health system's *modus operandi* (World Bank 2005).

There are also continuing education programmes for doctors and managers, delivered and managed by the Public Health and Management Department of the State Medical University. All health service managers (in whichever sector they work) now have to undertake 400 hours' mandatory management training every three to five years. The classification level awarded at the end of the training (1 (superior category), 2 or 3) determines the salary level. As part of their continuing medical education requirements, managers take a mandatory two-month programme of continuing education every two years. Approximately 120–150 managers attend each two-month programme, delivered by the Public Health and Management Department. In addition, since 2005, the School of Public Health and Management has provided a master's programme and short courses for health professionals in Moldova. Currently, an EU-funded Public Health Reform Project is providing management training to primary health care professionals in Chisinau and Orhei, but this project was due to finish in 2007 (Atun 2007).

## **Registration/licensing**

There is no formal licensing or registration of health professionals, but all personnel are obliged to undergo regular performance reviews and training following the old Soviet model of attestation. Five-yearly reviews and training courses in continuing medical education are undertaken. Continuing medical education is governed by regulations on attestation and the Law on Health Protection (1995). It consists of a total of 400 hours accumulated over five years and it needs to be done by every doctor in order to progress in the health service. Nurses also attend continuing professional development courses (typically of four weeks in duration), which in the past was organized within the Centre for the Continuing Education of Nurses (recently liquidated and

integrated into the State Medical University). This programme is theoretical and focuses mostly on the state-established standards. The successful accumulation of 250 hours of continuing professional development enables nurses to obtain a higher qualification.

## 6. Provision of services

### 6.1 Public health

Public health services are provided under the overall responsibility of the MOH. Since independence, services have been divided up into several specialist centres, which are in public ownership. Health promotion, epidemiological services and environmental health activities are run by the National Centre of Preventive Medicine. In 1997, the NCHM was established and collects national health data to analyse it for use in strategic health planning, producing guidelines or norms for use and conducting research on health-related issues. However, the main public health facilities in Moldova maintain a vertical organizational structure and are accountable directly to the MOH through the National Centre for Preventive Medicine. This has a network of 40 territorial branches throughout the country based on the Soviet sanitary–epidemiological service network, and they remain in full public ownership being financed from the budget through the MOH. This network is responsible for the implementation of sanitary norms in all public facilities (including health care facilities), environmental health monitoring and the notification and surveillance of communicable disease outbreaks.

The National Centre for Preventive Medicine has a special section devoted to health promotion. Health education programmes focus on HIV prevention, smoking reduction and mental health issues. Moldova also takes part in the European Health Promoting Schools programme. The health promotion section is, however, severely underfunded and has consequently been limited in its reach and impact (MacLehose 2002). As a result, despite current epidemiological trends in the country such as the rising noncommunicable disease rate and the disease burden from tobacco and alcohol consumption, the main emphasis of public health services remain the control of communicable diseases and environmental health protection and population health monitoring.

The National Health Policy called for a broader focus on public health to ensure that noncommunicable disease and chronic conditions are adequately addressed in future health planning, but at this stage such reforms remain declarative. Reforms of public health structures and organizations have aimed to strengthen public health capacity with the support of international donors.

Only the immunization programme is fully integrated into the health care delivery system and the rayon health authorities. A national immunization programme was established in 1994, covering eight target diseases (polio, diphtheria, tetanus, measles, pertussis, TB, hepatitis B and mumps). Vaccination is provided free of charge to all children. Moldova has achieved good immunization coverage for children (Section 1.4 *Health status* and Fig. 1.2), and official routine figures report coverage of over 90% for all vaccines, although there are significant regional variations. In 2000, coverage of children aged 15–26 months was 94% in rural areas and 86% in urban areas (Berdaga and Stefanet 2001). By 2003, 99% of those aged 8–19 years and 96% of university students aged 20–23 years were immunized with combined measles/rubella vaccine, while 78% of women of childbearing age (20–29 years) received monovalent rubella vaccine (UNICEF 2003).

The MOH coordinates a number of national health programmes for priority public health issues such as the prevention and treatment of TB. For example, in line with the National TB Control Programme, the implementation of The WHO Directly Observed Treatment, Short-Course (DOTS) strategy for TB treatment began in 2001 and now covers the whole country. HIV/AIDS is also a growing concern for Moldova. The Government of Moldova and international partners are coordinating their efforts under the framework of the National AIDS Programme, which sets a number of goals and indicators to be achieved in the next five years. International assistance is currently directed towards meeting HIV/AIDS prevention, treatment and care needs. Other key programmes include the prevention of viral hepatitis, diarrhoeal disease and cholera, anti-rabies programmes and prevention of iodine-deficiency disorders. Environmental health issues are of great importance owing to fears of contamination related to the large agricultural sector and previously high pesticide and fertilizer use.

## 6.2 Primary/ambulatory care

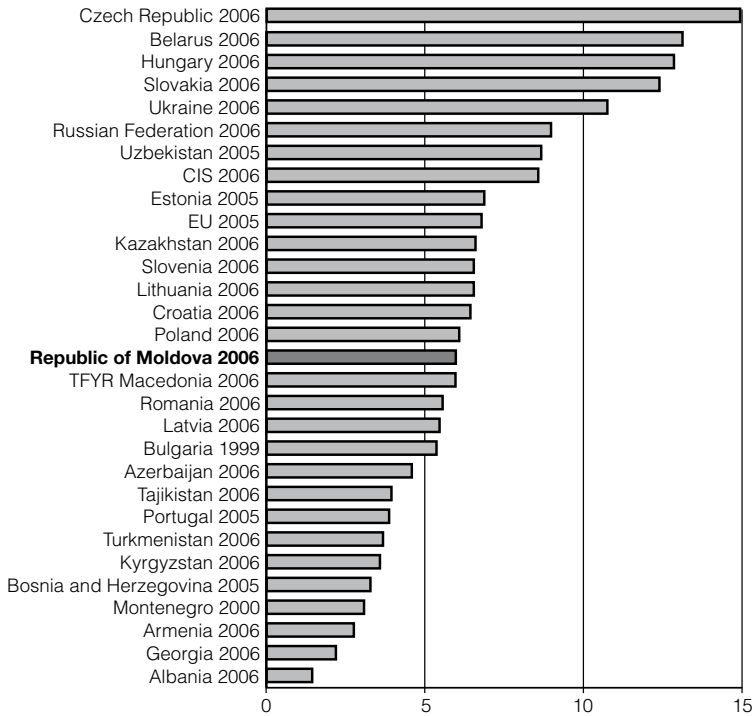
Government Decree No. 1134 Regarding the Development of the Primary Medical Assistance was issued in 1997 and created the specialty of family doctor and post of primary care nurse; it introduced the principle of free choice



of family doctor and replaced line-item budgets for primary care providers with a per capita payment system (Atun 2007). Responsibility for managing primary care, secondary care hospitals and emergency services was delegated to the local authorities. The primary care network now consists of four types of providers: (a) family medicine centres, based on the former district polyclinics and often serving large populations of over 50 000; (b) health centres, based on former rural medical points; (c) family doctor offices, based on former rural medical points which had only one doctor, covering populations over 1000; and (d) health posts for family doctors' assistants (feldshers) covering villages/areas with populations less than 1000 (Government of the Republic of Moldova and World Bank 2006). In addition, there are polyclinics managed by other ministries and private enterprises as part of parallel health care systems; however, most primary health care facilities are integrated into the main health care system and are wholly state owned with staff directly employed by the MOH. There are also Territorial Medical Associations in Chisinau, which are staffed by family doctors, but which also provide some specialized outpatient care. The Municipal Health Authority for Chisinau has direct authority over these and the family medicine centres around the capital; outside the capital, family medicine centres, health centres and family doctors offices are managed by the local health authorities and all are subordinated to the MOH. In total, there are approximately 50 family medicine centres, 392 health centres and 551 family doctor offices (Shishkin et al. 2006).

The scope and content of primary health care services are defined in law for both the State Guaranteed Minimum Benefits Package and the Basic Benefits Package provided under mandatory social health insurance. The essential services provided in primary care facilities differ little between urban and rural settings. Services include general and paediatric consultations and referrals, paediatric development checks and immunization, antenatal and postpartum care, nutrition clinics, chronic disease management (e.g. for diabetes, asthma, heart disease), mental health services, family planning, hepatitis and TB care, acute respiratory illness care, diarrhoea care, home visits, nursing care, ambulance services, and health promotion and prevention clinics (Atun 2007). Minor surgery facilities are not widely available in primary health care facilities, and a task-profile survey of family doctors in Moldova found that those doctors working in urban areas or in clinics supported through international aid programmes were more likely to use available diagnostic or therapeutic equipment, particularly for common paediatric conditions (World Bank 2005). The same study showed that psychosocial problems were infrequently managed by family doctors, but common chronic conditions were frequently managed by family doctors, with no urban and rural differences. The majority of the urban and rural family doctors interviewed (70–95%) routinely checked the

**Fig. 6.1 Outpatient contacts per person, selected countries, latest available year**



Source: WHO Regional Office for Europe, 2007.

blood pressure of their patients, did cervical smears, performed manual breast check for lumps and provided health education. Blood cholesterol levels (when needed) were more likely to be measured by those working in urban family medicine centres, while family doctors from rural areas were more likely to provide antenatal or intrapartum care. Generally, family doctors working in advanced reform regions (i.e. those regions in receipt of international aid) were more likely to provide these services (World Bank 2005).

Outpatient contacts per person per year (including contacts with primary health care and hospital outpatient appointments) have been falling steeply since independence, and utilization rates are now considerably lower than in other CIS countries (Fig. 6.1). According to World Bank data, there were just over 9 million visits to family doctors in Moldova in 2004, down from just over 11 million in 2002 (World Bank 2005). Visits to family doctors amounted to 2.7 per person per year in 2005, which was just 52% of all outpatient visits, and the average number of visits to a family doctor in 2005 was 3.3 for the insured population and only 0.9 for the uninsured (Shishkin et al. 2006). Among the insured people, almost 40% never visit their family doctor, which is similar

to the proportion of uninsured people who are covered by a family doctor; therefore, it could be argued that 40% of the Moldovan population never use the services of a family doctor (Government of the Republic of Moldova and World Bank 2006). However, since the introduction of mandatory social health insurance, the number of visits (total number of visits to facilities divided by the population) per person per year to family doctors has increased for both the insured and the uninsured populations. In the same period, the total number of outpatient visits (rayon facilities excluding republican institutions) also increased. The number of visits to family doctors, which in 2003 represented 63% of total visits, increased in 2005 to 66%, which would indicate increasing utilization of primary health care services (Government of the Republic of Moldova and World Bank 2006).

Patients are now free to choose their own family doctor, but their choice is restricted by geography as they can only choose a doctor working in their catchment area, and in rural regions there would be only one health centre in their catchment area. In theory, family doctors act as gate-keepers to secondary care, providing referrals for access to outpatient specialist and inpatient care and expensive diagnostic investigations, although this gate-keeping role is still not fully effective. Again in theory, after receiving a “referral for specialist consultation” from their family doctor, a patient can then choose a specialist, but only one working at the specific institution to which they were referred. Referrals for non-urgent inpatient treatment from either family doctors or specialists are reviewed by a Consultative Commission of Physicians and if the referral is considered appropriate, the commission selects the most appropriate hospital for the procedure. The patient then receives their referral but cannot change the hospital; they can only go to the one to which they have been assigned. However, there is a list of 80 diagnoses with which patients can have direct access to specialist care without referral; these include diabetes, asthma, TB, most cancers, some cardiovascular diseases and dermatovenereal conditions, including STIs (Shishkin et al. 2006). The number of referrals from family doctors has been increasing, and in 2002 there were 553 000 referrals, but a lack of a strong referral and counterreferral mechanisms mean that many specialists can be accessed directly at hospitals (World Bank 2005). Consequently the gate-keeping function of primary health care is currently suboptimal.

The primary health care system is extensive, and geographical access to services is good; a household survey conducted in 2000 showed that 87% of households (93% urban and 82% rural) were within 5 km of a primary health centre facility, and 79% of patients from rural areas and 93% from urban areas could access their nearest primary care facilities in less than one hour (Berdaga and Stefanet 2001). However, the same survey also found that there

were significant financial barriers to accessing care and substantial inequities existed: 33.5% of the general population (47.9% of lower-socioeconomic groups and 41.3% of the rural population) were not financially protected against health problems. Financial barriers led to “total inaccessibility” of health services for 15.3% of households and “low inaccessibility” for a further 40.1%. Of those able to access medical care 18.5% were unable to obtain the treatment prescribed for financial reasons (Berdaga and Stefanet 2001). However, a more recent health survey showed that the introduction of mandatory social health insurance has removed or significantly reduced barriers and allowed insured persons better access to care (Government of the Republic of Moldova and World Bank 2006). As a result, insured people not only have better coverage by family doctors but also utilize services more intensively (Government of the Republic of Moldova and World Bank 2006). Nevertheless, there are still serious financial barriers to accessing care for the uninsured, especially for those in the most vulnerable population groups (Section 3.2 *Population coverage and basis for entitlement*).

Significant geographical inequities remain in the distribution of staff, as it has proved difficult to recruit and retain medical personnel in rural regions. Based on the norm of 1500 persons to a family doctor, 88.9% of the population was covered by family doctors and 92% covered by primary care nurses in 2005, but with much variation in coverage. For example, while in Chisinau municipality approximately 98.6% of the population was covered by family doctors, less than 65% of the population was covered in Cantemir, Rezina, Cimislia and Falesti rayons (Government of the Republic of Moldova and World Bank 2006). A primary care facility survey in 2004, which explored the range of services provided, the availability of equipment and essential drugs and use of clinical guidelines, showed that immunization services were more likely to be provided in rural centres but urban facilities were more likely to have in stock measles, tetanus and BCG vaccines (World Bank 2005). The availability of essential equipment and essential drugs was also greater in urban rather than rural areas – other than in those centres that were a part of the Health Investment Fund Project (World Bank 2005).

A number of health centres and other primary care facilities have been refurbished through the Health Investment Fund Project financed by the World Bank, which has also worked to improve the quality of emergency care (see below). In the course of this project, 280 primary health care facilities were due to be refurbished; 55 facilities were refurbished in 2003, and initial feedback indicated that there was increased satisfaction of both users and health professionals (Ministry of Health 2003; World Bank 2005). Some improvements in the quality of primary health care – both the range of services offered and the quality of the environment in which they are provided

– have been achieved, despite a severely resourced constrained environment. There has been significant progress in readjusting the health care system away from inpatient hospital care and a curative focus to developing primary health care as a broad service provider in its own right. However, there is no systematic monitoring of the quality of services provided in primary care (World Bank 2005). More remains to be done to ensure universal access to primary care and to protect resource allocation to primary care (see Section 3.6 *Payment mechanisms*, under *Paying for health services*), and there is a need to improve the capacity of primary care providers in disease management, referral and management (Government of the Republic of Moldova and World Bank 2006). There is also a need to improve the status of primary care within the health care system in order to recruit and retain sufficient number of family doctors.

### **6.3 Specialized ambulatory/inpatient care**

At the secondary level of care, there are rayon general hospitals in rural areas and municipal general hospitals in Balti and Chisinau. These hospitals provide a relatively broad profile of services to the local population, while specialist services are provided through tertiary level republican hospitals, which are concentrated in the capital and generally have a highly specialized single profile such as TB care or oncology. There are also a number of general hospitals outside the statutory system, which are under the control of other government ministries (Section 2.3 *Organizational overview*). There are few private hospitals in Moldova, although it is possible to purchase some additional services in some public hospitals, such as private rooms. Approximately 85% of inpatient capacity in Chisinau is contracted by the NHIC, the remainder is used for inpatient cases paid out of pocket. Following the introduction of social health insurance, the legal status of hospitals has changed and they are now much more autonomous – all MOH hospitals were converted into state enterprises and funding is received through the NHIC rather than the budget (Government of the Republic of Moldova and World Bank 2006). Rayon hospitals cannot increase their number of beds without permission from the MOH. Hospitals serving a population of less than 90 000 provide services in only five basic specialties, while hospitals in larger rayons provide more extensive services to their own population and for patients from smaller neighbouring rayons. Specialized ambulatory care is provided through a network of 254 clinics (including approximately 50 family medicine centres), of which 142 are MOH outpatient facilities and 112 belong to parallel health system providers.

As part of a concerted consolidation effort between 1995 and 2002, the number of hospitals in Moldova was reduced from 265 to just 65 (World Bank 2005). In the same period, the number of hospital beds was reduced from almost 42 000 to 20 500 (i.e. by 51%; Shishkin et al. 2006). As a part of the administrative reforms between 1998 and 2000 (Section 2.4 *Decentralization and centralization*), the MOH approved a medium-term restructuring plan that required the 11 judet authorities to reduce the number of hospitals and hospital beds which were previously funded by local authorities. This led to the closure of all the small village hospitals, while the number of providers in the capital remained largely unaffected. In 2005, there were 64 hospitals in Moldova: 35 rayon hospitals, 10 municipal hospitals (9 on Chisinau and 1 in Balti) and 19 republican hospitals (16 of them in Chisinau). In total, 25 hospitals (almost 40% of all inpatient facilities) are located in the capital. Hospital beds are similarly concentrated in Chisinau; 40% are in republican facilities, 17% in municipal facilities and 43% in rayon facilities. From 2002 to 2005, there was a gradual increase in the hospital bed turnover rate, as well as a gradual decrease in bed occupancy rates and a subsequent decrease in the average length of stay (Shishkin et al. 2006).

The hospitalization rate fell sharply from 23.5 inpatient care admissions per 100 in 1990 to just 12.5 in 2001. The hospitalization rate has increased since then, but fell once again following the introduction of social health insurance – from 16.9 per 100 in 2003 to 16.3 in 2004 – but it has been creeping up since and stood at 16.7 in 2006 (WHO Regional Office for Europe 2007). However, rural hospitalization rates are considerably lower than urban rates (13/100 in 2005 compared with 16.6 in urban localities) and the hospitalization rates for the insured population was considerably higher than for the uninsured (Shishkin et al. 2006). There are considerable financial barriers to accessing secondary and tertiary care for the uninsured, who mainly come from low-income households in rural areas. The geographical disparity in hospital rationalization and restructuring is also significant. In 2005, the municipality of Balti had 2.4 times more beds per capita than the municipality of Chisinau, while Ialoveni rayon had only 13.8 beds per capita compared with 50.5 in Edinet rayon (Government of the Republic of Moldova and World Bank 2006). The government has elaborated and approved a 10-year Hospital Restructuring Plan to consolidate the republican and municipal hospitals in Chisinau, but it has yet to be implemented. Currently, the regionalization of inpatient care is being discussed, so that the scope of rayon hospitals would be limited to internal medicine, paediatrics, surgery, obstetrics and gynaecology, and communicable diseases, while three specialist hospitals (in Balti in the north, Cahul in the south and Chisinau in the centre) would be developed to ensure equal access to more sophisticated and specialized inpatient services.

The way health care services were organized at the local level meant that the chief doctor of the rayon hospital had immense power over the distribution of resources to different levels of the system. On the one hand, this did ensure closer cooperation and collaboration between primary and secondary level providers. However, on the other hand, it also meant that funds for primary care could be used to cross-subsidize inpatient care, as they were not ring-fenced, despite the declared aim of reorienting the system away from the Semashko inpatient intensive model to one based on primary care. It would appear that this has happened in many areas. The role of the chief doctor of rayon hospitals vis-à-vis primary care providers was, therefore, something that needed to be rethought. Although the chief doctors themselves were resistant to changes that would weaken their local power base, and they were usually an effective lobby group, the family medicine centres were given their autonomy from 1 January 2008. In terms of reform priorities for secondary care, there is also a need to develop both long-term care solutions (Section 6.6 *Long-term care*) and new care modalities such as home care and day surgery (Government of the Republic of Moldova and World Bank 2006). The lack of service quality reviews comparable to those conducted in relation to the development of primary care is indicative of the influence international agencies have, but it is also something which needs to be considered, particularly if patient choice is to become a reality.

## 6.4 Emergency care

The Moldovan emergency care system is now a consolidated network. Shortly before the introduction of social health insurance, emergency care services were centralized into five providers covering administratively defined catchment areas of different sizes. Four regional stations (north, south, central and Gagauzia) cover their respective parts of the country while the National Centre of Emergency Health Care covers Chisinau. The last was created in 2005 from the Chisinau Municipal Emergency Clinical Hospital and its ambulance service. All these providers have autonomy as separate legal entities, but they remain in public ownership and the management of emergency services are centralized in Chisinau (Shishkin et al. 2006).

There are 239.5 emergency care teams (0.66 teams per 10 000 population), which are located in the major settlements of all rayons. The service employs 497 doctors and 907 paramedic staff. There are currently 303 ambulances in the fleet, which cover 67.9% of real need (Shishkin et al. 2006). The whole emergency care system was upgraded in 2003, with new investments in

ambulances and emergency equipment, including 45 new ambulances in 2004 and a further 30 in 2005 (World Bank 2005).

There was a gradual increase in the number of emergency ambulance visits between 2001 and 2003, but following the introduction of the new payment methods under social health insurance, activity levels have increased rapidly. In 2005, the number of emergency calls per 1000 population averaged 252.8 (from 204.2 in 2004). The average in rural areas was still lower than the national average, at 212.2 (up from 158.7 in 2004), but the increase in emergency calls still shows improved access for rural populations to emergency services (Shishkin et al. 2006). Before 2004, there were substantial problems with the accessibility of emergency ambulance services, particularly in rural areas. Consequently, in order to create direct incentives for increasing provider productivity and to ensure sufficient access, the service payment method was changed to a per visit basis. Once this goal was achieved, the payment method was changed to a capitation payment method, but access has been unaffected (Section 3.6 *Payment mechanisms*, under *Paying for health services*). The number of people hospitalized via emergency services has also increased significantly since the introduction of social health insurance. This has significantly improved the treatment of surgical emergencies, and the rates of postsurgical complications and adverse events have fallen.

In 2005, 95.1% of emergency ambulance visits were made to patients covered by social health insurance: 72.5% insured by state budget contributions (pensioners, children, registered unemployed, etc.) 20.6% insured by employers and 2.0% self-insured. Only 4.9% of emergency ambulance visits were for the uninsured population, which means that accessibility for the uninsured population is five times lower than for the insured population (if the estimated number of uninsured is 25% of the general population) (Shishkin et al. 2006).

## 6.5 Pharmaceutical care

Almost all pharmacies were privatized in 1993, with the exception of pharmacies in large hospitals, which are generally still state owned. The state, however, remains a shareholder in a number of privatized enterprises, so Moldova has a mixed system of state and private pharmacies. The large-scale privatization was undertaken to try to ensure an adequate and regulated drug supply in the face of an economic collapse and the state's consequent difficulties in running a centralized drug supply and distribution system immediately following independence. The weaknesses in the state drug supply and regulatory system



that arose shortly after independence led to the formation of a large and unregulated illegal market in pharmaceuticals, alongside a collapse in the national prescription system. Today, the illicit supply of pharmaceuticals is considered insignificant, and regulation of sales through privatized pharmacies is helping to ensure the quality of the pharmaceutical supply. With the exception of a few restricted items, however, most drugs continue to be available for sale from all pharmacies without a prescription, although this is technically illegal. Privatization drastically improved the reliability of drug supply in urban areas, but it has also made drugs much more expensive, thus reducing access. One review of paediatric care services found that having multiple privately run pharmacies that practised shared price fixing within an individual hospital resulted in inflated rather than competitive drug costs. Drugs were much more expensive in the rural areas than in the cities, and hospitals that had maintained their own non-privatized pharmacies seemed to have the least problems with the availability of essential drugs (Duke et al. 2006).

Moldova has one main generic drug production company, Farmaco, which manufactures a limited range of products, and approximately 12 smaller drug production companies. However, approximately 95% of all drugs used in the country are imported (WHO 2006). Prior to independence, Moldova was able to obtain and distribute drugs through the centralized Soviet pharmaceutical system. However, post-independence it became clear that the centralized approach to drug purchasing was not sustainable. As part of the health reform process, Moldova moved to a system of local hospital-level purchasing. Exceptions to this new system included certain drugs such as insulin and haemophilia drugs, which were supposed to be supplied directly to the hospitals by the state. The state was often unable to provide these items and the shortfall had to be met by international nongovernmental organizations such as *Pharmaciens sans Frontières*. Under the local purchasing scheme, hospitals were supposed to receive money for specified drugs and prepare tenders to purchase these competitively. However, the money from the state budget for these drugs purchases was often inadequate (MacLehose 2002).

Following the introduction of mandatory social health insurance, different mechanisms for paying for pharmaceuticals were introduced. To help to rationalize prescribing and encourage doctors to prescribe effective but inexpensive drugs, an essential drugs list was drawn up in 1998, based on WHO recommendations. This essential drugs list is reviewed and revised on a regular basis. The reimbursement of prescribed medicines included on the essential drugs list depends on the level of care and geographical location. Doctors working in primary care can prescribe medicines on the reimbursed list, and the NHIC contracts with pharmacies in order to reimburse them directly for medicines dispensed to patients. Consequently, while primary care

providers do not receive any direct funding for pharmaceuticals, they have an indicative prescribing budget. However, there is a payment mechanism for use in the rayon hospitals, as they have their own pharmacies. Because of the absence of an alternative network for the supply of pharmaceuticals in rural communities, the rayon hospital pharmacies are also allowed to dispense drugs prescribed by family doctors. This is a part of the contract between rayon hospitals and the NHIC. Since 2005, when the system was introduced, this mechanism has worked quite well, and contrary to the problem of overconsumption encountered in other countries, the problem has been one of underconsumption of the resources allocated (Shishkin et al. 2006).

Officially, pharmaceuticals prescribed as part of inpatient care are free of charge for certain vulnerable groups (pensioners, children, registered disabled, etc.); however, drugs prescribed as part of outpatient care are generally charged at full cost, and this is a significant barrier to accessing health care for low-income households. Most out-of-pocket payments for health care are spent on pharmaceuticals (Shishkin et al. 2006). For patients with chronic conditions, such as diabetes, the situation can be precarious. Although under the minimum package most drugs for children under 5 years are supposed to be free of charge, the mechanism for this is unclear and it is unlikely that many children are benefiting from this arrangement. Also, although pharmaceutical treatment in hospital is meant to be free of charge for certain groups, in practice families often have to purchase expensive drugs (Duke et al. 2006). The costs for families are made even higher by the practice of giving many drugs at once under cumbersome treatment protocols, many of which were written under the old regime (Duke et al. 2006). Polypharmacy is also the result of financial incentives and parental or patient expectations; indeed some clinical guidelines were brochures sponsored by drug companies (Duke et al. 2006). Since 2004, drugs included on the essential drug list were also free of charge when prescribed for outpatient care; however, the essential drug list is very limited, covering just 32 products in 2005. Given the high level of out-of-pocket payments dedicated to the purchase of pharmaceuticals, it is critical to carefully expand the drug benefit package covered by the NHIC (Government of the Republic of Moldova and World Bank 2006).

Key aspects of pharmaceutical regulation in Moldova are governed by the Law on Pharmaceutical Activity (1993, amended 1998), which outlines who can perform pharmaceutical duties and the importing, production and registration of drugs, and the Law on Pharmaceuticals (December 1997), which covers quality control issues of pharmaceuticals, manufacturing and trials. Regulation of the pharmaceutical sector is a responsibility of the MOH. It has set profit limits (40% on wholesale price) on pharmacies and also regulates which drugs may be sold in the country (MacLehose 2002). In recent years, significant

progress has been made towards the accreditation and medical auditing of pharmacies in order to establish and enforce quality standards in Moldova. In 2002, the Law on Evaluation and Accreditation in Health Care (No. 552-XIII) was approved, and between 2002 and 2003 the National Council for Evaluation and Accreditation in Health Care accredited 67 pharmaceutical facilities (Government of the Republic of Moldova and World Bank 2006). However, little information on the accreditation process is available and very few of the drugs supplied by pharmacies are actually quality controlled. There are currently no licensing procedures for nonmedical, medical or pharmaceutical activities. Nevertheless, a Pharmaceuticals Agency has now been set up in the MOH for the market authorization and licensing of new pharmaceuticals. As part of the EU/Moldova Action Plan, Moldova has also been actively moving towards compliance with the World Trade Organization's intellectual property rights agreement (TRIPS), which is also a compulsory aspect of the country's membership of the World Trade Organization (Government of the Republic of Moldova and European Union 2005).

The number of pharmacies in Moldova has been expanding rapidly, and there were 1111 pharmacies in the country in 2005, the equivalent of 33 per 100 000 population (Government of the Republic of Moldova and World Bank 2006). Since 2002, when there were 53.4 pharmacists per 100 000 population, the number of pharmacists working in the system has also been growing rapidly, and in 2006 it was 79.0 (Section 5.2 *Human resources*) (WHO Regional Office for Europe 2007). While this may indicate that there is excessive capacity in the pharmacy network, the pharmacies and pharmacists are not evenly distributed across the country. For example, there are less than 16 pharmacies per 100 000 inhabitants in the rural rayons of Cimislia, Nisporeni and Causeni, while in Basarabesca rayon and the municipalities of Chisinau and Balti there are more than 45 pharmacies per 100 000 inhabitants – overall, 68% of pharmacies are located in Balti and Chisinau (Government of the Republic of Moldova and World Bank 2006).

Total drug spending in Moldova was 1223.7 lei (US\$ 95.8 million) during 2005 and it grew at an average rate of 8% per year between 2000 and 2005 (Government of the Republic of Moldova and World Bank 2006). This growth in drug expenditures can be partially explained by the introduction of reimbursement of pharmaceuticals by the NHIC under the State Drug Policy approved by parliament on 3 October 2002. However, given the use of private pharmacies to distribute the drug benefit package under health insurance, it is important that the NHIC develops adequate mechanisms to guard against fraudulent overbilling (Government of the Republic of Moldova and World Bank 2006). This is particularly important as many doctors bought pharmacies under the privatization programme, which are often in the clinic or hospital

where they work. Unscrupulous professionals might, therefore, be interested in prescribing expensive or even inappropriate drugs to patients to increase their own pharmacy profits (MacLehose 2002).

## 6.6 Long-term care

Long-term care for vulnerable groups such as the very elderly, children without family support and disabled people is the responsibility of the Ministry of Social Protection, Family and Child, so care runs parallel to the health care system. Financing comes from a combination of national and local budgetary revenues; for example, of the 2442 beds allocated in 2005 for the long-term care of the sick and the elderly, 2110 were funded from the national budget and 332 from local budgets. The funding for long-term care was projected to rise significantly in 2007, with most of the extra monies coming from local budgets (HelpAge International and Second Breath 2007). Outside the family, the private provision of long-term care is not really a feature of the system in Moldova, and services are underdeveloped. The health care system did have a *de facto* role in the provision of long-term care for the elderly and vulnerable children, where spare hospital capacity was used to meet the needs of these groups in the absence of alternative social care provision (MacLehose 2002; Duke et al. 2006).

Although there are some projects that provide home care and community care, most often long-term care provision is institutional. There has historically been excessive dependence on institutional care for disabled children and adults and for children without family support. During the Soviet era, parents were encouraged to put children with physical or mental disabilities into state care homes, and some financial and health care incentives to place children in state care homes rather than caring for them in the family home remain (MacLehose 2002). The quality of services available in state institutions is not high, and for children there have been considerable policy shifts in support of a programme of fostering, changes that have had strong support from international NGOs. The provision of long-term care services for the very elderly is cause for increasing concern as the Moldovan population ages and chronic diseases (often poorly managed) become more prevalent (Chawla et al. 2007). The Health System Development Strategy for 2007–2016 includes activities focused on increasing the number of long-term care facilities and the number of beds available. The aim is to provide 200 beds per 100 000 inhabitants by 2016. In 2006, the long-term care beds supply for the population was 70/100 000 inhabitants (Government of the Republic of Moldova 2007a).

## 6.7 Palliative care

As of August 2006, there were only 13 home palliative care teams working in Moldova, and one day-care centre; all were providing services for adults. There were no inpatient beds for palliative care in any medical institutions. There were also no official palliative care services for children with life-limiting illnesses; however, a few NGOs do provide palliative care for a handful of children (EAPC 2006). There is a reasonably good geographical spread of services – there are four teams working in Chisinau, one working in Balti, three working in Zubresti and the surrounding villages, and three working in Gagauzia, which cover the whole territory of the region (EAPC 2006). One of the big problems in accessing palliative care services in Moldova is opiate availability for analgesia. Most people in need (generally with cancer) have to pay full costs for their drugs and buy them from pharmacies using special prescriptions. There are budgets at the regional level for palliative care drugs, but these funds are woefully insufficient (EOLC-Observatory 2002). The system for prescribing strong analgesics is also overly bureaucratic.

Most of the palliative care services are provided by charitable NGOs, which are not formally integrated into the statutory system but act as complementary to the system. Financing for palliative care services has relied heavily on the international hospice movement and international donor agencies such as the Open Society Institute. Only two services are fully funded by the state: ATU Gagauzia, where palliative care is provided by trained palliative care professionals, and the Republican Oncological Institute, where there are five trained palliative care doctors. One centre is co-financed as funds for core staff salaries and office space are provided by the government while the palliative care services themselves are provided through Moldovan Soros Foundation grants (EAPC 2006).

The providers of palliative care in Moldova are organized as specialist teams that include mainly doctors but also nurses, psychologists, social workers and volunteers. There are six bereavement support teams operating in Moldova – all are geared towards adult service users – although as a rule, bereavement support is provided by psychologists or a priest, where appropriate (EAPC 2006). Volunteers are important in the hospice movement in Moldova; one service was initially completely staffed by volunteers (“Hospice Angelus” in Chisinau), and all the palliative care services have strong links to hospices around the world, which provide support and training for those working in palliative care in Moldova. The Open Society Institute has worked with services to translate documents and devise a national palliative care training programme (EOLC-Observatory 2002).

Although a concept and infrastructure for palliative care in Moldova was developed in 1994, the programme did not get state funding so exists only on paper; there is not yet any national policy or guidelines on palliative care. However, the Open Society Institute has been active in supporting a programme to develop a national palliative care network and standards of care for different types of patient. There is also now a National Society for Hospice-Palliative Care, although they have not been active in recent Council of Europe discussions pertinent to palliative care provision. The key issues and challenges for the development of palliative care in Moldova include the lack of legislation and information about palliative care, a continuing lack of professionals trained in palliative care, the lack of integration of palliative care throughout the statutory health care system and a paucity of data about the categories of patients who need palliative care services (EAPC 2006). Access to specialist care is also a significant issue.

## 6.8 Mental health

A national mental health policy for Moldova was formulated in 2000 and covers advocacy, mental health promotion, prevention, treatment and rehabilitation. The mental health policy has not yet been fully implemented, but it is hoped that full implementation will happen as part of the new Health System Development Strategy, which is due to run from 2007 to 2016 (Government of the Republic of Moldova 2007a). In 1998, a programme to improve psychiatric services was adopted that put much emphasis on protecting the rights and interests of people with mental health problems. The programme was followed up with the Law Concerning Psychiatric Assistance and Guarantees of Patient Rights (1998). Since 1999, the MOH has also been implementing a programme to develop more humane mental health care in Moldova through professional training for psychiatric nurses and doctors in multidisciplinary teams, with the support of the Geneva Initiative in Psychiatry (WHO 2005).

The first point of contact for people with mental health problems is most often the family doctor in a primary care setting, and those primary health facilities that have been more involved in the reform process are more likely to manage common psychological conditions without referral. More complex cases are referred for an outpatient consultation with a psychiatrist or psychoneurologist working either in a psychoneurological outpatient clinic or a psychiatric hospital. Most mental health services are, therefore, provided as a vertical programme rather than being integrated into primary care (Atun 2007). There are no community care facilities for people

with mental health problems, although the number of mental health day-care places in hospitals is increasing. Both outpatient and inpatient mental health care is meant to be free of charge; services are financed from central and local authority budgets, with the mental health care budget being allocated by the NHIC. People with severe mental health problems are entitled to claim disability benefits. However, the cost of pharmaceuticals is a serious barrier to patients with mental health problems, particularly given the necessity of long-term drug-based therapies (Interminds 2004).

There are three psychiatric hospitals in Moldova, all under the MOH, and although the number of psychiatric beds has been falling since 1991, the reduction has been dramatic since 1998, from 93.6/100 000 to 58.4/100 000 in 2006 (WHO Regional Office for Europe 2007). Most of these beds are in the psychiatric hospitals rather than general hospitals. It is not clear that resources released by the closing of psychiatric inpatient beds have been used to develop community-based alternatives (Interminds 2004). In 2004, there were 9 psychiatrists, 30.5 psychiatric nurses, 1 neurosurgeon, 9 neurologists, 0.7 psychologists and 0.5 social workers per 100 000 population working in mental health care services (WHO Regional Office for Europe 2005). The recruitment and retention of psychiatric staff is a problem as it is considered low-prestige work and the salaries are considerably lower than in other branches of medicine (Interminds 2004).

## 6.9 Dental health

Before the initiation of health system reforms, dentistry services were mostly provided through the primary care network of polyclinics (Goroshenko et al. 1996). However, few primary care centres now provide such services (Government of the Republic of Moldova and World Bank 2006). Dental clinics are now nearly all private enterprises, the process of privatization starting in 1999 when the government passed the laws on the “Minimum Package of Free Medical Assistance Guaranteed by the State” and “Regulation on Fee for Health Services”, which legalized formal payments for some health services and allowed the privatization of the dental and pharmaceutical sectors. In 2005, the benefits package for those covered by social health insurance was expanded to cover some limited dentistry services (World Bank 2005); prior to this, all dental services were paid for out of pocket.

There has been a steady improvement in dentist numbers, from 31.2/100 000 in 2001 to 42.4/100 000 in 2006, but only a handful of dentists graduate in any given year. In 2006, it was just 66 (WHO Regional Office for Europe 2007).

As with other medical personnel, dental services are concentrated in the urban areas, particularly Chisinau, so access for rural communities is limited (Section 5.2 *Human resources*). However, the main factor limiting access to dental services is cost. Although there is some evidence that patients are quite satisfied with the quality of services provided by private dentists in Moldova, there is a need for independent quality assessment for private dentists and a unified single system of certification (Pancenco 2007). At the current time, oral health and dental service provision is not a priority for the Moldovan Government, the MOH or international donor agencies. Consequently, there are no national oral health strategies at present.

## 6.10 Health care for specific populations

As noted in Chapter 1, an estimated 0.6 million people live in Transnistria, a territory that is nominally a part of Moldova but which declared independence shortly after Moldova seceded from the Soviet Union. The region remains effectively outside central government control, and its status is still being negotiated. Transnistria has never been recognized internally or internationally as an independent state, but it currently has its own parliament, president, constitution, economic system and currency (Roper 2005; Protsyk 2006). Government-style structures include a so-called Ministry of Health and Social Protection, which is effectively responsible for the funding and management of health services in its region. As a consequence of the division, Transnistria has not been included in the Moldovan health care reform programme, including the recent introduction of mandatory social health insurance, although there was some interest in introducing a similar system in the region in 2006. It is not clear how treatment of the population of Transnistria outside the region is financed, whether it is covered under the insurance scheme and if there is access to the health services in Moldova. Demographic, basic health and surveillance data (such as for HIV/AIDS) for the region have not been available since 1997, because the Transnistrian health authorities ceased reporting to the MOH in Chisinau at that time.

It would seem that the region has maintained a largely unreformed Semashko style wholly state-owned health system with polyclinics and with a large hospital sector; however, very limited information is available on the funding and performance of health services in Transnistria. Neutral descriptions of health care services and financing in Transnistria are not generally available, but the official website claims considerable successes in modernizing the system, improving quality and maintaining access (Pridnestrovie.net 2005).



A new medical school has also opened in Transnistria but its status is unclear and there are concerns about the quality of training offered.

As Transnistria is not recognized as independent but has sought to stand apart from the Republic of Moldova, the region has not had access to Moldovan Government funds or broad access to funding from international aid organizations working with Chisinau. Consequently, initiatives such as DOTS to control and treat TB have not been implemented in the region and there is restricted access in Transnistria to drugs, such as antiretroviral therapies for the region's estimated 1000–1500 people living with HIV/AIDS (mostly in Tiraspol) (Médecins sans Frontières 2007).



## 7. Principal health care reforms

**A**fter the collapse of the Soviet Union, the Moldovan population has faced severe social and economic upheaval and worsening health indicators at a time when poverty rates were rising and the health system found itself both unable to provide adequate, consistent and affordable health care and unable to sustain the inherited extensive Semashko system. A number of preventive programmes, such as the national immunization programme, were on the verge of collapse in the early 1990s. Increasing informal charges deterred many from attending health facilities at all. The inherited system was highly centralized, and planning was designed around funding bed numbers in specialist facilities with little real opportunity for effective planning at the local level (MacLehose 2002). Although there was concern about political and social implications of reducing capacity, health reform became a pressing issue, particularly following the collapse of the Russian rouble in 1998 with its negative repercussions for the Moldovan economy. Consequently, the financial situation prevented many of the reform ideas that were passed in law in the 1990s from being fully implemented until the new millennium (Table 7.1). High turnover of health ministers and other officials in the MOH was also a barrier to the reform process despite the best efforts of MOH staff. However, the extra time did enable the MOH to work closely with international organizations so that the reform initiatives could be refined before implementation, and some of the pitfalls encountered in other countries with inherited Semashko health care systems have been avoided. The key reform areas have related to the privatization of some health care services (most notably dental services and pharmacies), hospital restructuring, the reorientation of the system in support of primary care services, and, most recently, the introduction of mandatory social health insurance.

**Table 7.1 Legislation supporting major health care reforms and policy measures**

<b>Year</b>	<b>Legislation</b>
1993, amended 1998	Law on Pharmaceutical Activity
1994	Constitution of the Republic of Moldova
1995	Law on Health Protection
1995	Basic Law on Health Care
1996, amended 2003, 2005	Law on the Budget System and Process
1997	Law on Pharmaceuticals
1997	Government Decree No. 1134 Regarding the Statement of the Concept of Reforming the Health-Care System of the Republic Of Moldova in New Economic Conditions for the period 1997–2003
1998, amended 2003, 2004, 2005 and 2007	Law on Mandatory Social Health Insurance
1998, amended 2007	Law Concerning Psychiatric Assistance and Guarantees of Patient Rights
1999, overridden by the Public Administration Law (2003)	Law on Local Public Administration
1999	Regulation on Fees for Health Services
2002, approved 2003	Law on Evaluation and Accreditation in Health Care No. 552-XIII
2002	Statute of the National Health Insurance Company, approved by Government Resolution No. 156
2003	Basic Benefits Package of Health Care Services under Mandatory Health Insurance, approved by Government Resolution No. 1591
2007	Government Decision on the Health System Development Strategy for the period 2007–2016
2007	National Health Policy 2007–2021, approved by Government Decision No. 886

## 7.1 Analysis of recent reforms

Moldova began the health reform process cautiously. Privatization of many dental clinics and pharmaceutical services was implemented relatively early, but the pace of the reform process began to increase in 1998 with: rationalization and consolidation of medical staff and bed numbers, the decentralization of some planning and funding mechanisms in 1999, and new health funding distribution mechanisms in 2001 (per capita rather than by bed numbers). Since then, major progress has been made in redeveloping the health system to meet the needs of the country. Another early key reform measure undertaken was the development of a minimum package of health care in 1998. Although the package was, in reality, not available to all because of funding constraints, it helped to guide health planning towards providing a minimum level of basic

services with whatever funds were available. The move from bed numbers to per capita allocation in planning the health budget also represents a big step in making health planning more realistic and closer to the needs of the population. Since 2004, there has been profound reform of the health care system, with the implementation of mandatory social health insurance (although the legislation introducing social health insurance was passed in 1998) and a contracting model for purchasing health care services.

Although a range of legislation was passed on aspects of social insurance and other funding issues, the real reforms actually began after the publication of the “Health Sector Strategy for the Period 1997 to 2003”, which aimed to address structural inefficiencies, reducing excess human resource capacity and improving financing of the health sector. The strategy identified four major areas of development (Government of the Republic of Moldova and World Bank 2006):

1. Organizational and structural changes to develop family medicine-centred primary health care (with a named doctor responsible for citizens’ health), establish effective interface between primary and secondary care levels, create incentives for increasing health promotion and preventive activities, improve the management of human resources, introduce care guidelines, introduce decentralization to improve the local management of services, restructure the hospital network and transfer management of parallel health systems to the MOH.
2. Modifications to the financing and provider–payment system by introducing mandatory health insurance and contracting, changing provider payment systems (from line-item budgeting to per capita or fee-for-service mechanisms) and allocating state funds to the NHIC to cover vulnerable groups and priority national programmes.
3. Reform of the education and training system for medical staff, by changing the training curricula in line with best developed practice, strengthening continuing medical education, and reforming medical specialties.
4. Reform of pharmaceutical policies, introducing rational prescribing, developing policies and introducing regulations for medicines management.

As part of the 1997–2003 Health Sector Strategy and in order to move the focus of the system away from curative care and towards primary health care services, regulations were issued stipulating that 35% of local health care budgets (27% of government expenditure) should be allocated to primary health care, with 45% to hospital services, 15% to emergency services and 5% to specialist hospital services (World Bank 2005). Strengthening primary care services started in 1997, when Government Decree No. 1134 “Regarding the

Development of the Primary Medical Assistance” created the specialty and post of family doctor and primary care nurse, introduced the principle of patients choosing their family doctor and replaced line-item budgets for primary care providers with a per capita payment system. Responsibility for managing primary care, secondary care level hospitals and emergency services was delegated to the local authorities. In 1998, the Government of Moldova worked with the World Bank to design the Health Investment Fund Project, which ran until 2005, to support the Health Sector Strategy. This project aimed to (a) restructure the network of medical services, in particular the redistribution of resources from tertiary to primary care; (b) strengthen the primary health care network by establishing an efficient network of family doctors; (c) legalize informal payments and eliminating payments for unnecessary or excessive medical services (especially those that burden the poor); (d) create a package of medical services in line with budgetary resources, with an emphasis on primary health care; and (e) centralize health system financing to improve the distribution of funds between levels (World Bank 2000).

Between 1995 and 2004, the number of family doctors working in Moldova increased from 57 to 2096, and this expansion is one of the major reform achievements in recent years (Government of the Republic of Moldova and World Bank 2006). However, there is concern over the number of primary care centres that are understaffed and lacking standard medical equipment and facilities (Section 6.2 *Primary/ambulatory care*). Massive restructuring of secondary and tertiary care has resulted in a reduction of over half in staffing and bed numbers at this level. This restructuring is supposed to have released additional funds to the primary care sector. However, whether funds released through these reductions were passed to the primary care sector or even remained within the health sector at all is unclear, as primary care facilities remain severely underfunded and underequipped and most of the refurbishment of primary care facilities has come through the World Bank Health Investment Fund Project. Nevertheless, reforms in the health sector has been relatively successful in shifting resource allocation away from inpatient hospital care to ambulatory and primary care, despite real political and technical difficulties in reducing oversupply and the duplication of secondary and tertiary provision in Chisinau. However, there is significant variation with respect to the share of local health expenditure that goes to inpatient and outpatient care, which reflects the ad hoc process of restructuring and the high degree of autonomy local authorities have had in determining the pace and direction of reform (World Bank 2003). The autonomy of chief doctors of rayon hospitals in deciding the budget for all health care facilities in the locality also created circumstances whereby resources that should have been dedicated to primary care facilities were actually being used to cross-subsidize inpatient and

specialized care (Shishkin et al. 2006). This is why family medicine centres were given greater autonomy from 1 January 2008.

The key reform of the health financing system was the introduction of mandatory social health insurance, which happened in law in 1998 but was implemented only from 1 January 2004. Initially, the aim was to introduce a complementary funding stream for the health system in the face of falling budgetary revenues. However, the introduction of mandatory social health insurance then came to be viewed more as a catalyst for change, the new contracting and payment mechanisms being instruments that could be used to drive efficiency and quality in the health sector. The introduction of mandatory social health insurance was only revived again in 2001 with the founding of the NHIC. Government resolutions in 2002 enabled the creation of 11 territorial branches of the NHIC and defined the basis of the contract between the NHIC and health care providers for volume of activities for the BBPMHI and prices based on tariffs set by the MOH (Section 2.3 *Organizational overview*).

The introduction of mandatory social health insurance nationwide also only happened after the successful piloting of community-based health care financing through voluntary contributions in the Hincesti region, as part of a UNICEF/MOH project to improve mother and child health and increase access to basic services for the most vulnerable. The project began in 1999, following a household survey on the accessibility and affordability of health services, which showed the need for greater equity. The project focused on the provision of a basic package of services and emergency care. UNICEF provided basic equipment to health facilities, training on new health management techniques and initial stocks of essential drugs. A fund based on voluntary local contributions, which started in late 2000, was intended to finance the programme (MacLehose 2002). This experience was used to inform the wider development of mandatory social health insurance. The MOH was the initiator of health financing reform in Moldova. The strong political support for the introduction of social health insurance from the top levels of the Moldovan Government as well as a high level of professional support have proved distinctive features of the reform process in Moldova (see below). The National Expert Council on Health Care Financing also played a very important role in the elaboration and implementation of reform. The high level of consensus and concordance of actions have meant that the introduction of social health insurance can be deemed a huge success on many levels and was hailed by political leaders as one of the three main achievements of the government in the preceding electoral term (Shishkin et al. 2006).

The introduction of social health insurance has created a health financing system that is characterized by the centralized collection of public funds for health care, and contributions from the central government budget have

predominated in the funding of mandatory social health insurance in Moldova (Section 3.3 *Revenue collection/sources of funding*). Many countries in the CIS have introduced forms of mandatory social health insurance as part of health care reforms. The peculiarity of the collection mechanisms in Moldova is the principle of equivalency in social health insurance contributions for different categories of the insured, and the equivalency in the per capita cost of the social health insurance (Shishkin et al. 2006). In other words, contributions from the budget to cover especially vulnerable groups are equivalent to contributions from the working population. This has meant much higher spending on health from the state budget, rather than health insurance introducing an additional stream of funding for health. However, social health insurance does not cover the self-employed; instead the system plays the role of a voluntary health insurance and the self-employed can join the system by purchasing an insurance policy; as a result, 30% of the resident working population are uninsured (Section 3.2 *Population coverage and basis for entitlement*).

The main outcomes for the health care system with the introduction of social health insurance are as follows (Shishkin et al. 2006):

- the transformation of the system of health care financing was smooth, and the provision of medical services was uninterrupted;
- public funding of health care increased by 19% in 2004 in real terms, and by 16% in 2005;
- reforms increased the stability of public funding for health care;
- a real balance was achieved between state guarantees of free health care and their public funding.

The main outcomes for health facilities are:

- increased income;
- stability of public funding;
- acceleration of funding transfer from budgets to facilities;
- increased autonomy in spending decisions;
- the creation of real incentives to increase efficiency.

The main outcomes for health care professionals are:

- salary increases; and
- the possibility of earning salaries based on the real volume and quality of their work.

The key results for the population have been:



- improved accessibility of emergency prehospital and inpatient care for the insured (data on outpatient care were not reliable enough to draw conclusions); and
- decrease in the magnitude of informal payments.

Overall, the financial crisis of 1998, while terrible for the population, proved to be the essential catalyst for reform of health care financing, and to a certain extent the success of reforms in the health sector can be measured against difficulties encountered in other areas. For example, there were many normative pushes for reform of the pension system from the international lending agencies; however, it was not until the financial crisis of 1998 that there was broad political consensus in the country that reform was necessary. However, it proved impossible to find consensus on how this could best be achieved. The two main reasons for delaying reform to the pension system were lack of political will on the side of governmental authorities to reform the inherited Soviet pension system and the fierce resistance from forces opposing any reforms (Cashu 2000). Similarly, pessimistic assessments of the difficulties faced by Moldovan Governments wishing to introduce deeper economic reform to restructure the economic system (Way 2002) also serve to highlight how significant the successful introduction of mandatory social health insurance has been.

Cercone and Godinho (2001) identified three factors that have supported health sector reforms in Moldova. First, change was in the interest of all key decision-makers while, at the same time, political risk through making change was spread throughout all levels of government. Second, agreement was reached between the central MOH and the rayon health authorities on a medium-term restructuring plan for the reform process. Third, consensus was reached among international donors and lending agencies on the most suitable direction and pace of reform. Additional critical success factors have been identified for the reform of primary health care, including (World Bank 2005):

- the need to act strategically to improve intraregional collaboration and learning;
- investing in not only technical inputs but also management of change over the longer term;
- working at policy, strategy and operational levels simultaneously to ensure actual implementation;
- ensuring appropriate governance structures;
- responsiveness to the situation in a country not just implementing a generic solution is essential;

- branding and image building to improve the status of family medicine specialists in comparison with specialists in specific disciplines, for both professionals and the general public;
- improved incentives for continual improvement;
- improved communication between and within levels of the health system and with the public, as ineffective communication breeds resistance to reform;
- developing a holistic approach to reform, so that all components of the system are considered; and
- having an agreed exit strategy for international partners to ensure long-term sustainability.

## 7.2 Future developments

Since 2002, Moldova has made significant progress in reforming the health sector. The first phase of reforms was driven by financial crisis in the sector, which forced local governments to close small district hospitals and reduce the number of health care personnel. The second phase has been largely driven by the introduction of mandatory social health insurance and the commensurate increases in health financing. Now with health spending at nearly 10% of GDP, it is critical that a new phase of reforms is introduced in order to make gains in efficiency and quality (Government of the Republic of Moldova and World Bank 2006). As a result, the MOH has been exploring the potential for public–private partnerships in the health sector as a useful tool. In order to move forward with contracting models, it is necessary first to establish a clear legal base (in line with both EU and Moldovan laws) to enable direct contracting between the NHIC and primary health care providers – be they public or private. The legal status of these participants should be defined in law (e.g. whether these participants will be sole traders, limited liability companies, limited partnerships, joint stock companies). Laws should also be developed, or where available strengthened, regarding contracts between health care providers and the NHIC: especially in relation to governance responsibilities, financial probity, liabilities, breaches of contracts, resolving disputes, how “failure” should be managed and management of force majeure (Atun 2007). This is particularly important now that primary health care providers have been given their autonomy.

The Health System Development Strategy for 2007–2016 also emphasizes efficiency, system performance and quality as the key areas for development

over the next phase of reforms, while ensuring that the Moldovan population has adequate access to health care and protection from financial risk (Government of the Republic of Moldova 2007a). For this to be successful, the strategy requires firm political commitment, effective and visible stewardship, provision of adequate resources, good management and planning, an efficient monitoring and evaluation system at all levels and the availability of competent staff (Government of the Republic of Moldova 2007a).

The new Health System Development Strategy has the following general objectives, which it is hoped will build on recent successes in health care reform while avoiding some of the common problems with reform realization encountered elsewhere (Government of the Republic of Moldova 2007a):

- *Improving stewardship of the health system.* This will support the implementation of all other aspects of the strategy. It will be achieved through strengthening the capacity of the MOH in the development and implementation of health policies and strategic planning; strengthening the capacity of health authorities in monitoring and evaluation; improving communication in the stewardship process; strengthening intersectoral collaboration; and including patients, civil society and professionals in the decision-making process.
- *Improving health system funding and payment mechanisms for health services.* Improvements here will include changes to the contracting of service providers, increasing equity and transparency in the allocation of resources and financial protection of citizens.
- *Organizing and providing health services in line with requirements and tailored to individual needs.* This will be achieved by promoting integrated health care and assuring continuity of health services for addressing the health needs of the population; developing some priority health sectors that are of strategic importance in impacting on public health; and improving the quality of health services and patient satisfaction.
- *Generating and assuring the necessary resources for the health system.* This can only be achieved through human resources management, which should assure the rational utilization of existing staff as well as the adequate production of health personnel; strengthening the material base of health facilities; and the rational management of pharmaceuticals.

The main potential barriers to achieving these reforms are seen as lack of motivation among health personnel to support change and the exodus of personnel from the health care system; other factors are the continuing patient preference for urban rather than rural health care providers and the lack of managerial capacity and skills at the health system level (Government of the Republic of Moldova 2007a).

It is hoped that all future reform efforts will be underpinned by the new National Health Policy for 2007–2021, which has prioritized reducing health inequalities between socioeconomic groups and geographical regions in the country. The core target areas in the new National Health Policy are as follows (Government of the Republic of Moldova 2007b):

- health promotion and disease prevention through community and individual empowerment;
- ensuring mother and child health through access to services and support;
- strengthening the health of young people through education, access to services and psychosocial support;
- supporting a healthy and active elderly population through independent living and community integration;
- the control of noncommunicable chronic disease through prevention activities and promoting healthy lifestyles;
- improving environmental health and protection through the implementation of a range of international environmental treaties and encouraging the use of more sustainable transport;
- rational nutrition and increased physical activity by ensuring access to good-quality, healthy food and information on the benefits of rational nutrition and exercise;
- the prevention and control of smoking, alcohol abuse and the consumption of illegal drugs through reductions in both supply and demand for tobacco, alcohol and illegal drugs;
- violence and trauma prevention as a part of social and education policy;
- improving the quality of mental health services through the reorientation of services away from inpatient care;
- control of infectious diseases, particularly HIV/AIDS and TB, through improved prevention, detection and treatment;
- improving health system performance through the strengthening of its four key functions: stewardship, financing, resource generation and provision of services.

## **8. Assessment of the health system**

### **8.1 The stated objectives of the health care system**

**T**he Moldovan health care system aims to provide the entire population with universal access to a basic package of health care services. Previous state guarantees to universal access to the full range of health care services free at the point of use proved unsustainable in the economic climate of post-Soviet Moldova. The reality was that state declarations of universal access were not implemented, and access was severely restricted by informal out-of-pocket payments. Consequently, these commitments have been substantially revised and have been substituted by a more limited universal package with a clearly defined package of services covered by mandatory social health insurance. In the first year following the introduction of social health insurance, this pragmatic approach succeeded in extending the accessibility of health care services free at the point of use to the population, although it is not yet universal (see below). There is already growing political pressure to widen the state guarantees though it is not clear that this is economically sustainable at this stage.

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

Equity is a key performance measure for a health system. Payments for health services should be progressive, with richer households paying proportionally more towards financing the health system than poorer households, as well as being horizontally equitable, with households of the same ability to pay making an equal contribution. The consistently high levels of out-of-pocket payments in the financing of health care in Moldova meant that the poorest

households had more limited access to health services and paid a much higher percentage of their income for health care. Average out-of-pocket expenditure for hospitalization was more than three times average household expenditure, so the poorest households bore a potentially catastrophic financial risk where ill-health required hospitalization (World Bank 2003). Results from a UNICEF survey in 1997 found that nearly 50% of people requiring hospital services financed the out-of-pocket payments by selling assets or incurring debt (World Bank 2003). Because unofficial user fees and the need to pay full cost for pharmaceuticals were essentially universal phenomena, the poor simply forewent health care because of resource constraints (World Bank 2003). By the end of the 1990s, when the health care financing crisis was at its peak, the poorest sections of Moldovan society were paying a significantly higher proportion of their household budget on accessing health care, which reflected catastrophic inequities in the system (Government of the Republic of Moldova and World Bank 2006). Against this background, the need to develop a financial risk-pooling mechanism to mitigate risk among the poorest populations became compelling.

The introduction of mandatory social health insurance has helped to protect the population from the financial risks associated with ill health. For example, in 2004, average direct household expenditure on health for the poorest 20% of the population fell 21% in real terms compared with 2003 (Government of the Republic of Moldova and World Bank 2006). Also, the share of out-of-pocket payment for health fell from 51.5% in 2003 to 42.3% in 2005, for both official and unofficial payments (Shishkin et al. 2006). This was achieved because the government undertook to pay the contributions of certain groups, and these contributions are meaningful as they relate to the actual cost of care and are linked to employee contributions. Nevertheless, even though the magnitude of out-of-pocket payments has decreased owing to recent reforms, out-of-pocket payments for health are still relatively high for the European Region (WHO Regional Office for Europe 2007). Research into the cost of hospitalization has also shown that health insurance effectively provides financial protection to insured families; on average, the costs of hospitalization are 83% higher for an uninsured person (Government of the Republic of Moldova and World Bank 2006). However, while the poorest households are now spending less on health care, the utilization of health services by the poorest households has also fallen (Government of the Republic of Moldova and World Bank 2006; Shishkin et al. 2006). Also, the high out-of-pocket cost of pharmaceuticals erodes financial protection for the poor (Government of the Republic of Moldova and World Bank 2006).

Although regional differences in per capita funding for health care has decreased following the recentralization of resource pooling, and despite

ample coverage of health facilities, more remote regions are still served inadequately and rural poor are less likely to gain access to services. Rural poor households are also those that are least likely to have insurance and so are most likely to have to pay for treatment and consultations. Rural services are also the ones that are most acutely understaffed (World Bank 2005). Consequently, it can be said that, while recent reforms have had a very positive impact on equity in the health system's costs and benefits overall, the current system of health financing does not ensure effective protection of the whole population from financial risks. Out-of-pocket payments are still high, and a sizeable proportion of the population (20–25%) is not covered by social health insurance; many of these people belong to the country's poorest households. Consequently, households with higher income are benefiting more from health services than those with lower incomes. However, the Moldovan Government has undertaken to address these inequities and support social solidarity in the National Health Policy (Government of the Republic of Moldova 2007b).

### **8.3 Efficiency of resource allocation in health care**

In the Soviet era, the level of revenue a facility received depended on the number of officially registered beds and the number of staff employed. Performance, in terms of productivity of facilities, quality of care and patient satisfaction were not considered in the funding equation. This led to inappropriate incentives to retain unnecessary beds; to admit patients with little or no need for hospital care and to keep these patients hospitalized for as long as possible; and to invest little in improving the quality, appropriateness or efficiency of their care. Moreover, as resource allocations were made on the basis of capacity rather than health need, the bulk of public resources went to urban centres where the largest number of health facilities was located. These Soviet legacies have determined the nature of inefficiencies in the post-Soviet Moldovan health care system. Efficiency in Moldova has been limited by excessive and inefficient infrastructure, the limited use of appropriate clinical protocols and a lack of capacity in the primary health care system (World Bank 2005).

Profound hospital restructuring took place after the financial crisis, and much of the excess capacity in the Moldovan health care system was reduced. In just one year, 1998–1999, the number of hospitals fell from 276 to 150, and between 1991 and 2006 the hospital stock was reduced by 75%: in 2006 there were 84 hospitals in Moldova (WHO Regional Office for Europe 2007). However, much of the consolidation meant the closure of rural hospitals while

secondary care hospitals in Chisinau, the republican level specialist hospitals, were broadly unaffected. Consequently, the hospital sector still absorbs a significant amount of funding relative to primary care, despite concerted reform efforts to change resource allocation mechanisms. However, this may well change now that family medicine centres are no longer integrated into other local health services under the management of rayon chief doctors. The parallel health systems under the control of other ministries are also a source of great inefficiency in the system and there is currently no strategy for consolidating or restructuring those facilities that have remained outside the reform programme.

The focus on developing primary health care and the substantial investment in the training and retraining of personnel and reallocation of resources away from inpatient care has served to build capacity in the primary health care system, which had historically been extremely weak. However, there are still problems with attracting and retaining staff to work in primary care, particularly in rural areas. The development of health technology assessment and the introduction of evidence-based medicine remain key concerns in reforming the Moldovan health care system, both in terms of ensuring efficient use of resources and in terms of improving the quality of care (see below).

## **8.4 Technical efficiency in the production of health care**

It is difficult to assess technical efficiency in the production of health care in the Moldovan context because the performance-based framework focusing on results rather than inputs is relatively young. Contracting has been used as a means to improve performance at the primary health care level and it seems to have been highly effective in increasing productivity for emergency health care services. However, the data are insufficient to show whether medical facilities have used their rights to allocate money more efficiently. For example, it is known that in 2004 expenses for water, heating and electricity fell by 6.8% in real terms; however, there is no evidence to show whether this was a result of more efficient use of resources or a straightforward reduction in the volume of inpatient care (Shishkin et al. 2006). The development of performance indicators to encourage the use of selective contracting commenced in 2006, and it is hoped that these will increasingly be linked to actual funding.



## 8.5 Quality of care

There are still few incentives to improve quality and consumer satisfaction in the Moldovan health care system. The system is not accountable to the people and responsive to their needs and it continues to be run on a centralized, command-and-control system whereby the patient as end-user has little participation in the system's management. Moreover, medical personnel currently lack sufficient motivation to improve quality, particularly given that they earn such poor salaries. Despite some improvements in primary care facilities, much of the available equipment is obsolete (World Bank 2003). Capital spending has been zero for several years, further exacerbating the problems in quality attributable to sourcing new equipment or upgrading medical facilities. This means that the existing gap between urban and rural areas in terms of service provision, equipment and the availability of drugs is likely to remain for some time to come (Government of the Republic of Moldova and World Bank 2006).

Quality assessment is not yet a meaningful feature of the health care system, and minimum quality conditions for basic infrastructure are often absent. Currently, no evidence-based guidelines are applied at the primary health care level: neither organizations nor individual clinicians undertake clinical audit and monitoring the quality of the services delivered is based on inputs and not outcomes. Therefore, it is not possible to ascertain the quality of the services provided. Current quality systems are externally driven and consist of quarterly reviews by experts employed by the NHIC to review service activity levels. These are based on intermittent inspections and emphasize quality control, rather than quality assurance that is organizationally led and aimed at continuous improvement (Atun 2007).

Nevertheless, there is some evidence that recent reforms have had a positive impact on the perceived quality of services, particularly in primary health care (Shishkin et al. 2006). Evidence from qualitative research (interviews of over 300 stakeholders) suggests that the new model of primary health care based on family doctors is welcomed by users and health professionals alike (Government of the Republic of Moldova and World Bank 2006). These stakeholders (patients, doctors, nurses, policy-makers and managers) identified many benefits of the new model, including: the user-centred nature of new services, which emphasize holistic care and are more comprehensive than in the past; having a named doctor; improved user choice; and enhanced continuity of care. There was general consensus amongst those interviewed that patients have increased awareness of their rights, expect doctors to provide higher quality services and are beginning to demand services to which they are entitled. Although most doctors, managers and policy-makers interviewed felt

that the first contact and gate-keeping functions of primary health care have improved, there are not enough incentives to reduce unnecessary referrals to hospitals. Poor gate-keeping remains a critical problem as patients can directly access secondary care level and specialized care professionals without referral from the primary health care level (Government of the Republic of Moldova and World Bank 2006).

## 8.6 The contribution of the health system to health improvement

In many respects, it is still too early to assess the contribution of the current health system to health improvement, as the latest round of reforms introducing social health insurance and boosting primary and emergency health care services only took effect in 2004. It is also difficult to disentangle the impact of socioeconomic transition on population health from any effects of the near collapse of the health care system in the 1990s. However, falling infant and maternal mortality rates across the spectrum – early, late and post-neonatal – would indicate that programmes to improve the quality of maternity services have been effective, given that these improvements were achieved at the same time as socioeconomic inequalities were widening. In 2004, 99.4% of births were attended by skilled health personnel, and in 2006 the maternal mortality rate (16.0/100 000 live births) and the infant mortality rate (11.8/1000 live births) reached their lowest points ever (WHO Regional Office for Europe 2007). However, other mortality rates that could be reduced by medical intervention but that have not been the subject of concerted improvement efforts, for example premature mortality from diabetes, have not shown similar improvements (WHO Regional Office for Europe 2007).

Moldova has a double epidemiological burden of increasing communicable as well as noncommunicable disease, which highlights both the strengths and the weaknesses of the current public health system, which is still rooted in the Soviet sanitary–epidemiological network. Despite the resurgence in vaccine-preventable diseases immediately following independence, child immunization levels have been consistently high, which is a key marker for strong public health structures. However, the epidemiological profile of the country (Section 1.4 *Health status*) makes it clear that poverty, alcohol and tobacco are the key health determinants for most Moldovans, and mortality and morbidity from these factors account for a sizeable burden on society. Mortality from smoking- and alcohol-related causes are the highest in the whole WHO European Region by a significant margin, and this highlights one of the

major weaknesses in the public health system, namely, the implementation of effective health education and public health policy measures. Building capacity in this area is central to improving the overall health of the Moldovan population and in reducing the significant burden of premature mortality.



## 9. Conclusions

Common to other countries in the CIS, in Moldova there is a need to improve the quality of health care services through the implementation of evidence-based approaches to clinical decision-making and to improve the incentives for service providers to comply with good practice standards (Duke et al. 2006). To achieve improvements in the quality of care, there is a need to strengthen the role of the MOH in stewardship: in policy-making, evaluation and the regulation and monitoring of the health care system. It is also important that effective strengthening of primary care continues; this requires continued shifts in resource allocation away from inpatient care so that ambulatory health centres are resourced and empowered to deal with the vast majority of the population's health care needs, which can indeed be met at the primary health care level. There is also a need to increase the efficiency of the system and to ensure that the health financing system has appropriate incentives for health care providers. For example, the current hospital payment system provides republican hospitals with an incentive to treat simple, non-complex cases because they will be paid more for this than would a rayon hospital, which could treat the same patient equally well. Hence the "profit margin" (the difference between reimbursement and average case cost) is greater for the republican hospitals and they are discouraged from treating more "expensive" complex cases – that is, those that republican hospitals are designed to treat (Shishkin et al. 2006).

However, the central lesson to be learnt from the Moldovan experience of introducing mandatory social health insurance is that this can be highly effective where it is introduced as a means of initiating root and branch reforms of the system by using contracting as a mechanism to improve accountability, transparency and quality, even though mandatory social health insurance does not necessarily provide universal access or coverage. The introduction of mandatory social health insurance in Moldova has improved transparency in the system and reduced the magnitude of informal payments. Approximately

30% of respondents in a household survey conducted in 2005 mentioned that the practice of informal payments completely or partially disappeared once social health insurance was introduced, although 52.9% of respondents did mention that it had not disappeared altogether (Shishkin et al. 2006). Nevertheless, this same survey also showed that the level of information the general population had on health insurance, the understanding of the benefit package, the acceptance of reform and satisfaction with reform was very low. Inequality in access, benefits and outcomes are the key challenges to be addressed in future health care reforms, and improving population knowledge of the social health insurance system and its credibility are major tasks associated with this challenge (Shishkin et al. 2006). The population needs to be informed more adequately about the nature of the reforms, the reasons for the changes, their rights and the expected benefits.

There is also growing concern about the distance felt between policy makers and the practitioners who are at the forefront of reform initiatives yet without always being included in and informed about the reasons for change (Atun 2007). Experience from many countries confirms the importance of adopting a systemic approach to reforms and combining bottom-up and top-down approaches, with simultaneous developments at both policy and operational levels to create shared ownership, to reduce resistance and to enable lesson sharing at different levels of the health system. However, for this to occur there needs to be adequate and appropriate management capacity at these levels. Management capacity at MOH, NHIC and health care provider levels in Moldova needs to be substantially augmented to enable implementation of planned reforms and to improve planning and management functions in the health system (Atun 2007).

Nevertheless, the need to achieve greater coverage in the social health insurance system is acute and well recognized by the Moldovan Government. Disparities in health insurance coverage have both socioeconomic and geographical dimensions, with coverage lower in rural areas than in urban areas and with poor or extremely poor households most at risk of being uninsured. The most vulnerable sectors would appear to be rural poor and extremely poor households, as these are the only sectors that appear to have been adversely affected by the introduction of mandatory social health insurance, with utilization rates actually falling in 2004 (Government of the Republic of Moldova and World Bank 2006). Drug costs are a major contributor to the lack of financial protection in the system, and therefore the drug benefit package should be carefully expanded; however, there is a very real need to resist the populist extension of health care guarantees that are unsustainable. These would, in fact, promote informal payments in the system and threaten equity while undermining the credibility of the new system (Shishkin et al. 2006).

## 10. Appendices

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## 10.2 Useful web sites

Official website for the Republic of Moldova (Moldovan, Russian and English language pages) <http://www.moldova.md/>

Ministry of Health official site (Moldovan, Russian and English language pages) <http://www.ms.gov.md/>

National Centre for Preventive Medicine (Moldovan only) <http://sanepid.md/>

## 10.3 National health programmes in Moldova, 2006

MoldDiab (diabetes services)

Cancer prevention

Tuberculosis and bronchial asthma prevention

Endogenous mental disease

Prevention and treatment of pathologies negatively influencing the human genus

Expensive treatments, examinations and consumables

Expensive heart operations

Haemodialysis services and renal transplantation

Prevention of HIV/AIDS, sexually transmitted diseases and infections

Blood transfusion service

Immunization

Medical assistance to uninsured persons (since 2005)

Consolidation of technical and material resources in medical institutions

[Source: Adapted from Shishkin et al. 2006].

## 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. The most recent template is available online at: [http://www.euro.who.int/observatory/Hits/20020525\\_1](http://www.euro.who.int/observatory/Hits/20020525_1).

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 Organisation for Economic Co-operation and Development (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 HFA database. The HFA 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 HFA data have been officially approved by national governments. With its summer 2004 edition, the HFA database started to take account of the enlarged European Union (EU) of 25 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 HTA 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 care 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 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, legislation.

Producing a HiT is a complex process. It involves:

- writing and editing the report, often in multiple iterations;
- external review by (inter)national experts and the country's Ministry of Health – the authors are supposed to consider comments provided by the Ministry of Health, but not necessarily include them in the final version;
- external review by the editors and international multidisciplinary editorial board;
- finalizing the profile, including the stages of copy-editing and typesetting;
- dissemination (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.

## 10.5 About the authors

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# The Health Systems in Transition profiles

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

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

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

### How to obtain a HiT

All HiT profiles are available in PDF format on [www.euro.who.int/observatory](http://www.euro.who.int/observatory), where you can also join our listserv for monthly updates of the activities of the European Observatory on Health Systems and Policies, including new HiTs, books in our co-published series with Open University Press, policy briefs, the *EuroObserver* newsletter and the *Eurohealth* journal. If you would like to order a paper copy of a HiT, please write to:



[info@obs.euro.who.int](mailto:info@obs.euro.who.int)

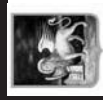
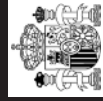
## HiT country profiles published to date:

Albania (1999, 2002<sup>a,g</sup>)  
Andorra (2004)  
Armenia (2001<sup>g</sup>, 2006)  
Australia (2002, 2006)  
Austria (2001<sup>e</sup>, 2006<sup>e</sup>)  
Azerbaijan (2004<sup>g</sup>)  
Belgium (2000, 2007)  
Bosnia and Herzegovina (2002<sup>g</sup>)  
Bulgaria (1999, 2003<sup>b</sup>, 2007)  
Canada (2005)  
Croatia (1999, 2007)  
Cyprus (2004)  
Czech Republic (2000, 2005<sup>g</sup>)  
Denmark (2001, 2007)  
Estonia (2000, 2004<sup>g,i</sup>, 2008)  
Finland (2002)  
France (2004<sup>c,g</sup>)  
Georgia (2002<sup>d,g</sup>)  
Germany (2000<sup>e</sup>, 2004<sup>e,g</sup>)  
Hungary (1999, 2004)  
Iceland (2003)  
Israel (2003)  
Italy (2001)  
Kazakhstan (1999<sup>g</sup>, 2007)  
Kyrgyzstan (2000<sup>g</sup>, 2005<sup>g</sup>)  
Latvia (2001, 2008)  
Lithuania (2000)  
Luxembourg (1999)  
Malta (1999)  
Mongolia (2007)  
Netherlands (2004<sup>g</sup>)  
New Zealand (2001)  
Norway (2000, 2006)  
Poland (1999, 2005)  
Portugal (1999, 2004, 2007)  
Republic of Moldova (2002<sup>g</sup>)  
Romania (2000<sup>f</sup>, 2008)  
Russian Federation (2003<sup>g</sup>)  
Slovakia (2000, 2004)  
Slovenia (2002)  
Spain (2000<sup>h</sup>)  
Sweden (2001, 2005)  
Switzerland (2000)  
Tajikistan (2000)  
The former Yugoslav Republic of Macedonia (2000)  
Turkey (2002<sup>g,i</sup>)  
Turkmenistan (2000)  
Ukraine (2004<sup>g</sup>)  
United Kingdom of Great Britain and Northern Ireland (1999<sup>g</sup>)  
Uzbekistan (2001<sup>g</sup>, 2007)

### Key

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

- <sup>a</sup> Albanian
- <sup>b</sup> Bulgarian
- <sup>c</sup> French
- <sup>d</sup> Georgian
- <sup>e</sup> German
- <sup>f</sup> Romanian
- <sup>g</sup> Russian
- <sup>h</sup> Spanish
- <sup>i</sup> Turkish
- <sup>j</sup> Estonian



The European Observatory on Health Systems and Policies is a partnership between the WHO Regional Office for Europe, the Governments of Belgium, Finland, Greece, Norway, Slovenia, Spain and Sweden, the Veneto Region of Italy, the European Investment Bank, the Open Society Institute, the World Bank, the London School of Economics and Political Science and the London School of Hygiene & Tropical Medicine.

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