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Ukraine

Health system review

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Health System Review 2010



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Preface

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

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

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

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

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

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

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

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

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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, Ireland, the Netherlands, Norway, Slovenia, Spain, Sweden and the Veneto Region of Italy, the European Commission, the European Investment Bank, the World Bank, UNCAM (French National Union of Health Insurance Funds), the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine.

The Observatory team 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 copy-editing,

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The HiT reflects data available in May 2010.

List of abbreviations

AR	Autonomous Republic
ATC	Anatomic-therapeutic-chemical
CECs	Clinical Expert Commissions
CIS	Commonwealth of Independent States
CPI	Corruption Perception Index
DOTS	Directly observed treatment, short course
DMFT	Decayed, missing or filled teeth
DTP	Diphtheria-tetanus-pertussis vaccine
EU	European Union
FAP	<i>Feldsher</i> and midwife post
GDP	Gross domestic product
GLP	Good laboratory practice
GMP	Good manufacturing practice
GP	General practitioner
HALE	Health-adjusted life expectancy
ILO	International Labour Organization
IMF	International Monetary Fund
MHI	Mandatory social health insurance
NATO	North Atlantic Treaty Organization
NGO	Nongovernmental organization
NHA	National Health Accounts
OECD	Organisation for Economic Co-operation and Development
OSCE	Organization for Security and Co-operation in Europe
PPP	Purchasing power parity
SPH	School of Public Health
STI	Sexually transmitted infection
TB	Tuberculosis
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UNICEF	United Nations Children's Fund

VHI	Voluntary health insurance
WHO	World Health Organization
WTO	World Trade Organization

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Abstract

The 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 Ukrainian health system has preserved the fundamental features of the Soviet Semashko system against a background of other changes, which are developed on market economic principles. The transition from centralized financing to its extreme decentralization is the main difference in the health system in comparison with the classic Soviet model. Health facilities are now functionally subordinate to the Ministry of Health, but managerially and financially answerable to the regional and local self-government, which has constrained the implementation of health policy and fragmented health financing. Health care expenditure in Ukraine is low by regional standards and has not increased significantly as a proportion of gross domestic product (GDP) since the mid 1990s; expenditure cannot match the constitutional guarantees of access to unlimited care. Although prepaid schemes such as sickness funds are growing in importance, out-of-pocket payments account for 37.4% of total health expenditure.

The core challenges for Ukrainian health care therefore remain the ineffective protection of the population from the risk of catastrophic health care costs and the structural inefficiency of the health system, which is caused by the inefficient system of health care financing. Health system weaknesses are highlighted by increasing rates of avoidable mortality. Recent political impasse

has complicated health system reforms and policy-makers face significant challenges in overcoming popular distrust and “fatigue” in the face of necessary but as yet unimplemented reforms.

Executive summary

Introduction

Ukraine is the second largest country in Europe and had a population of 46 million in 2009, which is 12% smaller than it was in 1991 when the country gained independence from the USSR. Heavy industry and manufacturing is concentrated in the east and south of the country, whereas the west is more agricultural. There is a political split along similar geographical lines. Populations in the western regions show stronger support for candidates advocating European Union (EU) and North Atlantic Treaty Organization (NATO) accession, while populations in the eastern and southern regions (where more Russian-speakers live) support candidates looking to maintain closer contacts with the Russian Federation.

Rapid marketization and hyperinflation following independence caused severe socioeconomic hardship in Ukraine and, while there was some stabilization in the economy from 2000 and even growth from 2003–2004 and 2006–2007, the global economic downturn has hit the Ukrainian economy hard and the country has sought assistance from the IMF and World Bank. The “Orange Revolution” in 2004 occurred, in part, as a response to dissatisfaction with the economic situation as well as political institutions. However, the government brought to power after the “Orange Revolution” was not able to overcome internal divisions in order to bring about lasting economic improvements.

While the overall health status of the Ukrainian population fell after independence, there has been a steady improvement since the mid 1990s. Maternal and infant mortality rates have been falling steadily, but so too have birth rates. The main contribution to the still elevated mortality rate is from cardiovascular diseases, which account for more than 60% of total mortality. However, infectious diseases are also key public health issues as it is estimated that 1.6% of the population is living with HIV/AIDS and 1.4% of the population are currently tuberculosis (TB) patients.

Organizational overview

In 1991, Ukraine inherited an extensive and highly centralized Semashko system, which it was not possible to maintain through the economic downturn that followed independence. There has been considerable decentralization in the system; however, in most other respects the system remains largely unreformed. Decentralization has meant deconcentration of functional and managerial powers at the regional and subregional level. Regional and local health directorates are responsible for health facilities in their territory and are functionally subordinate to the Ministry of Health, but managerially and financially answerable to the regional and local self-government. Only the State Sanitary-Epidemiological Service and the State Pharmaceuticals Quality Control Inspectorate, each with relevant facilities at the different levels of administration, remain fully centralized and vertically subordinated to the Ministry of Health. Consequently, while the Ministry of Health formally takes the lead in developing health policy, implementation is constrained.

Financing

Health care expenditure in Ukraine is low by regional standards and has not increased significantly as a proportion of GDP since the mid 1990s. The proportion of general government expenditure on health as a proportion of total health expenditure was 55.7% in 2007 (WHO, 2009). The bulk of government expenditure pays for inpatient medical services, with only a relatively small proportion (13%) going to outpatient services. Private expenditure primarily consists of out-of-pocket payments, which are high on account of the high cost of pharmaceuticals; patients generally purchase them at full cost price.

Officially, Ukraine has a comprehensive guaranteed package of health care services provided free of charge at the point of use as a constitutional right; nevertheless “charitable donations” are widely levied in the Ukrainian health system. Government attempts to define a more limited benefits package have left it to the individual facilities to determine which services are covered by the budget and which are subject to user charges. This has led to a lack of transparency in the system, which has contributed to an increase in informal payments.

Most health financing comes from general government revenues raised through taxation (value added taxes, business income taxes, international trade and excise taxes). Personal income tax is not a significant contribution to total revenues. Out-of-pocket payments also account for a significant proportion of total health expenditure, and there are some limited voluntary health insurance (VHI) schemes. Funds are pooled at the national and the local level, as local self-governments retain a proportion of the taxes raised in their territory. There are also inter-budgetary transfers to boost the coffers of poorer local authorities which cannot raise as much revenue. With the exception of a couple of pilot projects in small rural districts, allocations and payments are made according to strict line-item budgeting procedures as under the Semashko system. This means payments are related to the capacity and staffing levels of individual facilities rather than the volume or quality of services provided.

Regulation, planning and management

The Ministry of Health plays the key regulatory role in the Ukrainian health system at the national, regional and district levels. The Ministry is responsible for the accreditation of all health facilities regardless of ownership, but this is more of a formality than a tool for improving quality of services. Similarly, standardization efforts through the development of clinical guidelines and protocols have been ongoing, but they are not generally evidence-based and their efficacy has not been monitored. Since 2007, improving the quality of health care has become a more systematic activity and there is a department in charge of assessing the quality of health care services.

As health facilities are owned by local authorities rather than the Ministry of Health, management of the system is decentralized, which impedes the implementation of plans developed at the national level, and there is no central health planning agency. Approaches to capacity planning have remained almost unchanged since Soviet times. The mechanisms currently in place neither reflect the health care needs of the population nor account for regional characteristics of health service provision. There is also little incentive for rational use of resources or cost control over health facilities, which are predominantly funded from the national budget and out-of-pocket payments.

Physical and human resources

Ukraine has an extensive health care infrastructure despite a rapid reduction in the number of beds in 1997–1998 in response to severe economic crisis. Ukraine does not have a regular system for monitoring the upkeep of medical facilities and the conditions in which services are provided, but regular inspections by the State Sanitary-Epidemiological Service have found that, in 2007, only 29.6% of health facilities are on mains water supply and only 21.1% have mains sewerage. Unsatisfactory sanitary conditions are found most often in rural areas. The lack of systematic updates on the condition of medical facilities and the minimal financing of capital costs in the state health system are the two main reasons for the lack of planning in prospective development (construction, renovation) of medical facilities. The Ukrainian health system has also consistently encountered severe difficulties with the supply and maintenance of existing technological equipment.

The number of medical human resources per capita has increased gradually since 1990, but this does not reflect a growth in the number of medical personnel so much as a decline in the total population, as the absolute number of doctors has been falling. At the same time the medical workforce is ageing rapidly as new graduates choose to work outside the state health system or seek opportunities abroad. The key staff shortages are in rural areas and in primary care, which has a high turnover. The number of nurses has fallen much more rapidly due to the low wages and low status of nursing, and the limited possibilities for professional development. This is a trend witnessed throughout the Commonwealth of Independent States (CIS) and one which runs counter to developments in EU countries.

Provision of services

Traditionally, primary care in Ukraine has been provided within an integrated system by district internists and paediatricians employed by state polyclinics. In 2000 the transition to a new model of primary care based on the principles of family medicine began. Family doctors/general practitioners (GPs) make up a third (32.9%) of all primary care physicians. They work at family medicine polyclinics or in appropriate polyclinic departments, and the overwhelming majority of family doctor/GP facilities and departments are located in rural areas (70%).

The inpatient system is a hierarchical system organized into three levels. The first (lower) level is that of rural hospitals providing basic inpatient facilities. The second (middle) level is the true foundation of the system. Secondary inpatient care is provided in central district and municipal multi-profile hospitals, also in children's hospitals, specialized clinics (*dispensarii*), and specialized hospitals which are located and governed at this organizational level. The third (higher) level is that of regional and supra-regional specialization provided by regional hospitals, diagnostic centres and specialized clinics, and specialized clinical and diagnostic centres at the national research institutes of the Ministry of Health and the National Academy of Medical Sciences. These were originally designed to provide highly specialized medical care to patients with the most severe and complicated conditions, but there has been some blurring of the lines between secondary and tertiary care levels.

Health care reforms

The Ukrainian health system has preserved the fundamental features of the Soviet Semashko model against a background of other changes, which developed on market economic principles. The transition from centralized financing to its extreme decentralization is the main difference in the health system in comparison with the classic Soviet Semashko model.

Although no fundamental reform has taken place, many changes in the health sector have been initiated and often realized since independence, although most of them were oriented not towards meeting the health needs of the population but towards solving problems in the health sector. User fees have been introduced to mobilize additional resources, and sickness funds and VHI have begun to develop. To reduce government expenditure in circumstances where there was an acute shortage of funds, the stock of hospital beds was cut by a third. The legal basis was also laid and measures realized which were directed towards institutional reform of the health sector (for example, to reorient the system towards primary care and introducing family medicine); and specific quality guarantees for health services were also introduced (the licensing of medical practice, accreditation of health facilities, standardization of clinical practice).

Assessment of the health system

Despite changes since independence, the core challenges for Ukrainian health care are still the ineffective protection of the population from the risk of catastrophic health care costs and the structural inefficiency of the health system, which is caused by the inefficient system of health care financing. Health system weaknesses are highlighted by increasing rates of avoidable mortality. The recent political impasse has complicated health system reforms and policy-makers face significant challenges in overcoming popular distrust and “fatigue” in the face of necessary but as yet unimplemented reforms.

1. Introduction

1.1 Geography and sociodemography

Ukraine is the second largest country in Europe, situated strategically at the crossroads of Europe and Asia. The country is bordered by Belarus in the north-west, the Russian Federation in the north-east, the Republic of Moldova, Romania and Hungary in the south-west, and Slovakia and Poland in the west (see Fig. 1.1). It is washed by the Black Sea and the Sea of Azov in the south. The climate is predominantly moderate-continental; however, subtropical conditions are found in the southern shores of the Crimean peninsula.

Ukraine is divided administratively into 27 regions: the Crimean Autonomous Republic (Crimea AR), 24 *oblasts* (regions) and two city authorities (Kyiv and Sevastopol); 67% of the population live in urban areas. The eastern regions are the most urbanized. Heavy industry and manufacturing are concentrated east and south of the country, whereas the west is more agricultural.

The 2001 census recorded more than 130 nationalities and ethnic groups in Ukraine. The main ethnic groups are Ukrainians (78%) and Russians (17%). Since the census, the number of Ukrainians has increased by 0.3% and their proportion among all the groups in Ukraine has increased by 5.1%. Many different religions are also present in Ukraine. Freedom of religion and relative tolerance allow for the coexistence of various religions and atheism. Christianity predominates: Ukrainian Orthodox in the north, east and central parts (Moscow and Kyiv Patriarchates, Autocephalous Church) and Ukrainian Catholic in the west (Greek Catholic and Uniate). Ukrainian is the official state language; Russian, Romanian, Polish and Hungarian are also spoken.

The current demographic situation in Ukraine is very complicated (see Table 1.1). The population stands at 46 million, but has been falling since the mid 1990s. It fell drastically between 1995 and 2000 (-0.9% annually). Recently, the annual decrease has been 0.6%. Since independence, Ukraine's

Fig. 1.1
Map of Ukraine



Source: United Nations, 2008.

population has fallen by 5.8 million or 11%. Population density has decreased by 12% since 1990 and now is 76 people per km². The population is also ageing dramatically.

The birth rate is low and in 2008 was 11 per 1000 population. The rate dropped by 38% between 1990 and 1999, and reached its nadir in 2000 (7.8 per 1000 population). Between 2000 and 2008, it increased slightly, thus increasing the fertility rate from 1.1 to 1.5 births per woman, but this does not offset the high mortality rate (see below). Demographers explain this birth rate increase by the fact that the last numerous group of women born in the 1980s have reached active reproductive age.

Table 1.1

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

	1990	1995	2000	2005	2006	2007	2008	2009
Total population (millions)	51.8	51.7	49.4	47.3	46.9	46.6	46.2	46.0
Population, female (% of total)	53.8	53.6	53.5	53.8	53.8	53.9	53.9	53.9
Population aged 0–14 (% of total)	21.5	20.5	17.9	14.8	14.5	14.2	14.1	14.1
Population aged 65+ (% of total)	12.0	13.6	13.9	15.9	16.2	16.4	16.2	15.9
Population growth (average annual growth rate %)	–	0.0	-0.9	-0.9	-0.6	-0.6	-0.9	-0.4
Population density (people per km ²)	86.0	86.0	82.0	78.0	77.0	77.0	77.0	76.0
Fertility rate, total (births per woman)	1.8	1.4	1.1	1.2	1.3	1.3	1.3	1.5
Birth rate, crude (per 1 000 people)	12.6	9.6	7.8	9.0	9.8	10.2	11.0	–
Death rate, crude (per 1 000 people)	12.1	15.4	15.4	16.6	16.2	16.4	16.3	–
Age dependency ratio (population 0–14 and 65+ population 15–64 years)	0.50	0.52	0.47	0.44	0.44	0.44	0.44	0.43
Distribution of population (urban population %)	67.3	67.9	67.5	67.7	67.9	68.3	68.2	68.5
Proportion of single-person households (%)	–	–	20.9	22.2	24.6	24.0	23.7	–
Education level (literacy rate %) ^a	99.4	99.5	99.6	–	99.4	99.7	–	–

Sources: State Statistics Committee of Ukraine, 2010b; ^a WHO Regional Office for Europe, 2010a.

1.2 Economic context

Ukraine is considered a lower middle income country. Following independence and the transition to a market economy, Ukraine was challenged by a deep economic crisis. Industrial output fell by 54% between 1989 and 1999 and GDP fell by 59.2% (Åslund, 2005). In the early 2000s, the country implemented some economic reforms and GDP growth jumped to 12.1% in 2004 (see Table 1.2). Nevertheless, the average salary in 2004 was US\$ 111 per month. Dissatisfaction with the economic situation and political institutions helped to trigger the “Orange Revolution” at the end of 2004. This event amplified social expectations among population and increased the government’s expenditure on social needs, which was further stimulated by non-stop parliamentary elections in March 2006 and November 2007. Populist socioeconomic policies, combined with attempts to reverse the results of privatization, drastically lowered economic growth from 12.1% in 2004 to 2.7% in 2005. GDP stabilized somewhat in 2006 and 2007, but this did not reflect an improvement in industrial output; it was primarily due to price increases for energy and bank loans which caused the price of goods and services to spike.

Table 1.2
Macroeconomic indicators, 1999–2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GDP (current hryvnya, millions)	130 442	170 070	204 190	225 810	267 344	345 113	441 452	544 153	720 731	949 964
GDP, PPP (current international \$, millions)	148 637	160 838	179 866	192 531	215 117	248 073	263 007	291 100	322 441	336 355
GDP per capita (constant hryvnya)	4 044	4 326	4 772	5 070	5 592	6 316	6 534	7 059	7 662	7 865
GDP per capita, PPP (current international \$)	2 992	3 271	3 695	3 994	4 499	5 228	5 583	6 222	6 933	7 271
GDP growth (annual %)	-0.2	5.9	9.2	5.2	9.4	12.1	2.7	7.3	7.9	2.1
GINI index	29.0	—	—	28.3	—	—	28.2	—	—	—
Industry, value added (% of GDP)	38.5	36.3	34.7	34.5	34.6	35.9	32.3	36.1	36.7	36.9
Agriculture, value added (% of GDP)	14.3	17.1	16.4	14.6	12.1	11.9	10.4	8.7	7.5	8.3
Services etc., value added (% of GDP)	47.2	46.6	48.9	50.8	53.3	52.2	57.3	55.2	55.8	54.8
Labour force, total (millions)	22.9	23.0	23.1	23.1	23.0	23.0	23.2	23.1	23.3	—
Unemployment, total (% of total labour force)	11.6	11.6	10.9	9.6	9.1	8.6	7.2	6.8	—	—
Official exchange rate (hryvnya per US\$, period average)	4.1	5.4	5.4	5.3	5.3	5.3	5.1	5.0	5.0	5.3
Real interest rate (%)	21.6	15.0	20.3	19.2	8.9	2.0	-6.7	0.3	-7.2	-9.0
Poverty headcount ratio at national poverty line (% of population)	—	31.5	—	—	19.5	—	—	—	—	—

Source: World Bank, 2009.

In 2008, the rate of growth of the Ukrainian economy slowed down to 2.3%. Consequently, despite the favourable growth in GDP in the 2000s, in 2008 it was 74.1% of the GDP level in 1990. The falling rate of GDP growth has been accompanied by a high rate of inflation, 10.3% in 2005, 11.6% in 2006, 16.6% in 2007, 22.3% in 2008, and in 2009 it fell a little, to 15.0% (currency.in.ua, 2010). These economic problems and the impact of the global financial crisis led the Ukrainian government to approach the IMF and World Bank for assistance in late 2008. The global economic crisis has hit Ukraine especially hard and official figures for the first quarter of 2009 show that GDP fell by 20.3% when compared with the first quarter of 2008, 17.8% for the second and 15.9% for the third compared to the figures for 2008. In 2008, calculations based on the International Labour Organization (ILO) methods show that the unemployment rate among the working age population was 6.5%, and registered unemployment was 2.8%, but this has grown with the deepening economic crisis; in 2009, 9.4% of the working age population was unemployed (3.7% were registered). Although it would seem that employers in Ukraine have preferred not to lay off employees but have put them on unpaid leave or cut working hours instead, it has been estimated that the true unemployment rate in 2009 was between 9% and 12% (Blinov, 2008).

According to the State Statistics Committee of Ukraine, the average monthly income per household in 2007 was 715 hryvnya (US\$ 141.60): 764 hryvnya (US\$ 151.30) in urban areas and 613 hryvnya (US\$ 121.40) in rural areas; in 2008 it was 1031 hryvnya (US\$ 133.90): 1116 hryvnya (US\$ 144.90) in urban areas and 852 hryvnya (US\$ 110.60) in rural areas; and in 2009, it was 1098 hryvnya (US\$ 137.3): 1172 hryvnya (US\$ 146.5) in urban areas and 941 hryvnya (US\$ 117.6) in rural areas. In 2008, in comparison with 2007, the average monthly income per household nominally grew by 38%, but in real terms it grew by just 9.6%, and in 2009, it nominally grew by 6.5%, but in real terms shrank by 8.5%. In the annual household budget survey, 86% of respondents considered themselves poor, while only 13.4% said they were middle class. Consequently, almost no one in Ukraine perceived themselves to be wealthy. In 2008, 17.7% of the population earned less than the subsistence minimum of 607 hryvnya (27.2% of the rural population and 13% of the urban population). In 2009, 16.1% of the population did not earn a living wage (22.4% of the rural and 13% of the urban population).

As per the joint resolution of the Ministry of Labour and Social Policy, Ministry of Finance, Ministry of Economy, State Statistics Committee of Ukraine and National Academy of Science *Methods of integrated poverty assessment* (Resolution No. 171/238/100/149/2 issued 5 April 2002), the poverty

line in Ukraine is calculated based on a relative measure and is set at 75% of median equivalent expenditures, whereas the threshold of extreme poverty is set at 60%. According to one study, in 2005, 14.4% of the population in Ukraine lived below the extreme poverty line, meaning that they did not earn 45% of the officially established living wage (Cherenko, 2006). Using this method, extreme poverty began rising in 2003–2005. In 2005, the extreme poverty ratio returned to the 1999 level, despite the general improvement in the population's living conditions during this period. Considering improvements in the material well-being of the majority of the population, the increased level of extreme poverty indicates a significant gap between various socioeconomic groups (Cherenko, 2006).

However, this relative measure could be a poor tool for determining the poverty threshold assessment since the poverty line depends on income distribution in society. Another frequently used poverty criterion is the ratio of income (expenditures) and living wage, which already includes the costs of certain food, manufactured products and services. According to the State Statistics Committee of Ukraine, the number of people with average per capita monthly income below the living wage fell by 2.7 times from 80.2% to 29.3% between 2000 and 2007. However, this approach to calculating the poverty line receives much criticism as well, due to its imperfect method of defining a standard living wage. The World Bank, the Institute for Demography and the National Academy of Science now use a combined solution, based on a standard method of determining the absolute poverty threshold based on a daily food ration. According to this method, the national poverty rate in Ukraine fell steeply from a peak of nearly 32% in 2001 to less than 8% in 2005; largely as a result of the growth in real wages and real social transfers (mainly increased pensions) (World Bank, 2007). However, it was also noted that these increases were not fiscally sustainable, particularly in the face of rising fuel costs (World Bank, 2007).

1.3 Political context

Ukraine is a unitary parliamentary–presidential republic. The Constitution divides power between political institutions. The unicameral Parliament (Verkhovna Rada) holds legislative power, while the government (Cabinet of Ministers) holds the executive power. The judicial system of Ukraine consists of a system of courts of general jurisdiction with the Supreme Court of Ukraine being the highest judicial body in the system. The President, who is the head of state, is elected on the basis of universal, equal and direct suffrage

by secret ballot to a five-year term for not more than two consecutive terms. The President guarantees observance of the Constitution, state sovereignty, territorial integrity, and the rights and freedom of all people and citizens. The Parliament is formed on the basis of proportional representation. Currently, five parties and blocs are represented in the Verkhovna Rada: Party of the Regions (39%), Yulia Tymoshenko Bloc (35%), Our Ukraine–People’s Defence Bloc (16%), Communist Party (6%) and Lytvyn Bloc (4%). It should be noted that the majority of parties in Ukraine do not have a clear ideological basis and instead reflect the interests of separate corporate groups. In the first month after its election, the Parliament forms a coalition of factions, which includes the majority of deputies. The coalition forms the government and suggests candidates for the prime minister and ministerial posts which the President officially submits for consideration to the Parliament.

Executive power in the regions and districts, and in the cities of Kyiv and Sevastopol, is executed by local state administrations whose heads are appointed and dismissed by the President on appeal from the Cabinet of Ministers. Local self-government officials in Ukraine are elected directly by representatives of village, rural, municipal and district councils. Executive bodies of village, rural and city councils are represented by their executive committees. They are administered by the village, rural or city *Holova* (head), who is elected by the respective local community by direct vote for a period of five years. The Crimea AR has its own Constitution, which was adopted by the highest representative body of the Crimea AR, the Verkhovna Rada of the Crimea AR, and approved by the Parliament of Ukraine. Its government is the Council of Ministers of the Crimea AR.

The main health care laws in Ukraine are enacted by the Parliament. The country is working hard to bring national legislation in line with international health standards. In recent years, however, due to unstable parliamentary functions, the legislative promotion of the health system has slowed significantly (see Chapter 7).

Following independence from the USSR in 1991, Ukraine became a presidential–parliamentary republic, with the President wielding significant power. Citizens were unhappy with the socioeconomic distribution of wealth, the concentration of power in one person’s hands, the power of the pluralist elites, and bureaucratic administrative control. This dissatisfaction contributed to the “Orange Revolution” during the presidential elections in November–December 2004, when the flawed elections returning incumbent Viktor Yanukovich to power for a second term were challenged in street protests which prompted

new elections. These elections brought the leaders of the “Orange Revolution” (Viktor Yushchenko and Yulia Tymoshenko) to power. The clashing parties in the “Orange Revolution” reached a compromise and several amendments were added to the Constitution regarding the political system. Thus Ukraine changed the balance of power, becoming a parliamentary–presidential republic. The electoral system underwent changes as well. Since 2006, the Parliament has been formed on the basis of proportional representation. The second step of political reforms has not yet been implemented. It entails the democratization and decentralization of local self-government.

The new political system of 2004 has proved unstable. A series of political conflicts was caused by unfinished political reforms and the unclear boundaries between presidential and parliamentary powers. In 2007, the President disbanded the Parliament elected in 2006. After the pre-term parliamentary elections, the Yulia Tymoshenko Bloc and the Our Ukraine–People’s Defence Bloc (the parties at the root of the “Orange Revolution”) created a fragile majority of 227 deputies in a 450-seat Parliament. Yulia Tymoshenko became Prime Minister in December 2007. However, tensions between President Viktor Yushchenko and the Prime Minister worsened significantly. They held different views on controlling inflation, the sale of state assets and budget distribution. On the international stage, the President sought closer ties with the EU and NATO, whereas Tymoshenko advocated a well-balanced relationship with the Russian Federation. In 2008, the Parliament, supported by the Yulia Tymoshenko Bloc and the oppositional Party of the Regions led by Viktor Yanukovich, reduced the powers of the President. The Our Ukraine–People’s Defence Bloc left the coalition soon after. Presidential elections were called for early in 2010 and the results signalled the end of the “Orange Revolution”. Viktor Yushchenko was knocked out in the first round of presidential elections and Yulia Tymoshenko lost by a narrow margin to Viktor Yanukovich in the second round. Political stability in Ukraine remains elusive, however, and the country is quite divided. Support for Yanukovich is very much concentrated in the eastern and southern regions of the country (where more Russian-speakers live) while support for the Orange incumbents is predominantly in the western regions of Ukraine.

Under Viktor Yushchenko’s presidency Ukraine aspired to join both the EU and NATO. Ukraine has established much closer ties with the EU, although no formal application for membership has been made. NATO decided not to offer Ukraine membership at its summit meeting in April 2008. Ukraine is a full member of the United Nations, the World Trade Organization (WTO) since July 2008, the CIS, the Council of Europe since 1995 and the Organization for Security and Co-operation in Europe (OSCE). The country has ratified

most major international treaties which have an impact on health, including the Convention on the Rights of the Child and the WHO Framework Convention on Tobacco Control (as of June 2006). The Millennium Development Goals have been adapted to the Ukrainian context and are being pursued in relation to poverty reduction, control of HIV/AIDS, improving child and maternal mortality and other areas.

Ukraine scored 2.2 on the 2009 Corruption Perception Index (CPI) where 10 would be a country with no corruption; this was the same score as the Russian Federation, Sierra Leone and Zimbabwe in 2009 (Transparency International, 2010). The CPI score for Ukraine in 2008 was 2.5 (Transparency International, 2009), indicating that corruption levels have been increasing, which is disappointing given that tackling corruption was one of the core policies of the Orange government.

1.4 Health status

Social transformations, caused by new economic and socio-political developments, have had a negative impact on population health in Ukraine, which peaked in 1995–1996, although in recent years, the situation seems to be stabilizing and even improving (see Table 1.3). Average life expectancy at birth

Table 1.3

Mortality and health indicators, 1990–2006 (selected years)

	1990	1995	2000	2003	2004	2005	2006
Life expectancy at birth, female (years)	75.0	72.6	73.6	73.6	73.6	73.4	73.8
Life expectancy at birth, male (years)	65.7	61.3	62.3	62.3	62.0	61.5	62.3
Life expectancy at birth, total (years)	70.5	66.9	67.9	67.8	67.7	67.3	68.0
Mortality rate, female (per 1 000 female population)	8.8	10.4	9.8	10.0	9.8	9.9	9.6
Under 65 mortality rate, female (per 1 000 female under age 65)	2.8	3.7	3.3	3.4	3.5	3.6	3.4
Mortality rate, male (per 1 000 male population)	15.6	19.8	18.7	19.1	19.2	19.7	18.8
Under 65 mortality rate, male (per 1 000 male under age 65)	7.2	10.3	9.7	9.8	10.1	10.5	9.8
Infant deaths (per 1 000 live births)	13.0	14.8	12.0	9.5	9.4	10.0	9.6
Probability of dying before 5 years of age (per 1 000 live births)	16.7	19.0	15.5	12.8	12.3	13.0	12.3

Source: WHO Regional Office for Europe, 2010a.

fell by over three years between 1990 and 1995; it has since recovered, but has still not reached pre-independence levels. It then began improving slowly and in 2007 it was just one year lower than in 1990.

Most mortality is related to cardiovascular diseases (60%), followed by cancer (12%), and external causes including accidents and poisoning (9.7%); these three causes account for 81.8% of all deaths in Ukraine (see Table 1.4). Health-adjusted life expectancy (HALE) is not routinely calculated; international research conducted in 2003 found that in 2002 HALE was 54.9 years for men and 63.6 years for women in Ukraine.

Table 1.4

Main causes of death (all ages per 100 000), 1990–2006 (selected years)

	1990	1995	2000	2003	2004	2005	2006
Main causes of death (ICD-10 Classification)							
I. Communicable diseases							
– Infectious and parasitic diseases (A00–B99)	11.8	20.2	25.9	25.1	25.9	35.9	33.9
– TB (A17–A19)	8.8	15.1	22.3	21.5	22.6	24.3	21.3
II. Noncommunicable conditions							
– Circulatory diseases (I00–I99)	589.0	780.2	774.6	819.7	808.0	827.2	801.6
– Malignant neoplasms (C00–C97)	184.4	182.7	173.2	164.3	162.7	164.2	161.7
– Trachea/bronchus/lung cancer (C33–C34)	40.8	37.8	33.4	29.5	29.0	28.1	27.8
– Respiratory diseases (J00–J99)	66.5	82.5	67.4	53.7	50.7	50.1	44.0
– Digestive diseases (K00–K93)	29.7	42.6	42.1	48.2	54.6	62.1	59.0
III. External causes (V01–Y89)							
– Transport accidents (V01–V99)	26.1	19.1	14.1	18.5	18.9	19.8	19.9
– All external causes, injury and poisoning	107.4	162.1	146.0	146.0	143.9	141.4	130.3
IV. Symptoms, signs and ill-defined conditions	104.2	88.1	50.3	61.7	61.9	63.8	57.5

Source: WHO Regional Office for Europe, 2010a.

In 2002–2005, 62% of the adult male population and 17% of the adult female population smoked in Ukraine (WHO Regional Office for Europe, 2010b). Alcohol consumption levels are also high and there is a growing tendency towards alcohol abuse among children and young people. According to a 2007 survey of 15–16-year-old students, 83% had drunk alcohol in the past 12 months and 32% had been drunk; 72% of boys and 56% of girls had smoked at least once in their lives and 13% had tried cannabis (Hibell et al., 2009).

Despite the difficulties of the transitional period, maternal and child health has received a large amount of attention in Ukraine and significant progress has been made on this issue. Infant mortality rose between 1991 and 1995, but then fell by a third between 1995 and 2006. WHO and UNICEF indicators were

higher by 40%, but follow the same trend. The Soviet definition of a live birth is still being used (requiring the infant to weigh a minimum of 1000 g, rather than 500 g at birth, for example), which helps account for this difference. Formally, Ukraine adopted international reporting criteria in 2007, but as the registered level of infant mortality did not increase that year, it is likely that it is not yet being fully implemented. Research conducted by the Ministry of Health and National Institute for Strategic Studies also revealed that the number of neonates weighing between 500 g and 999 g decreased by half in the 2006–2007 period. The analysis also showed a significant increase in the survival rate of these infants (from 36.4 to 50.3 per 1000 live births), despite continued problems with access to neonatal intensive care equipment (Ministry of Health of Ukraine and Ukrainian Institute of Public Health, 2008). The early neonatal death rate and maternal mortality have both halved since independence (see Table 1.5). However, WHO and UNICEF consider the maternal mortality rate to be underestimated, undercounting being due to the punitive nature of the control system, which encourages health workers to disguise poor health outcomes.

Table 1.5

Maternal, child and reproductive health indicators, 1990–2008 (selected years)

	1990	2000	2005	2006	2007	2008
Adolescent birth rate (per 1 000 women aged 15–19 years) ^a	59.1	32.1	28.6	29.5	30.3	–
Births to mothers aged 15–19 years (% total live births) ^a	–	–	–	10.8	10.3	–
Abortion rate (per 1 000 live births)	1550.6	897.9	445.6	382.2	332.3	281.0
Neonatal deaths per 1 000 live births	–	6.7	5.7	5.6	–	–
Postneonatal deaths per 1 000 live births	–	5.3	4.3	4.1	–	–
Perinatal deaths per 1 000 births	14.3	9.6	8.9	8.8	8.6	8.5
Maternal mortality rate (all causes) per 100 000 live births	32.4	24.7	17.6	15.2	19.9	15.5
Maternal deaths per 100 000 live births (WHO estimates)	50.0	35.0	–	–	–	–
Sexually transmitted infections (STIs)						
Syphilis incidence per 100 000 population	6.0	91.9	42.2	34.5	29.9	27.5
Gonococcal infection incidence per 100 000 population	73.2	52.9	38.7	33.1	29.8	27.1
STI prevalence (newly registered cases of syphilis and gonorrhoea) per 100 000 population ^b	–	–	–	67.4	59.7	–

Sources: WHO Regional Office for Europe, 2010a; ^a State Statistics Committee of Ukraine, 2010b; ^b Ministry of Health of Ukraine and Ukrainian Institute of Public Health, 2008.

After a serious rise in the prevalence of sexually transmitted infections (STIs) in the 1990s, the rates of syphilis and gonorrhoea are now decreasing. The abortion rate dropped by 71% between 1990 and 2007, and the number of births to 15–19-year-old mothers dropped by 36%. Although the rate is still high by European standards, the reduction is closely linked to the development of family planning services since independence (see section 6.1).

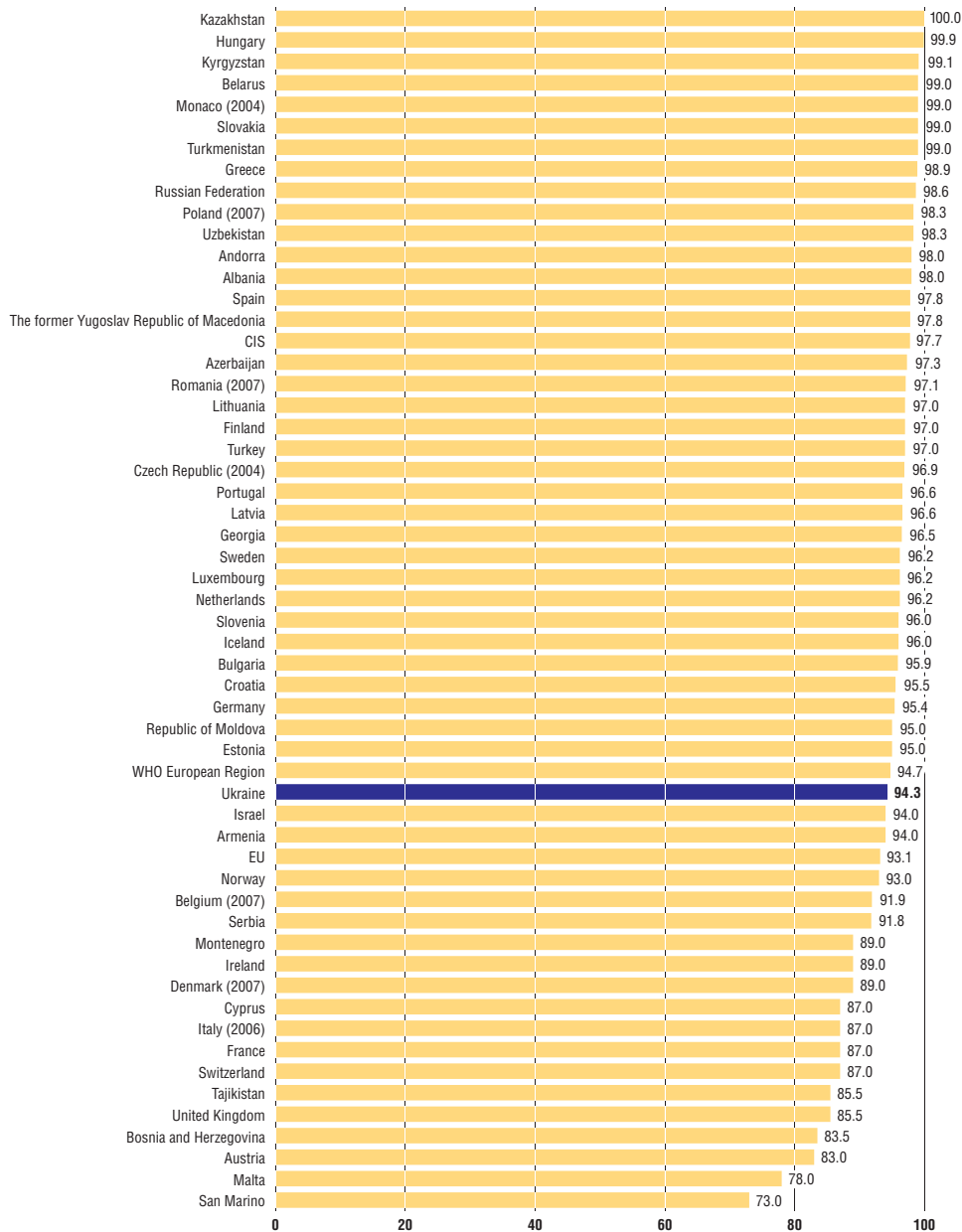
Childhood immunization levels for vaccine-preventable diseases are relatively high, but have been falling since 2002, which is cause for concern. Polio, DTP (diphtheria-tetanus-pertussis) and measles vaccination coverage fell to 90.6%, 90.5% and 94.6% in 2008, respectively (see Fig. 1.2 for data on measles). The falling rates are unlikely to be the result of improved data quality and are more likely the result of problems with the immunization programme and the reporting of vaccination scares in the mass media.

The TB and HIV/AIDS situation in Ukraine is very serious. According to the data from the Medical Statistics Centre (2008c), since 1995, TB has been classified as an epidemic in Ukraine and TB rates increased for 10 years before showing some signs of stabilization in 2006. The TB rate is 47 times higher in the prison system than in the rest of the country and 1.4% of the population are TB patients. About 10 000 people die from TB every year. Especially worrisome is the lack of stabilization for multi-drug resistant forms of the disease. HIV-related TB is also spreading rapidly. HIV/AIDS prevalence in Ukraine is among the highest in the WHO European region. The first cases of HIV in Ukraine were registered in 1987. The infection spread slowly for the next seven years at a rate of 6–40 new cases per year, but an outbreak among injecting drug users in 1995 aggravated the situation tremendously. The number of HIV-positive patients is growing every year and the actual spread of HIV is much higher than the number of registered cases. According to the Ministry of Health HIV/AIDS Committee, 1.6% of the population are HIV-positive. Injecting drug use remains the main mode of transmission for HIV (54.4% of new cases), but the rate of heterosexually transmitted HIV is growing as well. More and more children are also being born to HIV-positive mothers.

There are very limited data on health inequalities among different population groups in Ukraine. The 2001 health study linked to the general census in Ukraine launched a large-scale social research project aimed at establishing measures to reduce health inequality, and protect and promote public health (Gruzeva, 2006). The research revealed significant health differences between various income groups. Few individuals in low-income groups evaluated their health as excellent or good (1.2% and 11.4%, respectively); 67.8% of people in low-income groups estimated their health as poor; and 2.3% responded with very poor. These numbers are much higher than in the total population (12.3% to 23.2%, according to other studies). Medical facilities provide data showing that disease rates are 45.7% higher among low-income groups than among the wealthy. According to prophylactic screening data, disease prevalence varies dramatically between groups according to income. General disease prevalence was twice as high in low-income groups than in high-income groups.

Fig. 1.2

Level of immunization for measles in the WHO European Region, 2008 or latest available year



Source: WHO Regional Office for Europe, 2010a.

Hypertension morbidity was 1.9 times higher in low-income groups, and chronic bronchitis morbidity was 2.7 times higher. Prevalence of gastric ulcers was 2.4 times higher in low-income groups than in wealthy groups, and chronic gastritis was 3.3 times higher. Children from low-income households were 3 times more prone to chronic diseases than their wealthy counterparts.

According to epidemiological research conducted by the Ukraine Dental Association, there is a high prevalence of dental caries in the country (Ministry of Health, 2008): 87.9% of 6-year-old children with 4.6 decayed, missing and filled teeth (DMFT) had temporary occlusion caries; 72.3% of 12-year-old children with 2.75 DMFT had permanent occlusion caries; 70–80% of 15-year-olds surveyed had periodontal problems. Caries prevalence is much higher in areas with low fluoride content in the drinking water (78.6% of the population with 3.62 DMF), whereas in areas with standard fluoride content, caries affects 61.7% of the population with 2.05 DMFT. Over 60% of children and teenagers between the ages of 7 and 18 have teeth and jaw defects. The congenital malformation rate remains high. Dental problems among children in heavily polluted areas are 1.5 to 3 times higher than among children in ecologically clean areas.

In Ukraine 72.3% of water supply systems do not comply with sanitary norms due to a lack of sanitary protection zones; 17.4% of water supply systems lack necessary treatment facilities and 18.2% do not have disinfecting facilities. The water supply pipeline network is in poor condition; in some regions 30–70% of pipes are worn out. Routine and major repairs, as well as emergency repairs, do not occur in a timely manner. Some regions, especially in the south of the country, suffer from insufficient water supplies on top of poor water quality. Timed water supply and long interruptions lead to the bacterial contamination of drinking water. Sometimes water supply facilities are denied power services, which aggravates the situation. Agricultural water supply is of particular concern. Transferring rural water supply networks to the jurisdiction of local self-governments had a negative impact on water quality. Often, citizens have to repair the infrastructure themselves. Many rural water systems lack treatment and disinfecting facilities. Only a quarter of rural areas have a centralized water supply. The rest of the population use decentralized water sources such as wells. These water sources often suffer from unsatisfactory sanitary and technical conditions (Ministry of Health, 2006). In 2006, 12.6% of drinking water samples from the centralized system did not comply with sanitary requirements due to sanitary and chemical indicators; 4.1% of samples were unsatisfactory due to bacteriological indicators. For decentralized water samples, these percentages were 31.9% and 20.6%, respectively.

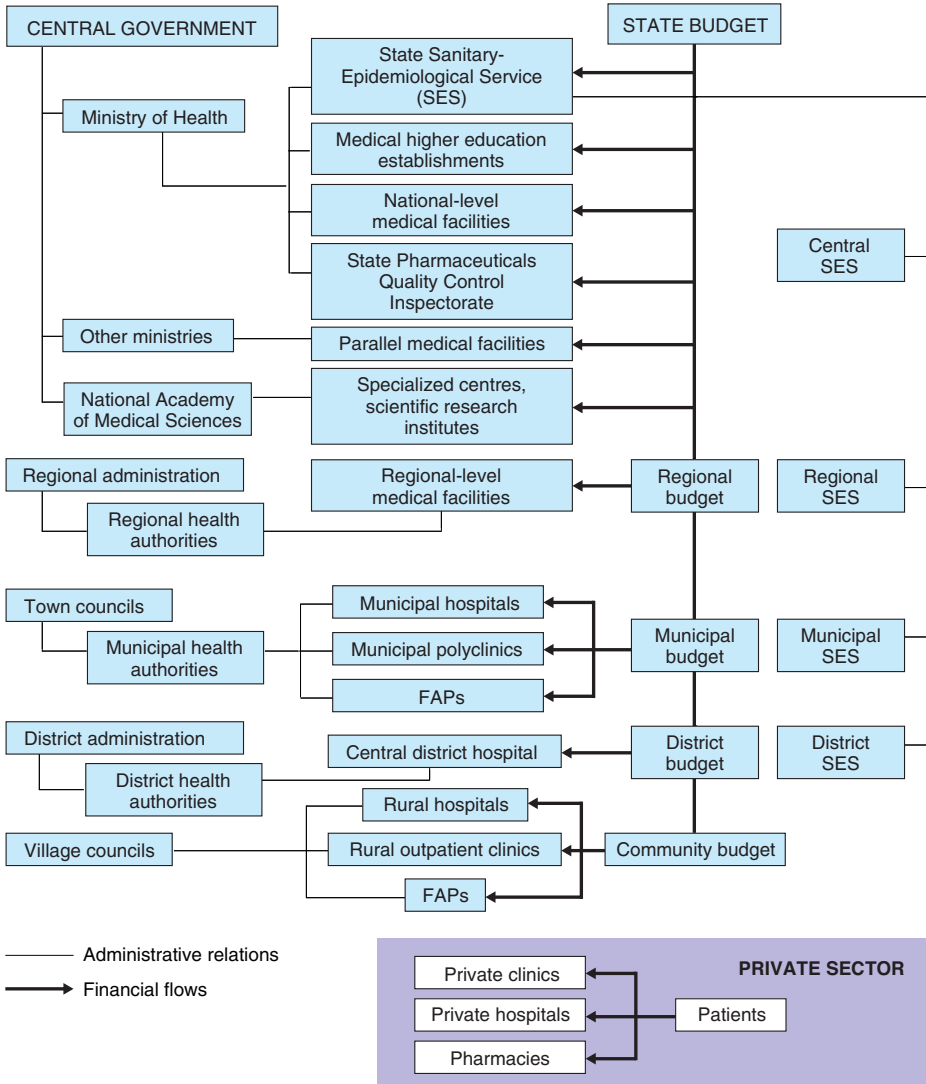
2. Organizational structure

2.1 Overview of the health system

The Ukrainian health care system is still based on the integrated Semashko model. Officially the system is financed by general taxation and formally provides universal access to unlimited care free at the point of use in public medical facilities. The different levels of public medical facilities are funded directly by the respective budgets. But all levels of local budgets (regional, municipal, district and village budgets) are financed through the allocation of funds from the central budget according to special formula approved by the Cabinet of Ministers of Ukraine. Formally, the health system in Ukraine is completely controlled by the state. In theory, management of the system and the coordination of its activities are provided by the Ministry of Health of Ukraine. In practice, however, the Ministry's influence is significantly limited.

The national Ministry of Health coordinates and governs the core health system through regional health authorities, which are structural subdivisions of local administrations but are functionally under the jurisdiction of the Ministry of Health (see Fig. 2.1). At the regional level the Ministry of Health of the Crimea AR, *oblast* (regions), and Kyiv and Sevastopol health administrations are accountable to the national Ministry of Health for national health policies within their territory. They are also responsible for regional health care facilities which primarily provide specialized and highly specialized services. At the local level, primary and secondary care facilities and hospitals are owned by the various tiers of local self-government – district administrations, municipal, city district, village and rural councils. Most medical services are provided to the population in facilities which are under local self-government at the regional, district, municipal or village level and which are generally financed from the budgetary resources of the relevant tier of the government which are allocated transfers to the local self-government level. However, due to poor government financing of the health system, the population is required to pay for outpatient and inpatient pharmaceuticals as well as provide unofficial remuneration to medical personnel.

Fig. 2.1
Overview of the health system



The private sector of the health system is rather small in Ukraine and consists mostly of pharmacies, medico-prophylactic facilities (inpatient and outpatient), and privately practising physicians (see section 5.1.2 *Capital stock and investments*). They receive their financing mostly through direct payments from the population for medical services and devices. Apart from

the development of a formal private sector, the basic organizational structure of the Ukrainian health system has essentially remained unaltered since the Soviet period.

2.2 Historical background

After the First World War, the October Revolution and the Civil War, the USSR suffered massive epidemics and famine. The country faced serious health problems with much of the health care infrastructure destroyed and inadequate resources to control communicable and other diseases. In 1918, N.A. Semashko, the first Peoples' Commissioner of Health, formulated the concept of Soviet health care. The officially stated principles were state responsibility for health care; universal access to free health care; the provision of high-quality services aimed at maintaining health, treatment and rehabilitation and the prevention of social diseases; and sustaining close links between medical science and practice. The state assumed responsibility for universal health care by creating a theoretically uniform state system to control communicable and occupational diseases and protect mother and child health. Epidemiological control measures for the prevention of epidemics were put into place, especially with regard to TB, louse-borne typhus, enteric fever, malaria and cholera. Public health measures involved interventions such as quarantine, improving urban sanitation and hygiene and drainage of malaria marshes. There were extensive programmes of periodic examinations of particular population groups deemed to be at risk (Lekhan, Ruidy & Nolte, 2004).

The health system in Ukraine, under strict control of the central government in Moscow, was formally under the control of the Commissariat (subsequently the Ministry) of Health of the USSR, although in reality many decisions were taken by the parallel Communist Party apparatus. Control was exerted through five-year plans, with their centrally determined norms for equipment and personnel that took no account of local needs. These norms were revised periodically at party congresses, which emphasized expansion of staff and facilities, although with little regard for quality. The government was also responsible for developing the state hospital network and for training health professionals. The state was the direct employer of health care workers; it also paid staff salaries and was responsible for equipping health care facilities, research institutes and educational institutions. Planning of resources and personnel was strictly centralized so that what passed for management of local health facilities involved merely low-level administrative functions. For some

time, a social health insurance model of health care that had been introduced in 1912 coexisted with the Soviet Semashko model. However, in 1927, health funds were abolished by governmental decree; hospitals and other health care facilities were nationalized and subordinated to local and regional health administrations. Health care workers became civil servants. At the same time, separate parallel health services, usually providing higher-quality services, were introduced for certain population groups, such as government officials, military and security service, or miners and other industrial workers. The territory that is now West Ukraine retained the Hungarian and Polish systems of health insurance until its annexation by the USSR in 1939 (Lekhan, Rudiy & Nolte, 2004).

During the Second World War Ukraine suffered greatly. Once again, many health facilities were destroyed and many health professionals were killed or deported. The post-war period saw a rebuilding of the health system, with wide-ranging, if basic, interventions bringing rapid reductions in many communicable diseases. The health system was rebuilt, based on a hierarchy of facilities at *rayon* (district), *oblast* (region) and republic levels. It included sanitary and epidemiological stations, hospitals, polyclinics and specialized health care facilities, each staffed and equipped according to norms based on the local population size rather than health needs. The polyclinic in each district was linked to the district hospital and health staff rotated between these facilities in an attempt to ensure continuity of services and to enhance the professional level of health care workers; these measures, however, were increasingly unsuccessful as demand outstripped resources. Sanitary and epidemiological stations monitored the status of water supplies, sewerage, air and soil, investigated outbreaks of communicable diseases, and monitored the health and nutrition of children. Medical and sanitary aid posts delivered health care at industrial sites and monitored occupational safety; specialized clinics provided various services in the field of medical rehabilitation and recuperation.

The rapid expansion of the health system, providing universal access to professional health services, along with some improvement in living standards, was, initially, very successful in improving population health, with substantial reductions in infant mortality and the incidence of many communicable diseases. Health progress was steady, with life expectancy increasing up to 70 years by the early 1970s. However, the epidemiological shift in the 1960s towards noncommunicable diseases stimulated an increasing specialization of health care. The 1970s and 1980s saw considerable growth in the network of specialized health care facilities, the introduction of specialized consulting rooms in polyclinics and the conversion of general-medicine units in hospital into specialized units. The intense and in many ways uncontrolled process

of specialization had shifted the priorities in health care at the expense of primary health care, with local physicians – the leading figures in the Soviet Semashko model – increasingly reduced to mere dispatchers of patients to specialists. However, these developments failed to halt the increasing impact of noncommunicable diseases, with several indicators of population health in the USSR beginning to deteriorate from the mid 1960s onwards. These trends had several explanations. One was the consequence of failure to invest in the social sector as the economy of the USSR faltered. However, the USSR was also lagging increasingly far behind the West in its ability to deliver new, complex interventions, such as modern pharmaceuticals and surgical techniques, and health care management continued to be based on indicators of quantity rather than quality. Notably, the USSR missed out on the development of evidence-based medicine, which had begun to advance especially in the West from the 1970s onwards, with *prikaz* (official guidance) based on so-called “expert” opinions rather than empirical evidence, a weakness whose repercussions are still apparent. Many treatment regimes were either ineffective or, in many cases, harmful.

Despite the limited resources available for the health system, planning continued to be oriented towards the goal of ever-increasing capacity, measured by the number of hospital beds and of health personnel. As a result, Ukraine, like many other republics of the former USSR, had one of the world’s highest numbers of hospital beds and physicians per capita. By the late 1980s, most health expenditure was directed to inpatient care (up to 80%) with around 15% spent on specialist outpatient services and just 5% on primary care. Inevitably, increased quantity was at the expense of quality, and in many cases encouraged harmful practices such as lengthy hospitalizations for minor disorders. However, in the late 1980s, following liberalization of political and economic relations by the policies of perestroika (restructuring) and glasnost (openness), some regions in the USSR saw the introduction of new forms of health care planning, financing and management called the “new economic mechanism”. It aimed at transforming the old financing system based on capacity to one based on the performance of public health care facilities, thus replacing the previous administrative approach to management by contractual relationships. The polyclinic was to become the key player in the system, holding financial resources that would purchase services from hospitals and other health care providers. However, these initiatives received no support from the Ministry of Health of the then Ukrainian Soviet Socialist Republic and soon ceased to function.

After 1991, Ukraine underwent a painful process of economic restructuring that was accompanied by social instability and drastically reduced living standards for large parts of the population, especially pensioners, disabled people and other vulnerable groups, leading to further worsening of population health (see section 1.4). This increased need for health care took place against the background of reduced ability of the health system to respond adequately. The general economic downturn also had an impact on the resources available for health care at a time when the costs of running the system have increased substantially. In Soviet times, costs of material and medical supplies, and basic services such as electricity, heating and others were fixed, thus allowing the state to maintain the extensive network of facilities. Also, the running costs of hospitals were comparatively low. The costs of pharmaceuticals were also relatively low, as the limited range available from production in the USSR or in other socialist countries was subsidized. The transition to a market economy has resulted in soaring prices of pharmaceuticals as well as basic services such as energy, thereby further complicating the already difficult economic situation in the health care sector. Against this background, maintaining the complex, inefficient public health system with its unbalanced structure of services in Ukraine has resulted in a highly unequal health system of low quality.

2.3 Organizational overview

The *Verkhovna Rada (Parliament)* sets the goals, major objectives, priorities, budget guidelines and regulatory framework for the health sector, and approves the targeted national health programmes. State health policy is then implemented by the Ministry of Health. The *President* is responsible for ensuring that health policy is implemented in accordance with health care legislation and the Constitution through the system of executive bodies. The *Cabinet of Ministers* coordinates the development and implementation of comprehensive and targeted national programmes, and creates legal, economic and managerial mechanisms to promote the efficient operation of the health system.

The *Ministry of Finance* prepares the draft state budget, which is then submitted to the Parliament for approval. This defines the public resources to be allocated to the health sector in any given year. The Ministry of Finance is also the body which establishes the requirements for state institutions (including health care facilities) in formulating and implementing budgets.

The *Ministry of Health* is the leading body within the executive power branch responsible for implementing health policy and administering state-owned health facilities. The health system is managed by the Ministry of Health through the regional health authorities in the 24 regional administrations and two city states of Sevastopol and Kyiv, where the departments are part of the city state administrations. There is also a separate Ministry of Health of the Crimea AR, which is part of the Crimean government (see section 2.4). At the national level, the Ministry of Health is responsible for setting national health policies, and directly managing and funding certain specialized health care institutions which are in state ownership, higher medical educational establishments, research institutes, and state-owned medico-prophylactic facilities (see Fig. 2.1, p. 16). The Ministry of Health provides vertical management with basic command-and-control institutions which provide regulatory functions in the sphere of social health protection (for example, the State Sanitary-Epidemiological Service and the State Pharmaceuticals Quality Control Inspectorate).

The Ministry of Health is also responsible for the organizational and methodological management of activities in the state medical catastrophe service. The latter, in essence, is a functional interagency body. It consists of medical forces, equipment and facilities at the central and regional levels, which are independent of local self-government and are instead under the Ministry of Health in cooperation with the Ministry of Emergencies, the Ministry of Defence, the Ministry of Internal Affairs, the Ministry of Transport and Communications, the Council of Ministers for the Crimea AR, and state administrations for the *oblast*, Sevastopol and Kyiv cities. Besides this, the Ministry of Health also manages the undergraduate and postgraduate medical education programme, the medical research system and controls a significant proportion of the centralized state purchase of pharmaceuticals, medical devices and equipment for the relevant state programmes.

The *Ministry of Defence*, *Ministry of Internal Affairs*, *Security Service* and *Ministry of Transport and Communications* all have their own health care facilities for their employees and their relatives, which operate in parallel to the main statutory system under the Ministry of Health. The State Penal Jurisdiction Department is responsible for the organization of health services within the prison system.

The *Ministry of Labour and Social Policy* is responsible, among other things, for providing long-term residential care for elderly people and people with disabilities.

The *National Academy of Medical Sciences* of Ukraine controls the research institutes which provide highly specialized medical services. These facilities are financed directly from the state budget through a separate funding stream.

Local authorities include district, city district, town and village councils and state administrations. These local authorities are important actors in the system as they own and co-finance primary care services provided to their local populations.

Many *nongovernment organizations* (NGOs) – professional medical associations and patient groups – are planned or in operation, but they are not very influential actors in the health system. There is no self-governing of the medical profession in Ukraine, although this is something that has proved important in ensuring quality and transparency in other countries of Europe.

There are many *international organizations* working in the Ukrainian health sector, but their activities are focused quite narrowly on specific areas such as sexual health, HIV/AIDS and TB.

2.4 Decentralization and centralization

In Ukraine, a highly centralized model of decision-making in the health system inherited from the Soviet era has gradually been replaced by a system in which authority has been delegated to local administrations and self-governing bodies. As a consequence, many recent innovative activities in the health care sector were initiated at the regional and local levels rather than the national level. Today, the health system is a complex multi-layered system where responsibilities in the health care sector are fragmented among central government (the Ministry of Health and many other ministries and public authorities), as well as 27 regional administrations and numerous administrative bodies at municipal, district and village levels.

Decentralization has meant deconcentration of functional and managerial powers at the regional and subregional levels. Functional deconcentration means that the system is managed through the Ministry of Health of Crimea AR and the health authorities of regional administrations, which are financially and managerially independent, while functionally subordinate to the national Ministry of Health. Only the State Sanitary-Epidemiological Service and the State Pharmaceuticals Quality Control Inspectorate, each with relevant facilities at the different levels of administration, remain fully centralized and vertically subordinated to the Ministry of Health. Deconcentration of general

managerial powers at the regional and subregional levels means that executive functions in the regions and districts are exercised by the relevant local (regional or district) administrations, the heads of which are appointed by the President. The head of the government in Crimea AR is appointed by its Crimea AR Parliament. As outlined earlier, the government of Crimea AR and the other regional administrations have to ensure that decisions by local self-governments, including those relating to the health of the population, conform to current legislation. They also coordinate the activities of state services. The heads of local administrations, in turn, with the approval of the Ministry of Health, appoint the heads of local health administrations and their deputies who participate in decision-making. The Minister of Health in Crimea AR is appointed to office by the Parliament, and approves the appointment of the heads of the health facilities as do the heads of the other regional health authorities.

With the enactment of the *Law on local self-government in Ukraine* (1997), significant budgetary authority was delegated to regional and district councils, which pass on management functions in health care to relevant local executive authorities. Somewhat similar relations are seen in Crimea AR between the Council of Ministers, the republic's Ministry of Health and the representative bodies. At the community level these responsibilities are delegated to councils and their executive bodies, which are by law also responsible for managing the local health facilities and have certain additional powers, including the assurance of accessible health services that are free of charge, development of a network of health services, human resource planning, contracting for the training of specialists, provision of pharmaceuticals and medical devices to certain disadvantaged population groups, accreditation of health facilities, and proposals for licensing individual entrepreneurial activities in the health care sector. Once again, local self-governments face a division of accountability, to the Ministry of Health for compliance with norms and standards, and to the local administrations for funding and management. They are responsible for:

- implementing national health policies at the local level;
- drafting local budgets and proposals on health care financing and reporting to the councils on expenditure against budget;
- funding and running public health care facilities;
- pooling budgetary and other resources to invest into health care facilities; and
- undertaking appropriate action to prevent and eliminate communicable diseases.

In contrast, decentralization through privatization has been largely inhibited by provisions of the Constitution prohibiting the reduction of the existing network of public health facilities. Instead the private sector is developing mainly through the establishment of new private health facilities and medical practices.

Local authorities are given responsibility for organizing their health services subject to strict central regulation. Decentralization of financing, along with increasing recognition of the health care needs of the population, has, however, led to increasing inequalities between wealthier and poorer areas. Deprived regions have been affected by the lack of sustainable sources of income and health care has become a heavy burden on local budgets. A number of communities have found it increasingly difficult to maintain health services in the public sector. However, with the passing of the Budget Code (2001), strict rules were established, allowing for inter-budget transfers as of 2002. The volume of transfers is based on a specific formula that takes account of financial norms of adjusted budget allocations, the number of residents in the territory and an index of relative fiscal solvency. This mechanism has, to a certain degree, levelled differences in budget capacities among regions and territories. In addition, the Budget Code explicitly defines the types of health facilities that can be funded by budgets at various administrative levels. However, public health care facilities may not be financed from more than one budget.

The most notable changes have taken place in specialized health facilities. The law has provided for centralized financing and management of specialized health facilities at regional level. These provide a range of mental health, TB, dermato-venereological and other services, generally involving low technology but used by a substantial number of patients. The decision to concentrate these services at the regional level has raised concerns among health professionals and decision-makers, specifically in cities where these specialized services exist in independent structural units, as the changes may impede integration of municipal health services. The transfer of these facilities to the regional level has also created problems for regional budgets. A number of municipal administrations have therefore decided to formally convert, that is, to re-designate specialized facilities as multi-specialty facilities. For example, one specialist psychoneurology clinic in Dnipropetrovsk *oblast* was joined with the pulmonological department of a general municipal hospital. The newly created organization officially became a municipal hospital. The move to strict legislative regulation of public funding of health care facilities led to some streamlining of resource use but created problems in integrating different levels of service provision.

2.5 Patient empowerment

2.5.1 Patient information, rights and choice

By law all citizens have the right to access information about their health and services available to them, but the mechanisms for accessing such information are not transparent. Patients also have the right to access care of adequate quality, and this is recognized as part of the accreditation process for health facilities, but this has not thus far acted as a clear mechanism for quality improvement (see section 4.1.2 *Regulation and governance of providers*). Patients officially have a choice of doctor and facility, but this is difficult to realize due to the way in which the system is financed (see Chapter 3 and section 6.2). Overall, the health system in Ukraine is not oriented towards the real health needs of patients.

2.5.2 Complaints procedures (mediation, claims)

There is no specific legal mechanism for patient complaints procedures within the health system. It is dealt with in general legislation regarding complaints (*Law on citizens' appeals* 1996) and thereafter to the *Law on human rights ombudsman* under the Parliament of Ukraine.

2.5.3 Patient participation/involvement

Although there are a number of legal provisions for public participation in the health sector and various patient groups, they have not yet played an active role in policy-making.

The necessity of protecting patient rights is noted in many normative acts, for example in basic legislation about health care and criteria for the accreditation of health facilities. However, patient rights in the Ukrainian health system are not protected systematically. In Parliament in 2007 there was a legislative project for protecting patient rights, which set up the legal basis for government policy and regulated relations in the provision and protection of patient rights. However, full consideration of the legislative project has not yet taken place. In Ukraine in recent years, a movement for creating community advisory boards in health care has begun. They are created under the local health authorities, medical facilities and independent social organizations, but their influence on the activities of the health sector is not yet significant (Angelov, 2007).

The population of Ukraine is very critical of the condition of health care in their country. In an international social survey conducted in 24 countries of Europe in 2005, Ukrainians gave their health system the lowest marks of any country – just 2–3 on a scale of 1–10 (Golovakha, Gorbachik & Panina, 2006). Another piece of social research, conducted in Mykolayiv *oblast* in 2006, found that most respondents felt the health service had poor accessibility and that services were of poor quality (Glukhovskii, 2007). The main source of dissatisfaction in patient complaints is the quality of medical care. The Ministry of Health alone receives around 5000 letters of complaint every year. This is only a small fraction of the total volume of complaints, as the majority of them are sent to and dealt with at a lower level of the health system.

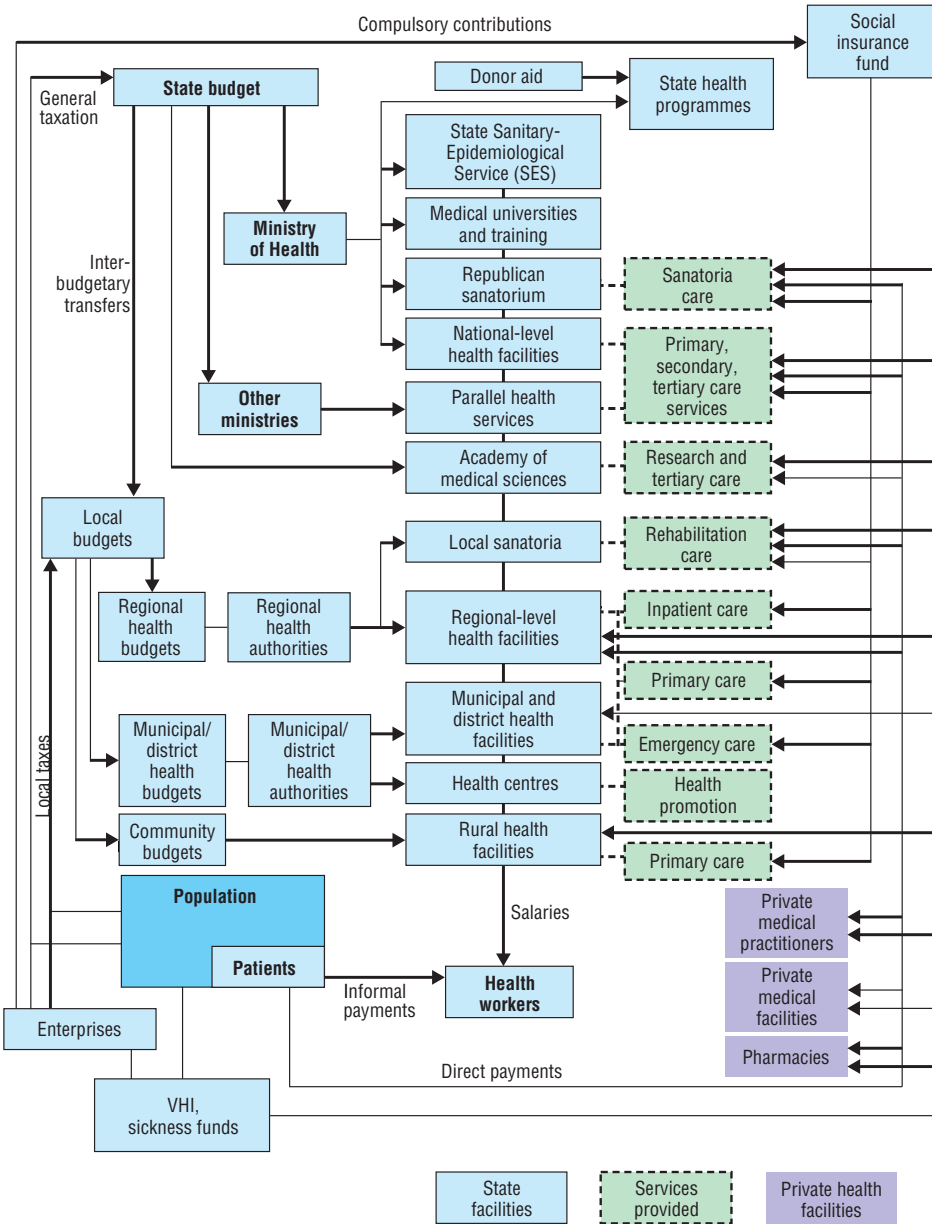
3. Financing

Health care expenditure in Ukraine is low by regional standards and has not increased significantly as a proportion of GDP since the mid 1990s. The proportion of general government expenditure on health as a proportion of total health expenditure was 57.2% in 2008 (WHO, 2009). The bulk of government expenditure pays for inpatient medical services, with only a relatively small proportion (22.7%) going to outpatient services. Private expenditure primarily consists of out-of-pocket payments, which are high on account of the high cost of pharmaceuticals. These are generally purchased at full cost price by patients; significant informal payments are also levied in the system.

Officially, Ukraine has a comprehensive guaranteed package of health care services provided free of charge at the point of use as a constitutional right, nevertheless user charges are widely levied in the Ukrainian health system. Government attempts to define a more limited benefits package have left it to the individual facilities to determine which services are covered by the budget and which are subject to user charges. This has led to a lack of transparency in the system which has contributed to an increase in informal payments.

Most health financing comes from general government revenues raised through taxation (value added taxes, business income taxes, international trade and excise taxes). Personal income tax is not a significant contribution to total revenues (see Fig. 3.1). Out-of-pocket payments account for a significant proportion of total health expenditure and there are some limited VHI schemes. Funds are pooled at the national and the local level, as local self-governments retain a proportion of the taxes raised in their territory. There are also inter-budgetary transfers to boost the coffers of poorer local authorities which cannot raise as much revenue. With the exception of a couple of pilot regions, allocations and payments are made according to strict line-item budgeting procedures as under the Semashko system. This means that payments are related to the capacity and staffing levels of individual facilities rather than the volume or quality of services provided.

Fig. 3.1.
Health care financing flowchart



3.1 Health expenditure

The State Statistics Committee of Ukraine is the main source of health expenditure data, but the official data underestimate total health expenditure, as they do not fully reflect unofficial payments for health services. National Health Accounts (NHA) have only recently been introduced to better summarize, describe and monitor health care financing. Based on the approach to the creation of NHA developed by the OECD in 2000, an investigation was completed on total health expenditure from 2003–2004, with particular regard to the funding of services for people living with HIV/AIDS (Gotsadze et al., 2006). In this report, official data from the State Statistics Committee of Ukraine were used to investigate the expenditures of state and private companies. To estimate donor activity in financing, data were collected through interviews with donors and the analysis of various reports from national and international organizations. The investigation of out-of-pocket payments used data from a special household survey undertaken in 2003–2004. The survey included 10 238 households and 26 675 respondents. It covered the entire population except for servicemen, convicts, permanent residents of boarding schools and nursing homes, and the marginal population (homeless people etc.). Nevertheless, it was felt that the data on out-of-pocket expenditure were underestimated in this study (Gotsadze et al., 2006). Consequently, the State Statistics Committee of Ukraine was advised to revise its methods when conducting household surveys for future estimates in NHA.

The NHA project materials formed the basis for the *Methodological recommendations on compiling National Health Accounts*, which was approved by Order No. 137 of the State Statistics Committee of Ukraine on 10 May 2007. As a result, the State Statistics Committee of Ukraine compiled a generalized table of NHA for the first time in 2005. This chapter uses primarily the official data of the State Statistics Committee of Ukraine. Data from before 1996 are impossible to compare with the subsequent period.

Health care expenditure increased rapidly in 2000 after the prolonged economic crises of the 1990s. Between 1999 and 2006, official health care expenditure per capita calculated by the State Statistics Committee of Ukraine increased 5.1 times. NHA data showed that total health expenditure grew 3.4 times. However, trends in real expenditure levels, which take inflation into account, are lower (only 1.3 times higher for the period 2003–2008). In 1999, the annual increase in total health expenditure was about 9% less than the previous year as a result of the 1998 financial crisis, which affected nearly all CIS countries. From 2000 to 2003, health care expenditure increased annually

(by 9.3% in 2000 up to 24.9% in 2003), which reflected the rapid growth of the Ukrainian economy. Political crisis in 2004 slowed economic growth and brought negative growth of health care spending in 2005 (by 2.6%). In 2006, the level of expenditure increased by 8.1% (and by 7.7% in 2007 and 4.3% in 2008) compared with the previous years (see Table 3.1). Total health expenditure as a percentage of GDP remains comparatively low for a country in the WHO European Region (see Fig. 3.2).

Table 3.1
Health care expenditure trends, 1999–2008

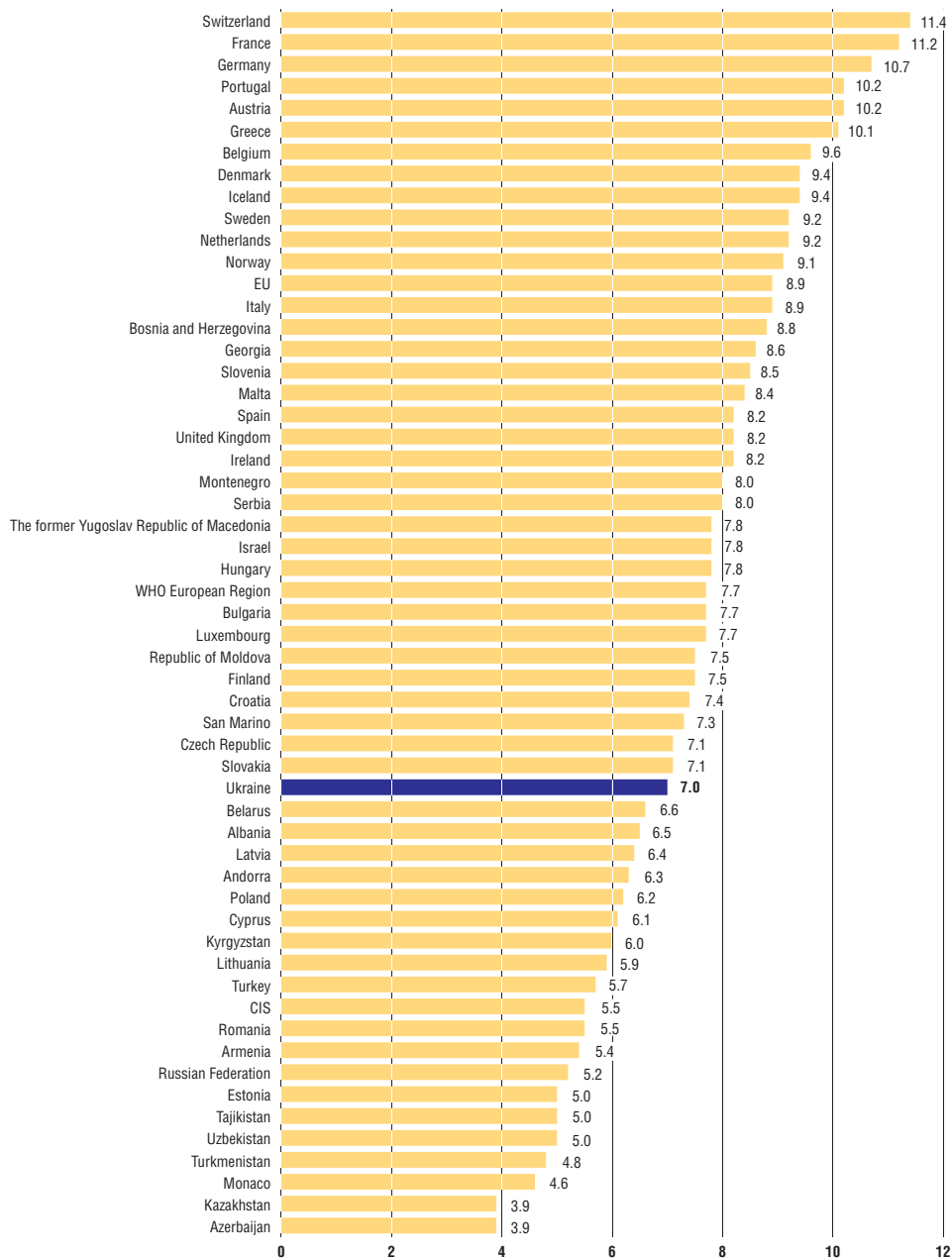
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total health expenditure (hryvnya per capita)	119.5	160.5	201.9	251.6	339.0/ 390.4 ^a	412.3/ 485.2 ^a	499.8/ 603.0 ^a	748.7	990.0	1 328.2
Total health expenditure corrected for inflation (hryvnya per capita)	70.9	77.5	88.6	104.8	130.9/ 150.7 ^a	138.3/ 162.8 ^a	134.7/ 162.5 ^a	175.8	189.4	197.6
Total health expenditure per capita (US\$)	29.0	29.1	38.1	46.8	63.6/ 73.2 ^a	77.8/ 91.2 ^a	99.0/ 119.4 ^a	148.3	196.0	259.8
Total health expenditure per capita PPP (US\$) ^b	187.0	195.0	209.0	250.0	314.0	348.0	387.0	427.0	475.0	498.0
Total health expenditure per capita (% GDP)	4.5	4.6	4.9	5.4	6.1/ 7.0 ^a	5.7/ 6.6 ^a	5.3/ 6.4 ^a	6.4	6.4	6.6
Share of state health expenditure in total health expenditure (%)	65.5	62.0	62.3	62.1	66.6/ 58.0 ^a	68.3/ 58.1 ^a	66.0/ 59.3 ^a	60.4	61.5	57.2
Share of expenditure from all other sources in total health expenditure (%)	34.5	38.0	37.7	37.9	33.4/ 42.0 ^a	31.7/ 41.9 ^a	33.9/ 40.7 ^a	39.6	38.5	42.8
Formal out-of-pocket expenditure (%)	34.5	38.0	37.7	37.9	33.0 ^a	30.8 ^a	32.1 ^a	–	–	–
Informal out-of-pocket expenditure (%)	–	–	–	–	8.5 ^a	10.4 ^a	8.3 ^a	–	–	–
External sources (%)	–	–	–	–	0.5 ^a	0.7 ^a	0.3 ^a	0.3	0.3	0.3
Annual growth in total real health expenditure from 1996 baseline (%)	-8.6	+9.3	+14.3	+18.3	+24.9	+5.6	-2.6	+8.1	+7.7	+4.3

Sources: State Statistics Committee of Ukraine, 2001–2007, 2010a; Medical Statistics Centre, 2001–2008, 2007; ^a Gotsadze et al., 2006; ^b WHO, 2010.

The expenditure in US\$ PPP (purchasing power parity) per capita reveals trends similar to the real level of expenditures for health in national currency with the decline at the end of the 1990s and the following growth in the first decade of the 21st century. According to WHO estimates (WHO, 2010), the full scale of changes from 1996 to 2008 is slightly greater, with expenditures increasing from \$176 PPP in 2006 to \$488 PPP in 2008 (see Fig. 3.3).

Fig. 3.2

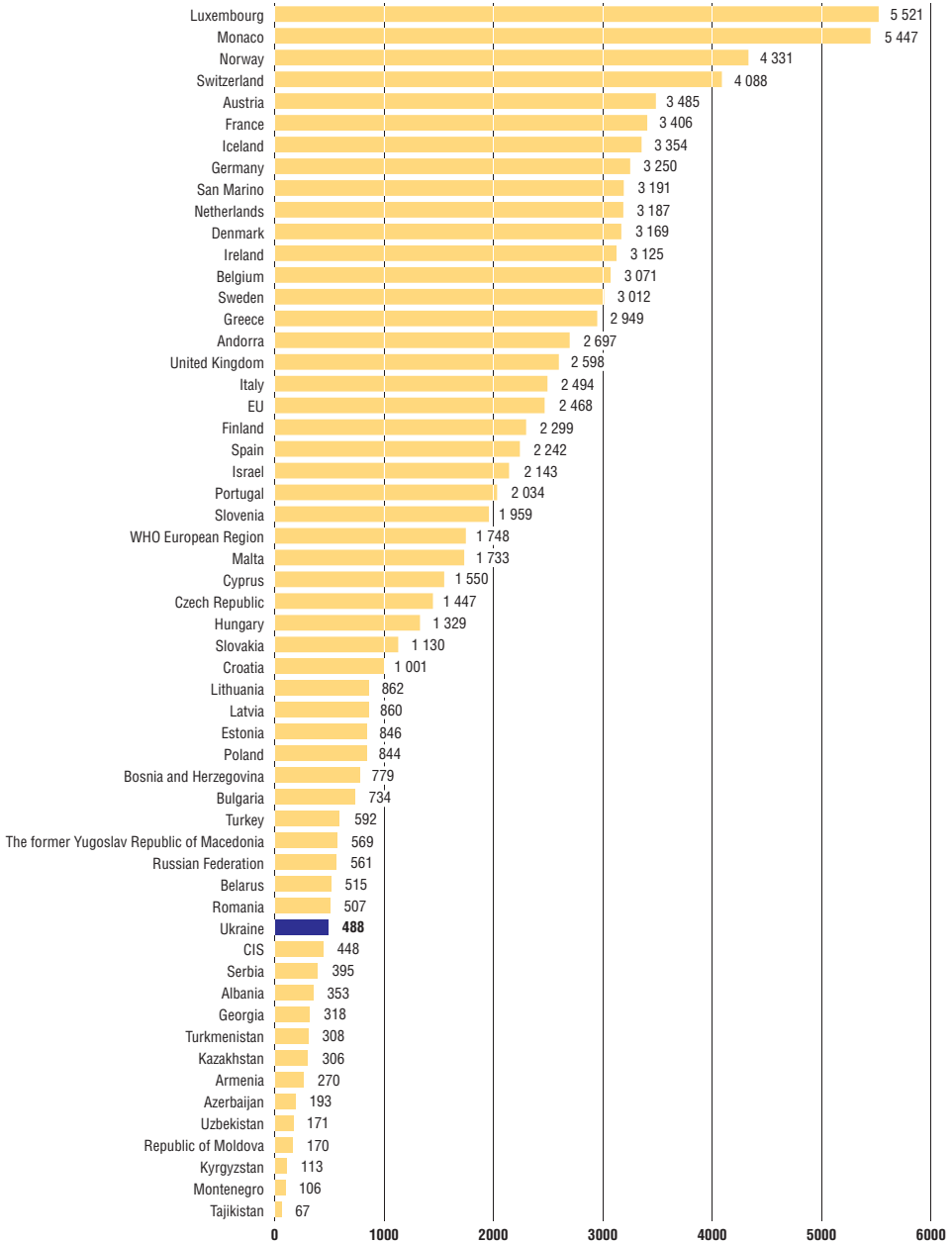
Health expenditure as a share (%) of GDP in the WHO European Region, 2005



Source: WHO Regional Office for Europe, 2010a.

Fig. 3.3

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



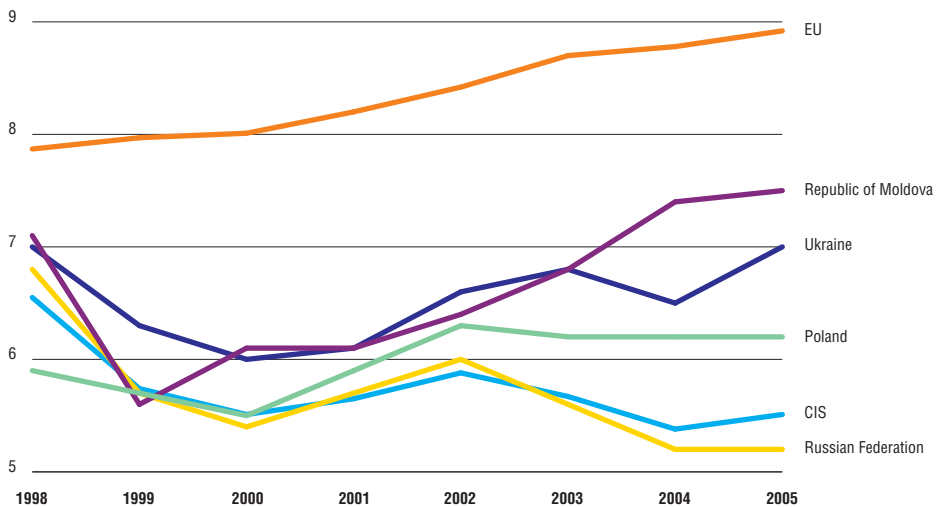
Source: WHO Regional Office for Europe, 2010a.

The exact level of total health expenditure in Ukraine is difficult to determine, mainly because of problems in obtaining data on health care spending in the informal sector. From 1998 to 2005, total health expenditure fluctuated between 5.0% and 6.5% of GDP, and was close to the average of the CIS countries (see Fig. 3.4). NHA data in Ukraine show that total spending on health in 2003 and 2004 was 7.0% of GDP, and 6.4% of GDP in 2008. However, NHA data include under-the-table payments in total health care expenditure, whereas the rate of GDP is calculated based only on official data without including the informal sector, which is substantial, so this may overestimate the level of total health expenditure as a proportion of GDP. For example, in the first quarter of 2007, the integrated informal sector accounted for 26% of official GDP (Ministry of Economy, 2007).

Official health expenditure data show that expenditure fluctuated between 4.5% and 6.0% of GDP between 1996 and 2006, reaching its nadir in 1999–2000 (4.5–4.6% of GDP). Health expenditure increased from 2001 to 2003, but in 2004–2005 it fell again from 7.0% to 6.4% (see Table 3.1). Overall, growth in total health expenditure as a percentage of GDP did not match the speed of economic growth in Ukraine.

Fig. 3.4

Trends in health expenditure as a share (%) of GDP in Ukraine and selected other countries and averages, 1998 to latest available year



Source: WHO Regional Office for Europe, 2010a.

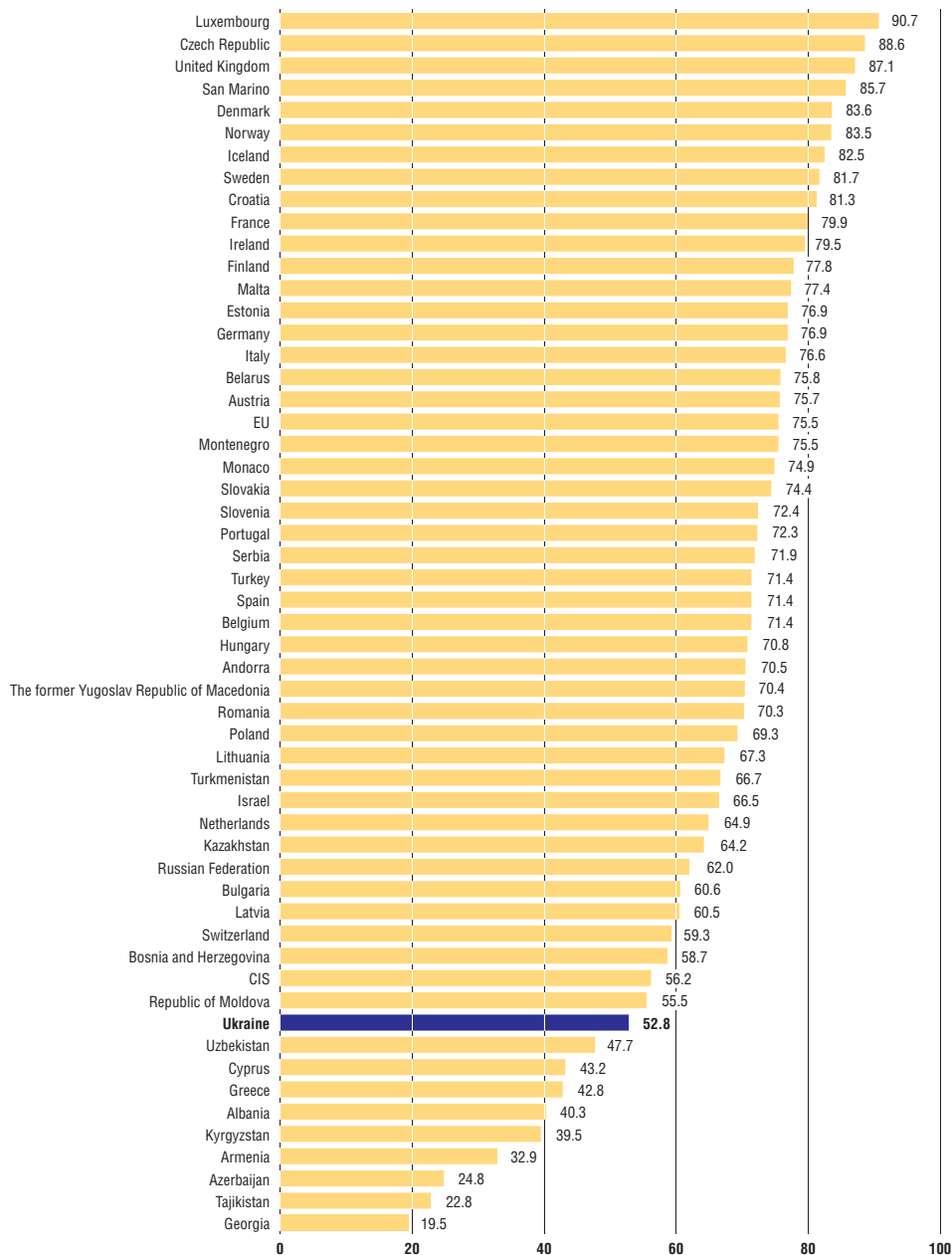
Total health expenditure as a proportion of GDP fell in most countries of the CIS following independence from the USSR, and in some countries, including Ukraine, overall expenditure levels have remained low (see Fig. 3.4). In terms of PPP, health expenditure per capita in Ukraine is one of the lowest in the WHO European Region (see Fig. 3.3), which shows the low priority that health care has been afforded in the country.

Based on official statistics, the share of public revenues in total health expenditure was over 80% in 1996, but fell to 62% from 2000 to 2002. Only between 2003 and 2006 was there some increase in the share of government health expenditure in total health expenditure (66–68%). NHA, which include informal payments, show that government expenditure in 2003–2008 fluctuated around 60% of total health expenditure. This is low for countries of the WHO European Region (see Fig. 3.5).

Table 3.2 shows data on the main categories of health care spending in Ukraine as a proportion of total health expenditure in 2003, 2004 and 2008. More than half of total health care expenditure goes towards providing medical services. About a quarter of expenditure on health care goes to inpatient care; about 13–14% to outpatient care (including primary care and specialized outpatient consultations). Both types of services are financed primarily from public sources. Ukraine spends a relatively small proportion of current health expenditure on outpatient care in comparison with other countries in the WHO European Region. It has been argued that this reflects an inefficient use of resources as patients who could have been treated as outpatients are instead hospitalized (Gotsadze et al., 2006). Significant sums (about 7%) are spent on rehabilitation care provided primarily in sanatoria – a remnant of the Soviet era – where patients spend their vacations and receive restorative treatments. Ancillary services receive about 4.5% of total health care expenditure. Government sources cover about half of spending on rehabilitation and a quarter of spending on ancillary services: laboratory tests, X-rays and other diagnostic procedures. This shows that three-quarters of ancillary services are covered by out-of-pocket payments. A relatively small proportion of spending goes to treatment in psychiatric facilities, addictions clinics and day-care hospitals, as well as long-term medical care, where almost all the expenses are covered by public financing.

Fig. 3.5

Health expenditure from public sources as a percentage of total health expenditure in the WHO European Region, 2005



Source: WHO Regional Office for Europe, 2010a.

Table 3.2

Government health expenditure by service programme (% total public health expenditure (THE)), 2003, 2004 and 2008

Type of expenditure	Total expenditure (% THE)			Public expenditure (% THE)		
	2003	2004	2008 ^b	2003	2004	2008 ^b
Health system administration	3.3	3.2	2.8	3.3	3.2	2.7
Education and training	2.1	2.1	–	2.1	1.9	–
Research and development in health	0.4	0.4	–	0.4	0.4	–
Investment in medical facilities	3.1	4.7	5.5	3.1	4.7	5.1
Public health and prevention ^a	3.7	3.7	3.4	3.5	3.3	3.2
Medicines	32.7	32.7	32.7	1.0	1.2	0.5
Medical devices	–	–	–	–	–	–
Medical services	53.6	52.1	52.6	43.9	42.4	44.2
– inpatient care	24.5	23.6	27.1	24.2	23.2	22.2
– day care	0.4	0.3	0.4	0.4	0.3	0.4
– outpatient care (excluding dental care)	12.7	12.7	14.3	10.8	10.8	13.0
– outpatient dental care	1.4	1.4	1.4	0.9	0.8	0.8
– ancillary services	4.5	4.5	4.6	1.1	1.1	1.2
– home care	–	–	–	–	–	–
– treatment in psychiatric and addiction hospitals and clinics	2.5	2.5	–	2.3	2.3	–
– long-term care	0.2	0.2	0.1	0.2	0.2	0.1
– rehabilitation	7.4	6.9	4.8	4.0	3.8	–
– other unclassified services	1.1	1.1	2.8	0.6	1.1	–

^a This includes international aid for communicable disease prevention and family planning services.

Sources: Gotsadze et al., 2006; ^b State Statistics Committee of Ukraine, 2010a.

The share of spending on drugs and medical supplies accounts for a rather large proportion of total health care expenditure (33%). State resources cover only a small part of that expenditure (about 0.5–1%). The population carries the main burden here, as both inpatients and outpatients have to pay for most drugs and medical supplies out-of-pocket. Public health and prevention activities receive only 3.5–4% of total health expenditure. This is very low, especially considering the scale of current public health problems: population decrease, HIV/AIDS and TB epidemics, high mortality from cardiovascular diseases and so on (see section 1.4).

3.2 Population coverage and basis for entitlement

Officially, Ukraine has a comprehensive guaranteed package of health care services provided free of charge at the point of use as a constitutional right. Article 49 of the Constitution of Ukraine of 1996 states as follows (Verkhovna Rada of Ukraine, 1996).

- Everyone has the right to health protection, medical care and medical insurance.
- Health protection is ensured through state funding of the relevant socioeconomic, medical and sanitary, health improvement and prophylactic programmes.
- The state creates conditions for effective medical service accessible to all citizens. State and communal health protection institutions provide medical care free of charge; the existing network of such institutions shall not be reduced. The state promotes the development of medical institutions of all forms of ownership.
- The state provides for the development of physical culture and sports, and ensures sanitary-epidemiological welfare.

In accordance with the 1992 *Principles of legislation on health care in Ukraine*, foreign citizens and people without citizenship who permanently reside in the territory of Ukraine enjoy the same rights and have the same responsibilities in the health care sector as Ukrainian citizens. The rights and responsibilities in the health care sector of foreign citizens and people without citizenship who temporarily reside in the territory of Ukraine are determined by law and respective to international agreements. There are no legal barriers to receiving medical care for different population groups. Article 38 of the *Principles of legislation on health care in Ukraine* states that “every patient, according to his/her condition, has the right to be treated in any government-run health care and prophylactic facility, given that the facility is able to provide the required type of care”.

The volume of government health care financing dropped significantly due to the economic downturn in the 1990s. This resulted in the state not providing real financial support for its commitments to providing free universal health care for all citizens. In an attempt to rectify this situation, the government undertook several attempts to introduce standards and restrictions into the guaranteed package of free health care, and to balance it with the country’s real economic and financial capacities. Cabinet of Ministers’ Resolution No. 1138,

issued on 17 September 1996, introduced official user fees for a number of services provided by state and community health facilities. It was declared that the official list was to include only services considered non-essential. In reality, the range of health services that could be provided for some sort of payment was essentially unlimited. Health care and prevention facilities were permitted to charge for services outside their principal professional work. These procedures include examining and treating patients referred by private practitioners, organ and tissue transplantation, reconstructive surgery, almost all types of dental care and many other services. In addition, health facilities were allowed to ask patients for voluntary compensation for services rendered, which in essence is a hidden form of payment. Only health services for children were to remain absolutely free of charge.

The lack of an explicit boundary between paid and unpaid services created an increase in service charges and a substantial reduction in access to health care. This gave rise to widespread resentment and complaints. Twice – in 1998 and 2002 – the Constitutional Court of Ukraine examined the issue of whether user charges for health services were unconstitutional. In May 2002, the Constitutional Court stated that health care offered in state and community facilities should be provided to all citizens without preliminary, current or subsequent charges. At the same time it stipulated that state and community health facilities could charge for services beyond the limits of the health system. It was also deemed possible to mobilize additional resources using voluntary insurance mechanisms and various other forms of financial participation by the population, such as sickness funds and credit unions.

The size of a guaranteed health care package was the subject of intense debate over a period of two years, but only after the strict ruling by the Constitutional Court did the government finally approve the Programme for Providing the Citizens of Ukraine with Free Health Care Guaranteed by the State (2002). It gives a defined list of health care services to be provided by state and community health care facilities for free, as well as standards on the extent of services provided. The Programme includes:

- accident and emergency care
- outpatient polyclinic care
- inpatient care for acute disease and emergencies requiring intensive treatment; 24-hour medical surveillance and hospitalization
- emergency dental care (complete for children, disabled people, students, pregnant women and women with children under 3 years of age)

- pre-physician aid to the rural population
- specialized sanatoria and health resorts for disabled people and children
- medical care for children in orphanages.

The standard for providing outpatient polyclinic care was established on the number of visits per 1000 people. The standard for inpatient care was based on the number of hospitalizations per 1000 people, the number of beds per 1000 people, and average length of hospital stay. The standard for emergency care was based on the number of calls per 1000 people. In this way, the Programme introduced a principle of accountability by tying state commitments to the expected health budget. Despite this, the standards of health care and the financing that should compensate the costs involved in providing care free of charge still have not been determined.

In 2002, the government also drew up a list of paid services that should be available in state and community health facilities (Cabinet of Ministers Resolution No. 989, issued 11 July 2002) if the patient or a third party pays for them in full. The government decided to charge user fees for the following services: infertility treatment; cosmetic services; anonymous examinations and treatment of substance abuse and STIs; surgical interventions for termination of pregnancy (unless medically indicated); dental, hearing, ophthalmic and other appliances; vision correction with spectacles or contact lenses; dental care provided in state practices; physiotherapy for adults; medical examinations for job applications, driver's licence acquisition, the right to carry weapons and the relevant periodic medical exams; speech therapy; treatment of stuttering in adults; home care and treatments when feasible in an outpatient setting; diagnostic examinations and patient appointments without referral from a physician; parental stay at a hospital with children over 6 years (unless required by the child's condition); medical services for sports competitions and public and cultural events; medical services to foreigners; and others. There were no explicit criteria to define the services provided for a charge; however, it appears from the list it produced that the government decided to charge for non-critical health services.

In Ukraine, therefore, the list of guaranteed free health care services is quite large, but in fact it is left up to the health care providers themselves to decide which services will be provided free of charge and which ones for a fee. Certain population groups are entitled to discounts for outpatient drugs. For instance, benefits are provided to war veterans and so-called "socially vulnerable" population groups: patients with socially significant and severe

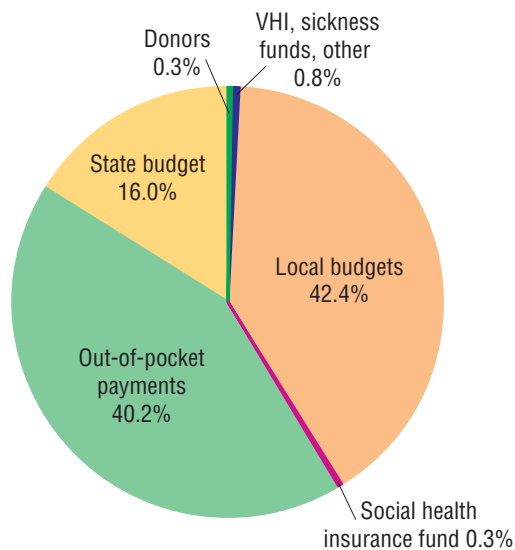
diseases; disabled workers; physically disabled people (grouped into three discrete categories); people disabled from birth; disabled children under the age of 16; retired people receiving the minimum pension; children under age 6; teenage girls and women with contraindications to pregnancy (provided with free contraceptives); victims of the Chernobyl disaster; those under 18 suffering alopecia due to chemical intoxication in the city of Chernivtsi in 1988; retired and disabled victims of political repression; and honourable donors.

3.3 Revenue collection/sources of funds

There are many different sources of financing for the health system in Ukraine (see Fig. 3.6). Since the lack of an appropriate accounting system makes it impossible to analyse the structure of health expenditure from different sources over time, this chapter will deal primarily with data received after the introduction of NHA, that is, from 2003 to 2008 (see Table 3.3). However, even the NHA underestimate the population's participation in direct health care financing (Gotsadze et al., 2006). Data from separate regional surveys indicate that the population's share of health system financing is higher by about 10% (Kryachkov, Bechke & Boyko, 2000; Litvak, Pogoreliy & Tishuk, 2001; Lekhan, Kryachkova & Maximenko, 2007).

Fig. 3.6

Percentage of total expenditure on health according to source of revenue, 2008



Source: State Statistics Committee of Ukraine, 2010a.

Table 3.3

Sources of revenue as a percentage of total expenditure on health in Ukraine, 2003–2008

	2003	2004	2005	2006	2007	2008
State sources, including:	58.0	58.1	59.3	60.6	61.7	57.2
– Central budget	18.2	20.2	17.5	16.3	18.6	15.6
– Local budgets	39.5	37.7	41.6	44.1	42.8	41.4
– Social insurance funds	0.3	0.2	0.2	0.2	0.3	0.3
Private sources, including:	41.5	41.2	40.4	39.4	38.3	42.5
– Direct payments from households	38.5	38.2	37.4	36.2	34.6	39.3
– Expenditures from private enterprises	2.2	2.2	2.2	2.3	2.8	2.3
– VHI	0.8	0.7	0.7	0.8	0.8	0.8
– Sickness funds	0.1	0.1	0.1	0.1	0.1	0.1
External sources	0.5	0.7	0.3	0.3	0.3	0.3
Total^a	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Gotsadze et al., 2006; State Statistics Committee of Ukraine, 2010a.

Note: ^a Totals subject to rounding errors.

3.3.1 Compulsory sources of finance

Central and local self-government budgets represent the major official source of financing for health care (see Table 3.3). The total budget in Ukraine is derived chiefly from taxation revenues (more than 70% from all kinds of income), non-fiscal income, revenues from trade with capital and other sources. The majority of all fiscal revenues (value added taxes, business income taxes, international trade and excise taxes) goes to the national budget. Local budgets are derived mainly from the part of taxation that is raised in different administrative and territorial units. This represents about 85% of their fiscal revenues. Local budgets are derived from small business taxes, land taxes, licence fees on certain entrepreneurial activities, vehicle taxes, environmental pollution payments and local taxes, dues and duties. National tax rates are set in accordance with taxation laws as determined by Parliament (Verkhovna Rada). Local administrations set the rates for local taxes and dues. There are no taxes specifically earmarked for health financing and there is no system of tax relief for the purchase of health cover.

The tax administration system, comprised of the State Tax Administration of Ukraine and regional and municipal tax authorities, is responsible for enforcing the tax laws, ensuring correct amounts and the timeliness of charges. The Tax Administration coordinates its activities with fiscal authorities and the State Treasury. It reports all taxes received, as well as other charges and fees.

Health care funding is considered a state responsibility. In accordance with Ukrainian law, the execution of state duties can be delegated to subnational levels. In this case, the national budget must assign budget resources in the form of assigned national taxes, fees, mandatory payments or shares thereof to the relevant budgets, or perform transfers from the national budget. To determine the volume of inter-budgetary transfers, Ukraine uses the so-called Financial Standard of Budget Sufficiency – that is, the guaranteed amount of resources transferred for the implementation of assignments delegated by the state within the limits of budget resources. In reality, the government underfunds allocations, forcing local authorities to use their own resources. In 2005, the revenue basket of local authority budgets was used to support social programmes, including health (Ganushchak, 2006). As financial resources are collected through a system of general taxation this should mean health care funding is progressive. However, the Ukrainian system has a number of specific regressive traits. For example, the existence of two taxation subsystems – a standard and a simplified system – undermines the integrity of the taxation system. Further, widespread tax evasion and the existence of tax benefits cause significant irregularities in the distribution of the tax burden; there is a single flat income tax rate for people with different incomes. As a result, the Ukrainian taxation system is not as progressive as it could be and a number of loopholes challenge the stability, administrative simplicity and efficiency of the system.

On 13 June 2007, Ukraine passed the *National plan for health care development by 2010* (Cabinet of Ministers Decree No. 815) to reform the health system. One chapter deals with strengthening the financial base of the sector through a transition to social health insurance. However, the problem of complementary sources of finance has not yet been resolved. There are multiple economic obstacles confronting the decision to introduce social health insurance. First of all, it is a heavy tax burden on employers (social insurance tax already accounts for 39% of the salary fund). Second, the price increase of utilities, particularly gas, has undermined the Ukrainian economy's competitive ability and has thus reduced the chances of reaching a consensus regarding the introduction of, what is in essence, a new income tax.

3.3.2 Out-of-pocket payments

According to NHA, the share of out-of-pocket payments in total health expenditure in 2003–2008 was almost 40% (minimum 34.6% in 2007, maximum 42.5% in 2008). Out-of-pocket payments are consistently increasing in all main forms of spending: official service charges, drug and medical product purchases, and informal payments. During the 1990s, the proportion

of formal out-of-pocket payments in total health care expenditure increased significantly (from 19% in 1996 to 38% in 2000). It stabilized at 38% from 2000 to 2002 and then decreased slightly to 32–34% from 2003 to 2006. User charges make up a relatively small proportion (7.3–8.6%) of total spending or 19.7–22.5% of out-of-pocket payments for health care. Fees-for-service in public and private health facilities account for only 2.9–3.1% of total spending. It is possible to estimate the share of informal payments in total health expenditure only from 2003, when NHA started being used; from 2003 to 2005 informal payments accounted for 8–10% of total health expenditure.

Out-of-pocket payments are mainly for the purchase of drugs and medical supplies for outpatient as well as inpatient care (19.7–21.8% of total health care expenditure and 55.4–58.4% of the total volume of out-of-pocket payments between 2003 and 2005) (Gotsadze et al., 2006). Retail pharmacies distribute 79% of all pharmaceuticals directly to the population, while 21% go through hospitals. NHA data show that out-of-pocket payments on pharmaceuticals and medical supplies at pharmacies accounted for 1.3–1.4% of GDP in 2006, but 2.1–2.2% in 2008, a significant increase from 0.8% of GDP in 1996 (State Statistics Committee of Ukraine, 2010a). According to household surveys performed by the State Statistics Committee of Ukraine in 2008–2009, 89.0–90.4% of inpatients had to pay for their pharmaceuticals themselves. NHA surveys found that, as well as pharmaceutical expenditure, the share of direct private expenditure on dental care is quite large (32.9%), as is rehabilitation care (19.3% of total expenditure on these types of services) (see Table 3.4). This survey found a rather small percentage of out-of-pocket payments in outpatient and particularly inpatient care due to discrepancies in the way data were collected. Other statistical publications have provided data on informal payments to medical professionals. Some cities even have unofficial price-lists for different types of services.

In order to protect themselves from pharmaceutical costs, some patients use VHI and sickness funds as a complementary source of funding (see section 3.3.3 *VHI*). They do not, however, have a significant influence overall.

The only mechanism used to ease the public burden of payments for pharmaceuticals is the exemption of sales of pharmaceuticals and medical supplies from value added taxes. To protect socially vulnerable population groups and patients with socially significant and serious diseases, there are certain benefits available for outpatient health services and pharmaceuticals. These groups can receive pharmaceuticals from the approved government list

Table 3.4
Volume and structure of out-of-pocket payments for various services, 2004

Type of service	Direct payments from the population			Payments to private providers and enterprises			Sickness funds		
	Hryvnya (millions)	US\$ (millions)	% total expenditure on this type of service	Hryvnya (millions)	US\$ (millions)	% total expenditure on this type of service	Hryvnya (millions)	US\$ (millions)	% total expenditure on this type of service
Outpatient treatment	297.5	56.1	10.0	100.1	18.9	3.4	—	—	—
Inpatient treatment	115.9	21.9	2.0	—	—	—	—	—	—
Outpatient dental treatment	110.2	20.8	32.9	31.2	5.9	9.3	—	—	—
Retail pharmaceuticals	7 202.5	1 359.0	95.8	—	—	—	33.2	6.3	0.4
Rehabilitation including sanatoria	307.2	58.0	19.3	415.1	78.3	26.1	—	—	—

Source: Gotsadze et al., 2006.

for free or for a discount with a prescription. However, expenditure through this programme does not exceed 2.7% of the total spending on pharmaceuticals (Gordienko, 2003). Expenditure on medical benefit is covered by general allocations to health care provided by the budgets. In reality, however, even socially vulnerable groups have to pay out-of-pocket for guaranteed services. Some patients from vulnerable groups pressure doctors into giving them more pharmaceuticals than required. This has caused the government to attempt to adjust the list of groups covered and introduce subsidies instead of benefits.

The government has attempted to regulate payments for health care services. The Cabinet of Ministers Resolution of 1996 introduced official user charges for health services and allowed local and regional governments to establish their own fees for health services provided at state and community facilities. The Resolution applies to those paid services that medical facilities provide in accordance with the approved services list and does not apply to these services that are required to be provided to the population for free. In reality, however, there is no clear line between free and paid medical services. As a result, the government does not regulate prices for those services which are provided for a fee in real life, but which are not yet included in the official list of paid services approved by the Cabinet of Ministers. Additionally, there is no official method of determining the full costs of medical services.

According to NHA, the volume of informal payments is currently almost equal to the volume of formal payments, that is, 8–10% of total health expenditure and 22% of household expenditure. But it is likely that the amount of informal payments is underestimated (Gotsadze et al., 2006). Informal payments existed in Soviet times, but their presence then was on a very small scale. Most informal payments were in the form of gratuities for a service received (such as produce in rural areas, for example, or chocolate elsewhere). As a result of the economic downturn in the 1990s coupled with wage arrears, personnel in health facilities have introduced informal payments in order to provide an acceptable wage for themselves. These payments are mostly monetary and are made before the service is provided. Often, the necessity of such payments is indirectly initiated by medical staff: patients tell each other about the necessity and the amounts required. For additional payment, doctors offer different drugs and services which they claim are more modern and efficient (or faster access to both). Payments in kind (gifts, produce) are still present in rural areas. It is extremely difficult to gauge the true extent of informal payments in the total income of medical staff. According to the limited NHA data, informal payments account for roughly 20% of the total salary funds. Their distribution is highly uneven as well, depending on location (rates are higher in the city

than in the country), type of care (inpatient care is much more expensive than outpatient), the doctor's qualifications (specialists receive higher payments than family doctors/GPs), case complexity and so on.

Informal payments persist due to several factors, including low pay for medical staff and the weak regulation of service providers, especially doctors and professionals involved in decision-making. Further, the government is not ready to admit its incapacity to provide free health care in full, which breeds tolerance towards informal payments, despite regular loud campaigns against corruption.

3.3.3 VHI

VHI still plays a very minor role in health care financing in Ukraine. Despite the relative growth in the number of insured people and insurance premiums, only 2.5% of the population use VHI, and its contribution to total health care expenditure is 0.8%. About 1.6% of the population participates in sickness funds and contributes nearly 0.1% of total resources to the system. The introduction and development of VHI was only made legally possible in 1996 when the *Law on Insurance* was passed.

VHI in Ukraine is offered exclusively by private insurance companies that are often not specialized in health. According to the State Statistics Committee of Ukraine, there are currently nearly 100 private companies in the VHI market, offering various health care packages (Kiselyev et al., 2004). Corporate (group) insurance, purchased by an employer, is the main form of VHI. Individual cover insurance makes up only a small portion of VHI – individual clients make up only 10% of the total number of VHI contracts. Many companies purchasing VHI prefer to substitute insurance without actuarial settlements, thereby replacing paid services by various financial schemes. The majority of VHI customers receive health services in the same state and community facilities as uninsured patients. Moreover, the same medical equipment is used in treating both groups and often they receive the same level of care. The main difference is that VHI offers partial coverage of pharmaceutical costs.

The framework within which VHI operates in Ukraine is not clearly defined. On the one hand it can be classified as a substitute, since it is used to cover expenses for drugs, laboratory work and other services that are not covered by the state health system in reality. However, these services are not officially excluded from the list of services guaranteed by the government. In fact a VHI customer is often paying for what is supposed to be provided for free. VHI is intruding into the state health care domain by duplicating state commitments

to a considerable degree, since the boundary between paid and free services is very unclear. On the other hand VHI can be classified as complementary since its customers receive the right to be treated in the best facilities.

There are several serious obstacles to VHI development in Ukraine. First, VHI premiums purchased by employers for employees do not carry any tax benefits, which means employers do not have any incentive to include health insurance in a benefits package. The structure of financing public medical facilities is based on an expenditure estimate which forbids using VHI resources to create incentives for medical personnel. Doctors (and particularly surgeons) in public medical facilities resent treating insured patients, since they refuse to pay informally. However, medical facilities sign contracts with insurance companies since it is now a legal way of selling medical services to the public. A significant proportion of VHI contracts are technically quasi-insurance, a disguise for patients paying for health services themselves. Patients pay official premiums into VHI, but the insurance company often acts merely as an agent, transmitting resources between the patient and the facility in purchasing health services. Also there is a noticeably low level of compensation from VHI, which fluctuates between 40% and 60% (Kapshuk, Sitnik & Pashchenko, 2007).

Health insurance for railway workers

There is a special part of the VHI system for insuring railway workers. It started as an experiment initiated by the railway management in 2001. Now the entire sector is covered by health insurance. At first, this insurance covered the rolling stock workers and the operations department. It is gradually spreading to cover other categories of railway workers (Kiselyev et al., 2004). In 2001–2006, the programme insured retired workers as well; until 1 January 2001, health insurance for retirees was substituted by fixed payments during inpatient care at a rate of 20 hryvnya per day for no more than two hospitalizations per calendar year.

The railway system and its workers pay premiums on an equal footing. The total amount of monthly premiums in 2001–2006 was 4 hryvnya (a little more than US\$ 9). In 2007, it was raised to 16 hryvnya per month (US\$ 38) (Yavorskiy, 2007). More than 600 000 people are covered, that is, 38% of railway workers. In 2009, more than 40 million hryvnya in premiums was collected, making up 7% of additional revenues for the health care budget of the Ministry of Transport and Communications.

A private insurance company provides insurance for the railway workers. This insurance covers inpatient care primarily in the parallel network of medical facilities. The resources allocated to the medical facilities are designed to cover

spending on pharmaceuticals, food and laundry stocks for each individual patient to cover the portion underfunded by the government budget, but only to a fixed maximum amount. In 2007, additional compensations for inpatient and outpatient pharmaceuticals were introduced. Further, the insurance company makes payments to the medical facility for case administration. Medical facilities keep a personalized record of expenditures on each insured patient.

Sickness funds

As an alternative means to mobilize additional resources for the health system, a number of sickness funds and credit unions are being established in Ukraine, alongside various charitable institutions and funds. Sickness funds represent quite a well-developed network of non government organizations established on a voluntary basis for complementary financing of the health system. Sickness funds function as VHI on a non-profit-making basis. While, legally, VHI companies are profit-making private organizations, sickness funds function in accordance with the *Law on charity and charitable institutions*, as charitable non-profit-making organizations guided by a common interest to improve health care for their members.

Membership in a sickness fund is voluntary. It may comprise individuals as well as working collectives, enterprises, agencies and institutions paying premiums for their members. The performance of sickness funds depends directly on the number and nature of its members. For this reason, preference is given to corporate membership, where working collectives, enterprises, or institutions cover fees for their employees. However, the individual premiums remain the main source of revenue. In 2009, individual premiums accounted for 95.7% of funds, while enterprises and institutions made up the remainder at 4.3%. Workers make up the majority of members in sickness funds at 64%, while 20.6% are pensioners and 15.4% are other categories of non-working citizens. The major function of sickness funds is to provide pharmaceuticals to their members in case of insufficient coverage from the government – in 2009, 79.8% of sickness funds' expenditure was on purchasing pharmaceuticals and other medical devices. A number of sickness funds have also committed themselves to contributing modern medical equipment to health facilities, developing targeted programmes, training and retraining personnel, advocating for healthy lifestyles, protecting mother and child health, and many other activities. About 17% of collected funds are spent on administration. The income of sickness funds is derived from a number of sources: founders' and members' premiums, charitable contributions, and donations and profit from

charity transactions. The premiums are determined by the sickness funds' administration as a percentage of salary (usually no more than 5%) or fixed payment (7–9 hryvnya per month or US\$ 10–14 per year).

According to Ministry of Health data, the number of sickness funds increased by 22 times between 1999 and 2006, but in 2009 they shrank as a result of the economic crisis. In 2009, more than 750 000 people, or 1.6% of the population of Ukraine, were covered by sickness funds (see Table 3.5). The popularity of sickness funds differs greatly among various regions (see Table 3.6). In Ukraine, 17 out of 27 regions have a very small percentage of the population covered by sickness funds (1%), but in 7 regions, 1–4% is covered; in 2 regions, 6–10% is covered; and in Zhytomyr *oblast*, the number of members exceeds 16% of the population. Since 1999, sickness funds' revenues have increased by more than 50 times, and in 2009 totalled 80 million hryvnya.

Table 3.5

Sickness funds' activity in 1999–2006 and in 2009

	1999	2000	2001	2002	2003	2004	2005	2006	2009
Number of sickness fund members (in thousands)	39.4	76.7	232.2	403.3	652.2	826.1	844.2	858.4	751.2
Resources collected by sickness funds (hryvnya, millions)	1.6	3.6	13.0	17.2	28.7	37.5	39.7	50.6	80.1
Average expenditure per member (hryvnya)	40.4	47.1	56.0	42.5	44.0	45.3	47.0	58.9	103.5

Source: Ministry of Health, unpublished data, 2010.

Sickness funds reduce the overall cost of drugs and medical devices to members and facilitate better monitoring of prescription practices. However, considering that sickness funds cover only a small proportion of the population, their impact on overall health care spending is rather limited: 0.13% of total health care expenditure. In some regions, however, where municipal sickness funds have been established with the active support of local authorities, opinions are generally very positive about their performance, citing improved accessibility and quality of health care (Bondarenko et al., 2003; Popov et al., 2003). Some of these regions include Zhytomyr *oblast*, and small cities such as Komsomolsk in Poltava *oblast*, Priluki in Chernihiv *oblast* and Voznesensk in Mykolayiv *oblast*, among others.

Table 3.6

Sickness funds' activity in different regions of Ukraine, 2009

Region	Number of sickness fund members	% of population	Volume of revenues collected (in 1 000 hryvnya)	Hryvnya per member
Zhytomyr <i>oblast</i>	213 514	16.50	24 483.0	114.7
Chernihiv <i>oblast</i>	85 905	10.00	7 279.0	84.7
Mykolayiv <i>oblast</i>	70 978	6.00	6 720.5	94.7
Poltava <i>oblast</i>	56 999	3.80	7 359.4	129.1
Donetsk <i>oblast</i>	43 932	1.00	1 910.9	49.4
Sumy <i>oblast</i>	41 371	3.50	4 176.1	101.0
Kharkiv <i>oblast</i>	34 530	1.30	1 277.9	37.0
Rivne <i>oblast</i>	29 789	2.60	1 071.3	36.0
Volynska <i>oblast</i>	29 085	2.80	2 499.9	86.0
Odesa <i>oblast</i>	29 050	1.20	2 405.7	82.8
Kirovohrad <i>oblast</i>	27 878	2.70	5 311.5	190.7
Luhansk <i>oblast</i>	18 071	0.80	3 918.6	216.8
Vinnytsia <i>oblast</i>	10 958	0.70	1 809.2	165.1
Dnipropetrovsk <i>oblast</i>	10 860	0.30	685.5	61.1
Kyiv city	10 790	0.40	1 709.3	158.4
Kyiv <i>oblast</i>	9 626	0.60	1 956.2	203.2
Chernivitsi <i>oblast</i>	6 841	0.80	500.2	73.1
Kherson <i>oblast</i>	6 093	0.60	497.7	81.7
Zakarpatska <i>oblast</i>	5 924	0.50	1 069.2	180.5
Cherkasy <i>oblast</i>	3 965	0.30	749.8	189.1
Khmelnyskyi <i>oblast</i>	3 809	0.30	254.5	66.8
Ivano-Frankivsk <i>oblast</i>	1 133	0.10	101.1	89.3
Zaporizhzhia <i>oblast</i>	174	0.01	19.7	113.2
Sevastopol city	0	0	0	0
Crimea AR	0	0	0	0
Lviv <i>oblast</i>	0	0	0	0
Ternopil <i>oblast</i>	0	0	0	0
Ukraine	751 255	1.60	80 088.5	103.5

Source: Ministry of Health, unpublished data, 2010.

Further expansion of the VHI sector will depend on a number of conditions, primarily:

- a clear boundary between state obligations and additional health services and drugs not paid for within state guarantees;
- an extension of tax incentives for individuals and legal entities aiming to purchase VHI; and
- the creation of incentives for medical personnel involved in VHI.

However, even if these conditions are met, an immediate expansion of VHI is unlikely simply because it is not affordable for the general public.

3.3.4 Parallel health systems

Many ministries and other government bodies have separate “parallel” health systems for their workers. The largest are in the Ministry of Transport and Communications (see section 3.3.3), Ministry of Internal Affairs, Ministry of Defence, Ministry of Labour and Social Policy, and the National Academy of Medical Sciences, among others. These parallel systems are funded from the national budget and almost 42% of health expenditure from the national budget is spent on parallel medical facilities and more than 11% of total public health expenditure.

According to data from 2008, the parallel health care network had 255 hospitals (10% of the total number of hospitals in the country), and 435 outpatient polyclinics (5.9% of the total in the country). The number of inpatients in the parallel networks made up 7.7% of the total number of inpatients, and visits to polyclinics made up 6.9%. The Ministry of Transport possesses the largest parallel network: 80 hospitals and 175 outpatient polyclinics. Data on the number of people served by the parallel health system is unavailable, but 1.7 million people work for the railway system, which is the largest industry within the jurisdiction of the Ministry of Transport and Communications (see also section 3.4.1 *Pooling agencies and allocation*).

3.3.5 External sources of funds

It is difficult to estimate the impact of external sources of financing in Ukraine. Overall donor activity contributes very little to financing of the health sector; according to NHA, their contribution accounts for less than 1% of total health expenditure (0.3–0.7% in 2003–2008). Donors to the health sector include international organizations (United Nations agencies, the EU, World Bank, the Global Fund) as well as governments of individual countries (Japan, Sweden, the United Kingdom, United States and others). Donations are used mostly to provide technical assistance. For instance, the EU carried out several projects in Ukraine, including Primary Health Care Support (€2 million; 2002–2005), Health Financing and Management (€4 million; 2003–2006), Support for the Development of a System of Medical Standards (€4 million; 2004–2006) and Support for Secondary Health Care Reform (€4 million; 2007–2009).

There are also major initiatives involved in fighting infectious diseases such as TB and AIDS, and supporting maternal and infant health programmes. In 2006, the Global Fund approved a US\$ 151 million grant to Ukraine to fund the programme HIV-AIDS Prevention, Treatment, and Care for the Most Vulnerable Populations in Ukraine, 2007–2011. In 2007, however, the Global Fund denied Ukraine's request for a US\$ 94.6 million grant to fight TB, due to an unclear spending plan. The Global Fund had already denied a grant for fighting TB in 2004. In 2006, however, the country managed to secure a grant to fight HIV/AIDS. The resources were granted directly to the Ukrainian government, but this was followed by a scandal over an increase in the price of medication. As a result, the Global Fund had to suspend financing, citing concerns over slow progress and management problems. A statement issued by the Global Fund said it had taken the decision because of implementation bottlenecks, and management and governance issues. Financing resumed after International HIV/AIDS Alliance, an NGO, was put in charge of the project. Following this, in 2009, the Global Fund approved a US\$ 105 million grant requested by Ukraine to combat TB.

3.3.6 Other sources of financing

The Ukrainian government mandates that it is the responsibility of the owners and administrators of enterprises, agencies and institutions to protect the health of their workers. Employers, therefore, must provide their own resources to fund compliance with safety techniques, sanitation in the workplace, recruitment and periodic medical exams for certain categories of workers in labour-intensive, unhealthy or dangerous jobs. They are likewise responsible for providing thorough medical examinations and rehabilitation for workers with potential professional or occupational diseases, and prophylactic medical examinations for groups of workers at risk of developing occupational diseases. The State Sanitary-Epidemiological Service administers compliance with sanitary requirements, within the limits of budget financing.

In accordance with the *Law on mandatory social insurance covering temporary disability, occupational accidents and occupational diseases*, the Social Insurance Fund against Occupational Accidents and Occupational Diseases uses its own resources to take measures against occupational accidents, to remove work-related threats to workers' health and so on. The only available data show that the Social Insurance Fund spent 15.5 million hryvnya in 2003 (US\$ 2.9 million or 0.08% of total health expenditure) and 10 million hryvnya in 2004 (US\$ 1.9 million or 0.4% of total health expenditure).

3.4 Pooling of funds

3.4.1 Pooling agencies and allocation

Pooling of funds for health care occurs within the budgetary process outlined by the *Budget Code of Ukraine* (Law of Ukraine No. 2542-III) issued 21 June 2001. The budget system is divided into 4 levels: (1) state/national budget, (2) regional budgets, (3) district and municipal budgets, (4) small town and village budgets, but it is still a “single payer” system. The Budget Code authorizes the financing of the health system assigned to different levels of the budget system. The historic approach remains the primary strategy for determining health care budgets for different levels. A targeted programme approach is used to solve acute problems in the health care sector. The national government and local self-governments at all levels are responsible for pooling funds: the Ministry of Health and other ministries, regional and municipal health authorities, and rural self-governments.

State budget resources allocated to health care in accordance with the *Law on the state budget* approved by Parliament are distributed among numerous agencies controlling the budget. The most important of these are the Ministry of Health and the National Academy of Medical Sciences of Ukraine, as well as a number of other ministries and departments in charge of medical facilities (see Table 3.7). Each of these agencies is responsible for financing the medical facilities and programmes allocated to them. As a result, the Ministry of Health is responsible for slightly more than half of the resources allocated from the state budget (see Table 3.7).

Table 3.7

State budget resources allocation, 2008

Ministries and departments	Volume of resources	
	Hryvnya (millions)	%
Ministry of Health	5 706.8	58.0
Other ministries and departments:	4 132.5	42.0
– Ministry of Transport and Communications	629.7	6.4
– Ministry of Defence	669.1	6.8
– Ministry of Labour and Social Policy	649.4	6.6
– Other ministries	1 102.0	11.2
– Academy of Medical Sciences of Ukraine	1 082.3	11.0
Total	9 839.3	100.0

Source: State Statistics Committee of Ukraine, 2010a.

The process of calculating the level of inter-budgetary transfers and the estimated local budget health care expenditures depend directly on the local population size, with the exception of those who receive care through a parallel network (see section 3.3.4 *Parallel health systems*). However the majority of parallel networks do not provide a full health care package to their workers. Workers in these ministries and other bodies have the right to seek care in their local community medical facilities, and they exercise this right – especially those workers with acute conditions. Therefore the pool of funds designed to finance parallel networks partially intersects with the regional financial pool. Citizens benefiting from access to parallel networks as well as regular medical facilities use a portion of the finances allocated to provide care to other people in the same region. The interaction between parallel and regional health systems faces a number of bureaucratic obstacles. This leads to the irrational use of combined resources in the health system in general. The government's *National plan for health care development by 2010* (Cabinet of Ministers Decree No. 815, issued 13 June 2007) outlines the steps towards the formation of a unified medical system under the Ministry of Health. This means that parallel health facilities would come under the community's jurisdiction and be integrated into regional health systems. However, no practical steps have been taken in this direction to make this happen.

Final approval of local health budgets by local representative authorities together with general budgets takes place not later than two weeks after the publication of the *Law on the state budget*. Regional health budgets include the budgets of the Crimea AR, the 24 *oblasts* and 2 cities (Kyiv and Sevastopol) which have the same status as an *oblast*. Regional health administrations finance their health facilities from their own budgets. Local health authorities or local administrations (if they have no separate health authorities in their structure) finance health care facilities under their jurisdiction from the relevant municipal health budgets. At the rural level, local self-governments finance medical facilities under their jurisdiction: small rural hospitals, rural outpatient clinics, *feldsher* or *feldsher* and midwife posts (FAPs). Splitting off the rural level in the budgetary system led to a catastrophic fragmentation of local health budget resources. On average there are fewer than 5000 people per local self-government in Ukraine. Not more than 10 800 territorial and administrative entities and settlements out of 30 000 can be considered viable self-governing units.

The *Budget Code of Ukraine* presents some possibilities to improve the effectiveness of pooling the local health system's financial resources. It allows municipal and local communities (settlements, villages and towns) to pool

their funds on a contractual basis in order to fulfil their commitments, transfer resources for these commitments to the upper budgets, and transfer subventions from one budget to another for the maintenance of shared facilities. In reality, however, these options are not used. In 2005, efforts were made to centralize expenditures on primary care in rural areas at the district level without specifying them in the budget of the actual communities. The appropriate amendments to the *Budget Code of Ukraine* (Law of Ukraine No. 2350-IV, issued 13 January 2005) were made, but the Cabinet of Ministers of Ukraine put the fulfilment of those amendments on hold. The political opposition to this decision claimed that depriving small communities of the possibility of financing their own primary medical care needs by transferring these functions to the district budgets is in effect an attack on the rights of local self-governments. In 2008, the amendments to the *Budget Code of Ukraine* mentioned above were annulled.

3.4.2 Mechanisms for allocating funds among pooling/purchasing agencies

The financing of social needs including health care is a state duty, but often the execution of these duties is delegated to the subnational level. Delegated assignments are financed through the system of inter-budgetary transfers. The size of transfers is calculated with the goal that they would completely finance the regional and local levels. The regional budget gives part of the received transfers to the district and municipal budgets, which in turn direct part of these resources to the small community budgets. The volume of health care expenditures in the regional, district and municipal budgets is determined by special formulas approved by the Cabinet of Ministers (Decree No. 1195 issued 5 October 2001, amended 14 October 2005, *On approving the distribution of inter-budgetary transfers between state and local budgets* and Decree No. 1782 issued 31 December 2004, amended 29 December 2005, *On regulation of inter-budgetary relations*), which take into account the gender and age specifics of the population.

Inter-budgetary transfers are designed to finance all duties of the state, including public administration and social needs. Within the total volume of transfers, there are no specifications for resource allocation for separate state commitments such as health care. Regional administrations and local self-governments have the right to determine the structure of their expenditure and therefore decide independently where to use the transferred resources. The rights of local authorities are limited, however, by decisions passed at the national level, for example, to raise the salaries of budget system workers, as well as obligations imposed by the Budget Code to pass down part of the

transfer. It is also forbidden to decrease the volume of spending on state programmes targeting diabetes mellitus and diabetes insipidus. Expenditure on these programmes is included in the sums transferred.

The structure of health care expenditure distribution between the levels of the budget system within the amounts of transfers that are passed down from the state budget is as follows:

- at the regional level, 35.4% of the total expenditure should be kept for health care;
- at the municipal and district level, not more than 55.1% of total expenditure within the inter-budgetary transfer must be kept for health care; and
- community budgets must receive not less than 23% of the total health budget included in the transfers passed by the state down to the municipal and district budgets mentioned above (or not less than 9.5% of the total health care budget included in the transfers passed by the state down to the regional budgets), but this money is not ring-fenced.

In practice, however, the planned expenditure does not always match the calculated figures during the passing of subnational budgets. A certain authority, for example, might decide to allocate more resources to the education system and cut the financing of the health system. For instance, during the drafting and passing of the budget in 2005, 17 out of 25 regions in Ukraine planned a smaller volume of health care expenditure in their budgets than was foreseen in the figures calculated by the Ministry of Finance. No nationwide data are available, but a study of six regions found that the community budget resources allocated to health care make up only 13–16% of the estimated health care expenditure within the transfer passed down from the state budget to regional budgets, which is only half to two-thirds of the estimated 23%.

State budget expenditure includes subventions to the subnational budgets for supplying medical equipment to rural outpatient clinics, *feldsher* posts and FAPs, and for the purchase of ambulances for rural medical facilities. In earlier years the Ministry of Health itself and other central agencies used resources from the national budget. Instead of transferring money down to the regional level, they purchased and sent equipment, drugs and so on. The majority of resources come from local budgets, however, and their share has increased in recent years, due to the decrease in centralized purchasing from the state budget.

Municipal budgets play the main role in the consolidated health care budget structure, which is not surprising considering that 68.1% of the population in Ukraine is urban. Community budgets play the smallest role (see Table 3.8).

Table 3.8

Distribution of national health expenditure based on budget system level, 2004

Budgets	Public health expenditure (million hryvnya)	Proportion of public health expenditure, %
National budget	4 628.6	34.8
Territorial budgets, including: ^a	8 687.5	65.2
– Regional budgets	2 318.3	17.4
– Municipal budgets	3 464.3	26.0
– District budgets	2 064.0	15.5
– Community budgets	517.1	3.9
Total public health expenditure	13 316.1	100.0

Source: Gotsadze et al., 2006.

Note: ^a Data are missing on the allocation of about 323.8 million hryvnya of territorial budget resources to the lower budget levels.

The growing importance of local self-government in health spending has been matched by the growing importance of input norms which determine the demand for funds as opposed to the supply of funds (see section 3.6.1 *Paying for health services*).

State targeted programmes

There are a large number of state targeted health care programmes that address a wide spectrum of health care problems such as immunization, fighting TB and HIV/AIDS epidemics, reproductive health, prevention and treatment of cardiovascular and cerebrovascular diseases, prevention and cancer treatment, and so on. The programmes are approved either by executive order or by law. The Ministry of Health orders, manages and coordinates these programmes. As the government passes these programmes, it orders the Ministry of Finance and the Ministry of Economy to make provisions for these programmes in drafting the state budget and forming a state policy of economic and social development for a given period. At the same time, the regional executive authorities receive recommendations for drafting and approving the corresponding regional programmes that must contain directions and measures outlined by the appropriate state programmes. They also receive recommendations for using local budget funds and other legal resources for the execution of these programmes. However, these recommendations almost always remain unfulfilled, and even if the regional programmes take place they receive a very small portion of

resources from local funds. For example, data from the Ministry of Finance show that in 2004 the government allocated 580.1 million hryvnya from the state budget to finance state targeted programmes, but all the regional and local budgets together allocated only 31.04 million hryvnya to run programmes fighting TB and HIV, providing insulin to people with diabetes, immunization programmes and centralized measures for treating cancer. Within the limits of these state programmes, the Ministry of Health purchases drugs for cancer, TB, HIV/AIDS and other illnesses, and delivers them to the regions.

There are no special budgets for the development of human resources and mental health protection. The proper expenditure is calculated in drafting first a state budget and then local, primarily regional, budgets.

3.5 Purchasing and purchaser–provider relations

The organizational relationship between purchasers and providers is based on an integrated model. State and community medical facilities (the providers of medical services) are under the administrative jurisdiction of their owners, that is, the corresponding state and local authorities (purchasers). Therefore in Ukraine the model is based on the principles of appropriate budgetary payments for medical services but not on the purchasing of medical services, which would be based on strategic public procurement contracting.

In financing health care from the budget, payments are made by state authorities, which are also established in the Budget Code as the chief administrators of budgetary resources. The chief health administrators of budgetary resources are the Ministry of Health and the National Academy of Medical Sciences of Ukraine, as well as a number of other ministries and departments. Each of these authorities finances the medical facilities and programmes in its jurisdiction – the list is approved by the Cabinet of Ministers (Decree No. 342, issued 15 April 2002, *On approving the list of medical facilities and health programmes financed from the state budget*). The medical agencies of ministries and departments receive their funding from the state budget. In calculating inter-budgetary transfers, the estimates of health expenditure from local budgets depend on the size of the local population, excluding those who receive care through the parallel network. However the majority of parallel networks do not provide a full health care package to their workers. Workers in these departments have the right to seek care in their local community medical facilities, and they exercise this right – especially those workers with acute conditions.

The Ministry of Health finances the State Sanitary-Epidemiological Service, higher medical education institutions, the State Pharmaceuticals Quality Control Inspectorate and related local inspections, and approximately 50 national-level medical agencies under its control that provide everything from primary to tertiary care. Additionally, the Ministry of Health funds state, interagency, and integrated programmes and measures related to health that are financed from the state budget. There are also certain centralized procedures through which the Ministry of Health purchases pharmaceuticals, medical devices, immunobiological medicines, expensive medical equipment and hospital vehicles.

The regional chief administrators of budgetary resources for health are the Ministry of Health of Crimea AR, along with health authorities in the regions, and the municipal administrations of Kyiv and Sevastopol, which finance medical facilities under their control. At the municipal level, the chief administrators of budgetary resources are the health authorities within the executive municipal powers. At the district level, there are no requirements regarding the existence of health authorities. On 11 May 2005, the Cabinet of Ministers added a health authority to the list of departments in the administration at the district level (Decree No. 328, *On the structure of local state authorities*, Appendix 3). However, its goals, functions and authorities were defined by the Cabinet of Ministers only on 28 November 2007 (Decree No. 1364, *On approving basic regulations for the health sector of district state authorities*). Therefore, health authorities in district administrations are currently exceptions, not the rule. The district director fulfils the role of the chief administrator of budgetary resources. At the community level, local self-governments distribute budget resources to rural outpatient clinics, FAPs and *feldsher* posts. The activity of purchasers is controlled through this hierarchical management structure.

3.6 Payment mechanisms

3.6.1 Paying for health services

Payment mechanisms in the Ukrainian health system are prospective. The overwhelming majority of state and community health care facilities are officially financed by the government. According to the *Budget Code of Ukraine*, they must be supported by the national or the relevant local budget. There is strict allocation of resources between the budgets, and any given facility can receive financing from one budget only. The real level of resource

allocations to government-financed facilities is based on historical budgeting adjusted for inflation and any budgetary increases. The Ministry of Finance and local fiscal authorities give the Ministry of Health, local health authorities and local self-governments the maximum health expenditure from the draft budget for the following year. The Ministry of Health, local health authorities and local self-governments then determine the maximum expenditure for the health facilities funded by them, and the facilities produce cost estimates for the next fiscal year. The Ministry of Health, local health authorities and local self-governments then examine these estimates to ensure they include accurate projected income and expenses figures, justification for planned expenditure, and that they comply with established wages, norms, prices, limits and other indicators in accordance with the law. They then create the draft budgets. Based on the draft estimates, the Ministry of Health, local health authorities and local self-governments draft budget requests and submit them to the financial authorities to be included into the appropriate draft budget. Once the draft budgets are drawn up, the Ministry of Health, local health authorities and local self-governments make any necessary corrections to the volume of budget funding to the facilities, before approving the drafts.

The primary and mandatory responsibility of government-financed facilities is to provide budget resources for salaries, pharmaceuticals, food and the maintenance of facilities. Thus the purchase of equipment, renovations and other expenditure not considered priorities can receive financing only if the primary requirements are covered and there are no other debts. In reality, salary expenditure accounts for more than two-thirds (70.8% in 2008) of territorial health care expenditure, followed by pharmaceutical expenditure and catering (19.8%), utilities (8.3%) and other expenditure (1.1%) (Gotsadze et al., 2006).

The allocation of budgetary funds is thus based on a list of permitted line items, which in turn is based on norms set by the Ministry of Health defining inputs such as staff, salaries, pharmaceuticals, catering and so on. The majority of these norms depend on the capacity of a health facility (number of beds in hospitals or number of visits in polyclinics). Many of these norms do not reflect real expenditure, for example on pharmaceuticals or hospital food. Facilities must spend resources exactly as allocated. They are not permitted to reallocate resources from one line item to another. Any changes in the facility's income and expense estimates must be approved by the chief administrators of budgetary resources and by the appropriate fiscal authorities, if the changes involve adjustments to the consolidated level of budgetary expenditure. If there are any unspent funds at the end of the year, the fiscal authorities will cut the facility's budget estimates for the next year by the same amount.

Line-item budgeting is very straightforward for the fiscal authorities in planning expenditures and controlling the targeted usage of allocated resources. However, this approach has a number of drawbacks: (1) input-based financing encourages health facilities to maintain excess capacity; (2) allocating resources for the maintenance of medical facilities, rather than the volume of work, does not provide incentives to improve productivity; instead the incentive is given to increase the infrastructure; (3) line-item budgeting limits the authority and responsibility of the management in medical facilities and does not provide incentives to look for more efficient ways to use resources. Therefore, resource allocations based on expenditure estimates are not linked to the workload of those who receive the resources. There are no incentives for health facilities to use their resources more rationally, and this creates a cost-based type of management. Consequently, even a significant increase of resource allocations to health facilities does not guarantee better fulfilment of the government's social commitments (see section 8.3).

Individuals and legal entities that are not financed by the government may receive funds from the budget to contribute to state programmes. They must use these funds in accordance with the budget resources usage plan, that is, they must distribute budget allocations in accordance with line-item budgeting. The budget resources usage plans are approved by officials in accordance with the chief administrators of budgetary resources, through which they receive the funds.

Centralized purchasing is done by the chief administrators of budgetary funds for facilities under their jurisdiction. Centralized purchasing includes items such as vaccines, pharmaceuticals to fight TB, for the prevention and treatment of HIV/AIDS, and for treating cancer, pacemakers, implants and other medical devices, expensive medical equipment, ambulances for rural medical facilities, and other items for fulfilling the measures outlined in state programmes. Centralized purchasing is conducted through tendering procedures by enterprises under the jurisdiction of the Ministry of Health (Ukrvaccine, Politechmed, Ukrmedsnab). The purchased pharmaceuticals and equipment are then distributed to the regions. The quantity, quality and assortment of purchased pharmaceuticals and medical devices often fail to satisfy the needs of medical facilities.

Budget allocations do not cover all health care expenditure in public medical facilities, despite the constitutional guarantees regarding free health care in state and community medical facilities (see section 3.2). In reality, there are many methods of payments, both formal and informal (see section 3.3.2 *Out-of-pocket payments*).

The Budget Code stipulates that outpatient care (primary and specialized) can receive financing from different budget levels. There are therefore allocations for these types of services in budgets at different levels; however most comes from municipal district health care budgets and community budgets. Private payments (user fees) are funnelled into special accounts (so-called commission accounts) and can be used at the discretion of the facility's management as they supplement allocations according to line-item budgets; informal payments go directly to the medical staff involved (see section 3.3.2 *Out-of-pocket payments*).

Inpatient care and dental care are purchased in a similar manner via local budgets. Formal private payments for dental services in public facilities go to special budget fund accounts, when declared. In private facilities, private resources come either in the form of fees-for-service from the patients or as contracts from private firms and corporations that cover a package of services. The majority of drug purchasing from budgetary sources is carried out by local or regional health authorities based on requests from medical facilities. The pharmaceuticals are then distributed among facilities. Pharmaceuticals are partially purchased with resources from a special budget fund in accordance with health insurance company contracts and sickness funds. The amount of these purchases is very small, however. Most pharmaceuticals are purchased directly by patients themselves, on the recommendation of their physician, and they pay out of pocket in full.

Psychiatric care is covered by local budgets through the line-item budget system. The prospective budget estimates do not take into account the cost of pharmaceuticals which patients purchase out of pocket in full. Only a small proportion (0.6%) is officially covered from public resources, usually for alcohol and substance abuse treatment in private clinics. Long-term medical care is usually financed from local budgets in accordance with line-item budget estimates drafted by social protection agencies. Rehabilitation services are normally provided by resorts and sanatoria. About half of this treatment is financed from budget resources. The remainder comes from employers or is paid out of pocket by patients.

Experiments with new methods of financing

There have been several experiments in Ukraine involving the introduction of new financing mechanisms, such as a global budgeting and payments on a per capita basis. These experiments are typically the result of local initiatives, and they are supported by technical assistance projects run by international donor organizations. For example, in Komsomolsk (Poltava *oblast*, population 60 000)

in 1997, the municipal authorities and medical community launched an experimental model of primary care organization. Trained family doctors signed contracts with municipal authorities for the provision of primary care services financed on a per capita basis. Since there were no legal precedents for a project in which services provided by community medical facilities were purchased on a contracting basis, the city established family practices. Currently there are 11 private family doctors who sign contracts with the municipal health authority and provide primary care to about 40% of the city's population. Funds are allocated from the budget on a per capita basis according to the number of citizens assigned to a particular physician. The rest of the population received primary care at a polyclinic that is government-financed according to line-item budgets. In 2003/2004, doctors in independent practices were brought together into group practices, and the polyclinics were turned into primary care centres.

In the early stages of this experiment there was an attempt to introduce a scheme of partial fund-holding in purchasing services from family doctors, but this mechanism was not supported by the local authorities. According to the results of a public opinion poll in Komsomolsk, the delivery of primary care services by family doctors is more financially efficient than the current system (Nadutaya, Nadutiy & Zhalilo, 2003; Nadutaya, 2004). The quality and accessibility of health care also improves. After the transition to the new model, the number of visits to medical specialists decreased by 36%, the number of adult hospitalizations decreased by 16%, and the number of emergency calls per 10 000 population decreased by 46.4%. Further, public satisfaction increased from 70–80% (within the traditional model of care by district internists and paediatricians in polyclinics) to 88% with health care provided by family doctors.

In 2005, the EU-funded project Health Financing and Management in Ukraine, conducted experiments aimed at changing the mechanisms of financing health care facilities. Two pilot rural regions were chosen in Kharkiv and Zhytomyr *oblast* with a population of about 35 000 in each. In these pilot medical facilities, line-item budgeting was replaced by global budgeting, meaning that the facility was financed based on the volume of care it provided, but, in contrast with the existing approach, resource allocation was not itemized and the amount did not depend on the capacity of the facility. Facilities were financed within the limits of an agreement, which took the form of a simple block-contract for the government's purchase of services. District-level health authorities acted as health services purchasers, according to the provisions of the *Civil, Economy and Budget Codes of Ukraine* and the *Law on the public*

procurement of goods, works and services (No. 1490-III of 22 February 2000). The purchaser negotiated with health care providers (that is, the district central hospital) on the volume of allocated resources and inpatient and outpatient care that the latter was obliged to provide to the population over the course of one year. Once the resources were received, the hospital itself determined where to direct them, taking into account its current needs and priorities. The hospital's autonomy was secured by its transformation into a form of non-profit-making communal enterprise as recognized by the *Economy Code of Ukraine* (Rudiy, 2005).

Local fiscal authorities resisted experimenting with new methods of paying medical care providers. In 2005, in a pilot district in Kharkiv *oblast*, the local authorities divided the financing of primary and secondary care to create two independent health care providers. The plan was to sign separate contracts to purchase medical services from the newly created district primary care centre (an independent non-profit-making community enterprise), and the central district hospital. In the contract for purchasing inpatient care and specialized outpatient care from the central district hospital, global budgets were the chosen method of payment. In the contract regarding the purchase of primary care, payment was to be on a per capita basis based on the list of patients from every family doctor/GP. In May–June 2006, however, when the project was scheduled for launch, authorities from the central district hospital, together with medical specialists from the inpatient care ward and the polyclinic, began strongly interfering with the launch. They used different methods to put pressure on the district parliament, including street protests by the medical workers. Their main argument was the inevitable breakdown of inpatient care and specialized outpatient care, claiming that the hospital would lose part of its funding. They also pointed out the difficulties of undertaking reforms during the period of state financial deficit. The true cause of the hospital's resistance lay in its unwillingness to lose resources and property earmarked for transfer to the primary care centre. Inpatient doctors and the polyclinic's medical specialists worried that the reform would decrease demand for their services, leading to staff reductions for specialists and reducing both formal and informal income. As a result of their protests, the project launch was postponed.

However, a different component of the same project had more success, where centralized financing of the district health system was achieved. All rural medical facilities (rural outpatient clinics, FAPs, etc.) became district community property. A united community non-profit-making enterprise was created on the basis of the central district hospital. All rural facilities became subdivisions and lost their status as independent legal entities. Unifying financial

resources and rural medical facilities at the district level created conditions for the more efficient utilization of budgetary resources allocated by local self-governments to health care. It also stabilized financing and protected the health care budget from rural community leaders redistributing the resources to other community needs. In March 2006, after securing an agreement with the relevant regional authorities, the Ministry of Health issued an order assigning additional districts in Zhytomyr and Kharkiv *oblast* to join the project. These new forms of financing are not widespread, however. The Ministry of Finance is the main opponent to reforming purchasing mechanisms for medical services. The Ministry expressed concerns about new purchasing mechanisms potentially upsetting the balance between existing and required resources (Lekhan, Rudyi & Shishkin, 2007).

3.6.2 Paying health care personnel

Workers in government-financed agencies and institutions (including health care facilities) are paid according to the laws and regulations of Ukraine, and according to general, departmental and regional agreements, and collective contracts between proprietors and work unions, within the limits of budget allocations and non-budgetary income. The health workers union has not had much success recently in their fight to increase salary levels. Ukraine has also largely retained the Soviet practice of remunerating public sector health care professionals using fixed salary scales. The advantage of this method lies in the simplicity of calculating the cost of salaries and the lack of financial risks for health care professionals. The main disadvantage is that there is no correlation between salary level and quality of work. Medical professionals do not have much incentive to increase their work volume, efficiency or quality.

One goal in the *Concept of the development of health care in Ukraine* (2000) was to differentiate medical and pharmaceutical workers' salaries based on their level of qualification, and the quantity, quality, complexity and efficiency of their work, while also taking into account their working conditions. Since then several attempts have been made to make payments to health workers more flexible. These attempts retained the basic principle of salaried employment but took into account a system of stimuli to improve clinical quality, enhance the prestige of medical specializations in short supply, increase the volume of work and so on. A Cabinet of Ministers Decree (No. 1298, issued 30 August 2002) adopted the Unified Tariff System of categories and quotients for the remuneration of workers in institutions and organizations of some government-supported sectors. Official rates are calculated by multiplying the salary of a worker of the first tariff category (in essence the minimum wage) by the

appropriate tariff quotient. The specific conditions of remuneration for health workers are set by a joint order from the Ministry of Health and the Ministry of Labour and Social Policy (No. 308/519 issued 5 October 2005, amended 2007, *On regulating remuneration of medical and social protection facilities workers*).

Professional salaries for the majority of medical personnel (medical doctors, mid-level health staff, pharmacists) are set in accordance with their qualifications which reflects a worker's professional level (no category, first category, second category and highest category). Professional salaries (tariff rates) are the government's guaranteed minimum wage to certain groups of workers with professional qualifications in public and private health care facilities. Managers at government-financed health care facilities have the right to raise salaries within the salary fund provided by the line-item budgets. Salaries can be increased for certain workers with hazardous or heavy working conditions, or for surgeons, depending on the quantity, complexity and type of work they carry out. For example, in outpatient and polyclinic facilities salaries can be increased up to 15%; in a day hospital specializing in surgery, they can be increased up to 25%; and in a hospital, the increase can be up to 40% of a professional salary. The list of facilities and jobs with higher wages due to hazardous or heavy work conditions is determined by a special addition to the joint order of the Ministry of Health and the Ministry of Labour and Social Policy. The list of actual workers who have the right to receive higher wages is determined by the enterprise's authorities in accordance with the union's committee and depends on the tasks and the volume of work. Additional remuneration is granted for specializing in more than one area, substituting for a missing worker, increasing the amount of work or the area served, and working nights at an hourly rate of 35–50% extra. For certain staff, bonuses are given for working long uninterrupted hours, performing complex duties, excellent achievements or for the execution of particularly important tasks. Bonuses are also given for being on-call at home, nursing duty, holding an honorary title and more. However, these bonuses can be decreased or removed if problems with clinical quality or discipline are identified.

In public facilities, the salaries of different categories of medical workers (medical doctors and mid-level medical staff) are virtually undifferentiated according to qualifications or the type of work. There are only two groups of specialists among medical doctors. The first group includes professionals whose qualifications are in demand and who have priority in the recruitment process: surgeons of all kinds, anaesthetists, any medical doctors for rural areas, and primary care physicians such as district internists, district paediatricians and family doctors/GPs. The salary for these specialists is one category higher

than for others. Public health care specialists (hygienists, epidemiologists, etc.), for example, are included in the second category: medical doctors of other specialties. The salaries of their support staff are equal to those of mid-level medical staff. The salaries of mid-level medical staff are 3–4 categories lower than that of medical doctors and there is no specialty gradation.

In an attempt to reduce turnover in emergency care and outpatient care, doctors and mid-level medical personnel in these sectors are paid bonuses for continuity of service. The largest bonuses for continuity of service are provided for emergency care doctors (up to 60%) and doctors practising in rural areas (up to 40%). Primary care physicians in cities can receive up to 30% of base salary. Moreover, like other specialists, these specialists can receive an additional bonus of up to 50% base salary for increasing the area served, substituting for a missing worker (which is important in understaffed facilities) and for a larger workload. There are no significant differences between inpatient sector medical personnel and other personnel, except for surgeons and anaesthetists, whose salaries can be increased by up to 40% for performing specific surgeries.

In all medical facilities with hazardous or difficult work conditions (inpatient and outpatient care), all types of personnel are paid higher salaries, including doctors as well as mid- and low-level medical staff. Salaries in psychiatric and addictions clinics can be up to 25% higher, while primary care physicians in polyclinics can be paid up to 15% more; 15% more in infectious diseases clinics; and up to 60% more in HIV/AIDS treatment facilities. Salaries in auxiliary facilities such as physiotherapy and radiological facilities can be paid up to 15% more of the professional base salary. The remuneration of dental specialists does not differ from other specialists. Mid-level dental workers and dental assistants have the same level of remuneration as other mid-level medical personnel. The base salary of medical facility managers and their deputies is the highest in comparison with other medical personnel. Their salaries depend on the capacity of the facility. Additional payments (24–25%) are provided for specific qualifications in health care organization and management.

In Ukraine, social workers work primarily in institutions for vulnerable groups, including special homes for retired and disabled people, territorial social care centres for senior citizens and single people, centres for home care, charity services, homeless centres, homeless shelters, centres for reintegration of the homeless people and so on. The base salaries of social workers are 1–2 times lower than the salaries of non-priority specialty doctors. As with doctors, their salaries are differentiated between categories of qualification. Social workers

employed at long-term facilities for children with developmental disorders can receive an additional bonus up to 25%, as can social workers at long-term care facilities for elderly or disabled people.

There is a relatively small number of private medical facilities in Ukraine, but the proportion of full-time workers in private health facilities usually does not exceed 50%, with the exception of dental practices and dental centres, which are mostly staffed by full-time workers. Other personnel are hired as contractors, since their primary work is at public health care facilities. They are paid primarily on a contractual basis. A contract between the administration and an individual medical worker provides either an hourly rate or a fixed sum for the total volume of work. Different forms of remuneration can be used for different employees at the same facility. The fixed rate differs significantly from facility to facility, which causes a high turnover. The hourly rate is usually based on the categories of medical personnel rates approved by the Ministry of Labour and Social Policy and the Ministry of Health, although remuneration is between 10% and 15% higher for working at a private facility.

The methods of remuneration give some flexibility in salaries for medical personnel at public medical facilities. However, this has not proved a significant incentive to increase the volume or quality of services provided. In the majority of cases, the remuneration of labour in health facilities is related only to the hours of work, without real consideration of the volume, quality or efficiency of work. Bonuses and additional payments (except for mandatory payments for substituting a missing worker, length of service or a qualification category) are extremely rare due to the chronic lack of funding. In cases where additional payments are awarded, the criteria are not transparent. Bonuses are given not necessarily to the best workers from a professional perspective, but to those who, for whatever reason, are more pleasing to the facility's administration. The lack of transparent bonus criteria removes any incentive to increase the efficiency or quality of work. Moreover, salaries are still very low. For example, a medical doctor with the highest qualifications, whose specialty is among the best paid, usually does not earn more than US\$ 300 a month, including bonuses and additional payments. The average monthly salary for doctors in 2006 was 901.6 hryvnya (US\$ 178.5), 610.6 hryvnya (US\$ 120.9) for mid-level medical staff, and 507.5 hryvnya (US\$ 100.5) for low-level medical staff. On average, salaries in the health sector are lower than those in other sectors of the economy. Salaries are 1.79 times lower than in industry and 1.22 times lower than in education. Such salaries do not attract personnel (particularly the young) to the health system and certainly cannot retain them. To a certain extent, these

low salaries provoked the appearance and spread of informal payments, which have negatively affected the general equity and accessibility of medical care. The poor have suffered especially.

Another obstacle to the implementation of more effective forms of labour remuneration is the lack of a legal basis for contracting at medical facilities. This tool would stimulate the development of clear criteria for work evaluation. It would create more transparent regulation of mutual commitments between the administration and staff, including the organization of labour remuneration.

4. Regulation and planning

4.1 Regulation

4.1.1 Regulation and governance of third-party payers

The overwhelming majority of health care and preventive services are provided through government-owned health facilities and the relationship between purchasers and providers is still integrated, as it was in the Semashko system (see section 3.5). Different levels of government act as agents that ensure the maintenance of health facilities within the limits of strict line-item budgets (see section 3.6). Health facilities therefore do not have any autonomy in managerial and financial decision-making. Although the *Law on public procurement of goods, works and services* was passed in February 2000 to regulate the purchase of health services with public funds on a contractual basis from both public and private actors, in practice this law has not been fully implemented (Lekhan & Rudiy, 2007). In its place, the *Temporary regulations on public procurement of goods, works and services*, approved by the Cabinet of Ministers in 2008, are being used, but the formal frameworks for contracts have not yet been developed by the Ministry of Health.

Therefore, in spite of the main legal means for the introduction of contract-based purchasing of medical services from different forms of health service provider appearing a few years ago, the transition to an active purchasing model for these services on the basis of public procurement contracts has not taken place (see sections 3.5, 3.6). The principal legal means for giving providers autonomy, which appeared recently, are also not being used (see sections 3.5, 3.6 and Chapter 7). As a result, the Ukrainian health system continues to function on the basis of hierarchical relations between the state (as third-party payer) and directly subordinated local authorities (as state property) and the public providers of medical services.

The public providers, which supply the population with the overwhelming majority of medical services, are financed on the basis of itemized estimates of expenditure agreed by the higher authorities at the required level and have the status of so-called budgetary institutions. These two factors, combined with the compulsory use of strict Ministry of Health normative planning structures and the staff of public medical facilities, condition the extremely limited rights of public providers to make independent managerial and economic decisions.

4.1.2 Regulation and governance of providers

State regulation of health care providers is concentrated at the national level; there are few regulatory activities under the authority of local self-government. The Ministry of Health develops and approves state quality standards and clinical protocols for health care, and is responsible for the organization and implementation of mandatory state medical accreditation of health facilities and issuing licences to legal entities and individuals that are engaged in the delivery of medical services or the production and sales of pharmaceuticals and medical equipment (Lekhan & Rudiy, 2007). Accreditation was introduced on 15 July 1997 by Cabinet of Ministers Decree (Decree No. 765, *On approving the procedure of state accreditation of a health facility*), and is mandatory for all facilities regardless of their form of ownership. Assessment of the first stage of accreditation indicated that it has led to some improvement in material and technical resources, the qualification of medical staff and the quality of care. At present there are 27 accreditation commissions in Ukraine at the health boards of regional, Crimea AR, Kyiv and Sevastopol administrations (Lekhan & Rudiy, 2007). The accreditation process initiated the creation of preconditions for the realization of patients' rights to medical care of adequate quality. However, due to a lack of working mechanisms for accreditation, the process gradually became a formality. Currently it has no real impact on the quality of care (see section 4.1.4 *Regulating quality of care*).

The Ministry of Health establishes the requirements for professional staff, training and development of health and pharmaceutical workers, uniform qualification standards for people pursuing medical or pharmaceutical activities, the list of medical specializations and the classification of types of health care facilities. Practising doctors are subject to certification every five years, but there is no system of registration for doctors (see section 5.2.4 *Registration/licensing*). Public and private medical health care providers (individuals and legal entities) are licensed under the *Law on licensing of specific types of economic activities* No. 1775-14 (2000) and joint order of the State Committee of Ukraine for Regulatory Policy and Entrepreneurship and the Ministry of Health

as of 16 February 2001, No. 38/63 *Licensing conditions for economic activity relating to medical practice* (Lekhan & Rudi, 2007). The legislation is designed to ensure that professional staff or provider organizations achieve minimum standards of competence and meet function-specific requirements regarding sanitation and safety and technical standards of equipment. Unfortunately, the licensing of medical practices has not assured the quality of health care. Many medical facilities, especially in rural areas, face severe structural problems. Many buildings have become dilapidated, with equipment that is outmoded and in poor condition (see section 5.1.3 *Medical equipment, devices and aids*). Some of the reasons behind this are the lack of modern standards for material and technical support as well as a very liberal form of licensing for state and community medical facilities, which usually manage to keep their historically established range of services.

4.1.3 Regulation and governance of the purchasing process

Since 2005, an EU project Health Financing and Management in Ukraine has identified the key regulatory barriers to providers being granted more autonomy so that health care financing could move away from the line-item model (see section 3.6). In the pilot project, hospitals were funded using global budgets with line-item accounting. The total amount of funds for a year was transferred to the service provider according to a simple block-contract for an agreed volume of outpatient and inpatient care rather than the level being dependent on the hospital's capacity and without strict allocations to specific expenditures. The project met with strong resistance from regional and local authorities, and tax collection agencies, which focus on detailed expenditure and revenues of budgetary institutions rather than their efficiency (Lekhan, Rudi & Shishkin, 2007).

As a part of this project, which effectively introduced a purchaser-provider split, budgetary health facilities were transformed into communal non-profit-making enterprises so that they could avoid the line-item financing of services and conclude contracts for service provision and make spending decisions independently. However, due to conflict between the Commercial Code and tax legislation, the tax authorities refused to register non-profit-making enterprises as profit-tax exempt non-commercial organizations. Budgetary institutions are exempt from land tax, but non-profit-making enterprises are not; there was also a risk that the health facilities would have to pay the standard rate for utilities, rather than the reduced budget institution rate. Financial authorities opposed any change to the status of budget institutions for fear of losing control over their financing (Lekhan, Rudi & Shishkin, 2007).

4.1.4 Regulating quality of care

As part of the reform programme, the government and the Ministry of Health have taken certain steps over the years to improve the quality of health care. The main efforts have been aimed at standardizing medical services and licensing and accrediting health facilities (see above). The standardization of medical practice in Ukraine began in 1998 with an order from the Ministry of Health which set standards for inpatient care (Order No. 226, issued 27 July 1998, *On approving temporary uniform standards for inpatient medical diagnostics and treatment for adults at medico-prophylactic facilities in Ukraine, and temporary standards for the volume of children's diagnostic research, treatment, and service quality*). Medical standards or clinical protocols have now been developed for most common diseases and compliance is mandatory. In 2002–2007, clinical protocols were developed and approved for 66 different types of medical services, however, the quality of these protocols is not very high. The majority of these protocols were created based on an expert consensus, without using evidence-based data. There was no clinical testing of their quality, no patients were involved and there was no monitoring of the effectiveness of their use.

4.2 Planning and health information management

In Ukraine, the health system is “integrated” in that health care providers are directly owned or employed by the third-party purchaser. Providers are therefore managerially responsible to a series of governing bodies depending on the level of care. This decentralized management of the system impedes the implementation of plans developed at the national level and there is no central health planning agency. The intersectoral comprehensive programme “Health of the Nation” for 2002–2011 was the first unified state plan for health since independence (see section 8.1). Regional administrations were tasked with developing regional programmes in consultation with the national programme and to set annual goals for implementation using local funds (Lekhan & Rudyi, 2007).

Approaches to capacity planning in the Ukrainian health care sector have remained almost unchanged since Soviet times. The mechanisms currently in place neither reflect the health care needs of the population nor take into account regional characteristics of health service provision. There is also little incentive for rational use of resources or cost control over health facilities.

For example, regional health authorities are responsible for establishing the total number of hospital beds, taking into account area-specific norms for inpatient care. The norm for Ukraine as a whole was set at 8 hospital beds per 1000 population. However, these are global standards; norms for hospital bed numbers according to specialty have not been specified. The defined bed capacity also determines staffing of hospitals, which is according to numbers of hospital beds by specialty.

Staffing levels for independent outpatient clinics and polyclinic facilities and outpatient units are determined according to norms approved by the Ministry of Health. These norms are differentiated for two population groups (children and adults) and administrative type (community, district, municipal, regional). The number of primary care providers – district internists and paediatricians – is calculated from the population in the catchment area. It is also possible to introduce positions for occupational health physicians in outpatient settings, as well as paediatricians providing services to children in preschool facilities and schools. Levels of nursing staff required to provide outpatient care are determined according to norms tied to a specified number of appropriately specialized physicians. Also, there are individual norms for the number of mid-level staff at the FAPs providing basic health care in rural areas. Clearly, these rigid standards provide few opportunities for effective management at facility level. In summary, current practices of human resource planning and management of the state-run health system do not follow a coherent model or else correspond to organizational goals. Overall, the current system also lacks any coherent approach to ensuring appropriate levels of health care workers (Lekhan, Rudyi & Nolte, 2004).

4.2.1 Health technology assessment

Health technology assessment may be defined as “the structured analysis of a health care technology, a set of related technologies, or a technology-related issue that is performed for the purpose of providing input to a policy decision” (Mossialos, Allin & Figueras, 2007). On this basis, health technology assessment is not yet a feature of the system in Ukraine.

4.2.2 Information systems

There is a unified electronic health information system for reporting from the regional level upwards, but at the municipal and community level reporting is done on paper using standardized forms. There are other localized information

systems, but these are not necessarily compatible and they are for the management of individual facilities rather than national-level planning and coordination. The reliability of data generated by and the efficacy of health information systems are discussed in section 1.4.

4.2.3 Research and development

Health research is conducted in the medical universities and academies of Ukraine and in the Ukrainian Institute for Strategic Research under the Ministry of Health, which publishes annual reports on the health system. The Institute started coordinating health research work in 2008, focusing on the development of primary and secondary care, continuous quality improvement in health care and health care financing. Previously priority areas for research to underpin health system development were set more spontaneously.

In 2009, the Ministry of Health approved priority directions for research and development of the health system.

- Identifying a model and development path for primary care based on the principles of family medicine.
- Identifying a route for the optimization of both the organization and the size of secondary and tertiary care.
- Identifying ways of overcoming the impact of the global economic crisis on the Ukrainian health system.
- Identifying the optimal model of health care financing for the current stage of development.
- Developing a strategy for increasing overall life expectancy in the country.
- Identifying a model for the provision of diagnostic services at the regional level.
- Refining the system of continuous quality improvement in medical care.
- Identifying appropriate information systems in health care and the introduction of telemedicine.
- Refining the organization of medical services for rural communities.
- Forecasting population health and the demographic situation in Ukraine.
- Forecasting the demand for human resources for the health system for the current stage of development.
- Optimizing the system of health care management at all levels.

- Developing the state-owned sanatoria and health spas.
- Reforming the medical rehabilitation system.
- Identifying ways of increasing the efficiency of resource distribution.

Research in these directions will be conducted by medical universities and coordinated by the Ukrainian Institute for Strategic Research under the Ministry of Health. Specific financing for conducting research has not been provided.

5. Physical and human resources

5.1 Physical resources

5.1.1 Infrastructure

The Ministry of Health is responsible for accrediting health care facilities and individuals practising medicine (see section 4.1.2). In 2008, there were 440 000 hospital beds in total in Ukraine, 92.3% of which were located in inpatient health facilities under the normative scope of the Ministry of Health. Between 1990 and 2008, the total number of beds fell by almost a third (37.2%), or 30% in terms of beds per capita (from 13.6 to 9.5 per 1000 population) (see Table 5.1). However, the decrease in bed numbers was only in facilities under the Ministry of Health; elsewhere the number of beds has actually increased.

Table 5.1

Inpatient hospital capacity, 1990–2008 (selected years)

	1990	1995	2000	2005	2006	2007	2008
Hospital beds per 1 000 population, total	13.6	12.5	9.5	9.5	9.6	9.5	9.5
Hospital beds per 1 000 population in facilities under the Ministry of Health	13.0	11.9	8.9	8.7	8.8	8.8	8.8
Beds per 1 000 population in acute care hospitals ^a	10.6	9.8	7.2	7.1	7.1	–	–
Psychiatric hospital beds per 1 000 population ^a	1.4	1.2	1.0	0.9	0.9	0.9	0.9
Nursing and elderly home beds per 1 000 population	1.2	1.1	1.0	1.0	1.0	–	–

Sources: Ministry of Health and Ukrainian Institute for Strategic Research, 2009; WHO Regional Office for Europe, 2010a; Medical Statistics Centre database, unpublished date, 2009.

Note: ^a Beds in Ministry of Health facilities.

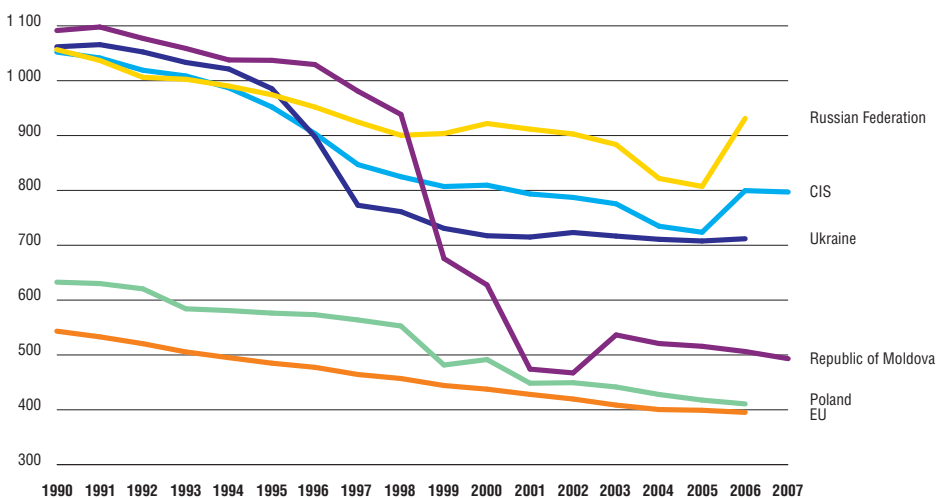
The main reduction in the number of hospital beds took place in 1997–1998 and was caused by the severe financial and economic crisis (see Fig. 5.1). It became impossible to maintain the massive overcapacity of the inpatient sector. The Cabinet of Ministers Decree *On introducing area-specific maximum norms for inpatient care* (No. 640, 28 June 1997) set a rate of 8 beds per

1000 population as the norm, thus requiring regions to adjust their bed numbers accordingly. As a result, more than 150 000 beds in facilities under the Ministry of Health were cut between 1996 and 1998. Further contraction in the hospital bed stock has progressed at a slower rate. The downsizing mainly affected rural hospitals, which were converted into rural outpatient clinics, and municipal hospitals, most of which were reorganized into polyclinics (see section 5.1.2 and section 6.4).

Although relatively low in comparison with other countries of the CIS, the number of acute care hospital beds in Ukraine is still high by European standards (see Fig. 5.1), even acknowledging the differences in the way the number of acute care beds is calculated. The European Health for All data show the sum of all hospital beds minus beds in TB and psychiatric hospitals. In Ukraine, there is no strict differentiation of beds according to the intensity of treatment and care. Thus the majority of inpatient facilities treat both acute patients and chronic patients who require long-term care, as well as “socio-medical patients” in need of long-term care for social rather than clinical reasons (such as vulnerable older people during winter months). There are very few so-called emergency care facilities providing care to acute patients only (12 facilities located in 10 out of 24 regions).

Fig. 5.1

Beds in acute hospitals per 1 000 population in Ukraine and selected other countries, 1990 to latest available year



Source: WHO Regional Office for Europe, 2010a.

The number of beds in psychiatric hospitals has fallen rapidly as well. Their number has dropped by 37% since 1990, reflecting a fall of 1.4 to 0.9 beds per 1000 population. Although the financial crisis has been a major factor, changes in the way mental health problems are treated in law have also had an impact (see section 6.11).

The Ministry of Labour and Social Policy is responsible for the number of beds in long-term care facilities and these beds are not included in bed number calculations made by the State Statistics Committee of Ukraine or the Ministry of Health. Their number has fallen by 20% since 1990, while the demand for these beds is growing, due to the rapid ageing of the population (see section 6.8).

5.1.2 Capital stock and investments

Ukraine has an extensive health care infrastructure. The health sector is monopolized by state and community health care facilities, most of which were inherited from Soviet times. Private facilities account for not more than 1% of the total volume of medical care. The total value of fixed assets of medical and social care facilities (including buildings and equipment) was 42 billion hryvnya (US\$ 8.4 billion) in 2006. This has almost doubled since 2000. However, the infrastructure is being eroded gradually as current financing mechanisms exclusively finance current health care costs and only partially finance capital costs (and only since 2000).

In 2008, outpatient care in Ukraine was provided by 8000 state and community outpatient clinics and polyclinics of different levels, 94.1% of which were under the normative scope of the Ministry of Health. More than half (61.3%) of the outpatient facilities under the Ministry of Health provide only primary care (rural and municipal outpatient clinics, and outpatient departments of rural primary care clinics); 25.2% provide primary and secondary outpatient care (free-standing polyclinics, the polyclinic departments of municipal hospitals for adults and children, central district and district hospitals). The remainder provide secondary and tertiary outpatient care. Also, more than 15 000 FAPs provide first aid in more remote rural areas. Since independence in 1991, the total number of outpatient care facilities increased by 16.5% and the number of facilities under the scope of the Ministry of Health increased by 7.2% (see Table 5.2). A more detailed analysis, however, reveals a more multi-directional trend: the number of free-standing outpatient clinics and polyclinics is growing rapidly, whereas the number of FAPs and polyclinic departments in hospitals is decreasing. The rapid growth of outpatient clinics and polyclinics began with

the introduction of family medicine/general practice in 2000 (see section 6.3), when more than half of the rural clinics and FAPs that provided services for 1000 or more people were converted into primary care physician-led outpatient clinics. There are very few newly opened facilities. The falling number of polyclinic departments in hospitals is also connected with the reorganization of hospitals into free-standing polyclinics.

Table 5.2

Transformation of the network of outpatient clinics and polyclinics, 1991–2008 (selected years)

Type of facility	1991	1995	2000	2005	2007	2008	±2008 since 1991
Outpatient and polyclinic facilities, total	6 869	7 220	7 430	7 776	8 000	8 000	+1 131
Outpatient and polyclinic facilities under the Ministry of Health, including:	6 423	6 544	6 456	6 692	6 842	6 888	+465
– free-standing polyclinics and outpatient clinics, of which	2 015	2 033	2 850	3 605	3 841	3 944	+1 929
• primary care physician-led outpatient clinics	1 618	1 636	2 408	3 076	3 294	3 628	+2 010
– polyclinic departments in hospitals	3 071	2 983	2 624	2 281	2 213	2 114	-957
– polyclinic departments in specialist outpatient clinics	545	527	491	372	369	367	-178
– dental polyclinics	316	324	320	309	300	–	–
FAPs	16 402	16 282	16 113	15 459	15 229	15 100	-1 302

Sources: State Statistics Committee of Ukraine, 2010b; Medical Statistics Centre, 2009; Ministry of Health and Ukrainian Institute for Strategic Research, 2009.

In 2008, there were 2800 inpatient care facilities in Ukraine, 90.9% of which operated under the scope of the Ministry of Health. The rest belong to other ministries and departments as well as to the Academy of Medical Sciences of Ukraine, which also runs 36 research institutes and centres. Since 1991, the total number of inpatient care facilities has fallen by 27.8% (see Table 5.3). As noted above, this is chiefly due to the reorganization of rural hospitals into primary care physician-led outpatient clinics. The decrease in the number of specialized clinics was caused by their fusion with multi-profile hospitals as departments.

Of the total number of beds under the scope of the Ministry of Health, 7.9% are in tertiary care facilities (regional hospitals for adults and children), 55.3% are in multi-profile secondary care hospitals, 31.2% are in specialized secondary and tertiary care facilities (specialized clinics, psychiatric and addiction clinics, etc.) and 5.5% are in rural hospitals (Medical Statistics Centre, 2006).

Table 5.3

Transformation of the network of inpatient medical facilities, 1991–2008
(selected years)

Type of facility	1991	1995	2000	2005	2007	2008	±2008 since 1991
Hospital facilities, total	3 882	3 855	3 258	2 905	2 800	2 800	-1 082
Hospital facilities under the Ministry of Health, total, including:	3 776	3 762	3 049	2 636	2 574	2 537	-1 239
– regional hospitals	30	28	25	25	25	25	-5
– regional paediatric hospitals	25	28	28	28	29	29	+4
– municipal hospitals	683	673	592	551	547	539	-144
– specialized hospitals	125	130	125	–	119	–	–
– municipal paediatric hospitals	124	120	104	99	97	96	-28
– district central hospitals	481	487	486	480	474	472	–
– district hospitals	–	–	125	134	142	–	–
– rural hospitals	1 481	1 423	948	668	609	580	-901
– psychiatric hospitals and addiction clinics	92	90	93	92	92	92	0
– maternity hospitals	83	87	93	89	89	89	+6
– specialized clinics	411	398	367	283	281	281	-130

Sources: State Statistics Committee of Ukraine, 2010b; Medical Statistics Centre, 2009; Ministry of Health and Ukrainian Institute for Strategic Research, 2009.

The number of private medical facilities is growing steadily. The first survey of all health facilities irrespective of their form of ownership was undertaken in 2008. It was found that in the private health sector in Ukraine there are 82 inpatient facilities, 577 medical centres, 1938 individual practices, and 6917 individual doctors active in private provision (Knyazevich et al., 2009). The majority of all private facilities and individual practices (about 75%) are engaged in dental care, while about 15% are diagnostic centres and laboratories. Medico-prophylactic institutions account for 5–10% of private medical enterprises and usually comprise small offices leased from large state facilities. Of the many fully private clinics in Ukraine, only 10 have a large capacity.

Ukraine does not have a regular monitoring system to oversee the upkeep of medical facilities and the conditions in which they provide their services. The condition of medical facilities can be assessed indirectly using data from the State Sanitary-Epidemiological Service, evaluating the sanitary conditions of medical facilities in the course of routine inspections. According to the data from 1 January 2008, of the total number of state and community medico-prophylactic facilities (including FAPs), 6.8% did not fulfil sanitary and hygienic requirements; 1.8% of these facilities required major repairs and 0.2% were situated in dilapidated and/or dangerous structures that could not be repaired. Moreover, only 29.6% of medico-prophylactic facilities have mains

water; 59.5% have hot water (31.4% of which are on a centralized hot water system); and 21.1% have mains sewerage. Unsatisfactory sanitary conditions are found most often in rural medical facilities. Based on the survey of primary care facilities and units conducted by the Ministry of Health in 2007 (Order No. 237, issued 11 May 2007), major repairs are required by 19.5% of rural outpatient clinics and local primary care physician-led outpatient clinics, and 16.4% of FAPs; 1% and 2% respectively are in a critical condition. More than two-thirds of the structures have been used for over 25 years, and 20% have been used for over 50 years. The majority of private medical facilities appeared in the last 15 years and comply with sanitary and hygienic requirements.

The lack of systematic updates on the condition of medical facilities and the minimal financing of capital costs in the state health system are the two main reasons for the lack of planning in prospective development (construction, renovation) of state and community medical facilities.

Strategic development planning and investment in the private medical sector depend on several factors. The main factor is the profitability of potential investments as well as identifying problem areas in the state health system. Consequently, most investments are made in the capital city and several other large cities. Diagnostic services, dentistry, gynaecology and a few other fields attract the most investment. Another important factor in investment planning is the focus of high public officials on certain areas of the health system. For example, consistent presidential attention to cancer problems has created a lucrative field for investment.

Ukraine does not have a system of amortized deductions for providing services (even paid services) at state and community medical facilities. The total volume of investments in the health system has increased slightly in recent years but is still small. According to the unpublished data from the State Statistics Committee of Ukraine, in 2004–2007 the volume of investments in fixed assets (including capital construction, updating of equipment and purchase of new equipment) in both health and social care sectors gradually increased from 1.5 billion hryvnya (US\$ 290 million) to 2.5 billion hryvnya (US\$ 500 million). This did not exceed 6% of total expenditure on health from all sources. Investments in the public sector account for half of all investments and are primarily used to purchase equipment (see section 5.1.3 *Medical equipment, devices and aids*). The remainder goes into the private sector for construction and equipment. No separate data exist for each sector, nor for the volume of investments for construction and equipment in each sector.

Until recently, investments in the private sector were sufficient only to open offices and small medical facilities that provided consulting and diagnostic services. However, with economic growth in Ukraine, despite the general difficulties facing foreign investors (political instability, lack of transparency in the legal system and taxation, bureaucracy and corruption), there has been significant growth in foreign investment in the health sector (Makarenkov, 2007). Quite large private hospitals and highly equipped medical centres have started to open. From 2006 to 2008, Israeli, American, Russian and other foreign companies invested in the construction of a private hospital (US\$ 30 million), an endoscopic surgery clinic (US\$ 10 million), an oncology clinic (US\$ 30 million), and an oncology and cardiology scientific production centre (US\$ 60 million) (Ksenz, 2007). Potentially, therefore, discussions about the transformation of the private medical sector should focus more on its qualitative rather than its quantitative growth.

5.1.3 Medical equipment, devices and aids

The Ukrainian health system has continuously encountered severe difficulties with the technological supply and maintenance of existing equipment. The deterioration of fixed assets at state and community medical facilities is very serious and continues to worsen: in 2000, 50% of equipment was worn out and obsolete; in 2007, this proportion had grown to 60–70%. The majority of equipment has been in use for 20 to 25 years, exceeding its technological lifespan by 2–3 times. For instance, in 2005, 80% of X-ray equipment had completed its depreciation period 10 years previously. The replacement of worn-out and obsolete equipment takes place at a very slow rate despite these findings being reported in the *State programme concept for medical technology production development for 2008–2012* (Cabinet of Ministers Decree No. 102, issued 21 March 2007). According to the Ministry of Health data, the estimated costs of equipment replacement in health facilities in 2008 was 12 billion hryvnya (US\$ 2.5 billion), whereas the annual volume of equipment purchasing did not reach even 10% of that amount.

Purchasing medical equipment for state and community health care facilities is performed on a competitive basis by the administrators of budgetary resources (officials from health care agencies and facilities). About 20% of purchases are completed through centralized procedures under the Ministry of Health within the framework of targeted state programmes. Many officials disapprove of both the content of centralized purchases (the makes, modification and integration of the purchased equipment) and the price, which is often higher than if the equipment were bought independently. They also disapprove of the

way purchased equipment is distributed to the regions. In 2008, the National Health Council under the President of Ukraine examined problems with the purchase of expensive equipment (“big ticket technologies”) and concluded that planning was unsatisfactory and there was no transparency in the purchase process. There is no registry of expensive equipment or its utilization in the Ministry of Health, thus there are no data on the distribution of such equipment nationally. Nevertheless, there are data which demonstrate the inefficient usage of such equipment. For instance, some facilities operate such equipment for only one shift. Such equipment is used to its full capacity only in specialized centres, while the usage is 3–4 times lower in multi-specialty facilities.

Domestically manufactured equipment accounts for 30–35% of purchases. Currently, more than 250 enterprises of various forms of ownership develop and produce medical equipment. Of these, 15% are government-operated and the remainder are fully private enterprises, of which 19% are joint-stock companies, 0.2% are joint ventures, 44.8% are limited liability companies and 20% are various small-scale enterprises. Before independence, Ukraine received medical equipment from 350 supplier plants in the USSR, only 19% of which were in Ukraine. Consequently, at independence, domestic Ukrainian industry could provide only 13–15% of the range and about 20% of the volume of medical equipment needed. The government has put significant effort into establishing and developing the domestic medical industry. Two state programmes on medical technology development were implemented between 1992 and 2003. This resulted in a tripling of the range of medical equipment production: from 740 to 2200 items. Currently, domestic manufacturers provide artificial pulmonary ventilation and respiratory anaesthetic equipment, hearing aids, radiology, electrocardiography and ultrasound machinery, refrigeration and cryogenic equipment, specialized medical furniture, equipment for trauma, orthopaedics and patients with restricted mobility, surgery and dentistry tools, colposcopes, sterilizing equipment (dry-air, steam and bactericidal sterilizers), electrodiagnostic equipment and electrical stimulators. Nevertheless, the range of domestically manufactured medical equipment remains limited, thus the purchase of more expensive imported equipment is still necessary.

The significant reliance on imported equipment and limited financing has made full replacement of equipment in medical facilities costly and very slow. The government considered several options, including purchasing expensive imported equipment, and purchasing medical equipment technologies and manufacturing licences abroad for domestic production before deciding to develop competitive domestic medical equipment, which is significantly cheaper and, overall, equal in quality. The third state programme is currently

under way concerning the development of domestic manufacturing of medical equipment for 2008–2012. The programme aims to broaden significantly the range of manufactured items (1.5 times), while assuring that the equipment is of a comparable quality to replace the imported equipment. Equipment for early diagnosis of diseases will be manufactured first, that is, radiology, electrocardiography and ultrasound machinery. Some modern scientific technology such as magnetocardiography, digital technology, biotelemetry, endoprosthesis replacement, oxygenators and implants will also be produced. The estimated cost of the programme is 170 million hryvnya (US\$ 36 million), 30% of which is financed by the government. The impact of this programme on the availability of essential medical equipment in hospitals is not yet clear.

There is no licensing system for medical equipment in Ukraine, but according to the Cabinet of Ministers Decree (No. 1497, issued 9 November 2004) *On approving the order of state registration of medical equipment and devices*, all domestic and imported medical equipment and devices are subject to mandatory state registration by the State Department on the Control of Quality, Safety and Production of Medicines and Medical Devices. Registration is based on a review of the appropriate set of documents presented by an applicant – an individual or a legal entity responsible for the production, safety and effectiveness of medical devices. The applicant takes part in choosing the appropriate agencies to review the documents. Based on the outcome of this review, the State Department on the Control of Quality, Safety and Production of Medicines and Medical Devices may require the medical equipment to be tested before registration.

5.1.4 Information technology

Internet access is still limited in Ukraine, but it is spreading rapidly. There were 15.3 million Internet users in 2009, which accounts for 33.7% of the total population (ITU, 2010). All the regional hospitals, about 80% of municipal hospitals and polyclinics and 90% of central district hospitals have Internet access. There are very few rural outpatient clinics and rural hospitals that are connected to the Internet. However, most facilities use the Internet only for e-mail and access to the central authorities' resources (official sites of the Ministry of Health, the Parliament and government). Few facilities use the Internet to access medical databases.

Primary care facilities by and large are not equipped with computers. Even among family medicine/GP facilities, which are provided with all their necessary equipment, only 12.3% have computers. In a few regions that were chosen as pilot regions for the implementation of EU projects Prevention and

Primary Health Care, and Health Financing and Management, and which received technical support, 50–70% of family medicine/GP centres are fully equipped. In other regions, only 5–7% of outpatient clinics are equipped with computers (Krivenko, Likhoto & Leshchuk, 2008). The primary care sector uses computers mostly for developing patient databases. A number of NGOs are working on creating software for primary care facilities. For example, the CIET “MediFAM” company is providing software for tasks such as maintaining patient registers, registering new patients, acquiring clinical information about patients from other facilities, the work schedule of primary care physicians and nurses, monitoring and analysis of nurse performance, analysis of nurse workload, monitoring nurse reports, creation of report forms and so on. This system is very successful in certain primary care facilities. However, there is no drive to implement this or some similar system on a large scale. A new national programme in the planning phase aims to develop the primary health system and provide computers and software to all primary care facilities. In the overwhelming majority of other medical facilities, computers are used mainly for producing statistics reports, payroll, financial monitoring and human resources records. Several facilities have created their own automatic control systems. However, these systems are neither unified nor certified, and their implementation in other medical facilities has proven to be difficult.

There are plans to increase and systematize computer usage in the state health system. The *Concept of the electronic registry system and medical information exchange between medical facilities* has been developed and put up for public discussion. It provides for the creation of a nationwide system of electronic registry, storage and analysis of data, the introduction of a personalized electronic patient’s card with an eye to the future creation of electronic document circulation on all health care levels, and the introduction of distance education and telemedicine technologies. However, technological remodelling of the entire system requires significant resources. According to experts, about 25 000 new computers need to be purchased. Moreover, quality software development will also incur considerable expense.

5.1.5 Pharmaceuticals

A series of interventions have now been implemented to regulate the pharmaceutical sector. With the 1996 *Law on pharmaceuticals*, foundations were laid for state policies on the development, registration, production and quality control of drugs manufactured in Ukraine. The main regulatory functions in pharmaceuticals are currently split between two entities: the State Pharmacological Centre and the State Pharmaceuticals Quality Control

Inspectorate. The State Pharmacological Centre has the main regulatory function of market authorization (that is, the registration and licensing of medicines) and pre-marketing quality control as well as responsibilities for clinical research, monitoring adverse drug reactions (although adverse drug reaction reporting by physicians is very low) and rational use of medicines (including development of the National Drug Formulary). The State Pharmacological Centre is completely funded through fees and charges for services with no contribution from the state budget. The State Pharmaceuticals Quality Control Inspectorate is responsible for quality control once drugs are on the market and it has a network of laboratories across the country to facilitate this. Good manufacturing practice (GMP) inspection, as well as the inspection of pharmacies and distributors, is also the responsibility of the State Inspectorate and, as of 2009, the licensing of production, distribution and retail sales fell under the remit of the Inspectorate, having previously been under the State Service on the Control of Quality, Safety and Production of Medicines and Medical Devices.

All pharmaceuticals that are manufactured, released on the market and used in medical practice are required to undergo state registration/marketing authorization according to the Cabinet of Ministers Decree (No. 379, issued 26 May 2005) *On state registration and re-registration of medicines*. The registration process consists of the examination of all the necessary files by the Pharmacological Expert Centre and then, based on its decision, the Ministry of Health approves the registration. In 2007, Ukraine had 11 500 registered pharmaceuticals, a third of which were manufactured domestically. The largest proportions of imported pharmaceuticals come from India (13.6%) and Germany (8.3%). Ukrainian law provides for intellectual property protection for the developers of medicines. A state registration applicant must provide a patent copy or a licence and a letter which indicates that the patentee's rights are not violated by registration. Moreover, the *Law on pharmaceuticals*, which was passed when Ukraine joined the WTO (with several amendments in 2006–2007), forbids the registration of pharmaceuticals (that is, generics) using registration data from another pharmaceutical for a period of five years, regardless of the lifetime of the patent. In linking the registration of generics to the expiration of a patent's lifetime and a five-year exclusive right to the original brand name, Ukraine undertook commitments that are rather steep in comparison with the WTO and Trade-Related Aspects of Intellectual Property Rights (TRIPS) requirements, and contradictory to “Bolar Provision”, which allows generics manufacturers to submit their products for regulatory approval before the expiry of a patented intervention. Implementation of these commitments may make

pharmaceuticals less accessible to the population and create problems for the pharmaceutical industry of Ukraine, and therefore for the country (Polyakova, 2006; Sur, 2006).

To ensure the quality and safety of pharmaceuticals, the registration process requires the presentation of pre-clinical examinations and clinical trial results. From 2008 the registration process for generics also requires proof of their bioequivalence to their brand-name counterpart (see section 6.6).

Complementary medications (primarily biologically active supplements) are not subject to state registration and must only undergo a sanitary and hygienic examination. Advertising for prescription-only drugs is banned in Ukraine. This ban is frequently violated, however. People purchase pharmaceuticals over the Internet, which is also illegal; it is not widespread, however, because of the wider population's limited access to the Internet.

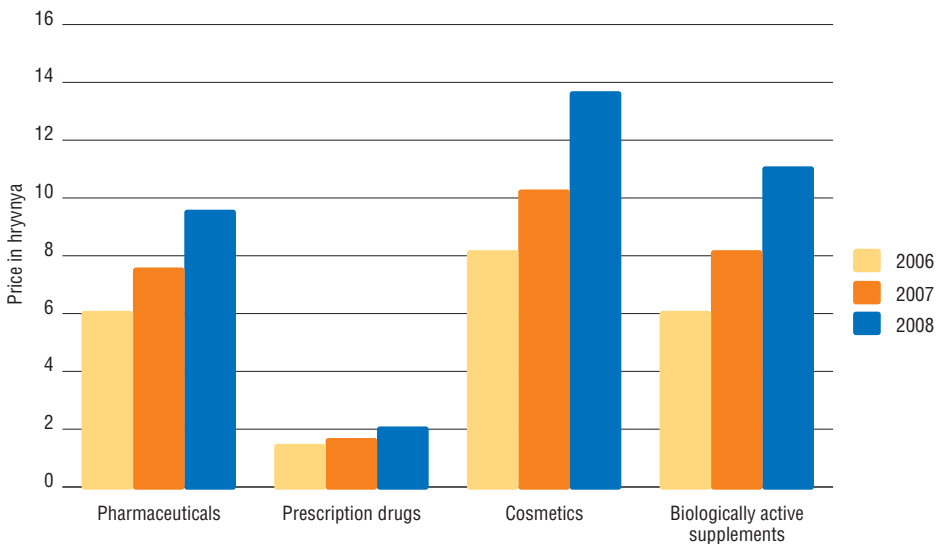
Price regulation for pharmaceuticals in Ukraine is based on the *Law on prices and price regulation*. The main direct mechanism of state price regulation was delegated to regional authorities by government decree in 1996 and consists of establishing maximum retail surcharges for pharmaceuticals and medical devices. Decentralized regulation has, however, resulted in substantial regional differences in retail surcharges as well as in wholesale and retail prices for pharmaceuticals. Sometimes the prices differ by 2–3 times even in the same region. State price regulation is implemented through the setting of maximum retail surcharges for pharmaceuticals on a special list that includes 149 unpatented international pharmaceuticals of different pharmacological groups, accounting for 21% of the national list of essential pharmaceuticals and medical devices. The Cabinet of Ministers Decree (No. 1499, issued 16 November 2001) *On amendments to certain decrees of the Cabinet of Ministers* has established a maximum limit of retail surcharges at the national level for these pharmaceuticals: 35% of the manufacturer's wholesale price (customs cost) distributed through the pharmacy network, and 10% for products that are purchased by public health facilities with funds allocated from the budget. Research conducted by the Ministry of Health revealed that the average level of retail surcharges on domestic and imported pharmaceuticals, the prices of which are subject to state regulation, decreased to 13.7% in comparison with 23.2% for pharmaceuticals not subjected to price regulation. However, these measures did not cap retail prices, since they depend not only on retail surcharges but also on the cost of imported materials for drug manufacturing (for domestic pharmaceuticals), the dollar and euro exchange rates (for imported

pharmaceuticals), and the relative economic wealth of different regions. There is currently no mechanism for monitoring prices, which hampers evidence-based policy-making in the area.

A more indirect method of price regulation has been the introduction of certain tax privileges. For example, sales of pharmaceuticals and medical devices registered in Ukraine are exempt from value added tax. Fig. 5.2 shows the price of retail sales on various pharmaceutical products in 2006–2008. Over three years the average price of pharmaceuticals increased by 28%, 10% of which is related to inflation and 2% to the introduction of expensive new drugs on the market. Moreover, 14% of this price increase is related to the substitution of cheaper medications with more expensive pharmaceuticals by a doctor at various stages of medical treatment.

Fig. 5.2

Average retail prices of the “pharmacy market basket” including components influencing the price increase, 2006–2008



Source: State Service on the Control of Quality, Safety and Production of Medicines and Medical Devices, under the Ministry of Health, unpublished data, 2008.

About 800 pharmaceutical manufacturers operate in Ukraine, and it has the largest pharmaceutical production capacity among the countries of the former USSR. There are 143 private pharmaceutical manufacturers, five of which produce 60–70% of domestic pharmaceuticals. Ukrainian pharmaceutical manufacturers strive primarily to produce generics. In order to compete with

imported drugs, large domestic manufacturers have initiated a transition to manufacturing pharmaceuticals in compliance with GMP. So far, about 15 enterprises have a GMP certificate. Larger pharmaceutical manufacturers have found it easier to pass certification, which could reduce the number of manufacturers and concentrate pharmaceutical production. The GMP Inspection in Ukraine has applied to become a member of the Pharmaceutical Inspection Cooperation Scheme. Legislation and implementing guidelines for drug manufacturing follow closely the EU Pharmaceutical “*acquis communautaire*” process, and are designed to echo developments in the EU (Stará, 2008).

In 2007, 21 945 companies were involved in retail distribution, including 10 342 pharmacies, as well as 6075 pharmacy kiosks and 5528 pharmacy units, which are separate pharmacy subdivisions designed to provide ready-made pharmaceuticals. Kiosks are permitted to sell only non-prescription drugs, whereas pharmacy units can sell both. State and community-based pharmacies comprise 24.6% of all pharmacies; the rest are private or collectively owned. Rural areas have only 15% of pharmacies, although 33% of the population lives in rural areas. All pharmacies are served by 320 wholesale units – pharmaceutical warehouses. Only 4.7% of these belong to the state or community. The number of wholesale distributors is decreasing rapidly. It must be noted that only five companies deliver 80% of goods to the pharmacies. Moreover, the profitability of retail distribution motivates wholesale distributors to create their own pharmacy chains. Pharmacists offer their consumers substitutes for indicated medication without consulting the doctor in charge. A number of pharmacies contract with clinical doctors to advise their patients to choose a particular treatment.

The administrators of budgetary resources are responsible for purchasing medications for state and community facilities (see section 3.6) in accordance with the approved list of domestic and imported pharmaceuticals that can be purchased with budgetary resources through tendering. The Ministry of Health is responsible for arranging procurement through tendering for centralized state purchases to support targeted state programmes. The existing system of centralized purchasing of pharmaceuticals is disliked by health care facilities and agencies, as well as by the monitoring institutions, because the Ministry of Health purchases and distributes drugs without taking into account regional demand regarding the type and volume of drugs needed. Moreover, the prices of purchased pharmaceuticals are often too high, despite the use of tendering in procurement (Main Auditing Agency, 2006).

There is no state reimbursement system in Ukraine. In 2008, the first reimbursement mechanism was developed and put up for public discussion. It reimburses pharmacies for the cost of prescription drugs for treatments approved by the Ministry of Health (insulin and its analogues). It recommended reimbursement from the state and local health budgets based on prices established by the Ministry of Health with the pharmacy sale price limit taken into account.

5.2 Human resources

5.2.1 Trends in health care personnel

This chapter uses figures from the State Statistics Committee of Ukraine, which until recently did not include specialists employed by private medical facilities. From 2008, in compliance with an order of the Ministry of Health (No. 378, issued 10 July 2007, *On approving health care report forms and instructions for their completion*), identical statistical reporting forms are sent out to all medical facilities regardless of which agency they report to or the form of ownership. However, the incomplete statistical data have little influence on workforce per capita ratios because the private health care sector is small and only half of its staff are full-time employees. Others have a second job in state facilities. Dentists and pharmacists are the exceptions, as the majority are employed full time by private facilities. Detailed information on various categories of health care workers can be obtained only from the Medical Statistics Centre which, until the issuing of the order mentioned above, collected data only on health care agencies and facilities under the jurisdiction of the Ministry of Health. These data cover 88.2% of health care workers with higher education and 88.4% of those with mid-level education. There are currently no data on the number of full-time equivalents, only the number of individual workers. However, in accordance with a Ministry of Health order (No. 456, issued 7 September 2005, *On the introduction of a unified state registry of specialists in the health system*), an individual registry of doctors should soon be completed, which will allow such data to be collated.

In compliance with the current qualification requirements in Ukraine, those who must have a medical degree include not only personnel involved in treating patients, but also health care managers, public health specialists (in the State Sanitary-Epidemiological Service), workers in laboratories and diagnostic centres, and so on (Ministry of Health and Ministry of Labour and

Social Policy, 2004). All these specialists are counted as doctors and mid-level medical personnel by the State Statistics Committee of Ukraine and the Medical Statistics Centre. Only from 1996 has the Medical Statistics Centre categorized all medical specialists employed by the Ministry of Health as so-called active physicians. They defined active physicians as those who are directly involved in treating patients, and therefore do not include administrators, statisticians, methodologists and sanitary specialists; dentists are also not included.

According to the State Statistics Committee of Ukraine, in 2008 the health system employed more than 220 000 doctors or 4.8 doctors per 1000 population, with 4.3 per 1000 population working under the Ministry of Health. The number of medical human resources per capita has increased gradually since 1990 (see Table 5.4), but this does not reflect a growth in the number of medical personnel so much as a decline in the total population. The absolute number of doctors has also been falling: in 1990 by 0.9% (2000 doctors) and in the facilities of the Ministry of Health by 1.3% (2600 doctors). In 1995 and 1996 (when the per capita rate was at its highest), it decreased by 2.2% and 4.8% respectively, or by 5000 and 10 000 doctors. At the same time, the medical workforce is ageing

Table 5.4

Trends in health care human resources per 1 000 population, 1990–2008 (selected years)

	1990	1995	2000	2005	2006	2007	2008
Doctors, total	4.3	4.4	4.5	4.7	4.7	4.8	4.8
Doctors working in Ministry of Health structures	3.8	4.0	4.0	4.2	4.2	4.2	4.3
Public health specialists (in sanitary-epidemiological services)	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Practising doctors, clinical medicine, total of which: ^a	–	3.0	3.0	3.0	3.0	3.0	3.0
– doctors working in outpatient care ^a	–	1.6	1.7	1.7	1.7	–	–
– doctors working in inpatient care ^a	–	1.4	1.3	1.3	1.3	–	–
– primary care physicians ^a	–	–	0.5	0.5	0.6	–	–
– medical scientists ^a	–	–	–	–	3.0	3.1	–
Mid-level health personnel	117.5	116.5	110.3	106.2	106.1	105.5	101.0
Mid-level health personnel working in Ministry of Health structures ^a	102.1	105.7	99.1	98.7	93.8	92.9	93.6
Nurses (including midwives and <i>feldshers</i>) ^a	8.4	8.4	7.9	7.9	7.9	7.9	7.8
Dentists	0.4	0.5	0.5	0.5	0.5	0.5	0.5
Dental technicians	0.1	0.1	0.1	0.1	0.1	–	–
Pharmaceutical chemists ^b	0.4	0.4	0.3	0.4	0.4	–	–
Pharmacists	0.5	0.4	0.4	0.5	0.5	–	–
Management staff	0.2	0.2	0.3	0.3	0.3	–	–

Sources: State Statistics Committee of Ukraine, 2001–2007; Medical Statistics Centre, 2001–2008, 2007; Gruzzeva & Galienko, 2009.

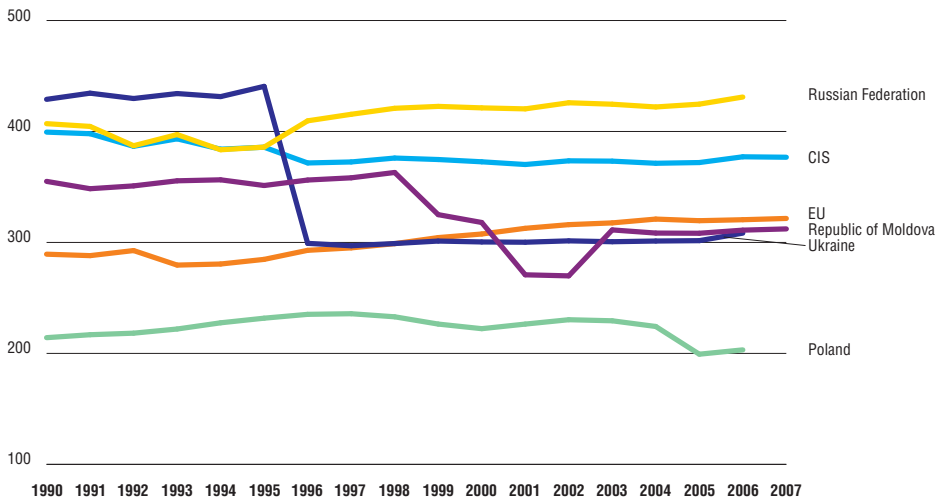
Notes: ^a Specialists working in facilities under the Ministry of Health; ^b Pharmacists with a higher education degree.

rapidly. In 2007, 22.5% of active physicians were of retirement age (16.1% in 1994; 19.5% in 2002) and 20% were approaching retirement age. The supply of public health workers, primarily in the sanitary-epidemiological services, has been stable since 1995, but the number of specialists decreased by 9.3% (more than 900 specialists). Although the number of active physicians under the Ministry of Health has remained stable at 3.0 per 1000 population since 1995 (see Table 5.4), their total number has fallen by almost 9.5% (15 000 physicians) between 1995 and 2008.

The supply of medical specialists in Ukraine (especially if counting all doctors, not only those working under the scope of the Ministry of Health) is close to the average number in the WHO European region and the EU, but lower than in CIS countries (see Fig. 5.3), although many countries in the CIS count all health system workers with a medical degree and not only active physicians. The sharp drop in the number of physicians per 100 000 in Ukraine in 1995/1996 shown in Fig. 5.3 reflects this transition to calculating only the number of physicians actively treating patients in the statistics.

Fig. 5.3

Number of physicians per 100 000 population in Ukraine and selected other countries, 1990 to latest available year



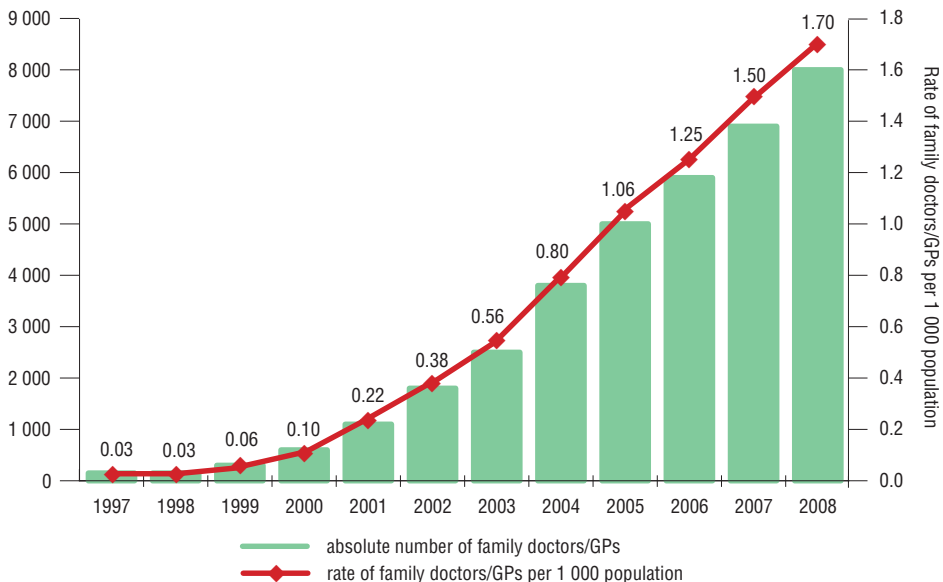
Source: WHO Regional Office for Europe, 2010a.

The outpatient sector employs 55% of all active physicians. Despite a decrease in the total number of doctors by almost 4.9% (4000 doctors), the supply of active physicians working in an outpatient setting slowly grew from

1.6 per 1000 population in 1995 to 1.7 in 2006 as a direct result of government policies on strengthening the primary care sector and the development of family medicine (see section 6.3). The total number of primary care physicians increased by 0.6% between 2000 and 2006, and the supply increased from 0.5 to 0.6. The total number and supply of family medicine/GP physicians is growing rapidly (see Fig. 5.4), whereas the number and supply of district internists and district paediatricians are decreasing. Thus, according to regional health authorities, the situation is getting worse with regard to primary care staff supply in large cities where family medicine has not yet been well developed. The primary care staff turnover rate is also rather high. A survey of primary care structures conducted by the Ministry of Health in 2007 showed that almost a third of all doctors (29.5%) had left their posts in the previous five years. Moreover, more than a quarter (25.6%) of the total number of primary care physicians are of retirement age and another 17% will reach retirement age within five years.

Fig. 5.4

Trends in the supply of family doctors/GPs, 1997–2008



Source: Medical Statistics Centre, Ministry of Health, unpublished data, 2009.

The total number of inpatient sector doctors has fallen by 12.4% (9000 doctors) since 1995, or from 1.4 to 1.3 per 1000 population. This is due mostly to the conversion of low-capacity rural hospitals into outpatient clinics (see section 5.1). This can be interpreted as a positive trend which is intended to optimize the use of inpatient sector resources (see section 6.4).

The Ministry of Health and higher medical educational institutions employ about 3.0 medical scientists per 1000 population. This figure is incomplete since there is no information available on the number of medical scientists employed by the 36 research institutes of the Academy of Medical Sciences of Ukraine. Also, a small number of medical specialists in alternative and folk medicine work at facilities under the control of the Ministry of Health: 20 folk medicine doctors and 123 reflexologists (about 0.003 per 1000 population). The majority of these specialists have private practices and it is impossible to obtain accurate data on their numbers.

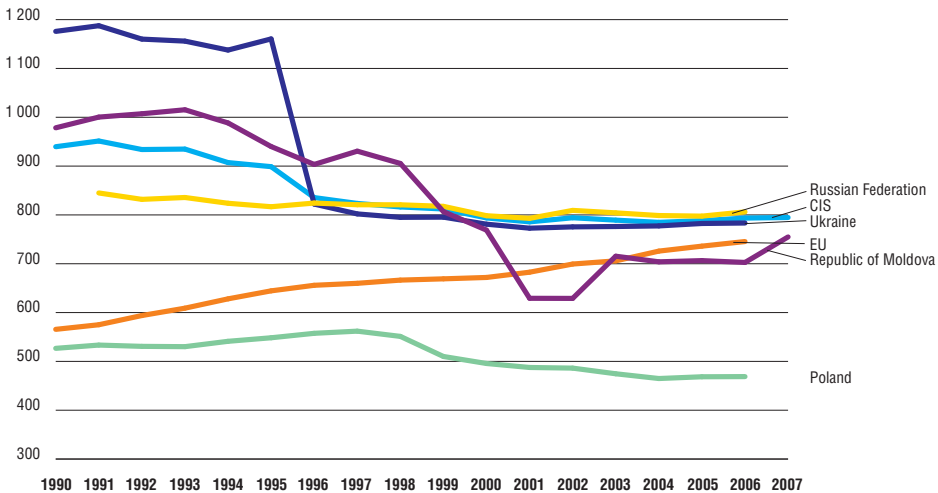
As with physicians, the State Statistics Committee of Ukraine includes in the category of mid-level medical personnel everyone with appropriate medical training, including dental assistants, public health specialist assistants and so on. The total number of mid-level medical workers has decreased by 18.9% since 1990, and the number of these workers at facilities under the Ministry of Health has decreased by 17.8%. There has been a rapid decline in the supply of mid-level medical workers since independence (see Table 5.4). In 2007, over 14% of mid-level medical workers were of retirement age. As with the number of doctors, the dramatic fall in the number of nurses between 1995/1996 and 1997 reflects a change in the way statistics were calculated to include only those actively working with patients in the health system.

Nurses, *feldshers* and midwives provide both preventive and medical services. *Feldshers* represent a special category of mid-level health workers between nurses and physicians. Unlike nurses, who in Ukraine work as assistants to physicians, *feldshers* are sufficiently independent in their work, performing a broad range of preventive, diagnostic and therapeutic tasks, prescribing some drugs, performing administrative functions and, in certain circumstances, conducting expert examinations to establish a patient's ability to work. The total number of nurses, *feldshers* and midwives decreased by 15.1%, or from 8.4 to 7.8 per 1000 population. The falling number of nurses has been caused by the falling status of mid-level health personnel. Medical nurses leave the health care field for other sectors of the economy, primarily due to the low wages and

the lack of possibilities for professional development. This is a trend witnessed throughout the CIS and one which runs counter to developments in countries of the EU (see Fig. 5.5).

Fig. 5.5

Number of nurses per 100 000 population in Ukraine and selected other countries, 1990 to latest available year



Source: WHO Regional Office for Europe, 2010a.

The Ministry of Health is alarmed by the human resources situation in the health sector. In June 2008, a special board of the Ministry of Health identified the main reasons for such developments as the natural loss of human resources through ageing and migration (Bernik, 2008). Due to natural causes alone, the number of doctors decreases annually by 3% (6000 doctors). There has been an alarming increase in the number of rural primary care health facilities in which every post is vacant; in 2006, this was the case in 273 rural outpatient clinics and for 386 FAPs. Graduates from university-level medical institutions often prefer positions in pharmaceutical companies to medical practice or leave the health sector all together. Moreover, in recent years, Ukraine has become a donor country of medical human resources. As a result, many health facilities are understaffed. The available data on medical human resources do not allow the volume of emigration to be measured, but data from border regions show that a significant number of doctors are seeking work abroad. The main “push” factors are low wages, poor social conditions, poor infrastructure in rural areas and the low status of the medical profession. The government is

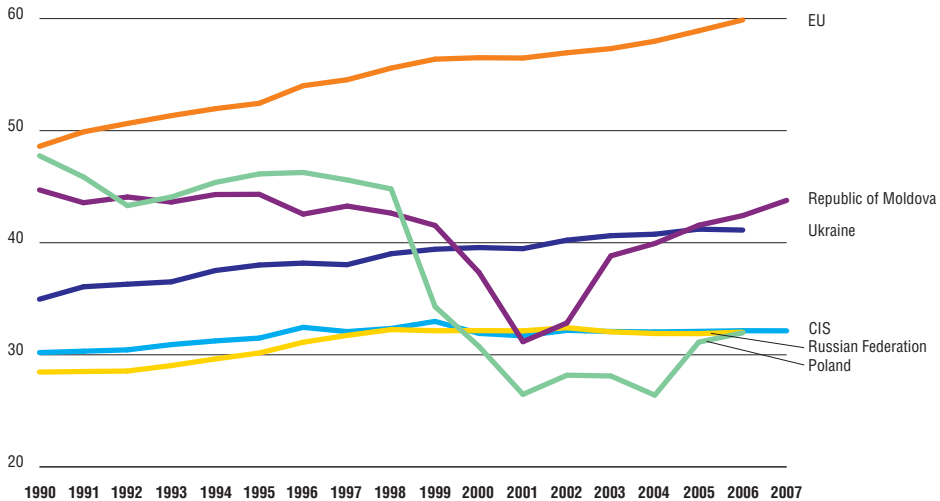
planning to develop comprehensive measures aimed at lowering the turnover of medical staff. This is particularly important since Ukraine signed the Bologna Declaration, which provides for the free movement of medical personnel within the European continent (see section 5.2.4 *Registration/licensing*). Parliament decided that from 1 January 2009, three more days should be added to paid annual leave for primary and emergency care medical workers who have served continuously for three years (Law of Ukraine No. 21-VI, issued 12 February 2008, *On amendments to Article 77 of the Principles of legislation on health care in Ukraine*). Parliament is also working to improve the social protection of health care workers.

According to the State Statistics Committee of Ukraine, the supply of dentists employed by state and community medical facilities, and medical facilities in parallel systems is increasing gradually and in 2008 there were 0.5 dentists per 1000 population. However, this figure does not include dentists in private facilities, which predominate. Including these, the supply of dentists is higher by 40% at 0.8 per 1000 population. Dental assistants and dental graduates (analogous to a *feldsher* in general medicine) are considered mid-level dental staff. Dental assistants are not differentiated from other mid-level medical personnel. According to the State Statistics Committee of Ukraine data on dental personnel, the number of these specialists decreased drastically since independence due to the growing delimitation between the functions of doctors and mid-level staff in dentistry. There are no available data on the number of dentistry graduates working in the private sector. Officially, levels are similar to those in Central Europe, and high relative to other countries of the CIS (see Fig. 5.6).

Since 1990 the number of pharmaceutical chemists (pharmacists with a higher education degree) working under the Ministry of Health and other departments has decreased by 20%. There are no exact data regarding the number of pharmaceutical chemists, including those working for private companies. However, according to the Ministry of Health, the real number of these specialists is double that given by the State Statistics Committee of Ukraine. Practically all pharmaceutical chemists work in pharmacies. Large hospitals with a capacity of 300 or more beds should have a clinical pharmaceutical chemist on staff, who is responsible for advising patients and doctors on the most effective pharmaceuticals available. In reality, there are only ten employed by a few hospitals. Officially, the supply of mid-level pharmacists has not changed much since independence, but there are no data regarding the number of pharmacists in the private sector. Excluding private sector specialists, the

Fig. 5.6

Number of dentists per 100 000 population in Ukraine and selected other countries, 1990 to latest available year



Source: WHO Regional Office for Europe, 2010a.

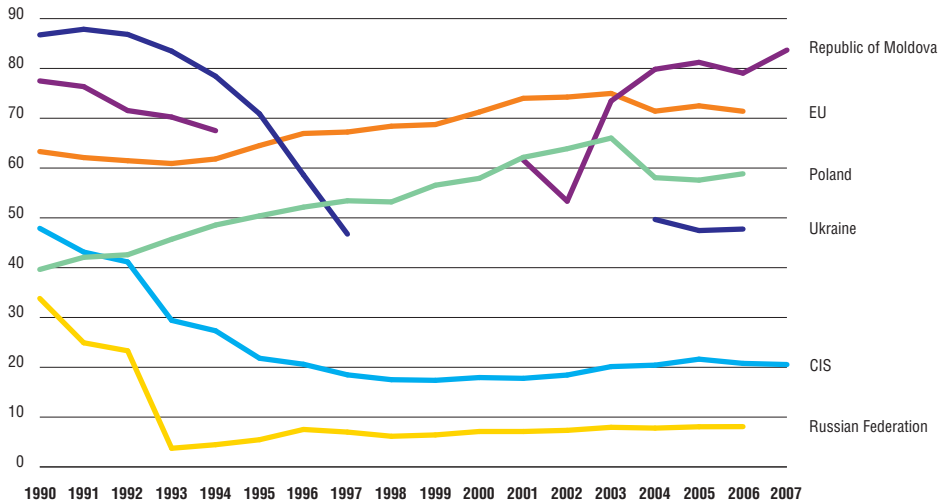
supply of pharmacists with a higher education degree is lower in Ukraine than in the EU, but is higher than in other CIS countries (see Fig. 5.7). However, including specialists from the private sector, the supply of pharmacists with a higher education degree in Ukraine is actually closer to the average for the EU countries.

5.2.2 Planning of health care personnel

The number of admissions to institutions of higher medical education is established by government order and supervised by the Ministry of Health, based on the estimated needs of the population for different medical specialists and the state's economic potential. Institutions of higher medical education also admit students on a contractual basis, where the student is self-funded or sponsored by a legal entity. Internships are based on requests from regional health authorities, taking into account the real and estimated staffing levels in health facilities, in compliance with staffing standards.

Fig. 5.7

Number of pharmacists per 100 000 population in Ukraine and selected other countries, 1990 to latest available year



Source: WHO Regional Office for Europe, 2010a.

5.2.3 Training of health care personnel

State policies stipulate that higher medical and pharmaceutical education shall remain in the state health system. According to Article 30 of the state *Law on higher education* (Law of Ukraine No. 2984-III, issued 17 January 2002), medical education is organized into several stages, comprising generalist medical education (complete mid-level medical education), specialist training (basic higher medical and pharmaceutical education) and postgraduate training at the Master of Science level (completed higher medical and pharmaceutical education). It must be noted that the Master of Science level provides teaching staff for institutions of higher education.

The system of higher medical education consists of two stages: undergraduate and postgraduate training. At present, training is provided by 18 state university-level medical schools and faculties, including three postgraduate medical schools. The institutions are funded by the Ministry of Health and are supervised by both the Ministry of Health and the Ministry of Education. In addition, there are four medical faculties within multi-specialty universities supervised and funded by the Ministry of Education. During the 1990s, there were also six nongovernmental institutes offering higher medical education.

However, five of these institutes have now lost their licence and were closed due to the poor quality of training provided. Therefore, only one private higher medical educational institution remains: the Medical Institute of the Ukrainian Association of Folk Medicine. Higher medical educational establishments are evenly distributed around the country. They are located in 16 regional centres and in the capital of the Crimea AR. Each institution has an education licence and accreditation levels III–IV, which allows them to provide specialist and Master-level training.

Undergraduate medical education provides training in two main directions: medicine (general medicine, paediatrics, disease prevention and dentistry) and pharmacy. All medical specialties are taught courses; correspondence education is permitted only for pharmacy students. Training usually lasts for six years, but general dentistry and pharmacy courses are five years long or five and a half years by correspondence.

In 2006–2007, 60 000 people attended higher medical educational institutions under the Ministry of Health, of whom 10 000 (18.0%) were international students. Of the 12 000 admitted, 10 000 graduated, 45.1% of whom received training in general medicine and paediatrics, 3.4% in disease prevention, 17% in dentistry and 28.5% in pharmacy. Of the graduates, 39% were supported by government funding. Most students funded by the government trained in disease prevention and paediatrics (93.4% and 71.3% respectively), and the smallest proportion was in dentistry and pharmacy (32.0% and 34.6% respectively) (see Table 5.5).

The number of medical graduates fluctuated between 7600 and 8400 in 1995–2005, but it increased by 20% in the two years to 2007. Admittance to higher educational medical institutions fluctuated over the years, but overall it is also growing. A financial deficit in 1996 prompted the Ministry of Health to reduce the number of university places for training specialists allocated by the state. Thus the number of students trained at the expense of the state budget fell by 40% between 1995 and 2007. At the same time, in an attempt to mobilize additional sources of funding, higher medical education institutes were permitted to introduce tuition fees. Correspondingly, the number of fee-paying students entering higher medical education increased by 6.7 times, which allowed for the retention of staff and the strengthening and upgrading of material and equipment in the institutions. However, these policies created many problems for the health system as well. On the one hand, a large proportion of fee-paying students tend to choose particular specializations, which aggravates existing imbalances in the supply of human resources in the

Table 5.5

Basic training of specialists, 2006/2007

	Admissions		Students studying	Graduates	
	Total	State-funded	Total	Total	State-funded
Higher Education Institution III–IV level accreditation					
Total	12 082	4 246	59 468	10 236	3 978
Medicine	3 795	2 309	23 194	3 761	2 020
Paediatrics	919	708	4 478	863	615
Public health	534	499	2 296	347	324
Dentistry	2 113	388	9 930	1 740	558
Pharmacy	3 797	271	16 237	2 612	303
Clinical pharmacy	249	17	1 221	305	57
Other specializations	625	54	2 112	618	101
Higher Education Institution I–II level accreditation					
Total	24 662	13 741	66 166	24 186	–
Nursing, midwifery, medicine	19 297	11 405	52 664	19 211	–
Public health	558	414	1 613	531	–
Dentistry, orthopaedic dentistry	1 390	489	3 026	1 303	–
Laboratory work	755	652	1 690	697	–
Pharmacy	2 612	787	6 593	2 290	–
Other specializations	120	6	580	154	–

Source: Medical Statistics Centre, 2008b.

health system as there are no caps on the number of students allowed to follow different specializations. On the other hand, some legislative issues remained unresolved, which allowed the Ministry of Health unofficially to limit the employability of contractual graduates at state and community health facilities. Moreover, low wages prompt fee-paying students to seek employment outside the health care sector.

The government has already offered 500 fee-paying students the possibility of switching to government-financed education in 2008/2009, on condition that they will fill posts in the most wanted specialties, primarily in rural areas. There are plans to increase the number of specialists allocated by the state, as well as to start a gradual transition to the residency model, which will promote the concentration of specialist training with competitive selection at the higher education level.

Postgraduate medical training is based on the principle of continuous professional education and involves a main specialization, further specialization and the advanced professional training of physicians. Main specialization is achieved through an internship, which combines intra- and extramural forms of

training. Medical schools usually do not have their own clinical centre, thus the full-time part of the internship takes place within medical schools, while only the extracurricular part is undertaken within health facilities. The internship can be completed in 34 specialties, 24 of which are clinical. The remainder are disease prevention, dentistry, pharmacy and so on. The length of internship training currently varies between one and two years, depending on specialty. In order to improve the quality of training, the range of specialties and length of internship were revised in 2005 as part of a Ministry of Health order (No. 81, issued 23 February 2005, *On approving the list of specialties and the length of internship for medical and pharmaceutical graduates from institutions of higher education*). The number of specialties was reduced from 54 to 34. The number of clinical specialties was reduced from 35 to 24, but the length of training was extended from 1–2 years to 2–3 years. The number of internship places available for each specialty is determined according to the requirements for specialists as identified by regional health authorities. Fee-paying interns choose their future specialty themselves. Training in specialties not covered by the internship programme, or the retraining of specialists, is offered at postgraduate medical faculties after completing an internship in the main specialty. The length of training is usually similar to the length of the full-time part of an internship, which is too short to provide sufficient training in the chosen specialty. Moreover, before training begins, the graduate must work as an apprentice.

Completing an internship and specialist medical training generally leads to doctors being given a certificate and awarded the title of “specialist doctor” in a particular field. Physicians who have completed formal medical training are required to continue professional development in order to maintain knowledge and skills, with the necessary programmes being provided at postgraduate medical faculties. In compliance with the concept of developing medical education, the Ministry of Health aims in the next few years to implement a system of continuing professional development for doctors and pharmaceutical chemists. The system is based on the principles of democratization of education, integration of traditional and new formal and informal structures, flexibility of curricula and syllabuses, and alternative approaches to the organization of the educational process. The system was developed while considering the professional medical traditions of the Ukrainian school of advanced training. Doctors are expected to improve their knowledge and skills through different forms of training. Along with traditional postgraduate faculty programmes, the system encourages correspondence courses and a credit system from all professional activity in order to be admitted for certification (which began

to be introduced in 2010). Currently, the Ministry of Health is developing the theoretical and organizational grounds for a system of continuous professional medical education (Order of the Ministry of Health No. 484 of 7 June 2009, *On the ratification of changes to the conduct of pre-certification cycle examinations*).

All practising physicians are subject to regular re-accreditation at least every five years. Eligible physicians are required to have completed a pre-accreditation cycle within one year before the official accreditation, performed by committees at the Ministry of Health or regional health bodies. The main criterion for appraisal is length of professional record. There are no clear appraisal criteria for the quality of a doctor's performance, however, and decision-making has thus been rather subjective. One major drawback of the existing accreditation system is that it largely aims at increasing the specialist's salary. Thus, a specialist who failed to verify his or her qualification level will only lose out on salary while their right to practise will not be affected.

The training of medical staff is based on educational standards. The development of standards for higher medical and pharmaceutical education is the responsibility of the Ministry of Health and the Ministry of Education. The Ministry of Health supervises the content, level and number of state educational standards, develops and approves syllabuses and qualification requirements for specialist training, and monitors the quality of basic medico-biological and professional training at undergraduate and postgraduate levels. The ministries develop and approve syllabuses and model curricula. To safeguard compliance with state educational standards and the achievement of a minimum level of professional competence within the higher medical education system, Ukraine has introduced state integrated licensing examinations. These examinations are performed in all higher medical educational establishments by the Centre for Testing Professional Skills of Health Workers, an independent unit established under the Ministry of Health. Medical students must complete two state licensing examinations during their undergraduate training, after studying basic disciplines ("Step 1") and after completing the full training course ("Step 2"). In 2004 the state licensing examinations for internship training were introduced, which is equivalent to "Step 3" in the current system of higher medical education. Medicine, paediatrics and public health graduates have an examination in general medicine, while dentistry graduates must pass an examination in dentistry.

Educational standards are mandatory for all medical and pharmaceutical educational establishments. However, the model curricula and syllabuses can be changed for not more than 15% of the total number of hours. Thus, within the allowed limits of standards modifications, the single private university-level medical school – the Folk Medicine Institute – offers a number of courses on folk and non-traditional medicine, including phytotherapy, homeopathy, manual therapy, bio-energy therapy and iridology, among others.

Public health specialists with a higher education degree can be divided into two groups: sanitation and disease prevention workers and public health education workers. The training for the first group of specialists (the majority of public health workers) consists of a six-year undergraduate programme in disease prevention followed by a one-year internship in one of the three specialties: general hygiene, epidemiology or virology, plus a four-month training in a narrow specialization. Public health education workers are required to follow the six-year programme for a medical degree in therapeutics, paediatrics or medico-prophylactics. They must then complete an internship in one of the clinical or disease prevention specialties.

Practising physicians go through a basic undergraduate six-year training process in medicine (therapeutics) or paediatrics, followed by two years of therapeutics internship or a surgery internship of three years, then voluntary training in one of 61 narrow specializations.

Primary care physicians receive the basic six-year undergraduate training in general medicine or paediatrics followed by a two-year internship in general medicine (for district internists), or paediatrics (for district paediatricians). Family doctors/GPs have a two-year internship or a six-month retraining course for active physicians.

Folk and non-traditional medicine specialists receive basic undergraduate training in therapeutics or paediatrics, followed by an internship in one of the clinical specialties and then specialize in folk and non-traditional medicine.

Dentists are trained through the basic five-year undergraduate programme in dentistry, followed by a two-year internship in dentistry. They then specialize in one of the following: therapeutics, surgery, maxillofacial orthopaedics, children's dentistry, orthodontics and so on.

Pharmaceutical specialists receive the basic five-year undergraduate training in pharmacy, followed by a one-year internship in general or clinical pharmacy.

Health care managers must have a higher education degree in medicine and a specialization in “health care organization and management” in compliance with qualification requirements. Specialization training is conducted at postgraduate medical schools and covers six modules, including social medicine, basics of health care management, the economic and legal foundation of management, management culture. However, neither the duration (two months) nor the content of the training ensure high quality.

Insufficient training often compels medical students and especially young managers to take a second higher education degree in economics or law. In order to supply the ever-growing demand for modern managerial skills, some higher education establishments have started training health care managers. The first department of health care management was established at the Kharkiv Medical Academy of Postgraduate Education in 2001, offering a one-year training programme to professionals with higher medical education (one year full time, or two years for intra- or extramural training). Graduates receive a specialist diploma in health care management, qualifying them to work in related fields. In 2004, the first Ukrainian School of Public Health (SPH) was established within the Kyiv-Mohyla Academy, which offers a two-year Master’s degree programme in health care management. In 2009, a joint project was accomplished in two universities (the Dnipropetrovsk Medical Academy and the Dnipropetrovsk Economics and Law University) to provide a postgraduate health care management course. Teaching is both in-house and distance learning for two years and two months. Courses in both schools are for fee-paying students only. There are plans to launch more management programmes in other higher education establishments, but the supply is still insufficient. “Health care manager” has also not been officially recognized as a medical specialty and there are no corresponding positions at medical facilities, thus limiting students’ prospects of adequate employment after graduation. The majority of trainees at the Kharkiv Medical Academy of Postgraduate Education and the Dnipropetrovsk Medical Academy are active managers who return to their posts after training, without having gained any advantage over their untrained colleagues. Graduates of the Kyiv-Mohyla Academy seek employment mostly with international programmes related to health care.

The government and the Ministry of Health understand that the lack of well-trained managerial staff is a serious obstacle to the implementation of health care reforms. There are constant debates about the creation of a modern system of health care management. Following an order from the Ministry of Health, the experts of the EU project Support to Secondary Health Care Reform in Ukraine, together with specialists from the National Academy for

Postgraduate Education (Kyiv), have developed the qualification requirements and the postgraduate programme to prepare health facility managers for the specialization of “health care management”. Ministers of Health have planned to conduct the retraining of health care managers and the managers of large health facilities over the course of five years, and in ten years to have retrained all managers working in the health system. However, as yet no real decisions have been made to improve the training of managerial staff.

Mid-level junior staff are trained at more than 100 medical vocational schools which are evenly distributed among the regions, and only two of which are private. These schools have medical education certification and hold the status of higher educational establishments at accreditation levels I–II, allowing them to train mid-level specialists (nurses, *feldshers*, etc.) and undergraduates. Some of these schools and several higher medical educational establishments at accreditation levels III–IV train nurses to degree level. Mid-level specialists are trained in such specialties as general medical nurse, midwifery nurse, disease prevention nurse, dental nursing, orthopaedic dental nursing, pharmacy, laboratory work and so on. Mid-level specialists at the undergraduate level study nursing, pharmacy, laboratory diagnostics and so on. Training is offered in full-time/intramural, part-time/evening and distance/extramural forms; the duration of courses is up to three years for students who have a general secondary education, up to four years for students who have just a basic secondary education and undergraduate courses last four years.

In 2006–2007, more than 66 000 people attended medical vocational schools and colleges (higher educational establishments at accreditation levels I–II). Fewer than 25 000 were admitted and more than 24 000 graduated. Of these, 79.4% studied nursing, therapeutics and midwifery, 9.5% studied pharmacy, 5.4% studied dentistry and orthopaedics and 2.2% studied disease prevention (see Table 5.5, p.103). More than 95% of students took full-time/intramural training; 3.4% took part-time training in nursing, laboratory work and pharmacy; and 1.6% used the distance/extramural form of training in pharmacy. Over half (55.7%) of enrolled students were state-funded. The majority of state-funded mid-level specialist places are in laboratory work and public health (86.3% and 74.2% respectively). The lowest proportion of state-funded mid-level specialist places are in dentistry and pharmacy (35.2% and 30.1%).

Mid-level medical graduates are required to continue their education and attend advanced training courses at medical vocational schools, colleges and specialized advanced training vocational schools. Like practising physicians, all mid-level medical workers are subject to regular process of accreditation at

least every five years. Accreditation is conducted by accreditation committees in medical facilities and by regional accreditation committees in regional health administration facilities. There are three categories of mid-level medical specialists. The main criterion for improvement of one's grade is the length of professional record.

Nurses occupy a special place among mid-level medical personnel. In the past 10 years, their training has gone through some transformations. Nurses are trained in one of three areas: nursing, therapeutics or midwifery, with further narrow specialization. The training involves a two-year basic course, which now also includes disciplines such as the theoretical foundations of nursing, interpersonal communication, evaluation of patient's health, clinical nursing and public health. Graduates may then enter advanced training at degree level, which lasts for two years full-time (three years part-time). Advanced training offers a deeper education in family medicine nursing, surgery, midwifery, management and so on. While, in theory, nurses trained to degree level qualify for positions as chief or senior nurses, or as deputy chief physician for managing nursing staff, this is rarely the case as there still is no appropriate regulatory framework. Qualified professional nurses continue to work in positions similar to junior nurses and their degree does not affect their salary. The Ministry of Health is planning to continue restructuring the nurse training system to establish nursing as a separate profession, with nurses working in health promotion, disease prevention, and patient care – all activities traditionally performed by doctors in Ukraine.

5.2.4 Registration/licensing

Ukraine does not have a system of doctor registration. Medical facility administrators and agencies in charge of medical business licensing are responsible for monitoring compliance with educational requirements. The licensing conditions are established in a Joint Resolution of the State Committee of Ukraine for Regulatory Policy and Entrepreneurship and the Ministry of Health (No. 38/63, issued 16 February 2001, *Licensing conditions for conducting a medical business*) and require a number of documents to establish compliance with education and qualification requirements such as:

- state model medical diploma
- medical specialist certificate issued by a higher education medical school upon completion of internship or specialization
- proof of qualification

- proof of advanced training accomplishment and retraining of mid-level medical and pharmaceutical workers
- professional record.

Specialists trained in other countries are permitted to practise in Ukraine after verification of their qualifications in compliance with the Ministry of Health Order No. 118-c, issued 19 August 1994, *On the rules of admittance to medical and pharmaceutical practice in Ukraine for medical and pharmaceutical specialists trained in other countries.*

In recent years, Ukraine has made an effort to bring medical training in line with European standards. In 2005, the country officially joined the Bologna Convention. In order to bring higher medical education up to these standards, the Ministry of Health has taken comprehensive measures: new curricula have been developed and the gradual introduction of a system of credit-units is taking place. This is also a uniform system of knowledge evaluation, and state accreditation is performed in compliance with the principles of quality provision. The material and technical base of educational facilities is also being renovated, and new educational technology is being introduced – including distance learning. The new medical training system was planned to be implemented by 2010. The full implementation of the Bologna Declaration principles is expected to improve cooperation with European universities, give more educational choices to the students, and facilitate the international mobility of students, teachers and specialists. However, these measures have left unresolved a number of problems with the higher educational system, particularly:

- insufficient compliance of medical education with EU standards
- poor quality of training due to the low motivation of students and teachers for self-improvement
- outdated educational technology
- the low level of computerization in education
- a lack of clinical centres in medical schools
- the low level of remuneration of pedagogical staff, which aggravates this situation.

The creation of clinical centres in medical schools has been debated for several years now. Even existing clinical centres lack legislative protection. In 2008, there were amendments made to the *Law on higher education*, providing for the creation of so-called “university clinics” – medical and research centres

within medico-prophylactic facilities, based on reciprocal agreements. University clinics are expected to become an integrated subdivision of higher medical education at accreditation level IV. They would provide highly specialized medico-prophylactic services and consulting to other medico-prophylactic facilities. They would also provide training, retraining and advanced training to medical specialists in compliance with higher educational standards, as well as conducting medical research, and testing and implementing new medical technologies.

6. Provision of services

6.1 Public health

Public health agencies and medical facilities are responsible for improving the population's health in the country. Health education is the responsibility of doctors of any level of qualification, particularly physicians of the lowest rank. Special medical facilities known as health centres exist on paper to coordinate activities to promote a healthy lifestyle, involving nonmedical institutions and facilities interested in this process as well, but they have yet to be fully implemented. However, current activities do not have a significant impact on public and individual attitudes towards their own health. Unfavourable health tendencies aggravated by widespread risk behaviours (see section 1.4) have increased the understanding that the traditional health care model (focusing primarily on treatment) does not improve health in Ukraine. There is a lack of human resources capacity to improve health communication in Ukraine, as well as organizational and financial barriers.

The Cabinet of Ministers Resolution *On approving the intersectoral programme "Health of the Nation for 2002–2010"* (No. 14, issued 10 January 2002) was, among other topics, dedicated to the promotion of a healthy lifestyle. The programme it introduced aimed for a number of measures to be taken in different branches of the economy, including education, creating an infrastructure of healthy recreational activities and incentives to support a healthy lifestyle. Unfortunately, the implementation of this part of the programme proved to be ineffective. The media actively advertises products harmful for health, particularly alcohol and tobacco. Furthermore, the Social Advertisement Institute is practically inactive, and health education for young people is lacking (Ministry of Health of Ukraine and Ukrainian Institute for Strategic Research, 2006). Nevertheless, there have been a number of indications of a breakthrough in the government's attitude towards healthy lifestyle issues. In 2005, a law was passed *On measures of prevention and reduction of tobacco products use and their harmful impact on the population health* (Law of Ukraine No. 2899-VI, effective 25 October 2005). In 2006, the

Parliament ratified the WHO Framework Convention on Tobacco Control. In 2008, amendments to the *Law on advertising* were issued, banning tobacco and alcohol advertising (Law of Ukraine No. 145-VI, effective 23 March 2008). Thus, from January 2009, there has been a ban on tobacco, alcohol and low-alcoholic beverages in “external advertisements” inside and outside of city limits. Further, the advertising or promotion of alcoholic beverages is banned from television programmes. From 1 January 2010, it is forbidden to advertise alcohol and tobacco in all printed media except for specialist titles.

Currently, the Government-approved *Concept of the state target programme “Healthy Nation 2009–2013”* (Special Resolution of the Cabinet of Ministers No. 731-p, issued 21 May 2008) provides for the implementation of a series of coordinated intersectoral measures to create favourable conditions for a healthy lifestyle in Ukraine (including more physical activity, rationalized nutrition, hygiene, cessation of tobacco smoking, and alcohol and drug usage) and the prevention of accidents. Financing for this programme comes from the pooling of funds from the state, local communities, public institutions and private organizations.

The State Sanitary-Epidemiological Service is the main structure in Ukraine that is legally responsible for public health protection. Its two main functions are the control of communicable diseases and environmental protection (monitoring the quality of water, air, soil and food). The State Sanitary-Epidemiological Service is organized hierarchically. It is financed exclusively from the state budget, which gives it relative independence from local authorities. The infrastructure comprises 816 sanitary-epidemiological stations including stations in rural areas, municipal and district stations, regional, central and one republican station, as well as disinfecting stations and one anti-plague station. The facilities have laboratory capacity for physical-chemical and microbiological analyses to identify the sources of infectious diseases. State Sanitary-Epidemiological Service facilities primarily employ medical professionals and mid-level medical staff. Specialists in the State Sanitary-Epidemiological Service are responsible for maintaining preventive and routine sanitary and epidemiological surveillance to ensure safe working conditions in public and private enterprises, facilities and institutions, including community buildings, water-pumping and sewerage facilities, residential and public buildings, residential institutions for children and teenagers, and medico-prophylactic institutions, among others. Anti-epidemic work is performed by the epidemiological sector of the State Sanitary-Epidemiological Service in concert with medico-prophylactic institutions. The Service is also responsible for monitoring the quality of drinking water: it is in charge of

19 290 centralized water supply sources. It also controls 101 252 decentralized water supply sources, including 96 813 wells, 1142 water catchment systems and 3304 artesian wells.

6.1.1 Immunization

Immunization is the main part of the preventive work. There are 10 mandatory vaccines in Ukraine: TB, polio, diphtheria, pertussis, tetanus, measles, mumps, rubella, hepatitis B and Haemophilus influenzae type b (Hib, since 2006). Depending on the specifics of their job or industry, certain categories of workers are required to receive certain other vaccines. The actual planning of activities and registration of children eligible for immunizations is the responsibility of local paediatric services or family doctors/GPs. The immunization of children is organized and performed by special units in children's polyclinics (vaccination surgeries) or family doctors/GPs, the polyclinic departments of hospitals, rural health facilities, as well as nurseries and schools. The State Sanitary-Epidemiological Service monitors the organization and regular administration of vaccines.

Two national immunization programmes have been implemented in Ukraine (1993–2000, 2002–2006) to reduce the rate of communicable diseases. In 2007 the percentage of the population immunized against the main vaccine-preventable diseases reached 95%, including measles – 98.8%; diphtheria – 98.7%; and pertussis, polio and TB (among infants) – 97.8%. Implementing these programmes allowed Ukraine to overcome the negative epidemiological situation that appeared in the 1990s and reduce the number of infectious diseases, primarily diphtheria, rubella and mumps. However, measles and pertussis levels remain undesirably high (there was an outbreak of measles in 2001/2002 and another in 2005/2006). The Ministry of Health regards this problem as a consequence of the vaccine shortages between 1992 and 1994. Moreover, vaccines received via humanitarian aid were never officially registered in Ukraine, and had a low immunogenic factor. This led to raised levels of these diseases among adults (Ministry of Health, 2007). An audit by the Accounting Chamber revealed a number of problems with the vaccination period, particularly irregular and sometimes insufficient supplies of vaccines (which caused a decline in immunization coverage from 2001 to 2003), insufficient compliance with the immunization schedule, disregard of contraindications in certain cases in order to reach coverage goals and insufficient monitoring of post-immunization complications. Low levels of health education among the general population aggravated the situation, leading to the mass refusal of vaccination (Flisak & unpublished document, Shakh, 2008).

The state immunization programme was developed for the period 2007–2015 and was ratified by Law No. 1658-VI of 21 October 2009. The programme aims to raise the levels of vaccination and revaccination for children in order to create a post-vaccination immunity that can contain an epidemic spread.

6.1.2 Family planning

The family planning system is one of the youngest subsystems in the Ukrainian health system. It was created as a result of the consecutive implementation of two national programmes, Family Planning (1995–2000) and Reproductive Health (2001–2005). Refining the family planning system remains one of the main goals of the current national programme, entitled the National Reproductive Health Programme to 2015. A network of family planning centres and offices has been created in the country. The service is headed by the Ukrainian State Family Planning Centre established at the Ukrainian Research Institute of Paediatrics, Obstetrics and Gynaecology. Regional family planning centres and contraception clinics have been established within obstetrical and gynaecological services. These new measures have thus far been relatively successful, with abortion rates falling by almost 4.5 times. However, abortions continue to be the main method of birth control in Ukraine. Government statistics suggest that modern contraceptive methods are utilized by only about 29% of women of reproductive age. More frequent use of modern contraception is hampered not only by high costs but also by low public awareness and the unsatisfactory family planning system. According to a sociological survey, only 61% of women who had undergone an abortion received further advice regarding contraception; only 15.6% received a prescription or actual contraceptives.

6.1.3 Routine examinations and screening

Ukraine regulates mandatory preliminary and routine medical examinations for certain categories of workers, including workers involved in public services which could lead to the spread of communicable diseases or cause food poisoning (food workers in community or children's facilities and school teachers) and employees who do heavy labour or work in hazardous conditions. The responsibility for arranging and conducting the routine mandatory medical examinations of employees lies with the owners of enterprises, facilities and institutions. Monitoring adherence is the responsibility of the State Sanitary-Epidemiological Service.

Since the mid 1980s, during the Soviet era, there have also been universal health examinations to provide dynamic monitoring of public health. Preventive screenings took place in accordance with certain programmes, the contents

of which differed according to the age of target population groups. These examinations revealed certain factors which had an impact on public health, and preventive work was based on these factors. Decreased health care financing had a pernicious effect on the preventive work of medical facilities, particularly concerning screenings of the adult population, which were reduced and took on a mostly declaratory form. At the turn of the century, the Ministry of Health passed a number of resolutions proclaiming the resumption of mass health screenings and the monitoring of public health (for example, the Ministry of Health Order No. 327, issued 8 December 2000, *On the resumption of mass health screening and monitoring of public health*). This work was to be accomplished in two stages: the mass health screening of vulnerable groups during 2001–2002, and prophylactic examinations to cover the remainder of the population during 2003–2005. However, due to a lack of resources (primarily financial), only the first stage was accomplished. Currently, only certain groups undergo compulsory medical screenings: children (monthly during the first year, quarterly during the second, twice a year during the third and annually from age 5 to 14), pregnant women, teenagers, students, emergency services workers and victims of the Chernobyl disaster. The local authority area is traditionally in charge of community health monitoring. Screenings involve other medical specialists (otorhinolaryngologist, ophthalmologist, surgeon, neurologist, dentist and others depending on indications), laboratory work and equipment tests. Unfortunately, the clumsy and expensive model of compulsory mass health screenings by a group of professionals without any proof that these screenings are effective is still present. There is still excessive attention paid to preventive screenings, alongside a formal attitude to health improvement and preventive treatments.

Along with mass health screenings in Ukraine, there are also targeted preventive screenings aimed at the early detection of certain conditions and diseases. For example, the state oncology programme (Cabinet of Ministers Decree No. 392, issued 29 March 2002) provides for a number of screening programmes: detection of cervical cancer (yearly cytological screenings of women aged 18–60 and colposcopy for women in risk groups), breast cancer (mammogram screenings for women aged 40–65 and early palpation exams for women starting age 15), and colon and prostate cancer (annual examinations for people over 50). In order to improve the timeliness and effectiveness of cervical cancer detection, the Ministry of Health launched another programme for cervical pathology screening (Ministry of Health Order No. 766, issued 31 December 2004). There is no special financing provided for screening programmes; they are financed primarily from local budgets from general resources allocated to health care. The lack of earmarked financing prevents

these programmes from acquiring sufficient equipment, and there is a catastrophic shortage of mammographs in the country. The cytological service is rather small, which has a negative impact on screenings for cervical cancer. There are organizational problems as well, with no coordinated system of preventive screenings for women, which interferes with planning and evaluating the true scale of screening coverage. As a result, screening programmes are not overly effective. The mortality rate for cervical and breast cancer did not change significantly from 2002 to 2006. The frequency of advanced breast cancer detection in 2007 was 27% (Medical Statistics Centre, 2008a). In 2006, the National Reproductive Health Programme (Cabinet of Ministers Decree No. 1849, issued 27 December 2006) made plans for lowering cervical and breast cancer rates by 2015 and made provision for the special financing for these goals.

Ukraine pays special attention to screening women during antenatal and postnatal periods. Screening is performed by family doctors/GPs and obstetricians/gynaecologists at specialized outpatient clinics called women's consultation clinics. These clinics provide dynamic monitoring of women's health during the antenatal period from 12 weeks of pregnancy, and provide health education and maternal care during the postnatal period. There are a number of screening programmes for pregnant women, including early detection of congenital defects (two ultrasound tests before 22 weeks and a test for alpha-fetoprotein), and tests for syphilis and HIV. Ultrasound tests cover about 94.6% of pregnant women, while the alpha-fetoprotein test covers 29.6%, the syphilis test covers 96–98%, and the double test for HIV covers 94.5%. Despite extensive screening, the morbidity and mortality rates for congenital defects are still very high: in 2007, 22.3 and 2.8 per 1000 live births respectively (Ministry of Health and Ukrainian Institute for Strategic Research, 2008). The rate of HIV-infected pregnant women in Ukraine is one of the highest in Europe, at 0.31% in 2006. The number of children born to HIV-infected mothers continues to grow and reached a record high of 2736 in 2006. However, Ukraine has had significant success in lowering the rate of mother-to-child transmission. In 2006, 93.4% of all HIV-infected pregnant women received antiretroviral treatment to prevent transmission. As a result, the rate of mother-to-child transmission has fallen by 4 times since 2001, from 28% to 7%. However, approximately 10% of HIV-infected pregnant women are not registered with women's consulting clinics and are not tested for HIV. Therefore they do not receive timely treatment. The optimal vertical transmission level (up to 1%) is possible only through universal HIV testing during pregnancy, and treating all women with positive results with three-component antiretroviral therapy (Ministry of Health and Ukrainian Institute for Strategic Research, 2007a).

The HIV/AIDS and TB epidemics have become major public health problems in Ukraine (see section 1.4). A number of legislative and other acts have been passed to fight the TB epidemic (for example, Law of Ukraine No. 2586-III, issued 5 July 2001, *On fighting TB*; Presidential Decree No. 643/2001, issued 20 August 2001, *On a national programme of fighting TB for 2002–2005*; Cabinet of Ministers Resolution No. 143, issued 15 February 2006, *Ordering mandatory prophylactic TB screening for certain population groups*; Law of Ukraine No. 3537-IV, issued 15 March 2006, *On amendments to some laws to strengthen the fight against TB*). Mandatory fluorographic screening was introduced in 2002 for the entire population, but especially for at-risk groups. In 2003, Parliament approved the use of the directly observed treatment, short course (DOTS) strategy (Resolution of Verkhovna Rada No. 989-IV, issued 19 June 2003, *On Parliament hearing of TB epidemics in Ukraine and their prevention*). In 2005, the Ministry of Health officially adopted a new strategy for fighting TB in accordance with international DOTS standards (Order of the Ministry of Health No. 610, issued 15 November 2005, *On adopting the DOTS strategy in Ukraine*), and signed a protocol regarding the treatment of TB patients (Order of the Ministry of Health No. 45, issued 28 January 2005, *On approving the regulations of medical services for TB patients*). In 2006, a new legislative decision required all patients with active TB to undergo mandatory treatment.

All measures for fighting TB received designated funds from the state budget. Furthermore, external technical and financial aid arrived from various sources. For example, in 2003 the World Bank issued a loan to strengthen the anti-TB and AIDS programmes. In 2007, a special agency was created within the Ministry of Health, the National Council to Counteract Tuberculosis and HIV/AIDS, which serves as the national coordination body for health facilities regardless of their affiliations. However, all these measures have not produced desired results. The TB epidemic has not been halted and there is a rapid spread of HIV-associated TB. The ineffectiveness of previous measures has been linked to insufficient systematic and coordinated organizational measures, the weak laboratory basis for TB diagnostics, the lack of a clear system of planning, purchasing, distribution and monitoring of anti-TB medications, creating problems with the regularity of their supply, the lack of a quality-control system for purchased medications, the insufficient qualifications of medical personnel at clinics for TB screening, consulting and treatment, the widespread use of mass fluorography screenings, palliative care in inpatient settings and so on – as these are all ineffective medical practices, from clinical and economic points of view (Barbova et al., 2006). To deal with these issues, in 2007 a state programme

for fighting TB in 2007–2011 was developed and made law (Law of Ukraine No. 648-V, issued 8 February 2007, *On approving the all-national programme of struggle against TB for 2007–2011*). The programme aims to reduce TB incidence and TB-related deaths through improving laboratory TB diagnostics, raising the efficacy of treatment, preventing the development of resistant TB strains, and improving the system of personnel training and retraining.

For the authorities, the problem of HIV/AIDS prevention has been at the centre of attention since the first Ukrainian cases, registered in 1987. In 1991, Parliament passed the *Law on the prevention of AIDS and on social protection of the population*. In 1992, the first national programme on AIDS prevention was launched in Ukraine. The fifth national programme on HIV prevention, care and treatment of HIV-infected and AIDS patients ran from 2004 to 2008. However, this is only the second programme with earmarked financing and the first programme that provided 90% of the necessary financial coverage for HIV/AIDS prevention and treatment. This programme received funding from state and local budgets, a loan from the World Bank, and a grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria. A network of special facilities – AIDS centres – has been created throughout the country. They are responsible for epidemiological monitoring and control, clinical and laboratory diagnosis of HIV/AIDS and opportunistic infections, organization and provision of necessary types of medical, psychological and social help for people living with HIV/AIDS, as well as educating medical facilities about HIV/AIDS. However, the interaction between these centres and general health care facilities is rather weak. Public and HIV-service institutions play a major role in solving the social, psychological and logistical problems encountered by people living with HIV/AIDS. However, they are not able to fully accomplish this work due to financial and organizational problems.

The worsening situation with HIV/AIDS led to the approval of the Sixth National Programme on Prevention, Treatment, and Support for HIV/AIDS Patients for 2009–2013 (Law of Ukraine No. 1026-VI, issued 19 February 2009). The programme puts forward a complex approach to fighting the epidemics, including the evaluation and monitoring of the epidemic situation, mass education on HIV/AIDS, primary prevention and steps on fighting HIV/AIDS among high-risk groups. The programme also creates effective working conditions for public organizations responsible for HIV prevention, respects and defends the rights of HIV/AIDS patients, and provides universal access to high-quality care, support and treatment for these patients. Also, in order to draw injecting drug users to antiretroviral therapy, a heroin-substitution programme has been launched. An important step in overcoming the HIV/AIDS

and TB epidemics is detection, prevention and treatment of HIV-associated TB. Currently, access to HIV screening at TB treatment facilities is offered free of charge; combined TB and HIV/AIDS treatment is provided if necessary.

6.2 Patient pathways

Patient pathways in Ukraine can be characterized as chaotic and uncontrolled, and often they do not correspond with the gravity and course of the disease. A patient can see a doctor of any specialty at a polyclinic. Where patients self-refer to the wrong specialist, they are redirected to another specialist as necessary. Some patients self-refer to inpatient facilities and some of them are hospitalized unnecessarily if there are empty beds that need to be filled.

According to research on patients with arterial hypertension and related diseases, 41.2% of patients first sought help from their primary care physician, 29.5% from medical specialists, 9.2% from the inpatient department of a hospital, 3.2% from emergency care and 16.9% from hospitals of different specializations (Kryachkova, 2003). There were also several different ways patients reached primary care: 44.2% seek district internists directly, 21% are referred to by medical specialists, 23.2% come from hospitals, 4.6% from day and home care hospitals, and 7% come from other facilities. Only a third of such patients are referred to primary care by specialized and highly specialized care in order to complete their treatment, while the remainder are referred to primary care due to the incompatibility of the patient's health condition with the type of care that was initially sought. The majority of patients circumvent their primary care physicians to see medical specialists and self-refer to hospitals directly: 34.1% of patients who seek specialized help self-refer and 31.3% of patients who come to general hospitals do so directly. Every third patient who seeks secondary care directly makes a mistake in their choice of a specialist and is redirected to a different narrow specialist. Nearly half of all patients who self-refer to specialist care at hospitals do not have a condition compatible with the hospital's level or profile and are transferred to a different health facility.

District internists only partially coordinate the movements of their patients in the health system: only 8% of patients received specialized outpatient care based on a referral from their district internist, while 33.7% were admitted to multi-specialty hospitals, and 61.5% went to day hospitals and home care hospitals (as a share of total visits to an appropriate level). On average, only a quarter of patients (26.5%) receive medical care at only one level and are not transferred to other specialists or to different medical facilities. The location

(level) of provided health care has been found to be compatible with the patients' health condition only in a third of cases; in 43.2% of cases patients received care far beyond the level that was really necessary, and in 22.7% of cases patients needed a higher level of medical care than they received.

Problems in the organization of patient pathways sometimes lead to unjustified complications. Some pathways have “loops” in them, whereby patients return several times to the same specialist or to the same facility at the different stages of their treatment. For example, it is typical for an arterial hypertension patient who goes to see a cardiologist at a specialized clinic to be redirected to his district internist who refers him back to the cardiologist. The main reason behind such chaotic patient movement is the lack of coordination of patient pathways from primary care physicians. Moreover, there is no distribution mechanism of patients to different levels of medical care, and there is an insufficient material and technical base for primary health care as well.

The convoluted system of patient pathways leads to the irrational usage of limited resources, compromises the quality of medical health and has a negative impact on population health. Adequate referral mechanisms could prevent a significant portion of patients from developing more serious conditions or complications.

6.3 Primary/ambulatory care

Traditionally, primary care in Ukraine has been provided within an integrated system by district specialists – district internists and paediatricians employed by state or community polyclinics. From 2000, family medicine/GP models have also been a feature of the system (see section 7.1). Currently, family doctors/GPs make up a third (32.9%) of all primary care specialists. They work at family medicine/GP clinics or in appropriate polyclinic departments. The overwhelming majority of family doctor/GP facilities are located in rural areas (70%). The number of privately practising family doctors/GPs is relatively small (0.8% of the total number of doctors in this specialization). The majority of privately practising physicians work under contracts either with the local authorities (for example, the city of Komsomolsk, in Poltava *oblast*; see section 3.6.1 *Paying for health services*) or with insurance companies.

District internists provide general medical care to the assigned adult population living in their catchment area (*dilnytsia*) in outpatient clinics or during home visits they are responsible for preventive work among the population,

perform dynamic monitoring of patients with chronic diseases, provide health education and immunization, and make referrals to medical specialists and hospitals. Primary care nurses perform mostly auxiliary functions: under doctors' supervision they prepare and fill out medical forms (except for the primary document, an outpatient patient's medical record), perform certain tests during a visit (take temperature, blood pressure, etc.) and explain the preparatory steps for diagnostic examination to the patients.

Depending on their qualifications, family doctors/GPs are responsible for providing general medical care to an assigned population (children and adults) in outpatient settings and during home visits, including prevention, diagnosis, treatment and after-care/rehabilitation for common diseases. As with other primary care physicians, family doctors/GPs organize referrals to specialists and hospitalizations for their patients, provide immunization services according to the vaccination calendar, conduct examinations for temporary work incapacity, issuing documents and verifying results, and promote healthy lifestyles and health education for patients. However, they can also perform basic surgical treatment of wounds, the immobilization of fractures and the dynamic monitoring of pregnant women with a normal course of pregnancy during the antenatal and postnatal periods. Family doctors/GPs work together with family medicine/general practice nurses. However, especially in urban areas, people are reluctant to bring very young children to family doctors/GPs who are retrained adult district internists rather than retrained primary care paediatricians. Sometimes children are already 7 or even 12 years old before their first visit. The retraining programme of six months is viewed as inadequate and, unlike in rural areas where district internists and district paediatricians had been *de facto* working as family doctors/GPs prior to retraining, a former district internist may have had very little contact with children. Consequently, in some areas, family doctors/GPs only work with children older than 3 or 7 years of age.

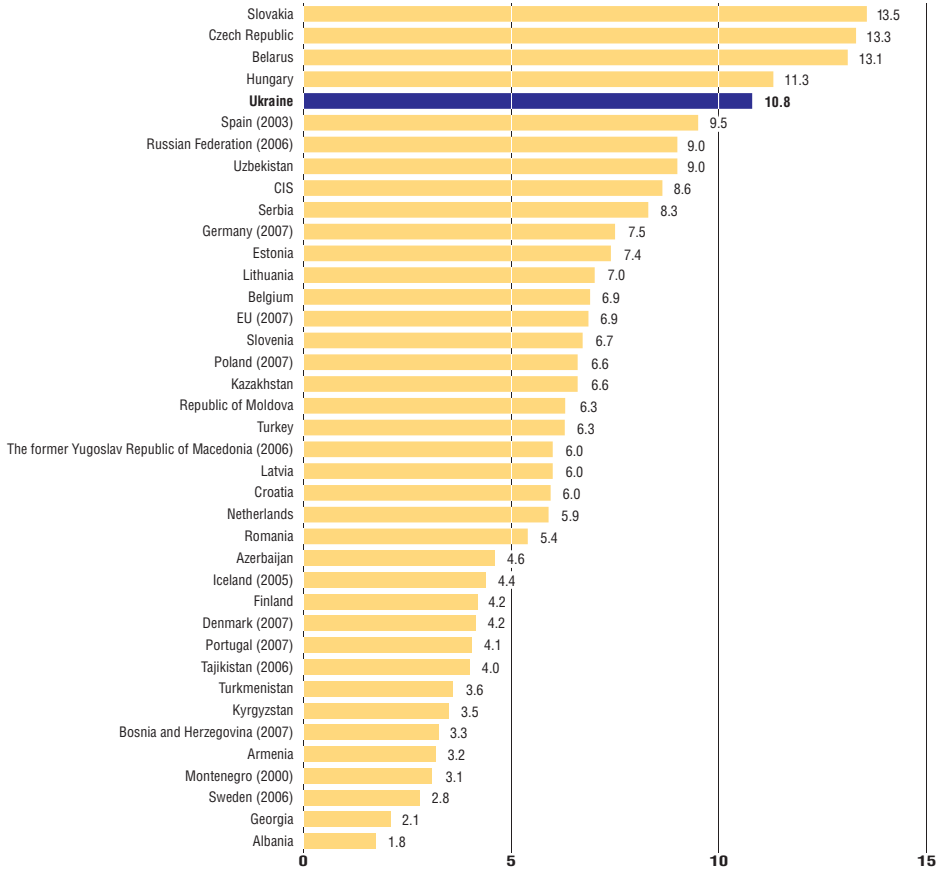
The optimum number of patients is set at 1700 adults per internist and 800 children per paediatrician. For family doctors/GPs it is set at 1110–1200 adults and children in rural areas and 1500–1600 in urban areas. However, in practice, on average there are about 2500 patients per internist in an urban area. The number of children per paediatrician is slightly lower than the set norm and there are about 1500 per family doctor/GP. However, these averages hide significant fluctuations in workloads for different types of primary care physicians. Nationwide, 13% of doctors working in primary care serve fewer than 1000 people (adults and children) and about one-fifth (20.4%) provide care for more than 2500 assigned patients. In rural areas the number

of doctors serving more than 2500 patients comes close to a third (29.1%). Although FAPs provide primary care services as well, the shortage of doctors in rural areas causes a number of problems with the accessibility and quality of medical care. In some areas this is further aggravated by low population density of 30–70 people per 1 km². About 11.4% of rural communities have outpatient clinics and hospitals with outpatient departments with a catchment area of between 2.5 and 9.5 km; 56% of rural communities have FAPs. About a third of rural communities have no medical facilities on their territory. Moreover, in some medical facilities located in rural areas not a single position is filled by a medical worker. The number of such facilities is growing (see section 5.2.1 *Trends in health care personnel*).

The organization of primary care delivery is based on the territorial-district principle by which the area served by a particular primary care unit is divided into catchment areas with a certain number of residents. Ukrainians have been granted free choice of primary care physician; however, this has not yet been implemented widely because, while a patient has the option to change their primary care provider, this is usually blocked by the receiving physician since it would stretch the territorial boundaries of their catchment area and complicate home visits. Developing primary care is considered the leading strategic direction and one of the main goals of health system development. There are plans for implementing comprehensive primary care reforms in the upcoming years (see section 7.2).

The total number of outpatient contacts per citizen per year is rather high in Ukraine and significantly higher than in the countries of Central and Eastern Europe and in EU countries (see Fig. 6.1). The high rate of visits per capita is a result of the Ukrainian method of paying for services based on capacity measures (see section 3.6.1 *Paying for health services*). Out of the total number of outpatient contacts, visits to medical specialists account for 75%, while home visits account for about 9%. More than a third of visits (36.7%) to an outpatient clinic or a polyclinic are for preventive checks. The number of preventive visits is influenced by two factors. First, there are strict requirements for target screening coverage for certain population groups (cervical cancer, breast cancer and TB screenings) and second, medical examinations are performed by a team of six or seven different specialists, using some tests the effectiveness of which have not been scientifically established. The number of outpatient visits in rural areas remains significantly lower than in urban areas and the majority of them (61%) are visits to mid-level medical specialists.

Fig. 6.1
 Outpatient contacts per person in Ukraine and selected countries in the WHO European Region, 2008 or latest available year



Source: WHO Regional Office for Europe, 2010a.

Access to secondary care is not regulated since there is no strict distinction between primary and secondary care in Ukraine. In essence, the concept of primary care is applied to the entire polyclinic – including the specialists working there – and not only its primary care unit. Patients may seek care from a specialist directly without a formal referral from their primary care physician and this option is used widely (see section 6.2).

6.4 Secondary care (specialized ambulatory care/inpatient care)

Secondary outpatient care is provided within the integrated model primarily by specialized offices (departments) of territorially based polyclinics and polyclinic departments of city hospitals, children's hospitals, central district hospitals and the polyclinic departments of specialized clinics (*dispensarii*). The average urban multi-specialty polyclinic serving a catchment area of 25 000 residents will have six or seven specialists, such as surgeons, orthopaedists, traumatologists, neurologists, ophthalmologists and otolaryngologists, whereas larger polyclinics may also have cardiologists, rheumatologists, gastroenterologists, urologists and others. As noted above, since there is no strict distinction between primary and secondary care in Ukraine, specialists in municipal polyclinics provide services to patients referred to by primary care physicians and those who seek care directly. The organization of secondary outpatient care is based on a territorial principle, with each polyclinic being assigned a defined area. Residents of that catchment area are entitled to full diagnostic examinations and appropriate treatment, and may be referred to the tertiary level when necessary.

The volume of secondary outpatient care provided by private facilities is not very significant, although private dental practices are developing rapidly. Private practices such as clinics providing gynaecological care (reproductive health clinics and centres offering family planning and infertility treatment) and alcohol, tobacco and drug dependency treatment centres or services are also quite widespread. These units are usually separate from the main health system. Some of them have a contractual relationship with institutions or private insurance companies, but the majority provide services to patients based on an established price list. There are also very well-equipped private facilities specializing in outpatient diagnostic services. Often, patients are referred to these facilities by medical specialists in state and community medical facilities that do not possess the appropriate diagnostic infrastructure. However, the relationship between these state and private facilities is not formalized, thus patients pay out of pocket.

The inpatient system is a hierarchical system organized into three levels. The first (lower) level is that of rural hospitals. These are very basic inpatient facilities with an average of 16 beds, providing general care for adults and children, chronic disease care, treatment of some infectious diseases, rehabilitation, completion of treatments, simple obstetric care, and more. The number of these facilities is decreasing (see section 5.1.2 *Capital stock and investments*). In 2008, they accounted for only 2.1% of beds. The second, middle

level is the true foundation of the system. Secondary inpatient care is provided in cities by inpatient wards in multi-profile hospitals, children's hospitals, specialized clinics and hospitals (for communicable diseases, maternity care and so on). In rural areas, it is provided by the inpatient departments of district and central district hospitals, and by hospitals in parallel health systems. These facilities have 75% of the total number of beds, and most are in multi-profile hospitals. Due to a general reduction in hospital beds, their capacity is gradually decreasing. Thus, in 2008, the average capacity of municipal hospitals was about 195 beds, while central district hospitals had about 210 beds. Hospitals offer several specialties usually in 7 to 12 units (general medicine, surgical, infectious diseases, maternity services, etc.), although the range of specialties covered is not regulated. In large cities there are also specialized clinics (most often for communicable diseases), maternity hospitals and highly specialized centres (for example, a burns centre or a neonatal centre) based at multi-profile hospitals. In addition, municipal specialized clinics provide inpatient health care for some socially significant diseases such as TB, STIs, psychiatric illness, endocrine conditions and others.

The third level is that of regional and supra-regional specialization provided by regional hospitals and specialized clinics, and specialized clinical and diagnostic centres at the national research institutes of the Ministry of Health and the Academy of Medical Sciences. These facilities hold over 20% of the total number of hospital beds. They were originally designed to provide highly specialized medical care to patients with the most severe and complicated conditions. Recently, however, the boundaries between secondary and tertiary inpatient care have become blurred. It has been reported that about one-third of patients admitted to regional hospitals should, in fact, have been treated in secondary-level hospitals. There are very few private inpatient facilities and most of them are specialized, highly equipped centres for oncology and cardiology patients, among others.

Despite the reduction in the number of beds, there is significant under-utilization of secondary care beds. The total hospitalization rate and, in particular, hospitalization of patients with non-chronic diseases decreased by 21% between 1990 and 2000. However, both figures started to increase slightly in 2001. The average length of hospital stay and stays in hospitals for patients with non-chronic conditions show a steady decreasing trend (see Table 6.1). Total inpatient care utilization and acute inpatient care utilization fell considerably between 1990 and 2000, and have stabilized at these levels (see Table 6.1). A high rate of hospital bed utilization combined with significant financial barriers to accessing inpatient care highlights the inefficiency of hospital financing

based on the number of beds. This stimulates facilities to keep these beds and hospitalize patients irrespective of their medical needs. Based on regional research from 2006–2007, almost a third of all hospitalizations (32.9%) were without specific indications which would require hospitalization. This number fluctuates widely depending on the unit's profile: cardiology departments for heart attack patients have 11–14% of unnecessary hospitalizations, while pulmonology and gastroenterology departments have 55–73% (Lekhan & Volchek, 2007).

Table 6.1

Inpatient hospital utilization, 1990–2008 (selected years)

	1990	1995	2000	2005	2006	2007	2008
Inpatient care admissions per 100 people ^a	24.4	21.9	19.4	21.6	21.9	22.5	22.5
Acute care hospital admissions per 100 people ^a	23.2	20.8	18.4	20.5	20.8	21.3	21.4
Average length of stay, all hospitals (days)	16.4	16.8	14.9	13.5	13.3	12.9	12.8
Average length of stay, acute care hospitals (days) ^a	14.0	14.6	12.7	11.6	11.3	11.1	10.9
Inpatient care utilization (days per capita), total ^a	4.0	3.7	2.9	2.9	2.9	2.9	2.9
Inpatient care utilization, acute hospitals (days per capita) ^a	3.3	3.0	2.3	2.4	2.4	2.4	2.3

Sources: Ministry of Health and Ukrainian Institute for Strategic Research, 2009; WHO Regional Office for Europe, 2010a; Medical Statistics Centre, unpublished database, 2009.

Note: ^a Utilization in Ministry of Health facilities.

Inpatient facilities are not differentiated by the complexity of interventions carried out. The same beds are used for patients with very different needs in terms of both services and equipment. Based on the same research, 74.6% of hospitalized patients required emergency care in the acute disease department, 14.9% required scheduled care in the chronic disease department, 8.2% required medical and social aid, and 2.3% required medical rehabilitation (Lekhan & Volchek, 2007).

6.4.1 Day care

In Ukraine, day-care inpatient facilities are expected to provide quality medical care services (complex diagnosis, intensive therapy using innovative medical technologies) to patients through their hospitalization as a day case where there are no actual indications for full-time medical observation. The Ministry of Health has regulated that day hospitals can function only as a part of outpatient clinics and polyclinics. Primary care day hospitals have gained the most popularity, followed by multi-profile day hospitals, which provide treatment mostly for cardiovascular, respiratory and digestive diseases. Some facilities

have day hospitals specializing in cardiology, neurology, gastroenterology, surgery, urology, ophthalmology, trauma, gynaecology and paediatrics, among others.

Day hospitals, like outpatient clinics and polyclinics, are financed according to the number of visits. However, day hospital financing is even less adequate in terms of real expenditure than the financing of polyclinics. For example, the estimated average spending on pharmaceuticals is 0.35–0.5 hryvnya or US\$ 0.07–0.1 per case at a day hospital. This is not very different from the allocation for one admission at a polyclinic (0.3–0.5 hryvnya or US\$ 0.05–0.06). However, the volume of services provided at a day hospital is much larger. Therefore, patients have to pay out of pocket for various pharmaceuticals and medical devices. Since independence, the number of day hospital beds has increased ninefold and the number of patients treated at day hospitals grew to match the increase in bed capacity (see Table 6.2). In 2008, 25.1% of the total number of hospitalizations received care at day hospitals, and day hospitals comprised 16.4% of the total number of beds in the facilities under the Ministry of Health. Patients prefer this form of care and often favour it over a 24-hour hospital stay. However, the growth of alternative inpatient care has so far had only a small impact on the utilization of inpatient facilities, and inpatient facilities lack the possibility of substituting their 24-hour services with day care, because of the way these services are financed.

Table 6.2

Development of day hospitals, 1991–2008 (selected years)

	1991	1995	2000	2005	2007	2008
Number of beds (per 1 000 population)	0.2	0.3	0.9	1.5	1.5	1.4
Number of patients treated (per 1 000 population)	6.6	9.2	25.6	51.0	58.9	56.3

Sources: Ministry of Health, 2001; Ministry of Health and Ukrainian Institute for Strategic Research, 2007b, 2008.

The national programme for health care development outlines significant reforms of the inpatient sector (see Chapter 7), including a reduction in the number of hospitalizations by:

- developing clear indications for the involvement of inpatient care;
- lifting restrictions on the development of inpatient care substitutes and on outpatient care in inpatient facilities;
- transferring facilities of the parallel systems to the Ministry of Health;
- reorganizing beds based on their functional differences;

- enlarging general hospitals to provide emergency inpatient care and creating service coverage for 100 000 to 200 000 people;
- reorganizing some hospital departments into chronic disease facilities to provide medical and social support, as well as palliative services; and
- reorganizing materials and equipment in health facilities based on their future use.

Furthermore, it has been proposed that, in order to provide the population with highly specialized and well-equipped medical care, university-based clinics must be established in the form of a holding union of medical universities and regional hospitals.

6.5 Emergency care

Formally, emergency care is defined in Ukraine as a type of medical care in health- or life-threatening conditions at the scene of an accident, en route to or at a hospital. All medical workers and facilities are required to provide emergency care. In urgent cases, when medical help is unavailable, emergency care must be provided by civil defence forces, militia, the fire department, rescue services, public transport drivers and others. In such cases, enterprises, agencies, institutions and citizens are obliged to provide vehicles to transport victims to the appropriate medical facility. In case of a life-threatening emergency, medical workers have the right to use any vehicle to reach victims or to get to hospital. In reality, the primary component in emergency care is the emergency care service of physicians and *feldshers*. The emergency care service is responsible for providing pre-admission care to patients and victims of accidents on-site and en route to the appropriate medical facilities. Due to the lack of differentiation based on the intensity of medical care (see section 6.4), emergency care is provided at medical facilities along with other medical services.

In 2007, the government approved a national programme on emergency care development by 2010 (Cabinet of Ministers Decree No. 1290, issued 5 November 2007). The programme provided for the development of a unified emergency care system, strengthening material, technical and human resources in medical facilities, and training and retraining medical staff, rescuers and other workers who use a vehicle to provide high-quality emergency care.

In 2007, the state's emergency care system comprised 96 independent and 891 hospital-based ambulance stations. The ambulance stations are supplied with appropriate equipment and special vehicles (primarily cars). Mobile emergency care is provided by 3114 mobile teams (0.71 per 1000 population). Since 1990, the number of teams has decreased by 14.5%, and the provision of care by 13.4%. Out of the total number of teams, 35% are general physician teams, 54% are *feldsher* teams and 11% are specialized (cardiology, intensive care, neurology, psychiatry, etc.). Specialized teams appeared during the period of increasing specialization of health care in the 1970s and 1980s, in order to raise the quality of pre-admission emergency care. These goals were not reached, however. Intensifying and narrowing the specialization of teams created some positive results alongside negative consequences. Using the specialized teams for their direct purpose significantly decreased their workload, which is now almost three times smaller than the professional workload of teams comprised of general physicians and *feldshers*. There have been attempts to increase the workload of specialized teams, which means that these teams have to make so-called "non-profile" trips and be used as general emergency teams. Using specialized teams in such a manner has a negative impact on the quality of emergency care, however, due to each team's narrow specialization. A well-organized emergency care system would mean about 15–16 trips per 24 hours for one team. In fact, the teams are making 1.5–2 times fewer trips: physicians and *feldsher* teams make about 10–11 trips, and specialized teams make 8.5 trips per 24 hours. This leads to the wasteful use of limited resources. The low workload of the teams is caused by general discrepancies in emergency care organization and administration, as well as by problems beyond the health sector, primarily the unsatisfactory management of road traffic. There are no special lanes for public transport and vehicles performing important social functions. Ambulances are often stuck in traffic, which significantly prolongs each trip.

In 2007, mobile emergency teams responded to 13.8 million calls, or 297 per 1000 population. The main reasons for calls were sudden acute illnesses, accidents and traumas (77.2%). Among other reasons were births (6.8%), transportation of patients and women in labour to hospitals (7.0%), and calls for diseases that did not require emergency care (7.0%). Since 1990, the frequency of calls has decreased by 13%. The reasons for calls have changed more drastically: the proportion of calls related to births and pregnancy complications has dropped significantly, due to a general fall in the birth rate. There were fewer calls for common diseases, while calls for acute diseases increased. At first glance, the calls structure for 2007 seems to correspond better with the main functions

of emergency care. However, there was an increase not only in the number of calls related to acute diseases, but in the frequency of these calls as well. The frequency increased by 1.3 times between 1990 and 2007, from 153.8 to 206.9 per 1000 population. This is caused not by organizational issues but by reduced access to emergency care, particularly for financial reasons (see section 8.2). Officially, state and community facilities must be free for all patients regardless of their origins (Ukrainian citizens, foreigners or people without citizenship). At the same time, standard budget allocations on pharmaceuticals per emergency call fluctuate from region to region, between 1.5 and 2.7 hryvnya (US\$ 0.3–0.5). This funding cannot cover even the minimum costs of pharmaceuticals and equipment needed for emergency services. Thus, patients themselves, or their relatives, are forced to search for life-saving medicine at any given time of the day or night.

There are a number of private emergency care services in Ukraine. These services are usually established in larger cities and are well equipped for providing medical care and patient transportation. However, high costs (300–400 hryvnya or US\$ 60–80 per call) mean that only a small proportion of population can use them. Data about their quality or capacity are unavailable.

One of the main qualities of emergency care is its timeliness. Emergency service timeliness in Ukraine is measured as the percentage of all calls where the team is in attendance within 15 minutes after the call has been received. According to the data from the Medical Statistics Centre, overall in 2007, mobile teams arrived on the scene in a timely fashion 88% of the time in general, and 90% of the time for accidents, traumas and acute conditions. However, the veracity of these data is questionable since the majority of emergency stations do not have the necessary equipment to automatically register the time when a call is received and when the team arrive on the scene. There are data showing that the number of late arrivals by emergency teams is very high and that sometimes patients have to wait for hours.

In case of emergencies caused by natural, man-made or social catastrophes, initial emergency care at the scene is provided by special rescue units. Subsequent care outside of the rescue zone is provided by the State Service of Catastrophic Medicine. The service was created in 1997 and comprises the Republican Scientific and Practical Centre, as well as 27 territorial centres of emergency care and catastrophic medicine, a mobile hospital, specialized mobile teams and brigades, and more than 780 teams of the regular emergency care service. The catastrophic medicine service also includes 12 emergency care hospitals and 77 other medical facilities, which can expand, if needed,

to hold up to 15 000 beds. State and local budgets reserve funds to reimburse expenses that may arise from the provision of medical care to the victims of emergency situations.

6.6 Pharmaceutical care

The organization of activity in the pharmaceutical sector is described in detail in section 5.1.5 *Pharmaceuticals*. According to the state law, drug provision is considered a part of the health service, and pharmaceuticals at state and community medical facilities must be paid for from the government budget. However, even under the Soviet Semashko system, outpatients were obliged to pay for drugs out of pocket (with the exception of certain groups entitled to benefits). Since independence, severe shortages in health care financing have forced patients to pay out of pocket even for inpatient drugs (see section 3.3.2 *Out-of-pocket payments*). Currently, only 13.3% of all pharmaceuticals consumed are provided through hospitals; 86.7% are purchased by the population at pharmacies. Certain population groups are entitled to some benefits in receiving medical services and pharmaceuticals. So-called vulnerable population groups and patients with socially significant and very serious diseases such as TB, cancer and so on, receive medical services either free of charge or with significant discounts. These benefits mostly include outpatient drugs. Drugs prescribed in the home which are on the government-approved list must be provided for free or with discounts. Benefits-related pharmaceutical costs are meant to be covered by state budget allocations to health care. However, poor health care financing limits their availability. In reality, even vulnerable population groups have to pay for their medications out of pocket most of the time.

In order to improve pharmaceutical access for the population, the government approved a national list of essential pharmaceuticals and medical devices in 2009 (Cabinet of Ministers Decree No. 333 of 25 March 2009, *A few issues with the state regulation of prices for pharmaceuticals and medical devices*). The list was developed according to anatomic-therapeutic-chemical (ATC) classification based on international non-proprietary names and includes 215 efficient, affordable and safe pharmaceutical drugs that are used in Ukraine in the prevention, diagnosis and treatment of the most common diseases. The list represents the foundation of a basic medical entitlement package and, by an order of the Ministry of Health, is to be used for arranging tender procurement for state purchases to support targeted programmes, state

support of the domestic pharmaceutical industry, plans for benefits costs recovery, the creation of clinical protocols and forms, and the monitoring of pharmaceutical supplies and price formation. However, in 2007, pharmaceutical usage by the population was uncontrolled (Cabinet of Ministers assignment No. 29029/1/1-07, issued 3 July 2007).

As most pharmaceuticals are purchased both by outpatients and inpatients, the scope for influencing prescribing patterns is rather limited, and is further hampered by the liberalization of pharmacy dispensing procedures. A list of prescription-only drugs has been developed by the Ministry of Health, but most of them can nonetheless be bought over the counter. In 2005, the Ministry of Health attempted to regulate procedures for dispensing prescription drugs (Ministry of Health Order No. 360, issued 19 July 2005). However, low levels of public education and poor preparation of the health system limited the attempt to move towards greater regulation of prescription-only drugs. At the same time, pharmacies do maintain strict controls on the supply of psychotropic drugs and hormonal preparations, even though many others, such as antibiotics, can usually be bought without a prescription.

Clinical protocols can have a certain influence on prescribing patterns as long as they contain a very clear definition of the medical indications for the use of a specific drug. There is no national programme promoting efficient generic drugs that are less expensive, as opposed to the more expensive brand names. Pharmaceutical companies have a significant influence on prescribing patterns. They have a very aggressive marketing policy, actively advertise pharmaceuticals in the mass media (advertising for prescription-only drugs is banned in Ukraine), hold free seminars for medical specialists and reward doctors who prescribe their products. As a result, there is a high level of over-prescription among physicians, who often prescribe expensive brand-name pharmaceuticals instead of less expensive generics and, in certain cases, disregard rational drug therapy. Doctors only prescribe generic drugs from the National Essential Drugs List to patients who are exempted from co-payments or who pay reduced prices for pharmaceuticals, which the patient then obtains from their local community pharmacy.

A combination of financial and educational measures could influence prescription patterns positively. For instance, the use of global funds that would at least partially cover the government's pharmaceutical expenditure has been suggested (Rudiy, 2005), as has the introduction of a system of reimbursements for pharmaceutical expenses (Lekhan, Slabkii & Shevchenko, 2009). However, there has been no real implementation of these initiatives.

In order to improve pharmaceutical provision, a national programme has been developed for 2004–2010 which outlined the selection of safe and efficient pharmaceuticals using pharmaco-economic analysis (Cabinet of Ministers Decree No. 1162, issued 25 July 2003). The programme also introduces a formulary-based drug procurement system, improves tender procedures for state purchases of medications and identifies state priorities for medication purchases. Finally, the programme introduces the state registration of wholesale prices, as well as the introduction of appropriate laboratory, clinical, industrial and distribution practices based on such standards as GMP, good laboratory practice (GLP) and so on. A list of essential pharmaceuticals and medical devices was approved in accordance with the programme, and necessary preparations have been completed to launch a formulary-based drug use system by the State Pharmacological Centre under the Ministry of Health (Ministry of Health Order No. 173, issued 17 March 2009 and Ministry of Health Order No. 59, issued 28 January 2010). The formulary-based system should improve the quality of treatment and should provide clinicians with access to its unified teams of clinicians and other health care specialists with information on the use of pharmaceuticals registered in Ukraine (their pharmacological properties, contraindications and distribution methods). The first National Drug Formulary of Ukraine for the supply of pharmaceuticals in health facilities was published in 2009.

6.7 Rehabilitation/intermediate care

In 2006, the government approved a model state programme on the rehabilitation of disabled people which provides a list of rehabilitation services and medical devices that the government should provide free of charge regardless of age, gender or type of disability (Cabinet of Ministers Resolution No. 1686, issued 8 December 2006). The model state programme serves as the framework for an individual rehabilitation programme which defines the types, forms, quantity and timeliness of rehabilitation, aimed at the restoration of or compensation for disabilities or lost bodily functions and capabilities as well as determining when and where rehabilitation should take place. The government has assumed responsibility for developing a rehabilitation policy, which is delegated to central authorities (the Ministry of Labour and Social Policy, the Ministry of Health, the Ministry of Education and Science, the Ministry for Family, Youth and Sport) as well as local authorities. Local authorities should work in partnership with public organizations for disabled people to develop and implement programmes for the prevention of disability and provide for the alleviation or treatment of

disabling conditions. Disabled adults and children are treated through medical, psycho-pedagogical, psychological and professional means, as well as with physical therapies, sporting activities and social rehabilitation.

Medico-social expert commissions are responsible for diagnosing disabilities and establishing the level of health loss, as well as determining a disabled adult's occupational capacity. They also develop individualized rehabilitation programmes. These committees act as independent centres within the regional health authorities. There are more than 400 medico-social expert committees in the country. Treatment-and-consultation committees in medico-prophylactic institutions are responsible for establishing the degree of disability in disabled children.

By law, the rehabilitation sector in Ukraine is comprised of executive authorities, local self-governments and various institutions such as rehabilitation facilities for disabled people, special and sanatorium-type preschools and schools for children requiring long-term treatment for physical and/or mental development problems, prosthetic and orthopaedic enterprises, sanatoria and health resorts for labour unions, social protection agencies, cultural activities agencies and public organizations for disabled people. Rehabilitation facilities are composed primarily of social rehabilitation centres for disabled children to correct developmental disorders and prepare them for education (services range from preschool to middle school, to technical, professional and higher education), professional rehabilitation centres to restore a person's capabilities and prepare them for work, medico-social rehabilitation subdivisions in social care centres for elderly people and single disabled people.

These rehabilitation centres function as national and local specialized facilities, receiving financing from national or local budgets, or as nongovernmental, non-profit-making organizations that receive financing from extra budgetary resources. Each centre's structure is determined by its specialization and can contain rooms for occupational and social rehabilitation, laboratories, workshops, classrooms and so on. These centres are staffed by both medical and psychological assistants. Currently, there are more than 270 rehabilitation centres for children in the network, 72 professional rehabilitation centres, and more than 270 medico-social rehabilitation departments within territorial social care centres for elderly people. The Ministry of Labour and Social Policies is responsible for the majority of rehabilitation facilities, and the Ministry of Education and the Ministry for Family and Youth are responsible for the remainder.

Despite the fact that the model rehabilitation programme outlines the basic medical rehabilitation services to be provided to disabled individuals, there are no medical facilities attached to organizations engaged in rehabilitation. To provide these services, the programme refers patients to appropriate specialized departments of health facilities, the clinics of research institutes, and sanatoria and spas. For instance, people with locomotor and central nervous system problems can be provided with medical rehabilitation, reconstructive surgery, prophylactic measures, and sanatorium and spa treatments. People with psychological disabilities can receive restorative treatments, psychiatric help, prophylactic measures, and sanatorium and spa treatments. Patients with serious vision or hearing impairment are eligible for restorative therapy, prophylactic measures, and sanatorium and spa treatments (hearing-impaired patients are provided with hearing aids, reconstructive surgery and cochlear implants). Where disability is the result of problems with internal organs, patients can receive restorative therapy, prophylactic measures, and sanatorium and spa treatments. Cancer patients are eligible for restorative treatment, prophylactic measures, medical supervision, reconstructive surgery, and sanatorium and spa treatments.

Medical facilities are not differentiated according to the intensity of care or treatment provided (see section 6.4). Restorative treatments and medical rehabilitation are therefore performed at practically all levels of health facility. The health system does include several facilities whose main priority is rehabilitation, however. Among inpatient facilities, these include a hospital for medical rehabilitation, a physical therapy clinic and a centre for children with impaired nervous systems. Among sanatoria and spas, these include a balneotherapeutic health resort and a mud cure clinic. The number of such facilities is very small, rehabilitation services are limited and not many patients are served. For example, the rehabilitation hospital of the Ministry of Health has 600 beds, provided primarily for patients exposed to ionizing radiation (Chernobyl survivors) as well as for other therapeutic and neurological patients. Natural remedies are used in conjunction with pharmaceuticals for rehabilitation, as well as physiotherapy, dietary treatments and so on. The Vinnytsia *oblast* rehabilitation hospital for children with organic locomotor system disorders uses a complex of physiotherapy and natural remedies (heat therapy, water therapy, mud therapy, etc).

The basic elements of a modern rehabilitation system do exist in Ukraine. However, this system does not address the full spectrum of problems in rehabilitating and reintegrating people with limited physical abilities or psychological and mental problems. Only 10% of disabled children are in fact

undergoing rehabilitation (Interfaks-Ukraina, 2007). The majority of disabled children do not attend preschools. Individuals with limitations in physical and mental development account for only 1% of the students in vocational schools (Interfaks-Ukraina, 2007). According to the Ministry of Education, in the 2007/2008 school year, special classes were created for only 14% of disabled children attending comprehensive secondary schools, and the rights of disabled children with technical or other rehabilitation devices are not respected. Disabled people make up only 0.4% of students in higher education. The reason for such low coverage of rehabilitation care is the inconsistent interactions between medical facilities, and labour and social protection agencies.

In 2007, the government approved a state programme to develop the rehabilitation system by 2011 (Cabinet of Ministers Resolution No. 716, issued 12 July 2007). The programme provides for:

- improvement of the delivery system of rehabilitation services;
- an increase of the production and supply of high-quality modern rehabilitation devices;
- easier access to education, including correspondence, integrated and inclusive education for people with physical and mental disabilities;
- training, retraining and professional development of disabled people according to current market demands; and
- creating easy access to social infrastructure and public transport.

The programme also provides for a personal database of disabled individuals as well as a list of required equipment and literature for rehabilitation facilities. The reorganization of medico-social expert commissions into medico-social expertise and rehabilitation facilities appears to be a promising solution for rapid development of the rehabilitation facilities network. Within five years, the programme should return 170 000 disabled people to work and social life, and fully satisfy the demand for medical, technical and other means of rehabilitation. This will save more than 100 million hryvnya, since there will be a reduced need to pay disability pensions, social benefits or compensation to the rehabilitated individuals.

So far, a social protection programme has been adopted to provide easy access to public and private facilities for disabled people, and new state construction standards have been approved to secure a convenient environment for people with limited mobility. This includes the production of accessible public transport vehicles. However, the programme lacks incentives to improve

the medical rehabilitation system, despite the fact that the Ministry of Health acts as a co-executor on a number of tasks. At the same time, the National Plan of Health Care Development provides for the establishment of rehabilitation hospitals by 2010 in compliance with the functional differentiation of secondary inpatient care facilities (Cabinet of Ministers Degree No. 815, issued 13 June 2007). The Ministry of Health developed and publicly displayed on its web site the project for this Plan, which takes into account international experience of running this kind of medical facility. It is intended that the hospitals will incorporate all modern approaches in the treatment of patients with trauma and various diseases that require rehabilitative measures for the prevention of disabilities and the rapid restoration of working capacity.

6.8 Long-term care

Long-term care in Ukraine is provided by facilities in the social care system (under the Ministry of Labour and Social Policy) that provide medico-social care to certain population groups. These facilities include homes for disabled children and nursing homes for elderly people and disabled people, as well as mental institutions and the inpatient departments of territorial centres for elderly people and single disabled people.

Homes for children are medico-social facilities designed to provide assisted living, education, upbringing and medical services for children aged between 4 and 18 with psychologically and physiologically impaired development. They are divided into four groups: (1) children of preschool and school age with normal intellectual development, whose physical impairment severely limits their movement; (2) children with severe mental disabilities who can move freely and attend to their own needs; (3) children with severe mental disabilities who can move freely but cannot attend to their own needs; (4) children with various levels of mental disabilities and complex physical problems who cannot move freely or attend to their own needs. Currently, there are 58 homes with more than 6000 children. The capacity of these schools fully covers demand, but their material and technical resources do not meet modern requirements (Yaskal, 2000). The deinstitutionalization of these children and the prevention of their institutionalization have not as yet received any serious attention from policy-makers.

Mental institutions are inpatient medico-social facilities that provide assisted living for patients with psychoneurological disorders who need medical services and assistance with daily living. These institutions accept patients of retirement

age and disabled people over the age of 18 with psychoneurological disorders, regardless of whether they have relatives (who are generally required by law to care for them).

Nursing homes for elderly people and disabled people are inpatient facilities with long-term stay for elderly people, war veterans, and disabled adults who need medical services and assistance with daily living. These facilities accept individuals without relatives. If there are vacancies, however, they can accept patients with able-bodied relatives when all financial costs are paid in full. Nursing homes provide 24-hour medical services and advisory assistance. The inpatient departments of territorial centres for long-term or temporary assisted living are designed for people who are unable to work and have lost mobility, cannot attend to their own needs, and need medical services and daily life assistance. According to the Ministry of Labour and Social Policy, currently there are 316 nursing homes with 55 000 beds, assisting 50 000 elderly and disabled people. There are also 270 inpatient departments of territorial centres for long-term and temporary assisted living.

Nursing homes and mental institutions receive their funding from local budgets, primarily through inter-budgetary transfers from the state budget, social insurance funds and through patients' pensions. However, with little funding available, these facilities are unable to provide proper sanitary conditions and enough food. Many of these facilities are situated in old buildings, poorly equipped and in poor condition. The quality of care is low. Moreover, these facilities do not have enough beds so there are waiting lists.

The types of medical staff employed at these facilities are determined by their areas of expertise. Thus, in nursing homes for elderly people, care is provided by geriatric and psychiatric specialists, while psychiatrists provide the care in mental institutions, and so on. Social workers provide social support and every facility is required to have a dentist. Since rehabilitation services in these facilities are rather unsatisfactory, the state rehabilitation programme provides for the introduction of medical and physical rehabilitation specialists as well as medical psychologists.

6.9 Services for informal carers

In Ukraine, many people use and participate in providing informal care services. There is no political or financial support from the government for this type of care, and there are no data available on the number of people involved in providing it. There are different NGOs which are usually set up

by people required to provide care for relatives with certain conditions (for example, children with cerebral palsy etc.). Sometimes, these organizations receive grants from various funds.

6.10 Palliative care

There is great demand for palliative care in Ukraine, due to the high mortality rate and an ageing population (see section 1.4). There are approximately 1.5 million people in Ukraine each year who need support from palliative care services; that is, approximately 480 000 patients and family members who care for terminally ill patients. However, there is no developed palliative care system in the country.

Medical services for terminally ill patients are usually provided by medical facilities of various specializations and levels, and they are treated alongside other patients without specific consideration for the type of services needed during the terminal phase of a disease. Primary care physicians and nurses bear the main burden of palliative care, including care for cancer patients, who make up the most prevalent group in need of palliative services. Hospitalization for these patients occurs in the acute phases only for a short period of time.

The first hospices were initiated by local self-governments and NGOs. The first hospice was opened in 1994 in Lviv. Currently, there are about 20 hospices and palliative care departments in multi-specialty hospitals with 650 beds for palliative care (Barmina, 2008). Services are located in urban areas such as Donetsk, Zaporizhzhia, Luhansk, Lviv, Lutsk, Ivano-Frankivsk, Kherson, Kharkiv and Kyiv. Current capacity can satisfy only 10% of the demand for palliative care. Most of these facilities are community-based and receive their small amount of funding from local budgets. They cannot provide the social side of palliative care as hospice staff do not include social workers, psychologists or attorneys. There is no developed networking between hospices and other medical facilities, social care agencies, public organizations and so on to assist continuity of care.

There is still an acute problem in providing pain relief to patients in the terminal phase of a disease. Because of strict narcotics control, doctors are significantly limited in their freedom to prescribe the correct type and dosage of opiate analgesics, especially to non-cancer patients, and for their use in home settings or social protection facilities. Another significant problem in palliative care is that medical staff and social workers lack the necessary knowledge and

skills in the methods and principles of pain relief and in relieving physiological and other somatic problems. The limited access to effective pain relief and essential medicines, the limited access to palliative care facilities, insufficient training of specialists and the limited capacity of NGOs all mean that the majority of patients do not receive adequate palliative care.

There is still no government policy regarding the development of palliative care. Even though the Ministry of Health legalized hospices in 1995 by including them in the list of medical facilities (Ministry of Health Order No. 114, issued 22 June 1995), and approved staffing standards for these facilities in 2000 (Ministry of Health Order No. 33, issued 23 February 2000), there is still no legislation regarding the activities of such facilities, with the exception of AIDS hospices (Ministry of Health Order No. 866, issued 27 December 2007, *On approving temporary regulations for hospice and palliative care departments for HIV/AIDS patients*). The lack of government policies regarding palliative care slows its development. There are insufficient institutional and human resources to create a palliative care facilities network; there are no methodological grounds or delivery standards; and there is no training system for medical and social workers engaged in palliative care. Many issues hamper the development of palliative care in Ukraine, such as insufficient government knowledge regarding the scale of the problem and a lack of state policies regarding the development of palliative care for various groups of patients with incurable illness. There are also insufficient integration and coordination between the Ministry of Health, the Ministry of Labour and Social Policy, NGOs, private providers, public associations for socio-medical protection and palliative care. This is compounded by a lack of resources and the use of outdated, inefficient technologies and models of palliative care (Ministry of Health of Ukraine and Ukrainian Institute of Public Health, 2008).

Nevertheless, there have been some positive changes in the government's attitude towards palliative care. In 2006, the All-Ukrainian Association of Palliative Care was created, along with the Inter-Departmental Work Group for Improvement of the Legal Basis of Palliative Care. In April 2008, in accordance with an order from the Ministry of Health on the national programme of palliative care development in Ukraine for 2010–2014, the Coordination Council on Palliative and Hospice Care was created. The Council is comprised of government members and public organizations. Currently, a programme has been drafted that provides for the development and improvement of the legal basis for using opiates in pain relief, the development of a hospice network, the creation of palliative care delivery standards, and the formation of a national system of medical and social staff training in palliative care.

6.11 Mental health care

The 2000 *Law on mental care* (Law of Ukraine No. 1489-III, issued 22 February 2000) set out the legal and institutional basis for providing mental care based on principles of human and civil rights for the first time in the Ukrainian context. It determines the responsibilities of executive authorities and local self-governments as well as the legal and social rights of individuals suffering from mental illness, and regulates the rights and responsibilities of physicians and other workers involved in providing psychiatric care. For instance, the law provides for mandatory consent from the patient and his relatives or legal guardians for receiving medical care, and the use of compulsory treatment can only be based on a court decision using measures approved by law. The law also establishes a patient's right to receive limited psychiatric care according to the patient's condition, preferably in home settings. Ukraine has also signed the Mental Health Declaration for Europe (2005) in Helsinki, and the Mental Health Action Plan. The openness of mental care to national and international NGOs has caused a shift in public attitudes towards both the providers and receivers of mental health care services.

The mental health protection system consists of psychiatric hospitals and outpatient clinics, and the psychiatric departments of multi-profile hospitals that operate under the Ministry of Health. There are also low-capacity psychiatric agencies that work under the jurisdiction of the security services, the Ministry of Internal Affairs, the Ministry of Transport and Communications, and the Ministry of Defence, providing services directly to the employees of these departments and their families. There are a small number of private medical facilities providing psychiatric, psychotherapeutic and drug treatment services. In 2007, the network of psychiatric facilities under the Ministry of Health consisted of 88 psychiatric hospitals with an average capacity of 500 beds, 29 specialized mental health clinics, as well as 656 psychiatric and 162 psychotherapeutic units in polyclinics within the main health system. Mental health receives about 2.5% of total health care expenditure. It has been estimated that 89% of all resources are used on inpatient psychiatric care, while outpatient services receive only 11%. It must be noted that psychiatric patients have to purchase their own medications, and less than 1% of patients receive the necessary psychotropic medication with up to 80% cost coverage. Neuroleptic medication would cost up to 10% of the daily minimum wage, and antidepressants would cost 3%. Therefore, the lack of a national system for supplying medication to psychiatric patients creates a heavy burden for the patients' families, reduces access to treatment and decreases its efficacy.

In 2007, facilities under the Ministry of Health employed 3362 psychiatrists (7.2 per 100 000 population), and 422 paediatric psychiatrists (4.7 per 100 000 children). Depending on the region, the supply of psychiatrists varies significantly: some regions have twice as many psychiatrists as others; most are concentrated in the eastern part of the country, with very few working in the west. According to staffing standards, every psychiatric hospital department and every mental health clinic is required to have at least one psychologist. In reality the numbers are much lower, which slows the humanization of psychiatric care and limits the implementation of psychotherapeutic measures. Staffing standards do not provide for social workers in medical facilities, and social care nurses are responsible for providing services to psychiatric patients (1 nurse per 150 beds). Each department for compulsory psychiatric treatment is required to have a social care nurse on staff as well.

There are 9.4 psychiatric beds per 10 000 population, 10.4 per 10 000 for adults and teenagers, and 2.95 per 10 000 for children. Psychiatric beds account for 10.7% of the total number of beds under the Ministry of Health (see section 5.1.1). The ratio of beds in inpatient facilities for non-chronic and psychiatric conditions is 1:7.5, while the ratio for psychiatric beds and long-term stay beds is 1:1. The overwhelming majority of psychiatric beds (96%) are in 106 specialized psychiatric facilities (88 hospitals, 18 specialized clinics (*dispensarii*)), including 96% of beds for adults and teenagers, and 96.2% for children. The remaining beds are distributed among several multi-profile hospitals of different levels: 3 regional hospitals, 20 municipal hospitals, 15 central district and district hospitals, 1 rural catchment area facility and 1 municipal children's hospital. The conditions provided by the majority of specialized psychiatric facilities are far below modern standards. The rooms contain 10 or more patients, and up to 24–30 patients in certain regions (Pinchuk, 2007).

The number of beds for patients in psychiatric hospitals has dropped by 37% since Ukraine gained its independence. However, the related optimization capacity has not yet been exhausted, as between 10% and 30% of beds in mental hospitals are still being used as socio-medical or long-term care beds. In some cases, beds are “re-allocated” rather than being closed. For example, in 2004, one psychiatric hospital became the property of Social Services and was then transformed into a psychiatric nursing home. This has not become a common practice, although the shortage of beds in mental health facilities is still an acute problem. The psychiatric health protection system has 105 day hospitals with 5137 beds – there are only 0.44 beds per 100 registered psychiatric patients. In a number of regions, the number of day hospitals ranges from 1 to 4. In general, the reduction in inpatient capacity has not been coordinated with development

on the community level of psychiatric health protection services. Moreover, the network of outpatient care facilities is shrinking, from 33 in 2002 to 29 in 2006. This deinstitutionalization of psychiatric care is also not supported by the population. Since there is no parallel creation of adequate alternative services to meet local needs, these bed closures serve to deprive a significant proportion of psychiatric patients of access to professional medical care (Strannikov, 2008).

A state target programme is being drafted to further develop the mental health protection system. Its main goals will be:

- a structural and functional reorganization of psychiatric care to increase the quality and accessibility of services;
- the integration of psychiatric care into the system of primary and secondary care;
- the development of prevention programmes among children and adults; and
- the implementation of measures to prevent the stigmatization of psychiatric patients.

This programme was developed in 2006, but still has not been approved.

6.12 Dental care

Currently, most dental health services are commercial. Patients must pay out of pocket for diagnostic tests, filling materials and so on, not only in private dental facilities – the number of which is growing rapidly in Ukraine – but also in state-owned facilities. State regulation of dental care prices is insignificant; the market plays the primary role in setting prices. Dental care for children and dental prosthetics for certain population groups remain free. There is limited quality control of dental services. According to data collected by the Medical Statistics Centre under the Ministry of Health, in 2007, in state-owned facilities, the only aspects of care which are regulated are those related to routine screening, the population examined during screening, the percentage of those examined who need check-ups, and the percentage of those who need check-ups and who actually receive them. There is no systematic quality control in the majority of private facilities.

In the 1990s, the drop in the accessibility and quality of dental services led to an increase in dental health problems, particularly among children. These factors prompted the approval of the State Programme for the Prevention and Treatment of Dental Diseases, 2002–2007 (Presidential Decree No. 475/2002,

issued 21 May 2002). The main goals of the Programme were to improve dental services, reinforce the primary and secondary prevention of dental diseases, ensure that the resources and organization of dental care comply with local needs and coordinate the activities among dental facilities. Some positive changes have occurred since the Programme's implementation. Each *oblast* created a registry of dental diseases (particularly targeting areas with endemic fluorosis), and dental facilities began providing preventive and dental hygiene services. However, the Programme's overall goals were not achieved due to a lack of specific financing, and poor coordination between the departments involved in the programme's implementation. The population's dental health continues to worsen.

According to the Dental Association, there are numerous factors responsible for these negative tendencies. Dental equipment is in fairly poor condition in state-owned facilities, especially in children's dental polyclinics, departments and practices. Also, techniques in use are incompatible with modern dental prevention and treatment standards. The disintegration of the national system of primary and secondary prevention has played a role, as has the downsizing of the network of dental practices in preschools and schools. Moreover, there is a lack of coordination between state and private dental sectors, and a lack of proper quality control for dental hygiene devices on the national market.

Dental care reforms are currently under public discussion. The reforms suggest transforming state-owned dental facilities into lease-holding, local or national companies, reorganizing the service model by providing equal conditions for facilities of different forms of ownership. Moreover, the government must present the public with a standard package of guaranteed dental services, primarily for children and population groups who are subject to mandatory medical check-ups. Further, the reforms would include the introduction of an intersectoral system of health education, with further development of effective methods of primary and secondary prophylactic care, primarily for children and pregnant women.

6.13 Complementary and alternative medicine

Since the 1990s, Ukraine has been going through a social crisis, accompanied by a decline in the prestige of science and education. Combined with the compromised quality and accessibility of mainstream medical care, there was an explosion in alternative healing. A large number of fraudulent healers appeared and, during the 1990s, these "healers" managed to obtain licences

or similar documents from the Ministry of Health, alongside legitimate specialists who use holistic approaches. As the massive uncontrolled spread of these healing practices began negatively to affect the population's health, the government began to react. In 1998, the President issued a special decree to bring this activity under public control (Presidential Decree No. 823/98, issued 31 July 1998, *On the regulation of folk and alternative medicine*). The decree commissioned the Ministry of Health to strengthen the licensing law for alternative medicine, and tasked the Ministry of Internal Affairs and the Ministry of Finance jointly to find and punish illegal "healers". It commissioned the Ministry of Information and the State Committee on Nationalities and Religion to control the mass media, filtering out advertisements for "medical" services that could harm public health. In fulfilling this decree, the Ministry of Health created a special Folk and Alternative Medicine Committee (reorganized in 2006 as a state enterprise) responsible for proposing state policies regarding the development of the field, creating a database of alternative practitioners, controlling their activity, and issuing special permits to practise folk and alternative medicine to people without a degree in medicine. A permit can be issued on the basis of the Ukrainian Association of Folk Medicine's expertise and a positive decision by the special committee that includes specialists from the Ministry of Health and other health authorities. Folk and alternative medicine practitioners are forbidden to treat cancer, infectious diseases including STIs, AIDS and contagious skin diseases, drug addiction and mental disorders that require immediate hospitalization. They are forbidden to assess psychological health, monitor and treat pregnancy complications, or perform surgical interventions including abortion. They are also not permitted to perform mass healing sessions with the use of hypnosis or other methods of psychic or bioenergetic influence.

To a certain extent, the committee has organized the field of alternative medicine, but a number of goals still have not been met. For instance, there is still no registry of alternative practitioners, which makes it difficult to control their activities. Many individuals continue to practise and advertise services unrelated to medicine (removal of curses, fortune telling, etc.) under cover of a licence from the Ministry of Health, further discrediting legitimate folk and alternative medicine practitioners. This caused the Ministry of Health to issue another order in 2003, which mandated an analysis of the implementation of legislation for folk and alternative medicine (Ministry of Health Order No. 267, issued 19 June 2003, *On controlling illegal medical practice in the field of folk and alternative medicine*). Further, this Order mandated the recertification of practitioners with a new licence from the Ministry. However, the necessary

legitimization of the field has still not been implemented, a situation aggravated by massive, uncontrolled advertisements of pseudo-healing practices in the mass media.

According to the Ukrainian Federation of Health Care Promotion, there are about 4000 alternative medicine practitioners in the country, but medical circles suggest a number at least 10 times higher. A small proportion of these practitioners are medical professionals specializing in folk and alternative medicine (see section 5.2.1 *Trends in health care personnel*). The remainder do not possess any medical training. Moreover, according to the Ukrainian Federation of Health Promotion, up to 70% of these so-called healers are neither professionally nor morally affiliated with healing. About 5.5 million people receive services from these “healers”, and this number does not show any signs of decreasing. There are several reasons people seek care from healers, among which two are mentioned most often: the lack of positive outcomes from a doctor’s treatment and an unsatisfactory relationship with a doctor. The majority of patients seeking alternative treatment from healers are elderly or have a low level of education, but there are significant numbers of patients with specialized secondary education and higher education.

As noted in section 5.2.1 *Trends in health care personnel*, there are no exact data about the number of professional specialists in the field of folk and alternative medicine. A small proportion of them are employed at state-owned facilities as reflexologists or specialists in folk medicine. The rest practise privately. They have minimal connection with mainstream health care.

6.14 Health care for specific populations

Ukrainian law guarantees equal access to health care to all Ukrainian citizens, foreign citizens and people without citizenship who permanently reside in Ukraine. However the rights of foreign citizens and people without citizenship temporarily residing in Ukraine are determined ultimately by special laws and international treaties (for example, Law of Ukraine No. 2801-XII, issued 19 November 1992, *Principles of legislation on health care in Ukraine*).

Medical health care for prisoners is provided in accordance with the health care law as with the population at large. Care is normally provided directly in a prisoner’s cell. In emergencies, prisoners can be transported to a medical facility in the Department of Justice or to the medical facilities of the Ministry of Health with the appropriate security measures in place.

7. Principal health care reforms

7.1 Analysis of recent reforms

Unlike many post-Soviet countries, large-scale health system reform has not been undertaken in Ukraine. However, the wider political and socioeconomic transformation in Ukraine has had an impact on the health system. The decentralization of management in the health sector was a part of the general government policy of administrative decentralization. Reform in this area consisted of the transfer of a series of administrative functions in the health system to the regional and local level – local state administrations and local authorities. On the one hand this allowed for an increase in the accountability of local authorities for the condition of medical services available to the local population, but on the other it brought extreme fragmentation of financial pooling and a growth in inequalities between territories. The reform of budgetary systems since 2000 also affected the resource allocation mechanisms in health financing (see section 3.4). The reform of territorial equalization mechanisms became a constituent part of the development of a system of inter-budgetary transfers for the financing of health service provision. The mechanisms introduced allowed some smoothing of territorial differences. However, the scale of inequalities remained significant, primarily because of flaws in the very method of equalization (see section 8.2). Within the framework of a general strategy of state divestiture of industry, the privatization of pharmaceutical and medical facilities was also undertaken. Under the influence of market relations, a private sector began to develop in the health system and most pharmacies were privatized.

Moreover, in the Ukrainian health system, different reforms heading in different directions were frequently initiated. Some of these were reactive in nature – in answer to new developments arising during the transition period. In the context of the sustained economic crisis in the country through the early 1990s, the main efforts were directed towards preventing the collapse of the existing health system and preserving a minimal level of social guarantees

for the provision of medical assistance to the population. At that time, with the aim of mobilizing resources for supplementary funding for health care, some health services were excluded from the state benefit package and became available for a fee. VHI was provided a legal basis. The necessity of attracting more resources for health led to the appearance and development of different types of organizations with charitable status which accumulate resources from enterprises, groups and individual citizens who make voluntary payments to prepay for medical services. Sickness funds are the most widespread, the activities of which are based on the simplest solidarity cover schemes for expenses. However, the share of expenditure on private services, voluntary donations and VHI in the overall volume of health care financing is very small. Most private payments for medical services are informal in nature, such as out-of-pocket payments to cover most of the cost of pharmaceuticals, medical materials, food, gratuities for staff and so on (see section 3.3.2).

To control expenditure in the face of an acute shortage of government resources for financing the health system, the hospital bed stock in the statutory system was swiftly reduced by almost a third (see section 5.1.1 *Infrastructure*). However, the chosen approach to rationalization – by reducing the gross number of beds while preserving the existing network of inpatient facilities, particularly in urban areas – did not have the desired effect of creating efficiency gains (see section 8.3).

The sharp fall in the health of the population in the 1990s and the critical demographic situation brought the necessity of systemic reform in the health sector to the top of the agenda. Economic stabilization and the beginning of economic growth were favourable factors for carrying out reform in this area. At the end of the 1990s, a series of reforms commenced, which were directed at improving the structural efficiency of the health system and improving the quality of care.

After long discussions regarding the development and provision of primary care, in 2000, the Cabinet of Ministers passed a new Resolution (No. 989, issued 20 June 2000, *On comprehensive measures directed at introducing family medicine within the system of health care*), which began a transition to a new model of primary care based on the principles of family medicine/general practice. The aim was to improve the quality of primary care services available, but it was also a cost-containment strategy as the family doctors/GPs would act as strong gatekeepers to hospital care and hopefully broaden access to services, thereby reducing pressure on emergency care services (see section 6.3). As part of implementation, the Ministry of Health developed and passed norms

to ensure the development of this aspect of health reform. In the regions, the primary care infrastructure started to take shape, based on the principles of family medicine: family medicine/GP clinics were founded (mainly in rural areas on the premises of existing rural outpatient clinics, rural hospitals and large FAPs). However, the speed of primary care reforms was almost entirely dependent on the position of local and especially regional authorities. In regions where the authorities were conservative, family medicine/GP services are rudimentary. In regions where the authorities actively led the changes, financial and administrative support for reforms existed and the process of establishing family medicine/GP clinics was swift.

At the beginning of 2009, according to monitoring data for the development of family medicine, in Ukraine there were 4228 primary care facilities functioning according to the principles of family medicine (of these more than 86% are rural) and the proportion of family doctors/GPs among the overall number of doctors working in primary care was around 30%. Also, 35.7% of the general population were covered by family doctors/GPs (78% of the rural population and 17% of the urban population). At the same time, regional differences in coverage ranged from 77.8% in Zakarpatska *oblast* to 6% in Kyiv. Moreover, in a number of cases the reform of primary care is of a formal character and consisted merely of renaming existing facilities without changing their character or activities. This limited the potential positive influence of reforms for allocative efficiency and population health. The primary care reform process was held back by the lack of a distinct general government policy and economic stimuli for the development of this sector.

Although extremely inequitable between different regions, the development of forms of care to substitute inpatient care (such as day care and home care, outpatient surgical centres) in Ukraine is ongoing. Since independence in 1991, the number of hospital beds for day care has risen from 0.2 to 1.5 per 1000 population by 2007 (see section 6.4.1 *Day care*). However, the growing volume of inpatient-substituting forms of care has not been of practical influence on the volume and structure of secondary care due to the prevailing ineffective administrative methods of coordination and integration in the health system.

Reforms directed at improving the quality of medical care have been undertaken more systematically (see section 8.5). Since 1999, according to a government resolution, all health facilities, irrespective of their form of ownership, have to undergo compulsory accreditation once every three years, and since 2001, in accordance with the *Law on licensing*, the licensing of clinical practice in all types of medical establishment has also become

compulsory. However, a system of incentives utilizing the results of licensing and accreditation (for example, excluding certain medical procedures from licensing or selecting medical service providers as recipients of state funding according to the quality of services provided) was absent. Also, licensing and accreditation commissions were conducted exclusively by health authorities, and this was not conducive to the transformation of these mechanisms into adequately formal instruments for internal assessment.

At the end of 1990s, the process of elaborating clinical standards started. The first elaboration was begun in 1998 with the “Temporary branch unified standards of medical technology of the therapeutic-diagnostic process of inpatient care for the population”, which was presented in the form of a list of diagnostic and therapeutic procedures with an indication as to the length of treatment and anticipated results. The development stimulated standardization in Ukraine and the adoption in 2000 of the *Law on state social standards and state social guarantees*. Until recently, improvement of health care quality was not a systematic activity. This started to change in 2007, when the Ministry of Health created a special department in charge of assessing the quality of health care services and pharmaceuticals. The National Research Institute of the Ministry of Health also opened a Department of Scientific Support for Standardization and Health Care Quality Control. The *Concept of health care quality control in Ukraine* was approved (Ministry of Health Order No. 166, 31 March 2008) and was being implemented. It provided for the creation of one unified multi-level system of quality control, with the introduction of evidence-based medicine and systematic monitoring for health care quality. It called for unified methods and the development of clinical recommendations, medical standards and clinical protocols based on more reliable, modern scientific data. It establishes controls for licensing, accreditation, certification and expertise, and improves the measurements of the population’s satisfaction with health care.

The proposed quality-control model was a vertically organized structural-functional system which included all levels of leadership – from the Ministry to individual facilities. The coordinating, consultative and advisory functions were the responsibility of Coordinating Councils for Quality Management and Control in Medical Services, which were to be set up at every level of leadership to bring together administrators, leading specialists, academics and representatives from NGOs. The responsibility for quality management and control was to lie with Clinical Expert Commissions (CECs) which were to work continuously and be made up of freelance specialists from the appropriate health care organ, highly qualified personnel in health facilities, higher education

institutions, scientific research facilities and community representatives. CECs were to present general quality-control materials to meetings of the coordinating councils. CECs also tabled proposals to the attestation and accreditation commissions about the implementation of sanctions against the relevant medical worker or health facility where systematic and/or gross defects, clinical mistakes or other factors which could negatively impact quality of care are brought to light. However, this order was superseded by another ministerial order (No. 163) on 24 February 2010, before the impact of the proposed quality-control model could be assessed.

A significant achievement for the health system, which is still not fully valued or adopted by policy-makers, was introduced in 2006 (with methodological support from a range of international organizations) – the NHA – a recognized international instrument, which makes it possible to obtain full information about financial flows in the health system (from both public and private sectors) (Gotsadze et al., 2006). Detailed data about national expenditure create a more reliable base for the development of strategies and policies in the area of health care financing (see section 3.3).

Significant changes have also taken place in the system of medical education. Since 2004, in accordance with the Bologna Convention, which Ukraine joined in 2005, the transition to European standards for the training of physicians has been implemented in higher medical education (see section 5.2.3). It is planned that the new system will be fully introduced in 2010.

However, on the whole, health care reforms in Ukraine have been notable for their slow speed of implementation, inconsistency and, in a number of instances, the contradictory nature of processes which, in reality, have not influenced the health of the population. The political instability in the country, the frequent changes of government and, accordingly, the leadership of the Ministry of Health have provoked permanent revisions to the course of reforms which, in the final analysis, led to delays in decision-making with regard to institutional changes in health care. Decisions affecting medical education may serve as examples: between 1994 and 2006, the decision to move from streamed undergraduate training (in general medicine, disease prevention, paediatric departments) to the training of all undergraduate physicians in general medicine was twice made and twice revoked. Each time, the adoption of a new decision starts a new 7–8 year cycle of physician training – and its repeal is accompanied by the corresponding costs.

The most prominent obstacles to the health care development in Ukraine may be summarized as:

- the focus on meeting the demands of the health system rather than meeting the health needs of the population;
- insufficient funding from public sources;
- violation of the principles of equity and solidarity;
- the ineffective use of available health care resources;
- the structural imbalance of medical services; and
- the inefficient use of health care potential to influence public health.

7.2 Future developments

After the Orange Revolution in February 2005, the government approved a programme with an ambitious title *Towards the People*. It included declared aims to provide all citizens with a guaranteed package of free medical services, to introduce social health insurance, to strengthen primary medical care and to facilitate the establishment of an institute for family medicine. However, the series of parliamentary elections in 2006 and 2007, with the accompanying changes in the format of parliamentary coalitions and the make-up of Parliament did not, at least formally, bring about any changes of note. A reform document proposing a set of institutional and structural changes in health care was passed for the first time only in 2007, albeit with an unrealistic time scale – the National Plan for the Development of the Health System for the Period to 2010. The results of work done as part of the joint project of the Ministry of Economics and the Ministry of Health, the World Bank, the European Commission and the Swedish Agency for International Development (*Key Strategies for the Further Development of the Health Care Sector in Ukraine*) were used as a scientific basis for the development of this document (Lekhan & Rudiy, 2007). For the National Plan, the eight key strategies for development were as follows.

1. Strengthening the financial basis and providing a stable financial structure for the health system through the introduction of social health insurance and the elimination of fragmentation of financial flows.
2. Increasing the efficiency of financial resources distribution and utilization in the health system through the introduction of a government order on the provision of medical services and the establishment of contracting between purchasers and autonomous health service providers, and

- changes to the principles of provider payment (moving from line-item financing of medical organizations to paying for services depending on the volume and structure of services provided).
3. The linking of the scale of government commitments with the financial resources available to health care through the development of a realistic programme of state guarantees with regard to free health care.
 4. Structural reorganization of the system of medical service provision, on the basis of which the development of primary care on the family medicine model can take place: the organization of effective linking between primary and secondary care levels; the optimization of the network of secondary care facilities, arising from the needs of the population; and the gradual transfer of parallel service providers to the statutory system under the Ministry of Health.
 5. The formation of an effective quality management and control system, and the establishment of a system-wide programme of standardization and quality monitoring for medical services.
 6. The material and technical renovation of health facilities.
 7. The implementation of rational pharmaceutical policies through the introduction of a purchasing system for essential medicines, state price controls for pharmaceuticals and medical devices, and quality control for pharmaceuticals.
 8. The improvement of personnel management, through improved planning for required medical personnel, ensuring training for specialists in family medicine/general practice and specialists in health care management in line with priorities.

Currently, several aspects of the National Plan are actively being implemented. The state programme for the development of primary care has been passed (Law No. 1841-VI of 22 January 2010, *On approving the "State Programme for the Development of Primary Health Care on the Basis of Family Medicine by 2011"*), which envisages a series of tasks: the development of primary care infrastructure in both rural and urban areas with the aim of moving it closer to where people live; legal and financial demarcation of primary care from other levels of medical care; the division of service purchasing and provider functions in primary care; the transition to organizing primary care in line with the family medicine/general practice model; the introduction of mechanisms to allow patients free choice of their primary care physicians and organizing patient access to secondary and tertiary care by referral from primary care

level doctors (gatekeeping); transition to per capita payments for primary care service providers and the reimbursement of staff in relation to the volume and results of their work; assistance for the development of private family doctors/GPs and their participation in fulfilling state contracts for primary care; and the participation of citizens in the process of developing, taking and monitoring of decisions affecting the functioning of primary care (see section 6.3).

A unified method of developing/adapting clinical recommendations has been prepared and passed (based on AGREE, the international tool for clinical recommendations quality evaluation – Appraisal of Guidelines, Research and Evaluation), as have clinical standards and unified clinical protocols (Joint Order of the Ministry of Health and the National Academy of Medical Science No. 102; No. 18 of 19 February 2009, *On accepting the unified method for developing clinical guidelines, medical standards, unified clinical protocols for medical care, local protocols for medical care (clinical patient pathways) on the basis of evidence-based medicine (parts one and two)*). For the organization and methodological coordination of standardization processes, a state centre for the development, monitoring and maintenance of medical standards was opened at the Ukrainian Institute for Strategic Research under the Ministry of Health. Working groups there are being put together and trained to develop or adapt clinical recommendations and, as necessary, rework the clinical protocols in place. The next challenge is to ensure the implementation of these clinical recommendations, protocols and standards at the provider level. Over 10 years (1999–2008) standards were created in the form of clinical protocols for virtually all clinical specialties. However, most of them were developed on the basis of expert opinion without the use of evidence and implementation was not supported by adequate incentives.

In the framework of the EU project Financing and Management of Health Care in Ukraine, several experiments have been conducted: encouraging financial and administrative autonomy of medical facilities, purchasing medical services on a contractual basis and using new payment mechanisms (generally substituting line-item financing with global budgets) (Rudiy, 2005). The results of these experiments were used in draft laws to provide the legislative basis for the planned reforms, including the new version of the *Principles of legislation on health care* as well as the draft *Law on medical services and facilities*.

The global economic crisis brought definite amendments to the plans for health care reform. The growth in pharmaceutical costs, food and energy prices caused a general increase in expenditures for maintaining the network of health facilities and an increase in the cost of health services. Rising

costs intensified the problem of improving the efficiency of using available resources to preserve access for the population to medical care of adequate quality. Ukrainian experts working with World Bank consultants developed a new strategy for the development of the national health system in the new economic conditions (Lekhan, Slabkii & Shevchenko, 2009). Based on this, the Ukrainian government developed wide-ranging anti-crisis measures (Cabinet of Ministers Decree No. 208 of 17 February 2010, *Some issues for the improvement of the health care system*). A specific package of measures was put together by the Ministry of Health, in which, along with short-term measures, there were plans for long-term measures of a more strategic nature, which were directed towards rationalization of the network of health care facilities and structural reorganization of the health system. At the same time, strengthening and developing an effective system of primary care remained the main priority. Along with primary care reform, a reorganization of secondary care was also proposed. The main idea was to introduce new territorial-functional units – hospital districts profiled to suit the health needs of the local population and refitted accordingly. These hospitals would be inpatient facilities in a multi-profile hospital with intensive care facilities and an outpatient clinic (one per district), a hospital for chronic conditions, one for rehabilitation, a hospice and a medical-social care department.

It is proposed that such reorganization would allow the rational regrouping of available resources and provide medical services of appropriate quality for patients with different needs. At the same time, the mechanisms for implementing these reforms are not yet certain. Two differing perspectives are being discussed: (1) creating a single financial pool at the regional level for secondary and tertiary care with the aim of creating the conditions for the optimization of planning for the medical facility network; (2) on a contracting basis creating inter-territorial unified hospitals under the administration of a few local self-government authorities. There are also plans for medical universities to have training clinics in the regional hospitals, with the aim of improving highly specialized care for the population and the quality of clinical training, and increasing the efficiency of medical research (see section 6.4). With their Decree (No. 208) the government launched two pilot projects in regions to trial these reforms in order to assess the potential risks and to develop measures to neutralize such risks before the implementation of reform at the national level.

After the presidential elections in January 2010, and the formation of a new parliamentary coalition and a new government, the basic course towards the introduction of the announced reforms in the health system has been preserved and supported, with the additional aim of introducing a system of mandatory

social health insurance (MHI) by the end of 2014 (Economic Reform Committee, 2010). MHI plays an important role in the proposed reforms. Some view the introduction of MHI as a source of additional financing; others view it as a powerful economic catalyst for the general transformation of the sector – an indispensable condition for the transition from an administrative command system (based on the Semashko model) to a system answerable to the health needs of the population. Deepening economic crisis in Ukraine (see section 1.2) did not prevent many politicians from calling for a rapid transition to a health insurance model, indeed, such calls multiplied. For example, in May 2009, during a parliamentary session, it was recommended that the relevant draft law be looked at again as a priority (Verkhovna Rada Decree No. 1461-VI of 4 June 2009). However, recent Ukrainian history shows that the final decision on the introduction of social health insurance will not be easy to make. Since independence, Parliament has returned to this issue many times – in 2003 a bill on the issue reached a third reading, but the law was not passed. Moreover, representatives of the political elite have completely different opinions about which model of MHI would be the most suitable in Ukraine.

The Ministry of Health considers the availability of trained administrative personnel to be an important condition for the successful implementation of reforms (see section 5.2.3). A draft 18-month Master's degree in Health Care Management programme for professional training has been prepared, as have the relevant teaching materials, which meet the requirements of the International Federation of Medical Education and the WHO Regional Office for Europe for postgraduate education programmes for health system managers. A five-year transition period is envisaged, after which, on appointment, the directors and deputy directors of health care facilities will only be able to start work if they are in possession of a relevant Master's degree. However, this decision has not yet been put into law. There are also plans for the introduction of a system of continuous professional development for doctors and pharmacists.

Overall, despite the fact that the goals and objectives of executive authorities have become much clearer recently, health reforms are still facing serious, even institutional, barriers, including the presence of constitutional norms guaranteeing free health services in state medical facilities. There is a lack of internal economic incentives for radical change within the health system, a lack of skills in solving health care issues among decision-makers at different levels and a lack of understanding of the national context while adopting international experience. Moreover, health care policies are often inconsistent, in line with the associated weak methodological and political leadership from the centre.

Managerial staff in health care lack many necessary skills as well. However, the main obstacles for the implementation of reform are political instability in the country, a low level of public trust in the government, and a multitude of lobbying groups seeking either to preserve the existing system or to pursue their own reform agenda in line with their corporate interests. Consequently, a number of private insurance companies openly resist socially oriented reforms as they would like to gain access to public financial resources for the health system and to block the development, or at least restrict activities, of a non-profit-making state fund for social health insurance that operates on a tripartite basis. Pharmaceutical companies that are displeased with the prospects of greater control over the use of pharmaceuticals resort to covert lobbying as well.

There is also covert resistance in the medical field. The majority of health managers who verbally promote independence are afraid of the responsibility of meeting their obligations, especially since many of them lack the appropriate training. Health authorities are reluctant to relinquish traditional levers of power. The medical community in general is interested in restoring their professional status and establishing fair remuneration for their work from the state. However, there is no single opinion in the community on the reforms of the health system. Many doctors would prefer to preserve the existing social contract, which provides them with informal remunerations, ensuring a high income. A smaller but very active percentage of doctors, disenchanted with the possibility of real change in the near future, decide to leave the health sector, or the country, altogether.

Political parties and other civil society groups play a significant role in prolonging the reform process. In election campaigns, all political parties have improving health care as a declared key aim. However, their views on the goals, and particularly the methods, for improving health care are significantly different, from the preservation of full free medical care (for parties on the left of the political spectrum) to the transition to VHI as the main source of health care financing and the privatization of health facilities (for right-wing parties). Centrists propose social health insurance together with comprehensive reforms of the health sector. Since no party has a parliamentary majority and the parties only form situational coalitions, it is difficult to make balanced legislative decisions to address pressing problems in the health system. Since regional and local authorities are elected from party lists, their political affiliation influences their attitudes towards health care reform. Thus, it is impossible to form a consolidated demand for the needed health reforms from the bottom up.

It is well known that implementing reform requires public trust alongside political forces united around the goals and principles of reform. Unfortunately, however, there is currently a very low level of public trust and support for political forces in the Parliament and trust in central and local executive authorities is even lower. Thus, it is doubtful that the public will support health care reforms, despite dissatisfaction with the current situation. Successful health reform implementation requires the establishment of certain conditions in order to overcome the distrust and so-called “fatigue” of promised but unfulfilled reforms.

- Health must be proclaimed a basic fundamental social and economic priority by all branches and levels of government; this must be supported by appropriate economic policy.
- There must be a political will to implement reforms.
- There must be clear, consistent and transparent health care policies, the development and control over which must involve all interested parties, primarily the public and the medical community.

8. Assessment of the health system

8.1 The stated objectives of the health system

The stated aims of the health system reform programme in independent Ukraine were first formulated in the *Concept for the development of health care*, which was introduced by the Presidential Decree on 7 December 2000. The main aims were:

- to maintain and promote the health of the population and to extend active longevity;
- to create legal, economic and administrative mechanisms to empower the citizens of Ukraine to exercise their constitutional rights to health protection, care and medical insurance;
- to ensure a guaranteed level of high-quality health care free of charge in accordance with legislation;
- to establish a regulated market for health services, facilitating the performance of health facilities of any type of ownership and creating conditions to meet the health care needs of the population;
- to ensure efficient use of available personnel, financial and material resources; and
- to establish joint participation of the state, employers, communities, enterprises and individuals in the financing of health services.

In 2002, Parliament ratified the long-term comprehensive programme Health of the Nation for 2001–2011, the aims of which were given as improving the demographic situation, improving and strengthening the health of the nation, improving the quality and efficiency of health care, and ensuring social equity and the right of citizens to health protection. Moreover, every government on coming to power has announced its aims in the sphere of health protection.

As part of their programme of activities in the Ukrainian Breakthrough: for the People, not Politicians, the “Orange” government declared in the Cabinet of Ministers Decree No. 14 of 16 January 2008) that:

the provision of high-quality and accessible medical care, the orientation of the health system towards disease prevention, and the creation of safe and healthy environments (working conditions, living conditions, study, relaxation, nutrition, healthy lifestyles and improving the demographic situation) should become the priority activities of all those in power.

To achieve these aims, the government took on a series of ambitious obligations, including:

- appropriate financing of the sector with a fixed social protection mechanism for health workers;
- developing the legal basis for the introduction of mandatory state health insurance with the provision of state-guaranteed free health services;
- developing measures to encourage citizens to purchase VHI;
- undertaking structural reorganization of the health system with the development of primary care according to a family medicine/general practice model and providing every family with access to a family doctor/GP in the course of five years;
- developing rural health care through the Village Doctor Programme, making provisions for the building/renovation of rural outpatient clinics and FAPs and updating of their medical equipment;
- improving the efficiency of health care spending by moving to resource allocation by services provided rather than capacity criteria, and the introduction of contracting between the state purchaser and health service providers with different forms of ownership;
- creating a state control mechanism for pharmaceuticals and medical devices, in accordance with the Programme to Combat the Sale of Counterfeit Pharmaceuticals, 2009–2012; and
- writing a Concept on regulating the quality of health services, 2008–2012.

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

One of the main problems faced by the health system in Ukraine is the mobilization of adequate resources in such a way as to guarantee equity in access to core health services. In accordance with the current requirements, health care financing should be both vertically and horizontally equitable; overall, however, the system of health care financing in Ukraine may be considered regressive. The main funding source, general taxation revenues, combines revenues from direct and indirect taxes so the financing system can be considered generally progressive (Mossialos & Dixon, 2002). However, the progressiveness of financing from budgetary resources is reduced by a considerable volume of activities in the shadow economy (up to 26% of GDP; see section 3.3.1), especially as wealthier citizens conceal their income from taxation. Moreover, the allocation structure according to the type of health service provider reinforces the inequality of state expenditure in vertical equity. Research conducted by the World Bank found that 70% of general government expenditure on health goes to hospitals, specialist facilities and sanatoria, although the poorest sections of the population use the services of these facilities considerably less frequently than wealthy citizens (World Bank, 2008).

To a greater extent, direct payments undermine vertical equity in financing. Although estimates of private health expenditure from different sources and using different methods vary greatly, even the most conservative suggest that they account for more than 40% of total health expenditure (see section 3.1), or up to 3% of GDP (World Bank, 2008). Patients pay for a considerable volume of services out of pocket. Most of the population pay out of pocket in full for their pharmaceuticals in both outpatient and inpatient care. Both rich and poor pay for drugs and treatment. The growth in payments is taking place in a chaotic and uncontrolled fashion, without any attempts by the government to mitigate the negative consequences of this process for the population (see section 3.2). Overall, in the World Bank's assessment, population payments for medical services in Ukraine are more regressive than in other countries of the WHO European region and OECD countries, and, potentially, health care costs could push many people into poverty (World Bank, 2008).

All of this results in significant inequalities in access to care. Irrespective of the economic growth witnessed in the country prior to the global financial crisis, in 2009 almost 20.5% of households could not access necessary medical care (see section 3.3.2). The diffusion of informal payments deters the poorest groups and rural populations (most of which are low-income) from using

medical services most of all. Due to their inability to pay for medical services, both urban and rural poor more often do not seek medical care or postpone it and, moreover, low-income patients are more often refused treatment because they cannot pay for services or pharmaceuticals (see Table 8.1). Vulnerable groups include many elderly people who rely on their state pensions as their main source of income and people with low educational attainment as they find it hard to find well-paid employment. Inequality in access to health care is also demonstrated by access for people living in regions with different levels of economic development. Research shows that in the poorer regions in western Ukraine financial access to health services is lower than in the wealthier regions in eastern and central Ukraine (Lekhan & Shishkin, 2007). High out-of-pocket payments also lead to considerable differences in the quality of services offered.

Table 8.1

Frequency of delaying seeking, utilizing and being refused health services, 2006

	Monthly household income level		Place of residence	
	Low	High	Rural	Urban
Frequency of delaying seeking health care due to the inability to pay for services, %	16.8	6.7	17.3	8.9
Frequency of utilizing health care, %	68.2	84.7	70.3	81.4
Frequency of being refused health care, %	19.6	10.0	–	–

Sources: Kyiv International Institute for Sociological Research, unpublished data, 2006; State Statistics Committee of Ukraine, 2007.

There are grounds for thinking that the scale of social inequalities is reaching crisis proportions. Data from the State Statistics Committee of Ukraine show that in the first quarter of 2009, prices for imported pharmaceuticals rose by 43% compared with the same period in 2008, due the devaluation of the hryvnya. The inescapable consequence of this was a reduction in the acquisition of pharmaceuticals by state-owned health facilities. The increase in pharmaceutical prices against a background of falling real incomes led to a reduction in the ability of people to purchase essential medicines and make formal or informal payments, as a result of which access to health care was reduced, particularly for the poor and vulnerable (Sheiman & Shishkin, 2009).

Inequalities caused by out-of-pocket payments can also have a horizontal regional character, as people with the same income level living in richer regions pay more out of pocket than those living in poorer regions. Similarly, in villages and small towns, gratuities are smaller than in big cities. Horizontal

equity in budgetary payments also infringes upon the functioning of parallel health systems. Often, especially in emergencies, patients who use services in parallel health facilities access services in the local statutory facilities, thereby taking a portion of the resources allocated to the financing of medical services for other patients in that territory who cannot access the parallel system (see section 3.4).

The system of budget financing in place allows for a certain amount of redistribution of financial resources. Following decentralization after independence (see section 2.4), the available approaches for inter-budgetary transfers did not equalize financial provisions for health expenditure because the prime concern was historical precedent in allocations to facilities, and differences in the age and sex structures and morbidity levels of populations living in different territories were not taken into account. The difference between maximum and minimum funding levels for health from territorial budgets was 2.1 times. Budgetary reforms undertaken in 2001 changed these budgetary transfers so they were calculated according to a single norm – per capita funding corrected by coefficients for the budgets of different levels and territories (see section 3.4). The system led to a definite reduction (of up to 1.6 times) in the inequalities between residents in different regions of Ukraine. However, the formula, which gives the requirements for disbursements and associated level of transfer equalization, not only included the age and sex structure of the population but also was burdened with multiple correcting coefficients taking into account the resources involved. For example, a few coefficients linked financing to the characteristics and number of health personnel working in the health facility network, so the shortcomings of budgeting based on historical precedent were not overcome (World Bank, 2008). It also became a defining factor for the preservation of significant territorial inequalities in health care financing in connection with the presence of existing differences in regional resource provision.

One of the more pressing problems being addressed by the Ministry of Health is how to reduce the scale of inequalities, particularly during a global financial crisis which has led to a reduction in the amount of finances available for distribution. For this the Ministry of Health is looking at the possibility of unifying the health protection budgets resources of villages, districts and towns by creating a single unified pool for the provision of all local primary care services. More radical suggestions include the unification of resources for the financing of inpatient care at the regional (*oblast*) level that would open up opportunities to not only rationalize the inpatient facility network, with

an emphasis on reducing excess hospital capacity and creating inter-district specialist care centres, but also overcome duplication of activities at secondary and tertiary level state facilities (Sheiman & Shishkin, 2009).

8.3 Efficiency of resource allocation in health care

Under the Soviet Semashko system, resource allocation was conducted according to the number of beds and staff in health facilities and not on population health care needs. The volume and quality of work conducted were not a factor. This approach created inappropriate incentives for extensive development and the preservation of excessive and inefficient infrastructure, resulting in the unjustified growth in outpatient appointments, unnecessary hospitalizations, longer hospital stays and so on. The biggest health facilities were also concentrated in the cities, towards which most health care resources were directed. This Soviet approach to allocating resources to health facilities based on their size was preserved in Ukraine (see section 4.2 and section 3.6.1). Formally, budgets at the health facility level are based on Ministry of Health norms, which define the staffing levels and other essential resources (such as the number of doctors) arising from the number of beds and visits to health facilities and not from the demand for medical services. The imperative nature of these normative acts (if they are not fulfilled, there may be harsh sanctions) is a contributory factor to the inflexibility of resource allocation in health care. This leads to high routine expenditure (particularly wages, utility bills and the like) and limits investments to improve the quality and efficiency of services for patients. Exacerbating this problem is the legislation which prohibits the closure of health facilities and the difficulties local authorities encounter when trying to reduce staff numbers.

At the same time, under the pressure of economic crises in Ukraine through the 1990s, there were a number of specific structural changes in the health system. The acute shortage of state funding for health care became the main reason for changes in the most expensive sector – inpatient care. The Parliament instituted an empirically grounded norm for the maximum number of beds (8 beds per 1000 population) (Cabinet of Ministers Decree No. 640, issued 28 June 1997). The accompanying indicators for the number of beds distributed between community and state facilities in a given territory should have been brought below this maximum level by the regional health authorities. This norm did not include the bed stock of parallel health providers. The number of beds was reduced rapidly (by 150 000 beds between 1996 and 1998) by

administrative means without any change in the approach to resource allocation (for beds) or to defining the number of medical staff (according to norms based on the number of beds). This provoked strong resistance from both the health care leadership and the many medical personnel. For the former it would mean a cut in funding and for the latter they could lose their jobs. Cutting the number of beds was achieved mainly by cutting hospital capacity (see section 5.1). As a result, the main saving from reducing bed numbers was insignificant in the face of dominant expenditure structures financing care irrespective of the volume provided.

More radical ways of reducing the number of hospital beds by closing facilities generally only affected the smallest rural hospitals, which, as a rule, were turned into outpatient clinics. In a number of cases, the closure of these facilities was dictated not so much by expediency as by the limited resistance to their closure. Besides economic factors, the reduction in the size of the population served was also influential for reducing the number of hospital beds. In total, from 1991, the number of hospital beds fell by almost a third (30.4%), the number of inpatient facilities fell by 27.8%. At the same time, the network of small rural hospitals shrank by 60%, while the number of secondary care hospitals in towns decreased less (down by 20%), and the number of tertiary care level facilities remained virtually unchanged. Hence the overall number of hospital beds has remained high (see section 5.1.1 *Infrastructure*).

A reasonably high level of utilization against the background of poor access to inpatient care, which is extremely expensive for a significant proportion of the population, is strong evidence of the inefficiency of financing inpatient care by the number of bed-days. This pushes hospitals to keep beds open and fill them with patients irrespective of whether they really need inpatient treatment. As a result, the dominance of funding for inpatient care in total health expenditure has been preserved, and spending on outpatient and particularly primary care remains far too low.

Human resources are extremely unevenly distributed. The biggest staff shortages are in rural areas and in primary care. Measures taken by the Ministry of Health in the form of sending new graduates to work in underserved areas and specialties, and the introduction of some benefits for health workers working in rural areas have not brought the desired results (see section 5.2).

To improve the efficiency of resource distribution, Ukraine needs to address a series of tasks listed in the National Plan for the Development of Health Care by 2010, including the financial and organizational demarcation between primary and secondary care, conducting structural reorganization of health care,

first and foremost the development of primary care along the lines of family medicine/general practice, the apportionment and strengthening of hospitals for acute care, the transition from the current way of distributing resources to one based on contracting between purchasers and providers of health services, and the introduction of new modern forms of paying service providers.

8.4 Technical efficiency in the production of health care

Assessing the economic efficiency of the health system is not feasible as this kind of research has not been conducted in Ukraine. However, there are indirect indicators showing economic inefficiencies in the system. The reduction of bed numbers pushed the task of raising the efficiency of resource utilization into second place. Hospitals, trying to preserve their bed capacity and to receive additional informal funds from the population, increase the volume of services, weakening demand for hospitalization to be necessary on medical grounds. The expansion of day and home care from polyclinics has not been accepted as a substitute for inpatient care.

As noted in section 6.4, unnecessary hospitalizations account for a third of all hospitalized patients. It was found that nearly 13% of patients were receiving specialist outpatient care and 20% were receiving treatment using technologies which did not require hospitalization. The average cost of medical services for one patient based on total expenditure (not only those which are really covered by the budget) in an outpatient setting would be approximately four times lower, and for day cases two times lower than the cost of inpatient treatment. These figures demonstrate the economic inefficiency of the current health system and lead us to conclude that the optimization of just one constituent medical service – the choice of an adequate place to provide health care – demonstrates the opportunity to increase the real funding possibilities of the sector.

8.5 Quality of care

The quality of health services is not regulated by a specific piece of legislation in Ukraine. However, since independence, the normative base has been formed and different efforts have been directed at improving the quality of health care (see section 4.1.4). In the mid 1990s, a system of quality guarantees for health care was created: in addition to the Soviet Semashko system's accreditation of health personnel, the licensing of medical practice was introduced (initially in private

structures, but from 2001 licensing was rolled out to all health care facilities irrespective of ownership) as well as the accreditation of health facilities (since 1997). However, in relation to the remaining obvious incentives, particularly for state and community health facilities, these mechanisms are more of a formality and do not much influence the safety or quality of health services. In 2008, on the basis of verifying the observance of licensed conditions in private facilities, 48 licences, representing 15% of private providers, were annulled. Not one state or community facility underwent such verification and none was deprived of its licence (Ministry of Health of Ukraine and Ukrainian Institute for Strategic Research, 2009). Conditions in health facilities are run down – both physically and morally; and their renovation is progressing extremely slowly (see section 5.1).

From the late 1990s, the standardization of health care has developed rapidly in Ukraine. Thousands of clinical protocols have been developed for different medical specialties. However, the level of the standards has remained low, and their implementation is only checked periodically, usually in connection with a patient complaint about the quality of care or a court case or other conflict situation. Health personnel lack adequate motivation to improve the quality of their work, and, in the case of adopting clinical standards, most often this is linked to the low and inflexible remuneration of staff (see section 3.6.2).

A system of quality control for pharmaceuticals has been introduced, which includes assessments of their manufacture, regulation of their entry to the market, the monitoring of adverse reactions and so on (see section 5.1.5). The system for monitoring adverse reactions, the implementation of which is the responsibility of the State Pharmacological Centre under the Ministry of Health, analyses spontaneous communications about adverse reactions and conducts pharmaco-epidemiological research. The number of notifications about adverse reactions between 1996 and 1999 grew 25 times, which shows that the system has come into being. On the basis of notifications received, the State Pharmacological Centre has banned or limited the use of 18 pharmaceutical preparations and groups of pharmaceuticals.

In 2009, the Ministry of Health introduced a new system of quality control and management in health care and began its implementation. However, there are few incentives to improve the quality of health services and increase patient satisfaction (see Chapter 7). Overall, irrespective of the many activities aimed at improving quality, the health system is hardly oriented towards population needs and is not answerable to its users for the results of its actions. Patients as end users have almost no participation in managing the system.

8.6 The contribution of the health system to health improvement

Thus far, there has been no official assessment of the contribution made by the health system to improving population health. However, available data shows that despite increased spending on health in 2000–2008 (see section 3.1), with the exception of maternal and infant mortality, the main health indicators have changed little (see section 1.4).

Research on avoidable mortality in Ukraine from 1989 to 2006 found that it reached a peak in 1995, growing by 52.6% among men and 29.6% among women from 1989, and that avoidable mortality rates fell towards 2006, but are still 36% higher for men and 20% higher for women than rates for the base-level year of 1986. The reduction in the level of avoidable mortality between 1995 and 2006 was mainly the result of broad prevention measures outside the health sector (Group I). Indicators for deaths which are amenable to health system-wide activities (detection and treatment of disease in the early stages – Group II) and effective medical intervention (Group III) were virtually unchanged for men or women (see Table 8.2) (Libanova et al., 2008).

Table 8.2

Avoidable mortality indicators for the population aged 25–64 years in Ukraine, 1989, 1995 and 2006 (per 100 000 population)

Cause of death	Men			Women		
	1989	1995	2006	1989	1995	2006
Group I	479.0	720.4	624.0	134.6	188.2	167.4
Group II	3.0	3.5	3.4	46.2	51.6	51.7
Group III	118.9	192.9	192.5	42.0	48.9	49.1
Total	600.8	916.9	819.8	222.8	288.7	268.2

Source: Libanova et al., 2008.

Irrespective of the increase in funding for the health sector, the lack of any improvement in avoidable mortality, that is, deaths which could be prevented by timely access to health services of reasonable quality, is evidence that the health system has had little impact on population health. It can be assumed that improving access to effective health care, but above all more rational and equitable distribution of resources and effective policy in the area of health protection, could ensure that real progress is achieved in the health status of the population of Ukraine.

9. Conclusions

The Ukrainian health system has preserved the fundamental features of the Soviet Semashko model of health care, such as general taxation being the main source of funding, the allocation of resources depending on the size of the medical facility, and budgetary financing of health facilities. Today the Ukrainian health system is close to a centrally planned system against a background of other changes which are developed on market economic principles. The transition from centralized financing to its extreme decentralization is the main difference in the health system in comparison with the classic Soviet model in Ukraine.

Apart from the reform of inter-budgetary relations which took place in 2001, the decentralization of the four-level budget system is characterized by the fragmentation and duplication of pooling in health care. The existence of parallel systems of financing has further reinforced this tendency. The system of financing in place not only contributes to the preservation of inefficient methods of resource distribution and patient pathways, but also fails to facilitate adequate access to essential medical services. The financing of health facilities on the basis of line-item budgeting and the preservation of the legal status of facilities as state-owned reproduce the existing pattern of expenditure and increases the need for a large volume of budgetary financing, which does not lead to improved efficiency. As a result, health care financing in Ukraine does not provide successful protection of the population from the risk of catastrophic health care costs by equalizing the burden of health care expenditure between different social and territorial groups. The situation is intensified by the practically unlimited and weakly regulated out-of-pocket payments for medical services, which are demanded by state health facilities, and that create inequalities in access to health care for population groups. The state guarantees of free medical care for citizens are declarative and have inadequate state funding.

Health facilities and workers do not have the motivation to improve the quality of medical services, increase the efficient use of resources, or take responsibility for the health status of the population. Health workers receiving hourly-rate salaries which disregard the real results of their work have no incentive to use resources rationally, to strive for the best population health outcomes possible per unit of resources spent, to build their professional activity on the basis of evidence-based medicine, or to find the optimum balance between cost and quality. Similarly, health care managers have no incentive to initiate structural internal changes in their organizations as such changes (for example reducing the number of inpatient beds or staff) within the existing framework of management and financing would also mean a reduction in budgetary allocations to the facility. In view of the virtual absence of competition between health service providers, the managers also have no motivation to organize effective quality control or to find ways of reducing the cost price of medical services. The results of the health system's activities are not as good as they could be given the resources at its disposal. The population in Ukraine is fundamentally unsatisfied with the health service and the necessity of reform in the health system is generally recognized.

Many changes in the health sector have been initiated and often realized since independence. Most of them were oriented not towards meeting the health needs of the population but towards solving problems in the health sector. Often a part of the medical services was made chargeable in order to mobilize additional resources; charitable payments and donations were allowed; and sickness funds and VHI began to develop. To reduce government expenditure in circumstances where there was an acute shortage of funds, the decision was taken to reduce the stock of hospital beds, as a result of which its volume was cut by over a third. Together with this, the legal basis was laid and measures realized which were directed towards institutional reform of the health sector (starting with the conversion of primary care to family medicine/general practice from the established inpatient-focused forms of medical service). A series of decisions were also made directed at setting up specific quality guarantees for health services (the licensing of medical practice, accreditation of health facilities, standardization of clinical practice).

However, it is hard to call the changes undertaken in Ukrainian health care "reforms" in so far as they were notable for their slow speed, inconsistency and, on a number of occasions, the contradictoriness of different processes. The main reasons for this are:

- the lack of clearly designated aims for the reforms (in both qualitative and quantitative respects);
- the lack of a clear strategy for changes, constant revisions and slow implementation of reforms;
- the lack of a clear policy provided to fulfil decisions taken and the disregarding of scientifically demonstrable or assessed experience of approaches, forms and methods of reforms; and
- the influence of different lobby groups on decision-making.

The government, when analysing the reasons for the lack of success in health care reform, came to the conclusion that, in order to ensure equitable access to medical services, achieve greater efficiency in the health system and improve its impact on population health, it would be necessary to reform the institutions which fulfilled all functions of the financing system – that is, to replace the entire Soviet Semashko model with one that is appropriate to the new social conditions. In 2007, with the National Plan for the Development of Health Care, the government started the attempt to introduce systemic reform and to move towards a health care model which was orientated towards satisfying the population's demand for accessible health services of reasonable quality. However, political instability in the country due to the changes of government and permanent parliamentary crisis hindered the passing of the legislative acts necessary to implement the proposed health care reform. Attempts to revise the apparently fixed course of the sector's development were resumed with new vigour. Reasonably consistently, albeit very slowly, the strategic direction of the National Plan is being implemented – that is, those parts which are linked to forming a system of quality control and management for medical services. A standardized method for the development of clinical management, medical and clinical protocols on the principles of evidence-based medicine and a programme of standardization of medical services, as well as processes for quality control and management of medical services, have been developed and approved, and await implementation.

The global financial crisis and associated reduction in financing for health care have once again brought the issue of Ukrainian health care reform to the fore. The Ministry of Health prepared an order on improving the system of health services for the population of Ukraine in a time of crisis which was approved by the Parliament. The aim was to minimize reduced access to health services at a time of crisis, primarily for the poorest sections of the population, and to create conditions for increasing the efficiency of the health system in the face of tighter budget limits. The leading role in this order is taken by

measures for increasing the structural efficiency of health care, in particular the intensification of reforms of primary and secondary care. However, serious institutional barriers remain on the path of reform: more parties have an interest in preserving the status quo than in reform. Reform requires a considered choice of expedient innovations and strong political will to actually implement changes. Consequently, there are high hopes for the economic reform programme for 2010–2014 announced in June 2010, which promises concrete health financing reforms, but whether or not they can be implemented this time remains to be seen (Economic Reform Committee, 2010).

10. Appendices

10.1 References

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10.2 HiT methodology and production process

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

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

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

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

A typical HiT profile consists of 10 chapters.

- 1 Introduction: outlines the broader context of the health system, including geography and sociodemography, economic and political context, and population health.
- 2 Organizational structure: provides an overview of how the health system in the country is organized and outlines the main actors and their decision-making powers; discusses the historical background for the system; and describes the level of patient empowerment in the areas of information, rights, choice, complaints procedures, safety and involvement.
- 3 Financing: provides information on the level of expenditure, who is covered, what benefits are covered, the sources of health care finance, how resources are pooled and allocated, the main areas of expenditure, and how providers are paid.
- 4 Regulation and planning: addresses the process of policy development, establishing goals and priorities; deals with questions about relationships between institutional actors, with specific emphasis on their role in regulation and what aspects are subject to regulation; and describes the process of health technology assessment, and research and development.
- 5 Physical and human resources: deals with the planning and distribution of infrastructure and capital stock; the context in which IT systems operate; and human resource input into the health system, including information on registration, training, trends and career paths.
- 6 Provision of services: concentrates on patient flows, organization and delivery of services, addressing public health, primary and secondary health care, emergency and day care, rehabilitation, pharmaceutical care, long-term care, services for informal carers, palliative care, mental health care, dental care, complementary and alternative medicine, and health care for specific populations.
- 7 Principal health 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 and legislation.

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

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

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

10.3 The review process

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

10.4 About the authors

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The Health Systems in Transition profiles

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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 WHO European Region and beyond. The HiT profiles are building blocks that can be used:

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

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Key

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

^a Albanian

^b Bulgarian

^c French

^d Georgian

^e German

^f Romanian

^g Russian

^h Spanish

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