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Belarus

Health system review

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Health Systems in Transition

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Belarus:

Health System Review 2013

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Preface

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

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

- to learn in detail about different approaches to the organization, financing and delivery of health services and the role of the main actors in health systems;
- to describe the institutional framework, the process, content and implementation of health-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 reviews poses a number of methodological problems. In many countries, there is relatively little information available on the health system and the impact of reforms. Due to the lack of a uniform data source, quantitative data on health services are based on a number of different sources, including

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

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

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

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

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List of abbreviations

BelMAPO	Belarusian Medical Academy for Postgraduate Education
BYR	Belarusian rouble
CDC	Communicable disease control
CIS	Commonwealth of Independent States
CT	Computerized tomography
DALE	Disability-adjusted life expectancy
DOTS	Directly observed treatment, short-course
DRG	Diagnosis-related groups
DTP	Diphtheria, tetanus and pertussis
ECG	Electrocardiogram
ENT	Ear, nose and throat
EU	European Union
FAP	*Feldsher*-midwife (*Akusher*) point
FTE	Full-time equivalent
GDP	Gross domestic product
GMP	Good manufacturing practice
GP	General practitioner
IAS	Information and Analysis Systems
ICD-10	International Statistical Classification of Diseases and Related Health Problems 10th Revision
ICT	Information and communications technology
IT	Information technology
IMF	International Monetary Fund
IVF	in vitro fertilization
MDR-TB	Multidrug-resistant tuberculosis
MRI	Magnetic resonance imaging
NATO	North Atlantic Treaty Organization
NGO	Nongovernmental organization
NHA	National Health Accounts
OECD	Organisation for Economic Co-operation and Development
OOP	Out-of-pocket payments

OSCE	Organization for Security and Co-operation in Europe
PPP	Purchasing power parity
PROMs	Patient-reported outcome measures
RSPC MT	Republican Scientific and Practical Centre for Medical Technologies, Informatization, Administration and Management of Health
TB	Tuberculosis
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
VAT	Value added tax
VHI	Voluntary health insurance
XDR-TB	Extensively drug-resistant tuberculosis

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Abstract

This analysis of the Belarusian health system reviews the developments in organization and governance, health financing, healthcare provision, health reforms and health system performance since 2008. Despite considerable change since independence, Belarus retains a commitment to the principle of universal access to health care, provided free at the point of use through predominantly state-owned facilities, organized hierarchically on a territorial basis. Incremental change, rather than radical reform, has also been the hallmark of health-care policy, although capitation funding has been introduced in some areas and there have been consistent efforts to strengthen the role of primary care.

Issues of high costs in the hospital sector and of weaknesses in public health demonstrate the necessity of moving forward with the reform programme. The focus for future reform is on strengthening preventive services and improving the quality and efficiency of specialist services. The key challenges in achieving this involve reducing excess hospital capacity, strengthening health-care management, use of evidence-based treatment and diagnostic procedures, and the development of more efficient financing mechanisms. Involving all stakeholders in the development of further reform planning and achieving consensus among them will be key to its success.

Executive summary

Introduction

The Republic of Belarus declared independence from the Soviet Union in December 1991 and from 1991 to 1994 was a parliamentary republic. Since then, the country has been a titular democracy headed by a President with very strong executive powers; President Lukashenko has been in power since 1994. Due to the moderate pace of economic reforms and partial price liberalization, Belarus avoided the full impact of economic liberalization experienced in many other Commonwealth of Independent States (CIS) countries. The relatively mild economic transformation has resulted in comparatively low rates of unemployment, poverty and inequity, as well as less drastic fluctuations in mortality indicators. However, the global economic crisis which began in 2008 has threatened this stability and a revaluation of the Belarusian rouble in 2011 rapidly increased the relative cost of imports, including fuel and pharmaceuticals, which has had an inevitable impact on people's standard of living.

Maternal and infant mortality have been steadily improving in recent years and average life expectancy for women is now higher than it was prior to independence (76.6 years in 2009), though lower than the average for the WHO European Region of 79 years, and with disability-adjusted life expectancy (DALE) of only 66 years. Average life expectancy for men has improved (64.8 years in 2009), but life expectancy for men still has yet to recover pre-independence levels and is below the European average of 72 years. Both tobacco and alcohol consumption are key factors in the width of this gender gap. Belarus is experiencing population decline as birth rates are falling and death rates are increasing; although noncommunicable diseases pose the greatest health burden, tuberculosis (TB) and HIV are the main communicable disease challenges to population health. High levels of multidrug-resistant tuberculosis (MDR-TB) pose a particular challenge to the health system.

Organization and governance

The inherited Soviet Semashko health system (a hierarchical, nationally controlled system the staff of which are state employees) is the basis of the current Belarusian health system. Despite considerable change since independence, a commitment remains to the principle of universal access to health care, provided free at the point of use through predominantly state-owned facilities, organized hierarchically on a territorial basis. Incremental change, rather than radical reform, has been the hallmark of health-care policy. The Ministry of Health has overall responsibility for the health system, although the funding and purchasing of primary and secondary care is devolved to the regional level (there are six regions, plus the independent administrative entity of the capital city Minsk). Highly specialized tertiary care hospitals are funded directly from the Ministry of Health budget. There are very few privately owned service providers in the system and few nongovernmental organizations (NGOs) engaged in providing services. Some line ministries and large enterprises have their own parallel health systems, which are often perceived as better but which are also not well coordinated with the main health system. Since 2005, these parallel systems are gradually being absorbed into the main health system.

The broad approach to planning in infrastructure and capital is based on legal minimum requirements focused on required inputs (as under the Semashko system), although a change to per capita budgeting for primary care has meant some shift towards planning infrastructure on the basis of demographic need, and there has been increasing investment in primary care. Planning and management functions are largely integrated, as both are ultimately the responsibility of the Ministry of Health. Health-care providers manage health-care delivery under the supervision of regional health-care departments and local government, but the system is in essence hierarchical.

Policy development and priority setting are centralized processes where the Ministry of Health is the key actor. District and regional authorities implement policies and act on centrally determined priorities within the constraints of their local budgets; there are no formal channels for seeking the input of different stakeholders in the policy development and priority-setting process. Individual health facilities have no meaningful decision-making powers over capital, staffing levels or payment, or the types of services offered. Decisions about capital and staffing levels are made by the regional or district health-care departments, staffing payment levels are agreed centrally and the types

of services offered are determined according to requirements issued by the relevant specialist branches in the Ministry of Health. There are difficulties with filling posts in less popular branches of medicine or rural areas.

The Ministry of Health plays the main regulatory role at all levels of the health system, although regional and district governments are also key stakeholders as they are responsible for financing the system at their level. Regulation is achieved through the use of very detailed accounting procedures and the issuing of central requirements (norms), rather than through contracting or licensing. For example, there is no central register or formal licensing of professional medical staff. Patient records are regularly checked to ensure diagnostic and treatment protocols have been adhered to and that doctors have made sufficiently detailed notes for quality assurance purposes. Where there is an adverse treatment outcome, individual doctors who fail to follow standards and protocols to the letter face severe legal consequences and penalties. As a result, health professionals are reluctant to report errors, and much opportunity for potential learning and improvement is lost. Although in principle patients can complain about their care, in practice the barriers to doing so are significant, such as the lack of a patients' right to see their own medical records.

Financing

In 2011, total health expenditure accounted for 5.3% of gross domestic product (GDP), which equated to a per capita expenditure at purchasing power parity (PPP) of US$ 793 per capita (around the average for CIS countries, but below the 2010 European region average of 8.3% of GDP). Most came from the state budget; the WHO estimated public health expenditure to be 70.7% of total health expenditure in 2011, and health expenditure accounted for 13% of total government expenditure in the same year.

Belarus has not introduced any form of compulsory social health insurance, and while financing for the system has been decentralized to the local level, the main source of taxation revenue remains local enterprises, rather than payroll contributions. This is a distinctive feature of the Belarusian system that reflects the nature of the wider economic system, which is largely unprivatized so that profits or revenue from local enterprises are channelled through local budgets and pooled (unearmarked) at the national level. The only other significant source of funding is out-of-pocket (OOP) payments, which at 26.7% of total health expenditure account for nearly all nongovernment expenditure, and are

mainly in the form of formal co-payments for outpatient pharmaceuticals. Voluntary health insurance (VHI) is not a significant feature of the system and nor are external resources.

Access to health services is universal and significant co-payments only exist with regard to pharmaceuticals, dental and optical care costs. Co-payment levels are determined centrally by the Ministry of Health, and costs are a less significant factor than politics in determining co-payment levels. Most people have to pay out of pocket for prescription outpatient pharmaceuticals, but certain essential drugs (broadly those covered by the WHO Essential Medicines List, plus some others for cancer, for example) are available free of charge; the import and purchase of these drugs are carried out centrally through the Ministry of Health. Certain categories of people (such as veterans) are also able to access pharmaceuticals, dental services and optical care with discounts or full reimbursement from public funds.

Local government acts as the main collecting agency, collecting taxation contributions from enterprises and individuals, along with other revenue, such as rent and profit from state-owned enterprises; it also acts as the main pooling agency for health services in the specified territory. However, successful state enterprises are not distributed equally across the country, meaning that the most disadvantaged regions also face the most difficulty in providing health services. A portion of local revenues are then sent to the central state budget, the collecting agency at the national level, from which the Ministry of Health receives its allocation; the Ministry of Health is thus the national-level pooling agency and acts as the third-party payer for specialized tertiary care and vertical programmes (e.g. for TB and HIV/AIDS) for the whole population. The overall health budget allocation is set by the Ministry of Health and the Ministry of Finance in line with the will of the Parliament and the President. Budget decisions are then passed down to the local level for implementation.

The organizational relationship between purchasers and providers is based on an integrated model, in that all personnel are directly employed by the paying authorities, which also own the facilities. Provider behaviour is controlled through a combination of hierarchical management and strictly enforced norms. Health-care services are paid for prospectively, using global budgets based on weighted capitation for primary care and on specific line-item budgets in turn based on past expenditure in secondary and tertiary care.

Physical and human resources

The capital stock of the health system is extensive, with more beds per capita than any other country in the CIS or the EU, reasonably equitably distributed across the country. Decisions on investment funding are made by the district or regional local authorities in accordance with the annual planning and annual budgets for health care. The purchase of the expensive equipment is funded in accordance with state programmes approved by the government. Since 2008, the use of information technology (IT) in the health system is being strengthened, with systems such as electronic appointment booking and working towards more systemic usage.

Belarus has maintained a large medical workforce since independence, even after 2010 when the internationally recognized definition of a 'practising doctor' was adopted. It is hoped that the move towards new definitions (excluding those with medical qualifications but not practising) will help in workforce planning as the uneven distribution of staff between regions and specialties will be clearer. Despite the large number of doctors and nurses, human resources in health care in the country are unevenly distributed, and there is a shortage in primary care in both in rural and urban areas. Although the large workforce means that the overall cost of staff is large, individual salaries are very low.

Basic medical training lasts five or six years, after which, on passing the state medical exams, the graduate receives a medical diploma, and is allocated a hospital placement for one year of practical training. Training takes nearly three years for nurses and *feldshers* (rural paramedics). Graduate doctors, nurses and *feldshers* should all complete an obligatory two-year placement (usually in a primary care facility) as their first job. There are minimum standards for the continuous medical education of all practising doctors and nurses, but continuing medical education is not linked to a process of revalidation as doctors and nurses are not registered or licensed in Belarus.

Provision of services

Public health is overseen by the State Sanitary Inspectorate, with facilities in every administrative territory and the Republican Centre for Hygiene, Epidemiology and Public Health which coordinates the prevention of different illnesses (such as HIV) and the promotion of healthy lifestyles. Currently, the key challenge is to move away from identifying and punishing breaches of sanitary legislation towards a strategy oriented towards preventing such

breaches from occurring. Large sections of the population are required to have regular preventive health checks, which represents a substantial workload for the health system but their efficacy has not been evaluated.

There is an extensive network of primary health-care providers throughout Belarus, but with an uneven distribution of health-care workers. The primary health-care network has two forms of service provision: traditional polyclinics in the cities; and rural outpatient clinics led by general practitioners (GPs) and small *feldsher*-midwife points (FAPs) in the remote rural areas. Primary care in the capital, Minsk, and five other regional centres is provided through the network of adult and paediatric polyclinics, where a number of preventive, diagnostic, consultative and referral services are offered. In rural areas there have been concerted efforts to introduce GPs who provide primary care services to both adults and children.

There is also an ambulance-centred system of emergency care, which also covers out-of-hours primary care, so coverage is available 24 hours a day, 365 days a year. Because the doctors and *feldshers* working in emergency care are also the first point of contact for patients, the ambulance system in Belarus is considered part of primary care.

At the secondary level of care there are district and regional hospitals. While district hospitals provide general secondary care services, regional hospitals deal with more complex cases and offer a wider choice of care. Each district and region also has an outpatient polyclinic, which delivers specialized care for the patients in the community. A significant direction for health policy in Belarus has been the growth in the volume of high-tech services (e.g. hip replacement, complex heart surgery and organ transplants) available in the health system – which has come about as the result of a specific policy push. Most of these high-tech procedures take place in highly specialized national centres which have the best human and material resources, but there are also now high-tech centres in some of the regional hospitals. The Ministry of Health has also been actively developing rehabilitation services, by founding rehabilitation centres, to which patients can be referred for after-care following various operations or treatments. The use of hospital beds for social and long-term care has been formalized and many rural hospitals have now been converted into nurse-led hospitals for nursing care.

There are no privately owned hospitals or primary health-care facilities in Belarus, but diagnostic centres are a significant part of private sector activities in the health system. These centres are most often the commercial branch

of public sector hospitals, which also raise private revenues by charging for private rooms for hospital stays and by encouraging cross-border health care (predominantly from other CIS countries).

Principal health reforms

The incremental approach, often using pilot projects to trial potential reforms, has been the main feature of health reforms in Belarus. Potential changes are discussed for a long time before they are introduced and some reforms have been discussed at length without ever being fully implemented. Discussions about reforms involve consensus building with all levels of government as well as capacity building in the sections of the health system which will be affected; only once such a consensus is in place does change materialize.

"Modernization" of the Belarusian health system has been a core aim of reform efforts in the last five-year plan. This partly reflects a need to "catch up" with developments in medicine, though it is also a means to earn extra revenues for the health-care providers through exporting high-tech health services. A similar modernization process has been initiated for the pharmaceutical sector. A new regulator – the Pharmaceutical Production Department – is charged with attracting investment to develop the domestic pharmaceutical industry and ensuring the competitiveness of its products to encourage exports (including achieving good manufacturing practice (GMP) compliance). The aim is also to reduce the dependence of the Belarusian health system on imported pharmaceuticals, but the integration of pharmaceutical production and regulation in one department could lead to significant conflicts of interest.

In 2010, after many years of intensive preparation and training, the first round of National Health Accounts (NHA) was produced. The accounts standardized the coding and classifications of income and expenditure in the health system and it will now be possible to estimate more accurately what services cost. While the introduction of NHA is a notable achievement in itself, it is viewed as just the first step towards transforming health-care financing in Belarus in order to improve the technical and allocative efficiency of the system. Discussions on future reforms therefore include comprehensive changes in the way health services are paid for.

Assessment of the health system

The stated objectives for the health system include improving the health of the population, reducing morbidity and mortality rates, and improving average life expectancy levels. The aim is to achieve this by improving the quality of health care provided as well as its accessibility to the whole population, and through the strengthening of public health to address unhealthy lifestyle factors.

Equity in financing is a key factor in enabling access to the health system and OOP payments are a common barrier. Relative to other countries of Europe, OOP household spending on health in Belarus is low and service utilization is high, indicating relatively equitable access. OOP payments are dominated by outpatient pharmaceutical costs, and there is potentially significant unmet need in access due to shortages. Barriers to services include waiting times and staff shortages.

The main lesson to be learned from the Belarusian experience is that, with unwavering political support, an incremental approach to economic and health-care reform can sustain access to health care for the population and protect population health from some of the harshest aspects of socioeconomic transition. However, it is not enough on its own to substantially improve population health or ensure efficient use of funds. A gradualist approach to reform has been embraced, and the system retains some key features of the Semashko system inherited at independence. Many of the changes which have been made have sought to address the inherent inefficiencies of the Soviet model: rebalancing the system in favour of primary care; integrating parallel health systems; and changing the incentives in provider payment systems. However, there is still significant surplus capacity in the system, particularly for inpatient care. Evaluations are undertaken to provide evidence on the effectiveness of new medical technologies, but systematic evaluations of the effectiveness, costs and impact of established practices are not generally used to inform policy-making. A key challenge is to address shortcomings in technical and allocative efficiency while ensuring that the access and quality of care do not suffer. Improving clinical efficacy by ensuring that treatment and diagnostic procedures are evidence-based would help move towards achieving both these goals.

1. Introduction

The Republic of Belarus declared independence from the Soviet Union in December 1991 and from 1991 to 1994 was a parliamentary republic. Since 1994, the country has been a titular presidential democracy and President Lukashenko has been in power since that year. Due to the moderate pace of economic reforms and partial price liberalization, Belarus avoided the full impact of economic liberalization experienced in many other Commonwealth of Independent States (CIS) countries. The relatively mild economic transformation has resulted in lower rates of unemployment, poverty and inequity, as well as less drastic fluctuations in mortality indicators. However, the global economic crisis which began in 2008 has threatened this stability and a revaluation of the Belarusian rouble in 2011 rapidly increased the relative cost of imports, including fuel and pharmaceuticals, which has had an inevitable impact on people's standard of living.

Belarus is experiencing negative population growth as the birth rates are falling and death rates are increasing, largely due to noncommunicable diseases. Maternal and infant mortality have been steadily improving in recent years and average life expectancy for women is now higher than it was prior to independence (76.6 years in 2009). Average life expectancy for men has improved (64.8 years in 2009), but has yet to recover to pre-independence levels; both tobacco and alcohol consumption are key factors in the width of the gender gap. Tuberculosis (TB) and HIV are the main communicable disease challenges to population health, and the high levels of multidrug-resistant tuberculosis (MDR-TB) pose a particular challenge to the health system.

1.1 Geography and sociodemography

Belarus is a landlocked country in eastern Europe, sharing borders with Latvia, Lithuania, Poland, the Russian Federation and Ukraine (see Fig. 1.1). The land is low lying, with many lakes and marshes. Forests extend over much of the northern territory, while the south is characterized by vast tracts of arable land. Belarus has a moderate continental climate with the average January temperature of -6°C and the average July temperature of +18°C. Average annual rainfall is 550–700 mm.

Fig. 1.1
Map of Belarus

Source: United Nations, 2004.

The population of Belarus has fallen from 10.2 million in 1990 to 9.5 million in 2011; there was a marked fall in the birth rate after the dissolution of the Soviet Union, from 13.9 per 1000 population in 1990 to 9.3 in 2005, but even though the birth rate has subsequently increased to 11.5 per 1000 population in 2011, the fertility rate has only grown to 1.5 births per woman (see Table 1.1). Relatively low birth rates combined with a high mortality rate have not been

offset by net in-migration and, consequently, Belarus has a rapidly ageing population, particularly in rural areas. In 2011, 75% of the population lived in urban areas and average population density was 46.7 people per km^2. According to the 2009 census, Belarusians make up the largest population group (83.7%), followed by Russians (8.3%); but there are also Polish, Roma, Ukrainian and other minorities (Belstat, 2012). The majority of religious believers are Orthodox Christians, but Catholics are the next largest group and there are also Protestants, Muslims and Jews. The official languages are Belarusian and Russian. Belarusian is widely spoken in rural areas, but the main language of government and business is Russian.

Table 1.1

Trends in population/demographic indicators, selected years

	1990	1995	2000	2005	2009	2010	2011
Population, total (millions)	10.2	10.2	10.0	9.7	9.5	9.5	9.5
Population, female (% of total)	53.1	53.0	53.1	53.3	53.5	53.5	53.5
Population aged 0–14 (% of total)	23.1	21.7	18.7	15.7	15.0	15.0	15.1
Population aged 65 and above (% of total)	10.6	12.5	13.4	14.4	13.7	13.6	13.5
Population growth (annual %)	0.2	-0.3	-0.3	-0.7	-0.2	-0.2	-0.2
Population density (people per sq. km of land area)	50.2	50.3	49.3	47.6	46.9	46.8	46.7
Fertility rate, total (births per woman)	1.9	1.4	1.3	1.2	1.4	1.4	1.5
Birth rate, crude (per 1 000 people)	13.9	9.8	9.4	9.3	11.4	11.4	11.5
Death rate, crude (per 1 000 people)	10.7	13.0	13.5	14.5	14.1	14.5	14.3
Age dependency ratio (% of working-age population)	50.9	52.0	47.5	43.0	40.2	40.0	40.0
Urban population (% of total)	66.0	67.9	70.0	72.4	74.2	74.6	75.0
Literacy rate, adult total (% of people aged 15 and above)	–	–	–	–	99.6	–	–

Source: World Bank, 2013b.

The whole territory of Belarus was occupied by the Nazis during the Second World War and the republic lost approximately one quarter of its population and 80% of its infrastructure. The sizeable Jewish communities which had lived in Belarus were almost completely lost in the Holocaust. After the massive devastation of the Second World War, there followed a period of intense reconstruction, with rapid industrialization and significant economic development. From the 1950s Belarus emerged as one of the major Soviet manufacturing regions, emphasizing tractors, trucks, oil processing, the machine tool industry, synthetic fibres, televisions, and high-technology industries such as superconductors and microchips, which were part of the Soviet military-industrial complex (Ioffe, 2004). However, agriculture remained

important to the economy and the Chernobyl atomic energy station disaster in neighbouring Ukraine on 26 April 1986 had a devastating effect, as more than 70% of the radioactive pollution fell on southern Belarus, contaminating large areas of arable land and making many small towns and villages uninhabitable.

1.2 Economic context

The dissolution of the Soviet Union was initially disastrous for Belarusian manufacturing industries due to the subsequent rise in energy costs and the disruption of supply chains across what became national boundaries, because Belarusian industries were highly integrated parts of the Soviet system. There was a breakdown in trade and a sharp fall in productivity. Consequently, following independence, there was a dramatic fall in gross domestic product (GDP) and hyperinflation as price liberalization took hold. However, genuine "shock therapy" and mass privatization were not realistic options for Belarus, as there was insufficient popular consensus in support of such an approach, given the social hardships that they would have entailed (Ioffe, 2004).

The Belarusian population was therefore buffered from the full force of economic transformation because price liberalization and privatization were only partially introduced by the state, and the pace of economic reform has been evolutionary and moderate (Richardson et al., 2008). Officially, Belarus has a socially oriented market economy and it retains many features of the Soviet administrative-command economy but with limited central planning (Nuti, 2005). It is state policy to support Belarusian producers in all spheres of the economy (including tobacco and alcohol manufacturing). Belarusian society made some progress towards greater equity with a Gini index of 26.5 in 2011 down from 30.4 in 2000 (see Table 1.2). This relative equity was achieved through the maintenance of a narrow wage spectrum, price subsidies and generous social transfers. However, current economic conditions challenge the sustainability of this approach (Kruk, 2013).

The Belarusian economy benefited considerably from the favourable terms of its energy supplies from the Russian Federation; these were renegotiated, however, in 2006. As with other countries dependent on Russian energy, this has posed great challenges for the economy and the global economic and financial crisis has compounded economic difficulties. Macroeconomic stability was sacrificed to allow expansionary monetary and fiscal policies, which resulted in a foreign exchange and balance of payments crisis in 2011 when the Belarusian rouble lost 70% of its value

Table 1.2
Macroeconomic indicators, selected years

	1990	1995	2000	2005	2009	2010	2011
GDP (current US$, millions)	17 370	13 973	12 737	30 210	49 210	55 212	55 132
GDP, PPP (current international $, millions)	47 347	34 824	51 569	83 492	121 201	131 456	141 507
GDP per capita (current US$)	1 705	1 371	1 273	3 126	5 176	5 818	5 820
GDP per capita, PPP (current international $)	4 647	3 416	5 154	8 640	12 749	13 852	14 938
GDP growth (annual %)		-10.4	5.8	9.4	0.2	7.7	5.3
Cash surplus/deficit (% of GDP)		-2.7	0.1	0.2	0.2	-1.5	1.9
Tax revenue (% of GDP)		19.9	16.6	20.1	19.3	16.9	16.3
Central government debt, total (% of GDP)		16.9	15.0	6.6	19.2	19.6	44.2
Industry, value added (% of GDP)	47.1	37.0	39.2	41.8	42.3	42.9	44.4
Agriculture, value added (% of GDP)	23.5	17.5	14.2	9.8	9.4	9.1	9.9
Services etc., value added (% of GDP)	29.4	45.6	46.7	48.5	48.3	48.0	45.7
Labour force, total (millions)	5.3	5.0	4.7	4.6	4.5	4.5	4.5
Poverty headcount ratio at national poverty line (% of population)			41.9	12.7	5.4		
Gini index		28.8	30.4	27.9	27.7	27.7	26.5
Real interest rate (%)		-63.9	-41.2	-6.4	5.6	-1.7	-28.3
Official exchange rate (LCU per US$, period average)		11.5	876.8	2 153.8	2 793.0	2 978.5	4 974.6

Source: World Bank, 2013b.
Note: LCU: Local currency unit.

against the US$ and inflation soared to 109% (World Bank, 2012). The official unemployment rate in 2011 was extremely low at 0.7%, but there is considerable underemployment and significant numbers of workers are reported to be on leave with reduced (or no) pay (Slay, Juraev & Kachanovich, 2012).

1.3 Political context

The Republic of Belarus declared independence from the Soviet Union in December 1991 and from 1991 to 1994 was a parliamentary republic. Since 1994, the country has been a titular democracy headed by a President with very strong executive powers, to the point that there is limited separation of executive, legislative and judiciary branches. The President of Belarus is Alexander Lukashenko, who has been in power since 1994. The government is headed by a Prime Minister (Mikhail Myasnikovich since December 2010) and a first Deputy Prime Minister (Vladimir Semashko since December 2003); both of these positions are appointed directly by the President. The legislative

branch consists of a bicameral parliament (National Assembly) with an upper house (Council of the Republic) and a lower house (Palace of Representatives). The Council of the Republic has 64 seats: 56 members are elected by regional councils and 8 members are appointed by the President. The Palace of Representatives has 110 seats and members are elected for a four-year term. The judiciary consists of a Supreme Court and a Constitutional Court. In the Supreme Court all judges are appointed by the President while in the Constitutional Court half are appointed by the President and half are appointed by the Palace of Representatives. The main political changes since Belarus was declared independent from the Soviet Union have been referenda which have led to amendments of the 1994 Belarusian Constitution, strengthening the role of the executive relative to the legislative branch. For example, a referendum in October 2004 removed all presidential term limits (previously a President could only serve two consecutive terms).

Belarus is divided into six administrative regions (*oblasti*) – Brest, Gomel, Grodno, Mogilev, Vitebsk and Minsk region excluding the capital city Minsk, which has the status of an independent administrative entity. Each region and the capital city are further subdivided into districts (*raiony*), which have their own local authorities. Local authorities play an important role in the provision of various services, including primary care (see Chapter 2). However, the regional and district levels of government lack legally defined limits of authority and guaranteed financing. Consequently, although responsibility for the provision of health-care services is devolved to the local government level, this mandate is frequently not matched by appropriate resources and a legal entitlement to generate revenue for the local budget (UNDP, 2005). A strong executive power structure organized in a top-down manner and reporting directly to the President undermines the accountability of the executive branch to locally elected people's representatives (UNDP, 2005). Most often, important laws related to health care are enacted by presidential and ministerial decree and the main channel for influencing the health policy-making process is to lobby through contacts within the Ministry of Health (Richardson et al., 2008).

In 1991 Belarus became a founding member of the CIS, the official headquarters of which are in Minsk. The CIS is very important to Belarus on many levels, but particularly as the Belarusian economy is reliant on trade with other countries of the CIS. Since 1996 Belarus has been party to a Union Treaty with the Russian Federation, and from 1 January 2010 a Customs Union with Kazakhstan and the Russian Federation. There are proposals for the Customs Union to form the basis for a Eurasian Union by 2015. As of June 2013, the leadership in Belarus was showing less interest in becoming a member

of transnational organizations such as the EU, the Council of Europe or the North Atlantic Treaty Organization (NATO), accession to which has strongly influenced the political and economic situation in Belarus's western neighbours. Belarus has observer status with the World Trade Organization.

Belarus is a signatory to both the United Nations Convention on the Rights of the Child and the International Bill of Human Rights. However, Belarus does not have an independent national human rights institution and the United Nations Human Rights Council Universal Periodic Review of Belarus in 2010 highlighted concerns around the continued use of the death penalty and arbitrary detention (United Nations, 2010). Observers from the Organization for Security and Co-operation in Europe (OSCE) indicated that Belarus had a long way to go in meeting its OSCE commitments for democratic elections following their mission to observe the presidential election in December 2010 (OSCE Office for Democratic Institutions and Human Rights, 2011). In the 2012 Corruption Perceptions Index, Belarus scored 31, where 100 would be a country without any perceived corruption; for comparison, Ukraine scored 26, the Russian Federation 28, Lithuania 54 and Poland 58 (Transparency International, 2012).

1.4 Health status

The statistics system in Belarus is highly centralized and is organized according to the principles established under Soviet rule (Grigoriev, 2011). Mortality data for Belarus are generally trustworthy, especially at working ages, although there is a worrying number of deaths from unknown causes (127.5 per 100 000 in 2009, or 11% of total deaths), particularly for deaths at older ages (Grigoriev, 2011; WHO Regional Office for Europe, 2013).

Average life expectancy at birth is relatively low in relation to the countries of the WHO European Region, at 64.8 years for men and 76.6 years for women in 2009 (see Table 1.3), but fluctuations following the dissolution of the Soviet Union have not been as dramatic as in the neighbouring Russian Federation or Ukraine (Grigoriev et al., 2010). The total mortality rate has been falling in recent years and, in 2009, the leading cause of mortality was diseases of the circulatory system (mainly ischaemic heart disease), followed by cancer and external causes such as accidents, poisonings, injury, homicide and suicide (see Table 1.4). However, there is a significant gender difference – the male mortality rate is more than double the female mortality rate, although the three leading causes of mortality are the same. In 2007, disability-adjusted life

expectancy (DALE) in Belarus was 62 years (58 years for men and 66 years for women), which compares favourably with the CIS average of 59.6 years, but is considerably lower than the EU average of 71.7 years in 2007 (WHO Regional Office for Europe, 2013). DALE estimates also show that although Belarusian women live 12 years longer than Belarusian men, they generally do not do so in good health.

Table 1.3

Mortality and health indicators, selected years

	1990	1995	2000	2005	2009
Life expectancy at birth, in years	71.3	68.6	69.0	68.8	70.6
Life expectancy at birth, in years, male	66.3	62.9	63.4	62.9	64.8
Life expectancy at birth, in years, female	75.8	74.4	74.8	75.1	76.6
SDR all causes, all ages, per 100 000, male	1 490.2	1 844.0	1 828.7	1 914.4	1 728.3
SDR all causes, all ages, per 100 000, female	816.3	911.6	903.6	891.7	790.1

Source: WHO Regional Office for Europe, 2013.
Note: SDR: Standardized death rate.

Table 1.4

Main causes of death per 100 000 population, selected years

Causes of death (ICD-10 classification)	1990	1995	2000	2005	2009
Infectious and parasitic diseases, per 100 000	7.6	10.1	9.9	15.7	11.5
TB, per 100 000	4.7	6.9	7.3	10.5	7.3
AIDS/HIV (as recorded by routine mortality statistics system), per 100 000		0.0	0.0	0.9	2.4
Diseases of the circulatory system, per 100 000	544.8	620.6	658.9	691.2	601.1
Ischaemic heart disease, per 100 000	336.1	395.5	431.6	242.8	415.0
Cerebrovascular diseases, per 100 000	148.3	166.4	174.2	172.3	143.7
Malignant neoplasms, per 100 000	176.6	187.3	180.3	148.0	160.7
Malignant neoplasm of colon, rectum and anus, per 100 000	17.7	19.9	20.1	10.0	10.5
Malignant neoplasm of larynx, trachea, bronchus and lung, per 100 000	39.0	43.8	39.5	36.3	32.4
Malignant neoplasm of breast, per 100 000	10.6	11.4	12.5	11.8	11.0
Females – malignant neoplasm of cervix uteri, per 100 000	6.0	6.8	5.7	5.9	5.1
Diabetes mellitus, per 100 000	6.3	7.7	6.1	4.5	3.1
Mental and behavioural disorders, per 100 000	2.4	4.2	4.7	7.4	8.6
Diseases of the respiratory system, per 100 000	73.3	64.8	62.0	47.5	36.0
Diseases of the digestive system, per 100 000	22.7	25.9	28.5	41.2	46.8
Transport accidents, per 100 000	27.5	21.7	18.5	19.8	15.3
Suicide and intentional self-harm, per 100 000	21.3	32.3	34.2	29.0	25.8

Source: WHO Regional Office for Europe, 2013.

In 2009, the leading causes of premature mortality (that is, under age 65) in Belarus were diseases of the circulatory system (191 per 100 000), external causes including injury and poisoning (127 per 100 000) and cancer (93 per 100 000). Many of the deaths from external causes are alcohol related and, according to official figures, in 2007, 2416 people died of alcohol poisoning alone (Zharko, 2008). However, a considerable proportion of deaths attributed to external causes are the result of suicides, and Belarus has one of the highest suicide rates in the WHO European Region, with men aged under 65 years of age appearing to be most at risk (WHO Regional Office for Europe, 2013).

Tobacco consumption remains a serious health issue in Belarus with 50.4% of the male population and 10.2% of the female population being daily smokers in 2011. The male smoking rate reached 54.9% in 1998, but has been gradually falling since 2005; the female smoking rate, however, has been consistently rising from a low 3.6% in 1995 (WHO Regional Office for Europe, 2013). This is consistent with research showing that international tobacco companies have been aggressively marketing their products to women in the former Soviet Union (Gilmore & McKee, 2004), and highlights the challenges faced by public health agencies (see section 5.1). Alcohol consumption is also a significant factor in public health and it has been estimated that per capita adult consumption is 15.1 litres of pure spirit annually (WHO, 2011).

Although noncommunicable diseases pose the greatest health burden, HIV and TB remain significant threats to public health. HIV is a concentrated epidemic in Belarus, affecting mainly injecting drug users and their sexual partners. There has been renewed commitment to a comprehensive DOTS (directly observed treatment, short-course) strategy since 2005, and from 2008, Belarus has been implementing Global Fund projects on DOTS enhancement and MDR-TB control, but the legacy of the Soviet approach to non-standardized treatment has led to Belarus having the highest ever recorded proportions of MDR-TB and XDR-TB (extensively drug-resistant TB) in the world (Skrahina et al., 2013). This has made Belarus (along with most other countries of the former Soviet Union) a high priority country on TB. TB is the main cause of death from infectious diseases in Belarus (see Table 1.4).

There have been significant improvements in mother and child health in Belarus (see Table 1.5); the maternal mortality rate peaked at 25.2 per 100 000 live births in 1997, while the infant mortality rate peaked at 13.5 per 1000 live births in 1995. According to WHO estimates, the infant mortality rate in Belarus in 2009 was 11 per 1000 live births, which compares favourably with the average for countries of the CIS (24.1 per 1000 in 2009), but it is still

considerably higher than countries of the EU (3.9 per 1000 in 2009) (WHO Regional Office for Europe, 2013). WHO estimates show a similar downward trend to that shown in official government data, but at a considerably higher rate as the full WHO definition of a live birth is not currently used in Belarus (Grigoriev, 2011).

Table 1.5

Maternal, child and adolescent health indicators, selected years

	1990	1995	2000	2005	2009
Adolescent fertility rate (births per 1 000 women aged 15–19)			27.6	22.9	21.5
Abortions per 1 000 live births	1 791.7	804.8	1 301.0	716.0	329.2
Perinatal deaths per 1 000 births		12.2	7.4	4.9	3.7
Neonatal deaths per 1 000 live births			4.7	3.1	
Postneonatal deaths per 1 000 live births			4.6	3.8	
Infant deaths per 1 000 live births	12.1	13.5	9.3	6.3	4.7
Estimated infant mortality per 1 000 live births (World Health Report)	20.0		15.0		11.0
Mortality rate, under-5 (per 1 000)	17.2	16.8	13.7	9.3	6.6
Maternal deaths per 100 000 live births	21.8	13.8	24.6	15.5	0.9
Syphilis incidence per 100 000	2.7	150.6	105.2	32.7	22.5
Gonococcal infection incidence per 100 000	100.1	166.4	98.8	62.8	56.6

Source: WHO Regional Office for Europe, 2013.

2. Organization and governance

The inherited Soviet Semashko system sets the context for the current Belarusian health system. The commitment to the principle of universal access to health care provided free at the point of use through predominantly state-owned facilities organized hierarchically on a territorial basis remains key despite considerable change in the system since independence. Incremental change, rather than radical reform, has been the hallmark of health-care policy. The Ministry of Health has overall responsibility for the health system, although the funding of primary and secondary care is devolved to the regional level. Highly specialized hospitals are funded directly from the Ministry of Health budget. There are very few privately owned service providers in the system and few nongovernmental organizations (NGOs) engaged in providing services.

The broad approach to planning in infrastructure and capital is based on norms and inputs (as it was in the Semashko system), although the change to per capita budgeting for primary care has meant some shift towards planning infrastructure on the basis of demographic need. Planning is informed by the minimum social standards, which have been set by the government as the main mechanism for the realization of the citizen's constitutional rights in the social sphere, including the right to health care. Planning and management functions are largely integrated, as both are ultimately the responsibility of the Ministry of Health. Health-care providers manage health-care delivery under the supervision of regional health-care departments and local government, but the system is in essence hierarchical.

Policy development and priority setting are centralized processes in which the Ministry of Health is the key actor. District and regional authorities implement policies and act on the centrally determined priorities within the constraints of their local budgets; there are no formal channels for seeking the input of different stakeholders in the policy development and priority-setting

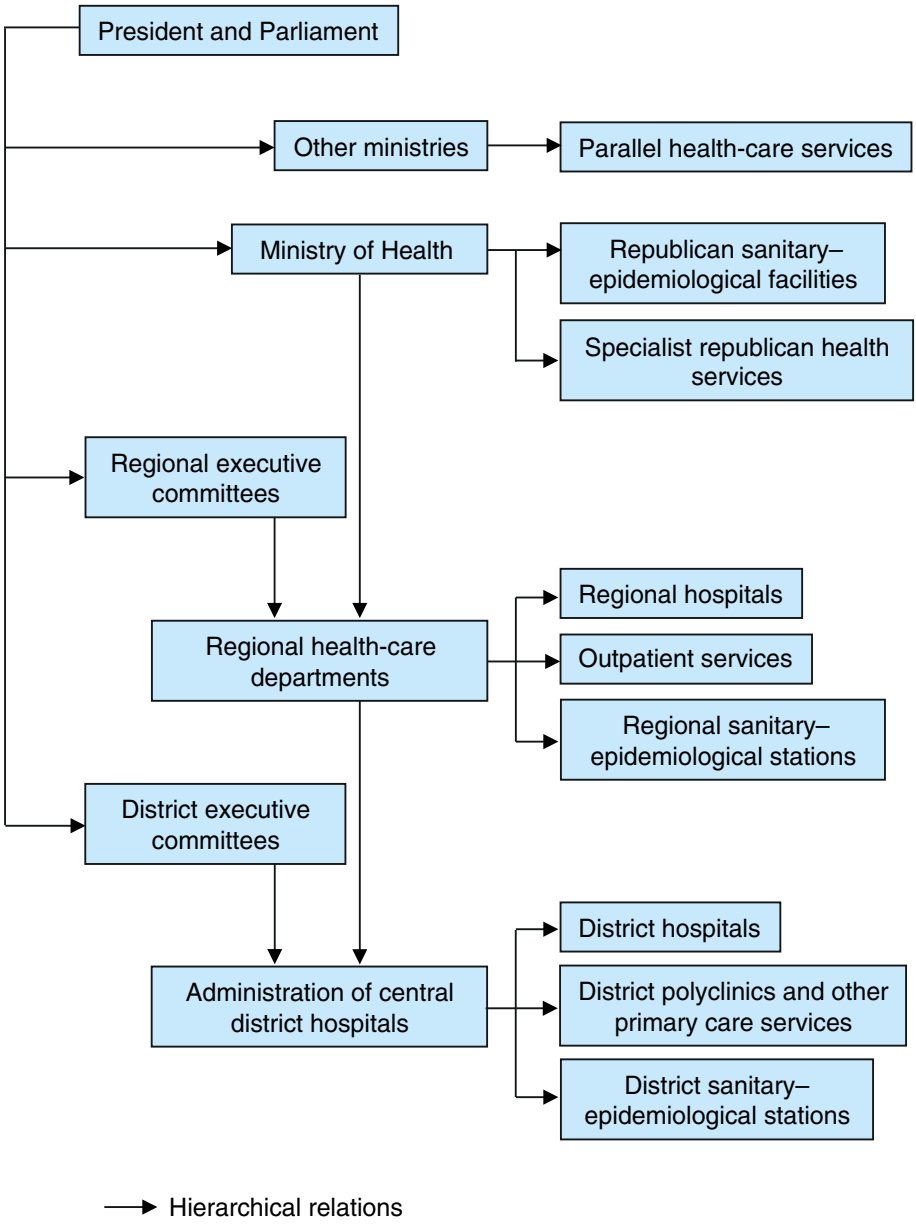
process. Individual health facilities have no meaningful decision-making powers over capital, staffing levels or payment, or the types of services offered. Decisions about capital and staffing levels are made by the regional or district health-care departments, staffing payment levels are agreed centrally and the types of services offered are determined according to norms and standards issued by the relevant specialist branches in the Ministry of Health.

The Ministry of Health plays the main regulatory role at all levels of the health system, although regional and district governments are also key stakeholders as they are responsible for financing the system at their level. Regulation is achieved through the use of very detailed accounting procedures and the issuing of norms and standards, rather than through contracting or licensing. For example, there is no central register or formal licensing of professional medical staff. Patient records are checked to ensure diagnostic and treatment protocols have been adhered to and that doctors have made sufficiently detailed notes. Where there is an adverse treatment outcome, doctors who fail to follow standards and protocols to the letter face severe legal consequences and penalties.

2.1 Overview of the health system

Administrative relationships in the Belarusian health system are hierarchical and organized on a territorial basis; selective contracting is therefore not a significant feature of the system (see Fig. 2.1). The organization and financing of primary and secondary care services happens at the local level (both regional and district level), with minimum standards set centrally by the government in accordance with current priorities of the country (see section 2.4). The minimal standards are determined on the basis of the available capacity of the government and the Ministry of Health within a certain time frame and can be refined if necessary. Day-to-day management and financing of the system therefore happens at the local level and the key actors are regional and district governments and regional health-care departments; however, the hierarchical administrative arrangements and regulatory framework mean that ultimate management power lies with central government, namely the Ministry of Health, the Parliament and the President.

Fig. 2.1
Organization of the health system in Belarus, 2013



2.2 Historical background

Although there was quite extensive health-care coverage through the *zemstvo* system in Belarus prior to the October Revolution in 1917, it was the introduction of the Semashko system when Belarus was part of the Soviet Union which really set the context for the current health system. The Soviet Semashko system was organized around the guiding principle of universal access to health care, free at the point of use. It was a tax-based system with highly centralized planning of resources and personnel, based on a hierarchy of facilities at the district, regional, republican and all-union levels. All health-care workers were employed by the state and private practice was very limited. Care was focused on inpatient treatment and, consequently, primary care was very weak. There was an emphasis on the continuous expansion of staff and facilities and an extensive system of parallel health services which were attached to large industrial enterprises, certain ministries (for example the Ministry of Transport and Communications, Ministry of Internal Affairs and so on) and the Communist Party elite. The extensive coverage and universal access to free care meant that the Semashko system was equitable, despite qualitative differences in provision between geographical regions and mainstream and parallel health services. However, it was also inefficient and resource intensive, particularly in terms of its reliance on inpatient care. Also, while the Semashko system proved reasonably effective in its control of communicable diseases, with the epidemiological shift towards a noncommunicable disease burden the system was insufficiently flexible and primary health care and health promotion too weak to enable the control of noncommunicable diseases predominating towards the end of the Soviet era (Figueras, McKee & Lessof, 2004).

Since independence in 1991, a programme of radical reform of the health system has not been introduced in Belarus, which is why health care retains many of the key features of the Semashko system and faces many of the same key challenges. Instead, a process of incremental change has been followed, using pilot projects to test the suitability of different approaches to the financing and organization of health care. In some cases, elements of these pilot projects which the government and the Ministry of Health deem successful or useful have then been rolled out nationwide. Incremental change, rather than radical reform, has been viewed as a means of maintaining access to and the provision of services – both of which have proved difficult in some CIS countries which embraced more far-reaching socioeconomic reforms. The incremental – rather than radical – change approach also fits with the wider approach to post-Soviet social and economic policy in Belarus.

The key organizational reforms since 1991 have focused on the core weaknesses of the Semashko system. There have been policy efforts to strengthen primary care and to address the urban–rural divide, which has included the introduction of general practice in rural areas. However, in practice, the hospital sector is still dominant and is in need of streamlining so that resources can be released for primary care and public health. Some excess inpatient capacity in rural areas has been converted into long-term social care, which has fulfilled a service need since long-term care provision in the Soviet system was sorely lacking, but it has blurred the boundaries of care provision between the health system and the social care system (see section 5.8). There has also been significant decentralization of health-care financing and administration (see section 2.4) and capitation-based budgeting has been introduced in order to encourage greater efficiency in resource allocation at the district level.

2.3 Organization

Belarus has a national health system and the Ministry of Health has overall responsibility for it, although the funding of primary and secondary care is devolved to the regional level. Tertiary services (highly specialized hospitals) are funded directly from the Ministry of Health budget. The relationship between different layers within the system is hierarchical and most policy decisions are made centrally (see Fig. 2.1). There are very few privately owned service providers in the system, and, with the notable exception of some NGOs, most organizations are state bodies. The main actors in the health system which provide the institutional setting for health-care financing, planning, administration, regulation and provision are listed in the subsections that follow, with their primary functions and roles.

Parliament and President

The national-level government, in conjunction with the Ministry of Health, makes decisions on the future of health-care services and defines the reform agenda. The Parliament and the President must also approve the budget, which should be in line with their strategic vision for the development of health-care services.

Ministry of Health

This is the key institution in the organization of the Belarusian health system. Different departments within the Ministry of Health undertake planning in all aspects of human and physical resources, decide on the financing of services

and administer the system. The Ministry of Health is organized hierarchically: the Administration of the Central District Hospitals (*Administratsiya tsentralnoi rayonnoi bolnitsy*) is subordinated to the regional-level health-care departments (*Oblastnye upravleniya zdravookhraneniya*), which are subordinated directly to the Ministry of Health and the District Executive Health Authority, but power is concentrated in Minsk, where most of the planning decisions are made.

Ministry of Finance

The Ministry of Finance works with the Ministry of Health, the Parliament and the President to determine the budget allocation to health-care services. The Ministry of Finance also monitors Ministry of Health spending, and the Ministry of Health must submit regular accounting reports to the Ministry of Finance.

Regional health-care departments

The regional health-care departments are significant agents in the organization of health care as they officially own all the state hospitals, as well as all polyclinics, outpatient clinics and *feldsher*-midwife (*akusher*) points (FAPs) within their region. The regional health-care departments are established and controlled by the Regional Executive Committee (by the order of the Governor (*Gubernator*) of the region) with the formal approval of the Ministry of Health. Although they are subordinated to the republican-level Ministry of Health, they do have limited autonomy in the organization of services and, to a certain extent, their funding as it comes from the regional budgets. At district level, the Administration of the Central District Hospital works with the district executive committees (local government).

Professional associations

Professional associations are evolving in order to promote the interests of different groups of health professionals. For example, the Byelorussian Association of Physicians is a national-level organization which works closely with the Belarusian Medical Academy for Postgraduate Education (BelMAPO) to support postgraduate medical study and, since 1994, to publish a professional quarterly journal (*Medicine*). There is also an Association for General Practitioners, a Dental Association, an Association for Cardiologists and other professional associations for different specialties. However, these associations have limited funding opportunities and relatively small memberships. By contrast, 96% of health workers are members of the Belarusian Trade Union of Health Workers, which makes it one of the largest and most influential trades unions in the country.

NGOs

There are few NGOs active in the field of health care in Belarus. Most are active in supporting people most seriously affected by the Chernobyl nuclear power plant disaster in 1986, and collaborate closely with international NGOs.

International organizations

International organizations have not been as influential in shaping the health system in Belarus as they have been elsewhere in the post-Soviet space. Nevertheless, United Nations agencies such as WHO, United Nations Development Programme (UNDP), United Nations Population Fund (UNFPA) and United Nations Children's Fund (UNICEF) have been very active in working with state structures on specific health-related projects, such as the control and prevention of TB as well as mother and child health. The Global Fund has also been active in Belarus, funding TB and MDR-TB control initiatives and HIV/AIDS projects.

The main stakeholders in the policy-making process are the President and the Ministry of Health, and this is the level at which the policy agenda is set. There is some influence from international organizations, such as Global Fund, WHO and the World Bank, and the media also raise the profile of different health issues, but overall, key policies are developed centrally. As funding for health care comes from general taxation, the Ministry of Finance is responsible for collecting financial resources for health care, but there are no earmarked taxes or other contributions specifically for health funding. The Ministry of Finance is less influential in deciding the proportion of budgetary expenditure that is to be devoted to health care than the President and Parliament. When the annual budget is being decided, the Ministry of Health and the Ministry of Finance settle their positions and present an agreed budget to the government. The delivery and planning of health care is the responsibility of the Ministry of Health. There is a department within the Ministry of Health which is responsible for assessing policy outputs according to set assessment criteria, but these reports are for internal use and are therefore difficult to access. Consequently, the most widely available reports on policy implementation and systems performance are produced by international partners in relation to their specific pilot projects.

2.4 Decentralization and centralization

In Belarus, different tiers of government operate hierarchically and power is concentrated at national level. Following independence, there has been some deconcentration of authority in the health system from the national to the regional and district levels, as regional and district health-care departments and regional and district governments became responsible for the organization of primary and secondary health-care services within their respective territories. National programmes and minimum standards are set at national level, but local authorities are able to supplement this with their own priorities. Although funding for primary and secondary services has always come through local government channels, local funding for services has been strengthened since independence, which has led to some inequities between richer urban areas with a strong manufacturing base and poorer rural areas. In response, allocation mechanisms have been revised to try and better reflect regional differences (see section 3.3). There is no real experience of delegating regulatory functions to non-state bodies. There are no plans to alter the balance and introduce further decentralization into the health system, and much greater administrative and financial capacity would be needed at local level for any further decentralization to take place, if it were deemed desirable.

2.5 Planning

The allocation of resources to the health system is based on normative legal acts which are regulated by (normative) volume activity indicators and which take into account medical and demographic processes in the country. In this way, the main normative legal act is the Law on the Minimum State Social Standards, which were introduced with the aim of creating a mechanism for the realization of the citizens' constitutional rights in the social sphere, but also for improving the standard of living and supporting social development. There are seven minimum state social standards in the field of health:

- minimum budgetary expenditure on health per capita
- minimum number of primary care doctors per capita
- minimum number of inpatient beds per capita
- minimum number of state-owned pharmacies per capita
- minimum number of emergency care teams per capita

- minimum number of ambulances per capita
- minimum sanitary-technical standards for health-care facilities.

Most of these minimum social standards in health care serve to fulfil the norm for the minimum per capita budgetary expenditure on health. This is the basis for the territorial programmes of state guarantees for the provision of free medical care. The territorial programmes include territorial norms for the specific volume of medical care, and planning indicators for their funding. A territorial programme includes the rights and responsibilities of local authorities for their fulfilment.

The broad approach to planning in infrastructure and capital is therefore still based on norms and inputs, although the change to per capita budgeting for primary care has meant some shift towards planning infrastructure on the basis of demographic need. The Administration of Health-Care Planning and Economy is the division of the Ministry of Health which acts as a national planning agency for health services. It has two departments, one for planning and budgetary financing for health-care organizations and one for norm-setting and salaries. This department sets the standards for the volumes of medical care that should be provided as well as norms and standards for the supply of staff, pharmaceuticals, food, uniforms and so on. These norms and standards are rolled out nationwide. Planning and management functions are largely integrated, as both are ultimately the responsibility of the Ministry of Health. Health-care providers manage health-care delivery under the supervision of regional health-care departments and local government, but the system is in essence hierarchical.

Policy development and priority setting are centralized processes where the Ministry of Health is the key actor. District and regional authorities implement policies and act on the centrally determined priorities within the constraints of their respective budgets. Regional and district authorities can appeal for more funding or lobby for different priorities to be applied in their area, either through the Ministry of Health or their elected representatives in government, but there are no formal channels for seeking the input of different stakeholders in the policy development and priority-setting process (see section 2.6).

2.6 Intersectorality

Health is not systematically taken into account by other ministries and health impact assessment is not a compulsory procedure for the development of projects outside the health system. However, the policy process does ensure a broad range of stakeholders are at least consulted on health programmes (see section 2.5). The Ministry of Health is responsible for coordinating its work with other ministries and agencies in the area of health, for health education initiatives and so on.

2.7 Health information management

2.7.1 Information systems

The Methodology and Medical Statistics Sector of the Ministry of Health develops the forms which are the basis of the reporting system. These forms are used throughout the health system and in parallel systems in all facilities and at the national level. Clinicians are obliged to complete these forms and return them within a specified time limit. The data are aggregated at the facility level and then forwarded to the regional level before they are passed on to the national level. The accuracy of reporting in the forms for quality control purposes and patient safety auditing is the responsibility of the Control of Official Documents Execution and Citizens' Application Sector, which is a Ministry of Health department. Reporting is, however, segmented and fragmented as each specialty has its own reporting system and there is little coordination between them. Epidemiological and demographic indicators are used for health system performance assessment at subnational levels. Statistical data on population health and volume of services are collected at the regional level in order to assess the implementation of state programmes and minimum social standards which relate to health.

The National Statistics Committee of the Republic of Belarus is responsible for collecting, processing and disseminating population data for Belarus. The 10th revision of the International Classification of Diseases (ICD-10) was adopted in 2002, and the Soviet definition of a live birth has not been used since 1993. The Belarusian definition of a live birth has been in use since January 1994 and is broadly similar to the WHO definition, but there are still extra requirements relating to gestation, birth weight and length (Grigoriev, 2011). Communicable disease reporting is the responsibility of the sanitary-epidemiological network.

A number of information systems are in use at the national level of the health system used for monitoring the health of particular groups and to support strategic decision-making in the health sector. There are some centralized medical registers that form part of separate statistical monitoring projects, such as the cancer register, the influenza register, the diabetes register, the state register of people affected by radiation as a result of the Chernobyl catastrophe and several others. There are also "Information and Analysis Systems" (IAS) for different aspects of the health systems such as the IAS for "Young Specialists", the IAS for the "Register of Tariffs for Chargeable Clinical Services", etc.

Routine surveys of patients and health-care workers are conducted within health facilities and the Ministry of Health, to assess the quality and accessibility of services, but the findings are used internally rather than being made public.

In order to allow improvements in regulation and planning, the health information system needs strengthening, particularly if health-care financing is to move away from input-based planning (see section 3.7.1 *Paying for health services*). To facilitate the development of evidence-based medicine in Belarus, more reliable and disaggregated epidemiological data are also required.

2.7.2 Health technology assessment

From 2011, a team at the Republican Scientific and Practical Centre for Medical Technologies, Informatization, Administration and Management of Health (RSPC MT) have been conducting evaluations of medical technologies, including cost–benefit analyses of pharmaceuticals. But there is not a dedicated agency that conducts systematic evaluations of the effectiveness, costs and impact of health-care technology with the aim of informing health policy-making.

2.8 Regulation

The Ministry of Health plays the main regulatory role at all levels of the health system – at the national, regional and district levels (through the health-care departments) – although regional and district governments are also key stakeholders as they are responsible for financing the system at their level. Some of the most closely regulated aspects of the system are those where patients pay out of pocket for services. For example, prices for private practice or supplementary services provided in state health-care facilities are fixed.

Regulation is achieved through the use of very detailed accounting procedures and the issuing of norms and standards, rather than through contracting or licensing.

2.8.1 Regulation and governance of third-party payers

Belarus has maintained similar mechanisms to those in place in the Semashko system, with integrated purchaser and provider functions (see section 3.3.4 *Purchasing and purchaser–provider relations*). Different levels of government are responsible for purchasing health services for citizens within their catchment area, depending on the level of care – most tertiary services are financed directly from the national budget, whereas district and regional authorities are responsible for purchasing primary and secondary care services within the statutory system. The relevant ministries and enterprises are responsible for purchasing services available through their parallel health services.

Purchasers and providers within the statutory system are all part of the public sector; ownership of health facilities lies with the relevant level of government responsible for covering their costs, but ownership is of less relevance in Belarus, as the privatization of health-care facilities or services is not on the reform agenda and is unlikely to be at any time in the near future. Governance and management arrangements for regional and district health-care departments are determined by the Ministry of Health in accordance with the legal framework provided by central government. From 2001, all health-care services in Belarus have been financed with the upper limit of resources depending on the number of residents in the region and districts. This provided an incentive to the district and regional health-care authorities to cut the excessive number of hospital beds. However, no risk adjustment has yet been implemented in the per capita formulation for those districts which have a higher proportion of, for example, elderly residents.

Norms for the minimum package of services to be provided are decided centrally, but there is scope for local government to provide more services than these where finances allow. Consequently, local priorities may also be reflected in purchasing decisions, but in practice this is often limited by resource constraints. While this may be desirable in ensuring flexibility in the system to respond to the needs of the local population, it has also hindered reform and a real reorientation of the system away from hospital-based services in support of primary care. The heads of district hospitals are major stakeholders at the local level and can be very effective in lobbying for resources to maintain their services at high levels. It is not clear how local government is held accountable

for purchasing decisions. Norms for service provision volumes passed down through the Ministry of Health are no longer mandatory, quality control mechanisms are still underdeveloped and, in essence, budget constraints remain "soft", so purchasers are not held accountable in terms of costs.

2.8.2 Regulation and governance of providers

Within the statutory system, the main health-care providers are polyclinics, outpatient clinics and FAPs at the primary care level, as well as hospitals at the secondary and tertiary care levels. These providers are all in the public sector and are managed on a hierarchical basis according to an integrated "command-and-control" type health system. Individual hospitals, polyclinics, outpatient clinics and FAPs have no meaningful decision-making powers over capital, staffing levels or payment, or the types of services offered. Decisions about capital and staffing levels are made by the regional or district health-care departments, staffing payment levels are agreed centrally and the types of services offered are determined according to norms and standards issued by the relevant specialist branches in the Ministry of Health.

From 2001 all health-care facilities (both public and private) have to complete the formal procedure of being licensed by the Licensing Committee of the Ministry of Health. It was hoped that licensing in the public health-care sector would improve the quality of the health-care facilities and support a more equal distribution of resources between regions and districts.

Professional conduct and quality of care is regulated through the Ministry of Health, which audits patient records in order to ensure that the required treatment protocols have been adhered to and through the burdensome system of reports which doctors need to submit in relation to a wide range of clinical procedures and outcomes. Protocols are developed according to the ministerial annual plan for the revision of clinical guidelines and protocols. There is an Advisory Council on Clinical Protocols in the Ministry of Health, which leads meetings to discuss any problems regarding clinical protocols and revise them. All diagnostic and treatment protocols have therefore been revised since the Soviet era, but they do not necessarily coincide with models of best practice used in western Europe. Rather than incentives for participation in quality assurance programmes, doctors who fail to follow standards and protocols to the letter face severe legal consequences and penalties.

There are similar reporting systems and reviews at the facility level; these are the responsibility of the sanitary-epidemiological network, which acts as the public health and safety inspectorate, ensuring that a wide range of

norms and procedures in relation to hygiene standards has been implemented. If hygiene standards are found wanting in a particular facility, the Sanitary-Epidemiological Inspectorate has the power to close a health facility until the requirements have been met. The relevant head of department (Chief Doctor in clinical matters or Chief Nurse for the implementation of sanitary protocols) is responsible for ensuring protocols are followed and staff can be penalized if they do not follow these protocols.

Where patient safety is deemed to have been compromised by the inadequate implementation of diagnostic and treatment protocols, the physician at fault can be demoted or dismissed, but as there is no formal licensing of doctors, they cannot be banned from practising (see section 2.8.3 *Registration and planning of human resources*). No established mechanisms exist for collecting and analysing information about errors that occur in health care outside of punitive practices. Some categories of patient death trigger an automatic investigation, such as deaths from heart attack in the first hour, appendicitis, pneumonia and all infant or maternal deaths. Both the public and leaders of health-care organizations still tend to blame individuals when adverse events occur. As a result, health professionals are reluctant to report errors as they fear reprimand and disciplinary action, a wide range of errors remains undiscovered and the opportunity for information sharing is lost. An open and fair, blame-free culture in which staff can report incidents with no negative consequences for themselves would ease this problem.

2.8.3 Registration and planning of human resources

There is no central register or formal licensing of professional medical staff, but upon employment, new staff must show they have the relevant qualifications and training, including continuing professional development training (organized through BelMAPO and the Vitebsk State Medical University), which is linked to their bonuses and remuneration (see section 4.2.3 *Training of health-care personnel*).

Planning for health-care personnel is still developed on the basis of norms, and there are policies to redistribute health workers to fulfil these norms (for example, new graduates have to complete a compulsory two-year work placement in primary care), but it is still proving difficult to fill posts in less popular branches of medicine, and the size of the hospital sector means that there is almost no limit to the number of new specialists that can be absorbed into secondary and tertiary care. In 2011 there was demand for 4424 doctors in the health system and 2067 new graduates were sent to fill vacant posts

for their obligatory work placement (*raspredelenie*) – 136 to rural areas and 267 to areas affected by the Chernobyl explosion where it is hard to recruit staff (see section 4.2.3 *Training of health-care personnel*). The health system needed 5342 mid-level health personnel, 3025 graduated and 2590 of these were given obligatory work placements which reduced the deficit of nurses by 60%. Different approaches to health-care planning are being explored, but it is likely that norms-based planning will prevail for the foreseeable future.

2.8.4 Regulation and governance of pharmaceuticals

The Ministry of Health and its agencies are responsible for the regulation and governance of pharmaceuticals in Belarus, ensuring that products meet the required standards for efficacy, quality and safety. In October 2011, a Pharmaceuticals Manufacturing Department was created at the Ministry of Health as a regulatory body (see section 6.1). Patent protection is left to manufacturers to pursue through the courts as necessary. There are 10 local quality-control laboratories across the country which form part of the state-owned distribution network (see section 5.6). Seven laboratories deal with pharmaceuticals; three (which are all in Minsk) are responsible for quality control of biologically active preparations (vaccines, blood products, etc.). Counterfeit pharmaceuticals are now very rarely found in Belarus as the wholesale purchase of drugs is so closely regulated – pharmaceuticals can only be purchased direct from factories or from official distributors. The retail of pharmaceuticals over the Internet is banned.

It takes five years for a new drug to be registered. The specialist work for this is conducted by the Centre for Expert Examination and Testing in Health Care, which is a state-owned enterprise under the Ministry of Health responsible for licensing, registration and regulation of pharmaceutical products. The criteria for registration are developed nationally; there have been moves, however, towards developing joint drugs registration by 2013 for the three countries in the Customs Union (Belarus, Kazakhstan and the Russian Federation); this would be facilitated by the expansion of good manufacturing practice (GMP) compliance (see section 5.6).

Both state-owned and private pharmacies need to be licensed and all pharmacies are entitled to dispense the full range of drugs registered in Belarus. However, only state-owned pharmacies are able to dispense drugs which are wholly or partially subsidized by the government. There are 95 diseases for which drug treatment is wholly reimbursed by the state, including HIV treatments, TB treatments, asthma, insulin for people with diabetes and so on.

The Essential Medicines List covers these conditions and is broadly similar to the WHO-recommended list, but it is broader as it also includes cancer treatments and the drugs needed following transplant surgery. Pharmaceuticals prescribed to inpatients are provided free of charge. Up to 90% of outpatient prescription costs for other conditions are paid by the state for certain categories of people who are eligible for benefits (people with disabilities, etc.). However, pensioners are no longer covered as part of measures to reduce costs following the impact of the global financial crisis. For a while children under the age of 3 years and certain categories of disabled people also lost their eligibility, but from April 2012 (by Presidential Decree) this was reversed. For some special categories of people, 100% of outpatient prescription costs are covered, such as Second World War veterans, survivors of the Chernobyl clean-up operation and so on. The average annual per capita out-of-pocket (OOP) expenditure on drugs was US$ 70 in 2011. Paying for pharmaceuticals as an outpatient accounts for most of the OOP costs for patients in Belarus, but there are large regional differences in per capita consumption levels, with those in urban areas spending nearly 10 times as much on pharmaceuticals as those living in rural areas.

The import and purchase of pharmaceuticals for socially important diseases are carried out centrally through the Ministry of Health in order to keep down costs attributed to the budget and patients. Pharmaceuticals for state-owned pharmacies are ordered by the regional governments through the state distribution network. End prices for patients are determined by the central government. The Ministry of Health aims to keep costs down through the use of generic pharmaceuticals, the implementation of tendering procedures and the supply of pharmaceuticals to retailers at cost price. Cost-containment through restrictions or protocols for prescribing in primary care has not been comprehensively introduced. It has proved difficult to encourage generic substitution, partly because patients perceive brand-named products to be better quality, but also because in training doctors often learn the brand names rather than generic names for drugs so then automatically prescribe brand names rather than generics. It is also more profitable for pharmacies to dispense more expensive brand-name drugs rather than generics. Control of the over-the-counter sale of antibiotics and anti-hypertensives has been weak, but renewed efforts from June 2012 have sought to restrict access to these classes of drugs by making them available by prescription only. To support this, primary care doctors can now prescribe more than one month's worth of drugs at a time for people with chronic conditions (see section 5.3).

2.8.5 Regulation of medical devices and aids

The purchase of essential medical equipment is planned by the district chief doctors depending on current needs and the limitations of local budgets. For purchases from the district budgets costing more than €10 000, a tendering procedure is used. All districts have a central bookkeeping and accounts system for the supply of medical devices to all the district health-care institutions (including district hospitals, district polyclinics, ambulance services and primary care facilities, such as outpatient clinics and FAPs). Requests for disposable supplies and basic equipment from all health-care facilities in the district are registered and centrally approved by the district Chief Doctor, depending on current priorities. After receiving the equipment, the central bookkeeping and account system maintain the supply of equipment, devices and aids with annual "inventorization" (annual inventories to check the levels). As a rule, primary care facilities are a lower priority than secondary hospital and specialist care. Basic equipment is not always available in sufficient quantity and quality, although the recent investment in rural primary care facilities has reduced the proportion of outdated equipment being used at the outpatient clinics, FAPs and polyclinics and at district hospitals. There are also gaps in the supply of basic equipment, transport upgrading and disposable supplies at the primary care level.

2.8.6 Regulation of capital investment

Capital investments are controlled by the Ministry of Health and the regional or district authorities, depending on the level of health care. The controls cover only the state-run public sector, but there were no private or nongovernmental inpatient hospitals as of June 2013. Certain mechanisms are used to try to improve the geographical distribution of resources. The first is the "guaranteed social standard of health-care expenditure per inhabitant at the district and regional level of care", which has been in use since 2001 (see section 3.7). Before this, the appropriate financing level was judged according to capacity-related criteria (number of hospital beds). The second mechanism is the planning and implementation of the priority state programmes for health care. These state programmes place the responsibility for meeting certain investment targets with the district authorities. The state programmes aim to trigger strategic health-care delivery improvements. The most recent priorities have been maternity services, building capacity for cardiosurgery and orthopaedic care (endo-prosthesis).

Capital investments prioritize the hospital and specialist sectors. However, attention has also been paid to the improvement of primary health-care facilities, particularly through the State Programme for the Revival and Development of Rural Areas, which focused on the reconstruction and updating of primary care facilities in the country. However, social, long-term, palliative and mental health care still lack sufficient capital investment and are low on the priority list.

2.9 Patient empowerment

2.9.1 Patient information

Informing the general public about the availability and effectiveness of health services and healthy lifestyles is considered to be a significant task by Belarusian health authorities at the national and local levels. There is a growing understanding that the provision of information about treatment options and self-help strategies would enable patients to use health services more efficiently and effectively. Achieving the maximum attainable level of health has recently been declared a national priority and some measures were formulated in the Ministry of Health's concept paper "On the realization of governmental policy on fostering healthy lifestyles for the period to 2020", in which issues of health information were given considerable attention. In practice, the task of disseminating patient information is imposed on institutions subordinated to the Ministry of Health, mainly on the sanitary-epidemiological centres of different levels, as well as local health facilities. There is a vast range of patient information available in Belarus, including printed materials (special magazines, newspapers, columns in popular publications, books, brochures and leaflets) and the mass media (special broadcasts on radio and television).

As the number of Internet users in Belarus is increasing, the Internet has become a popular source of information on health-related issues. Although most of the health sites are not state sponsored, there are several official medical portals, including web sites of the Ministry of Health and its subordinates, where information is available regarding the organizational structure, functions and capacities, contact points and working hours of publicly owned health facilities. However, these web sites do not provide information about the quality performance indicators of hospitals and primary care facilities, the technical skills and qualifications of general practitioners (GPs) or specialists, or where to seek a second opinion or independent advice on health problems.

On the primary and secondary care level, every health facility is obliged to have an information service in place for providing information (either face-to-face or by telephone) on the availability of services, their cost (if they are supplementary to the extensive free-of-charge benefits), working hours of staff and the contacts details of the administration. However, it is not possible to obtain any information on the quality of health services, ranking positions of units and staff according to their performance, records of medical errors or adverse events as these data are not collated.

Also, on the primary care level, doctors are obliged to deliver lectures on different aspects of public health on a regular basis, and then report on these activities to the district executive health committee (see section 5.1). This practice has been carried over from the Soviet era, but its impact on health behaviour has not been evaluated. Overall, no methodologically sound studies have been conducted so far in Belarus to evaluate the specific demands for health information, the impact of that information on health behaviour, or the level of popular understanding of the health system benefits to which they are entitled. As of June 2013, little evidence was available in Belarus on the quality of health information provided and to what extent this information actually meets patients' demands or needs.

2.9.2 Patient choice

Since Belarusian citizens enjoy universal health-care coverage, the choice of primary care provider is determined primarily by the area of patients' residence (as a rule, patients are supposed to use the nearest medical facility). Inpatient care in Belarus is also organized according to geographical location, i.e. divided into zones providing care for inhabitants of particular administrative territories (except for emergency hospitalizations). Under such a principle, health-care facilities at the secondary level do not have much incentive to compete with each other for patients. Theoretically, patients have the right to choose a physician or health department within a particular hospital, but in practice this right is difficult to realize, primarily because of the lack of reliable information and unclear criteria for making such a choice. In addition, the head of the health department usually has to give their permission for patients to exercise this right, thus creating a significant barrier to choice.

Patients can refer themselves outside their territory if they pay out of pocket at the special commercial departments of the state-owned health facilities or at private diagnostic medical centres located mainly in the regional cities. Only in rural areas does patient choice seem to be more constrained, and the

gatekeeping role of primary care practitioners is a reality, but this is mainly due to geographical features, as patients have fewer health facilities on their doorstep.

2.9.3 Patient rights

The legal basis for the recognition, protection and promotion of patients' rights in Belarus was established by the Constitution, stating that "citizens of the Republic of Belarus shall be guaranteed the right to health care, including free treatment at state health-care organizations. The State shall make health care accessible to all of its citizens." Other provisions of the Constitution guarantee the safeguarding of human dignity, protection of life, as well as physical and psychological integrity without any discrimination, thus emphasizing fundamental value of human beings, which constitutes the underlying concept of all regulations governing health care. Following these constitutional provisions, Belarus has incorporated provisions on patients' rights into different laws and regulations relevant to the national health system (Fomenko, 2006).

The most comprehensive set of patients' rights has been embedded into the Law on Health Care (2008), including the right to care and treatment in a healthy and safe environment; the right to choose health services and attending physician; the right to be respected as a person and be treated with dignity; the right to information regarding health status; the right to informed consent; the right to self-determination, confidentiality and privacy; the right to participation in decision-making regarding treatment options; the right to alleviation of pain and the right to spiritual support. The Law on Health Care also recognizes the rights of specific categories of patients, such as patients with diminished capacity for decision-making, mental health patients, minors and participants in clinical trials. The protection of patients' rights is also set out in several other laws, such as the Law on Tissue and Organ Transplantation (2007), the Law on Drugs (2006), the Law on Blood Transfusion (2010), as well as in a number of different regulations issued by the Ministry of Health.

In general, Belarusian legislative texts and regulations are mostly in accordance with the provisions of international norms and recommendations on patients' rights. However, a more thorough review of national documents suggests that patients' rights in Belarus are a declarative concept rather than having a real impact on daily practice (Fomenko, 2006). The main problem with the implementation of these rights is that they are not backed up by adequate mechanisms for their realization. For example, the right to information is difficult to exercise due to the very short time doctors have for consultations

and their overall reluctance to inform patients about their health status in detailed manner, alleging that patients would not understand it anyway due to their medical illiteracy. The right to access one's own medical records, ask for a copy of them, and be allowed to correct any errors they might contain has not been included in the national legislation; patients are entitled to request and to be given only a written summary of diagnosis and treatment upon discharge from a hospital.

In order to set out all the key elements of patients' rights clearly and to elucidate the ways in which patients' rights could be effectively enforced in the Belarusian health system, several attempts to elaborate a separate law on patients' rights have been undertaken. However, the Ministry of Health has recently expressed no interest in further improvement of patients' rights legislation, arguing that the current legal framework covers the issue of patients' rights quite thoroughly.

A recent study on how well the general public is informed about patients' rights has found that knowledge about patients' rights among the population in Belarus is very limited: more than half of those surveyed have never heard about the right to choose health services and attending physicians (51.2%), or about the right to participate in the decision-making process regarding treatment options (58.6%), which suggests that there is a need to raise the issue of patients' rights on the health policy agenda (Shukhatovich, 2010). Another survey has found that the protection of rights pertaining to patients and health professionals is perceived to be unbalanced, especially in primary care. In a survey among doctors, 49% of them considered patients' rights to be sufficiently protected, 38% insufficiently protected and 10% not protected at all; in the same survey, only 4% of doctors considered their rights to be sufficiently protected, with 47.9% of respondents considering their rights to be insufficiently protected and 46.2% considering their rights to be not protected at all (Antipova, Goryacheva & Suvorova, 2004).

2.9.4 Complaints procedures (mediation, claims)

Belarusian health legislation defines neither the right of patients to complain if they are not satisfied with the quality of services provided nor the complaints procedure itself. In the Ministry of Health, regulation governing administrative issues within health facilities it is stated that any conflicts between patients and health-care professionals should be resolved under common principles of national legislation. According to this statement, patients' complaints fall under the jurisdiction of the Law on Citizens' Requests, stipulating that citizens have

the right to lodge complaints against administrative bodies and receive written responses or other feedback within a fixed period of time. In the Belarusian health system, no mediating mechanisms have yet been established for settling conflicts between patients and health professionals on a basic level. Also, patients cannot rely on support from independent assistants, such as patient advocates or an ombudsman office, simply because such bodies do not exist in Belarus.

In practice, most patients first submit their complaints to the administration of the health facility which has provided the care in question. The administration is obliged to investigate the complaint and inform the patient in writing within 15 days from the date of receiving the complaint if there is no need for additional investigation and up to one month if there is such a need. If they are dissatisfied with the results of the investigation, the patient can submit a complaint to the Regional Health-Care Department or to the Ministry of Health. If the patient still complains about the quality of care received, usually a lawsuit is initiated.

Civil Code delictual liability provisions are applied to situations where a causal relationship between treatment and material or non-material harm to patients can be established. Under this procedure, it is the patient who is required to produce evidence of the health professionals' failing. As patients in Belarus are not entitled to access their medical records and ask for a copy of them, and as patients as plaintiffs are supposed to bear the costs of all legal procedures, the burden of proof imposed on patients is significant. According to Belarusian legislation, in state-owned health facilities staff are usually exempt from liability to damages because the administration, as an employer, is responsible for damages with regard to the medical errors or negligence of its employees. Once an error causing harm to a patient has taken place, the physician at fault can be demoted or dismissed, but as there is no formal licensing of doctors, they cannot be banned from practice. In addition, it is possible for patients to seek redress through criminal proceedings, as the Belarusian Criminal Code reserves criminal punishment for health professionals who have been grossly irresponsible and directly caused a patient's death or serious injury. The number of medical malpractice claims has been growing, increasing by 15–20% annually (Fomenko, 2007).

There is also an informal procedure involving the Ministry of Health telephone hotline for submitting complaints directly. Patient concerns about the quality or safety of services are sometimes raised by the media. However, doctors are still reluctant to discuss their failures and report errors as they

fear reprimand and disciplinary action. There is no system for collecting and analysing information about clinical errors that occur in health care. As a result, medical mistakes can rarely be disseminated as lessons to prevent adverse events in the future (Fomenko, 2007).

2.9.5 Public participation

An organized movement of health-care consumers has not emerged in Belarus. A small number of patients' self-help groups exist, focusing their attention on specific diseases and working in conjunction with health professionals to raise awareness of the needs of the patients they represent. There is no single organization dealing with the protection and promotion of patients' rights at the local, regional and national levels. According to Belarusian legislation, health facilities may establish special bodies for safeguarding patients' interests and protecting their rights and welfare in health care or clinical research. However, these bodies (in essence hospital or research ethics committees) are usually affiliated to the hosting organizations and their membership is composed of employees of the institutions which establish them, which gives rise to some doubts concerning their capacity to maintain independence, pluralism and lay representation and, hence, fulfil their mission properly (Famenka, 2011).

In Belarus, participation of the public in health policy-making is rather limited. Officially, citizens are given the right to participate in public discussions on proposed policy, but whether their concerns are actually considered by decision-makers when formulating and promulgating policy is unknown due to lack of transparency in policy-making processes. The history of passing the Law on Prevention of Diseases Hazardous for Public Health (No. 345-Z, 7 January 2012), for example, shows that in this case public voice had little impact on policy formulation and then implementation. The draft of this Law was proposed by the Ministry of Health and its scope and content was the source of much controversy. The most intense debate was around the issue of mandatory testing for HIV, which, in the opinion of numerous NGOs and civil society activists, had been formulated very broadly and was likely to threaten basic human rights if it were implemented. The concern had been shared by the United Nations agencies operating in Belarus and was highlighted in mass media. However, this public campaign had little impact on the final draft of the Law, which passed through legislative proceedings with only minor changes. The Law is not fully consistent with the current international recommendations on public health interventions (compulsory medical check-ups and HIV testing, the restrictions in the employment of people living with HIV, the compulsory isolation and treatment of TB patients). There are also some epidemiological

concerns as it could discourage people from coming forward for HIV testing. As of June 2013, amendments to the Law on Health Care were being similarly debated, with regard to the initiative of the Ministry of Health to either oblige "intoxicated" patients to pay for treatment or withhold treatment for such patients. Despite strong opposition from both expert community and general public, the draft Law with these amendments was submitted to the Parliament and was awaiting endorsement. If it is passed, it would potentially be a significant challenge to the notion of universal coverage.

In order to assess the level of patient satisfaction with health care, the Institute of Sociology of the National Academy of Sciences of Belarus has been conducting nationwide surveys since the early 2000s. According to the results of a survey conducted in 2006, 20.8% of respondents in rural areas were satisfied with health care; 42.4% were more or less satisfied; 26% were more or less dissatisfied; 8.4% were dissatisfied; 2.4% could not answer. Of urban residents, 13% of respondents were satisfied with health care; 36.4% were more or less satisfied; 34% more or less dissatisfied; 14.3% were dissatisfied; and 2.3% could not answer. In 2008, the same survey indicated that 17.8% of respondents in rural areas believed that the health care provided to them was good; 50.6% believed that it was of moderate quality; 22.3% believed that it was bad; 9.3% could not answer. Among urban residents, 12.1% of respondents believed that the health care provided to them was good; 50.8% believed that it was of moderate quality; 23.1% believed that it was bad; and 14% could not answer. The results of a retrospective analysis of these surveys showed that the level of satisfaction with health care has increased over time, and most significantly among rural residents (Shukhatovich, 2009).

At the local level, the administrations of all health facilities are obliged to conduct patient satisfaction surveys quarterly and report the results to the higher authorities. However, implementation of this initiative has proved to be quite troublesome: the surveys are usually conducted by the staff of the health facilities, rather than an independent external body; the administration is not interested in negative results being reported to higher levels; and for facilities with only one or two doctors it is perceived to be just an additional bureaucratic burden.

3. Financing

In 2011, total health expenditure accounted for 5.3% of GDP, which equated to a per capita expenditure at purchasing power parity (PPP) of US$ 793 per capita. Most came from the state budget; WHO estimated public health expenditure as a share of total health expenditure to be 70.7% in 2011 and health expenditure accounted for 13% of total government expenditure in the same year.

Belarus has not introduced any form of compulsory social health insurance and, while financing for the system has been decentralized to the local level, the main source of taxation revenue remains local enterprises rather than payroll contributions. This is a distinctive feature of the Belarusian system that reflects the nature of the wider economic system, which is largely unprivatized so that profits or revenue from local enterprises are channelled through local budgets and pooled (unearmarked) at the national level. The only other significant source of funding is OOP payments, which are mainly in the form of formal co-payments for outpatient pharmaceuticals. Voluntary health insurance (VHI) is not a significant feature of the system and nor are external resources.

Access to health services is universal and significant co-payments only exist with regard to the costs of pharmaceuticals, dentistry and optical care. Co-payment levels are determined centrally by the Ministry of Health and costs are a less significant factor than politics in determining co-payment levels. Most people have to purchase prescription outpatient pharmaceuticals at full cost price, but certain essential drugs (such as those for treating diabetes, asthma, TB, HIV and some others) are available free of charge. Certain categories of people (such as veterans) are also able to access pharmaceuticals, dental services and optical care with discounts or full reimbursement from public funds. Informal charges are not tolerated by the authorities.

Local government acts as the main collecting agency, collecting taxation contributions from enterprises and individuals, along with other revenue, such as rent and profit from state-owned enterprises. It also acts as the main pooling agency for health services in the specified territory. A portion of local revenues are then sent to the central state budget, the collecting agency at the national level, from which the Ministry of Health receives its allocation. The Ministry of Health is thus the national-level pooling agency and acts as the third-party payer for specialized tertiary care and vertical programmes for the whole population. The overall health budget allocation is set by the Ministry of Health and the Ministry of Finance in line with the will of the Parliament and the President. Budget decisions are then passed down to the local level for implementation.

The organizational relationship between purchasers and providers is based on an integrated model, in that all personnel are directly employed by the third-party payers, which also own the facilities. Provider behaviour is controlled through a combination of hierarchical management and strictly enforced norms. Health-care services are paid for prospectively, using global budgets based on weighted capitation for primary care and on line-item budgets in turn based on historical incrementalism in secondary and tertiary care. All health-care personnel working in the main statutory system are salaried according to salary scales set at the national level by the Ministry of Labour and Social Protection with the Ministry of Health, with standard increments based largely on years of service, qualifications and positions held.

3.1 Health expenditure

According to WHO estimates, in 2011 total expenditure on health accounted for 5.3% of GDP, which equated to a per capita expenditure at PPP of US$ 793 per capita (see Table 3.1). The vast majority of this spending came from the state budget; WHO estimated public health expenditure as a share of total health expenditure to be 70.7% in 2011 and health expenditure accounted for 13% of total government expenditure in the same year (WHO, 2013).

WHO estimates of health expenditure reflect the sum of general government and private expenditure on health and are based on the National Health Accounts (NHA) classification, including both nationally reported data and estimates from international organizations. NHA classifications were first introduced in 2008 to track spending on HIV/AIDS, but from 2010 they have been rolled out across the health system to track spending and support the effective management of resources (Zharko, 2011).

Table 3.1
Trends in health expenditure in Belarus, selected years

Years	1995	2000	2005	2006	2007	2008	2009	2010	2011
Total health expenditure, PPP per capita (BYR per US$), WHO estimates	228	314	585	614	701	734	763	762	793
Total health expenditure as % of GDP, WHO estimates	6.7	6.1	6.9	6.3	6.4	5.9	6.1	5.6	5.3
Public sector health expenditure as % of total health expenditure, WHO estimates	71.1	75.5	72.9	70.2	69.1	65.1	64.0	77.7	70.7
Private sector expenditure on health as % of total health expenditure, WHO estimates	28.9	24.5	27.1	29.8	30.9	34.9	36.0	22.3	29.3
Public sector expenditure on health as % of total government expenditure, WHO estimates	11.5	10.1	10.5	9.5	9.1	7.9	8.4	13.4	13.0
Public sector expenditure on health as % of GDP, WHO estimates	4.8	4.6	4.8	4.4	4.4	3.8	3.9	4.4	3.7
Private households' OOP payments on health as % of total health expenditure	18.6	14.0	19.9	22.2	23.6	27.4	26.9	19.8	26.7
Private households' OOP payment on health as % of private sector health expenditure	64.5	57.1	73.4	74.5	76.4	78.6	74.8	88.9	91.0
VHI as % of total expenditure on health	0	0	0	0	0	0	0	0.2	0.2
VHI as % of private expenditure on health	0	0.1	0.1	0.1	0.1	0.1	0.1	0.8	0.8

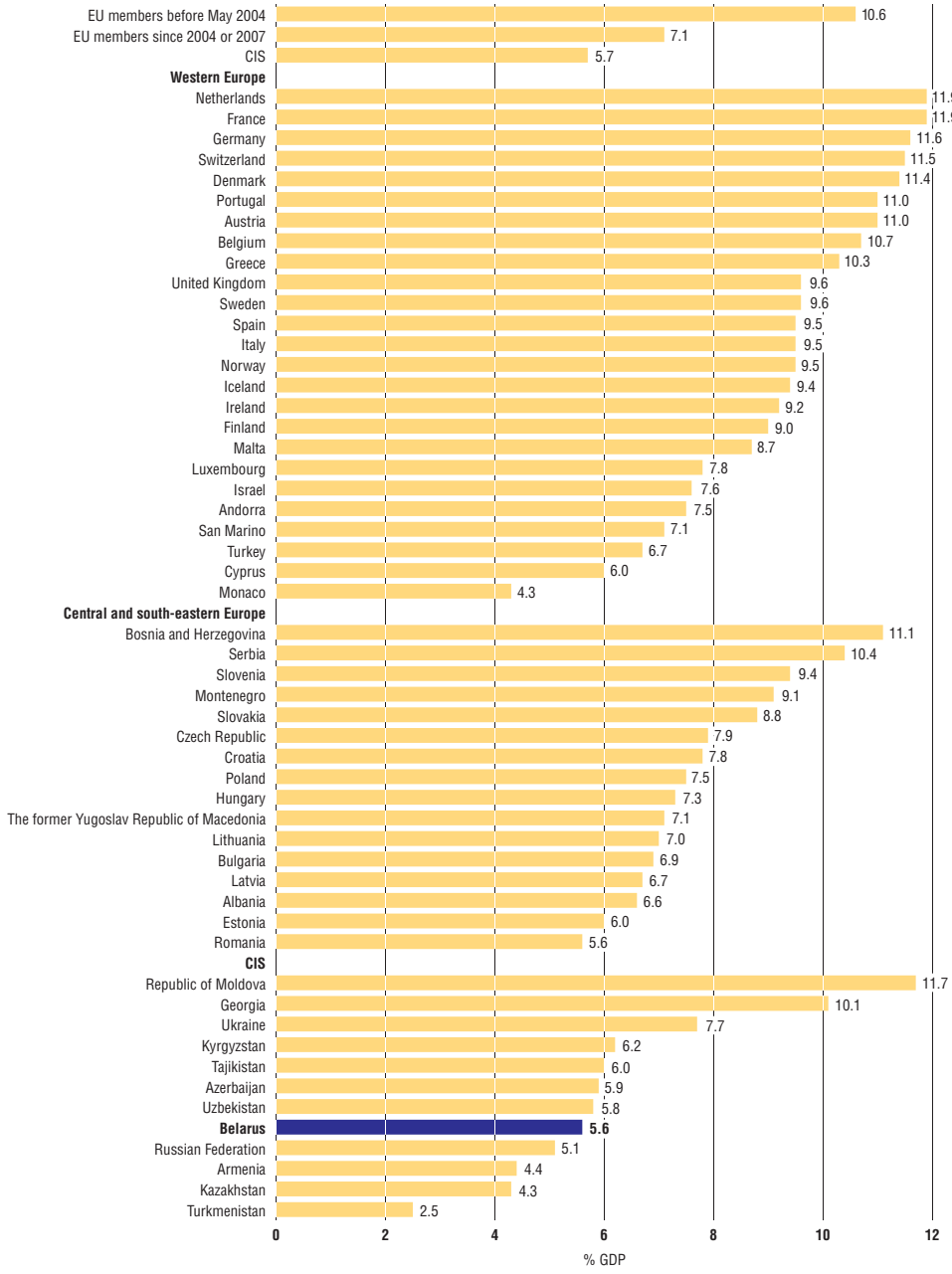
Source: WHO, 2013.

Total health expenditure and the public sector share of health expenditure in Belarus had been relatively stable, but from 2005 it has shown an overall downward trend (see Table 3.1 and Fig. 3.2). WHO estimates show that health expenditure as a share of GDP in Belarus – at 5.6% in 2010 – is below the EU average of 9.9%, and the WHO European Region average of 8.3%, and level with the CIS average of 5.7% (see Fig. 3.1).

According to WHO estimates, health expenditure as a share of GDP peaked in 2005 at 6.9% and has been falling since; health expenditure has been consistently higher in Belarus than in the Russian Federation, although the gap is narrowing (Fig. 3.2). In terms of PPP, according to WHO estimates, Belarus has the highest per capita health expenditure in the CIS, after the Russian Federation (see Fig. 3.3). This reflects the political priority given to health care in Belarus, but it also indicates that the current organization of care, which is quite similar to the organization of care under the prior Semashko system, absorbs considerable resources. The system is primarily funded through the public sector and, according to WHO estimates, the share of health expenditure from public sources as a percentage of total health expenditure was 70.7% in

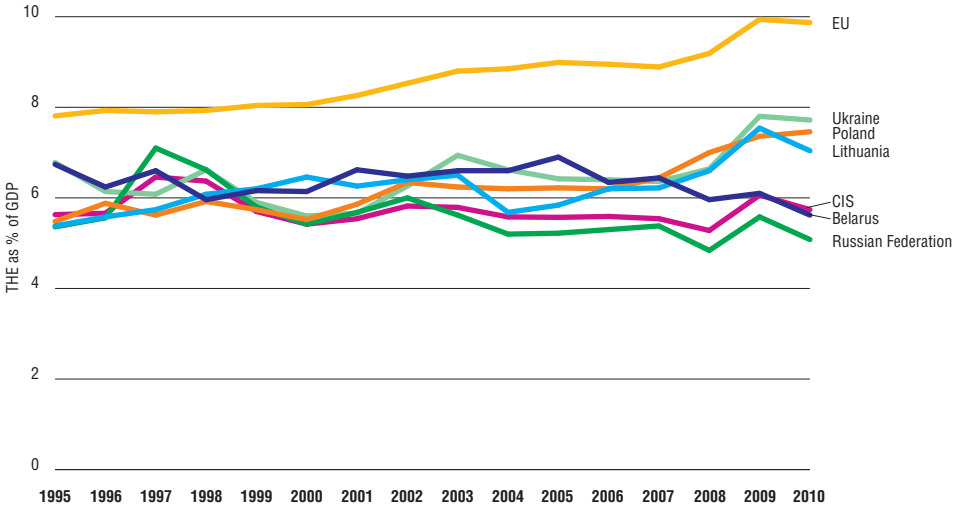
Fig. 3.1

Total health expenditure as % of GDP, WHO estimates, 2010



Source: WHO Regional Office for Europe, 2013.

Fig. 3.2
Trends in total health expenditure as % of GDP in Belarus and selected other countries, 1995 to latest available year



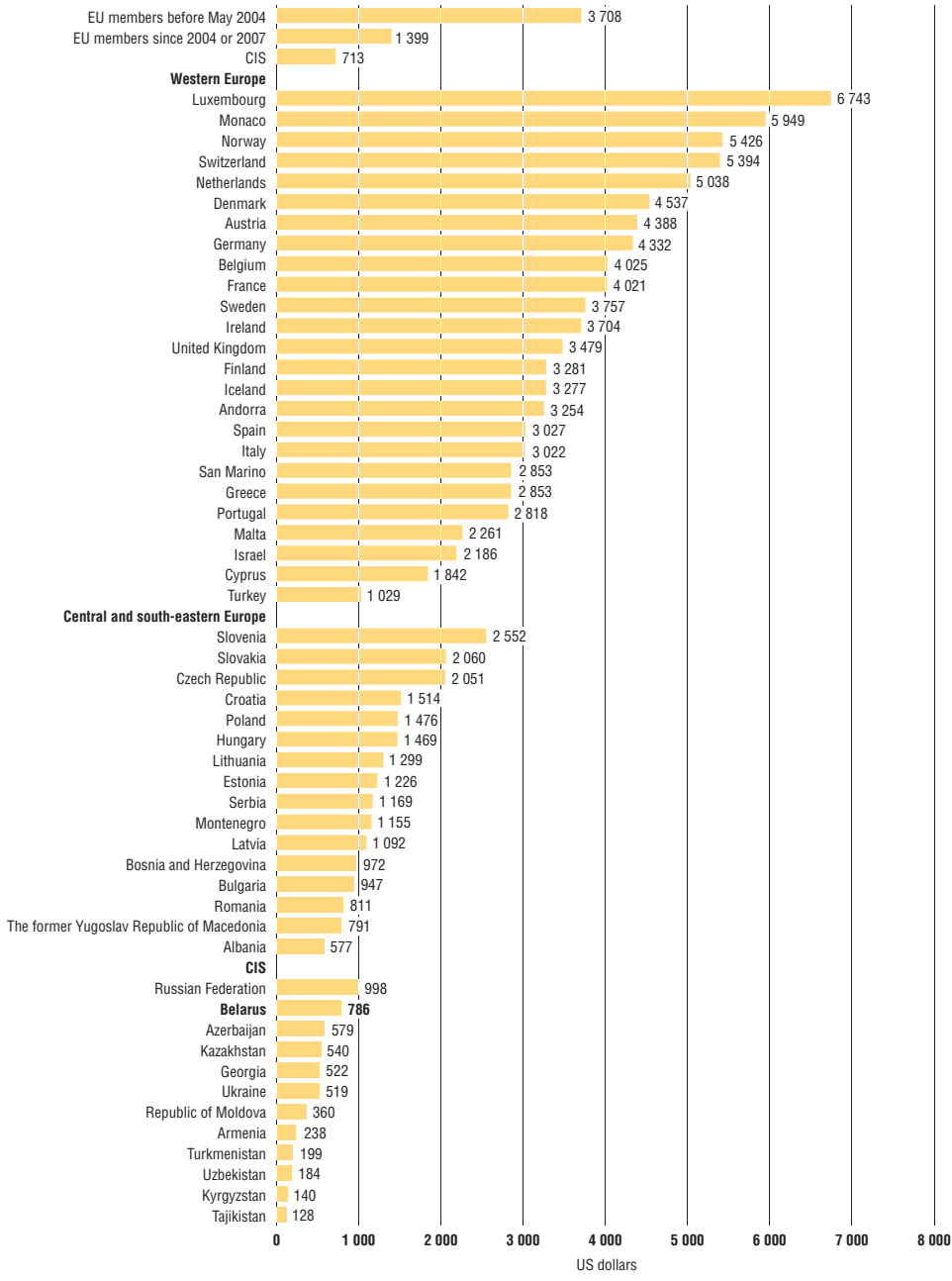
Source: WHO Regional Office for Europe, 2013.
Note: THE: Total health expenditure.

2011, which is higher than in neighbouring Lithuania or Poland and considerably higher than in any other country of the CIS, the average for which was 56.6% in 2010 (see Fig. 3.4). Such public spending has been maintained despite severe fiscal shocks.

The proportion of total health expenditure on inpatient services has been gradually falling from 60% in 2000–2001 to 43% in 2011. This is largely as a result of a policy decision to strengthen primary care at the expense of inpatient services. In 2011, 97% of total inpatient expenditure was from public sources. The proportion of total health expenditure on pharmaceuticals has fluctuated, but in 2011 it was 18%, of which 30.5% was from public sources (up from 14.8% in 2006); outpatient pharmaceutical costs account for most of the OOP spending in Belarus. Total capital investment expenditure on medical facilities as a proportion of total health expenditure has also fluctuated since independence, but it was 8% in 2011. Salaries continue to consume a large share of resources, the wage bill reaching 41% of total health expenditure in 2011 (WHO Regional Office for Europe, 2013).

Fig. 3.3

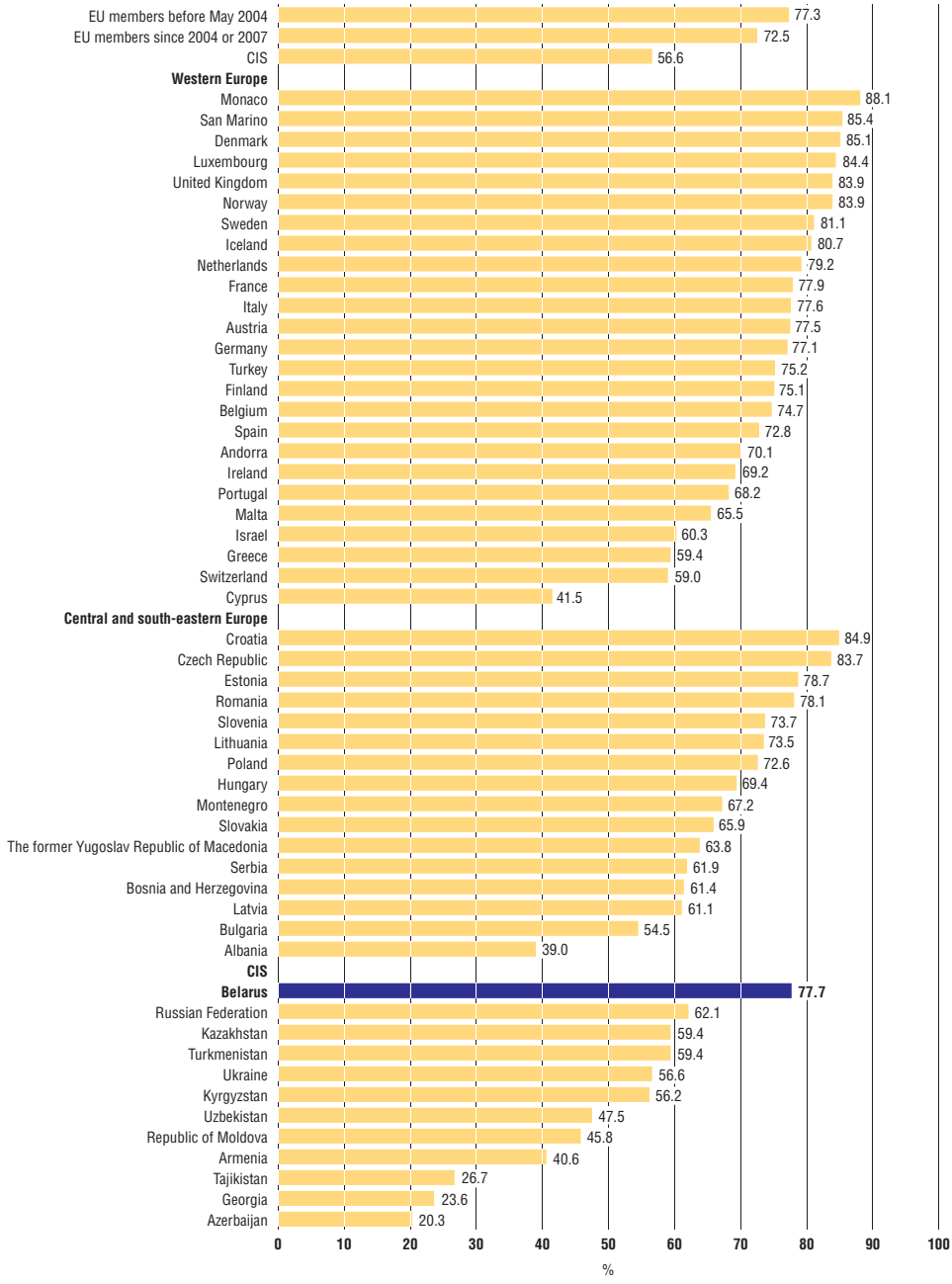
Health expenditure in US$ PPP per capita in the WHO European Region, 2009, WHO estimates



Source: WHO Regional Office for Europe, 2013.

Fig. 3.4

Public sector health expenditure as a share (%) of total health expenditure in the WHO European Region, 2010, WHO estimates



Source: WHO Regional Office for Europe, 2013.

3.2 Sources of revenue and financial flows

Belarus has not introduced any form of compulsory social health insurance and, while financing for the system has been decentralized to the local level, the main source of taxation revenue remains local enterprises rather than payroll contributions (see Fig. 3.6). The only other significant source of funding is OOP payments, which are mainly in the form of formal co-payments for pharmaceuticals and private services such as cosmetic dentistry. While the overall balance of public and private sources of expenditure on health gradually shifted away from public sources from the mid-1990s, the system is still overwhelmingly state funded through general taxation (see Table 3.2). VHI is not a significant feature of the system and nor are external resources (see Table 3.2 and Fig. 3.5).

Table 3.2

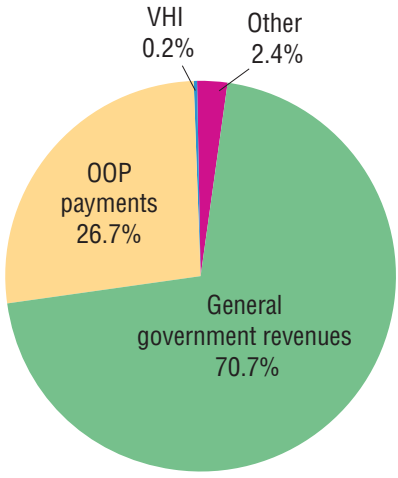
Sources of revenue as a percentage of total health expenditure, selected years

Source of revenue	1995	2000	2005	2006	2007	2008	2009	2010	2011
General government expenditure	71.1	75.5	72.9	70.2	69.1	65.1	64.0	77.7	70.7
OOP payments	18.6	14.0	19.9	22.2	23.6	27.4	26.9	19.8	26.7
VHI	0	0	0	0	0	0	0	0.2	0.2
External resources on health	0	0.1	0.1	0.2	0.1	0.2	0.2	0.5	0.3

Source: WHO, 2013.

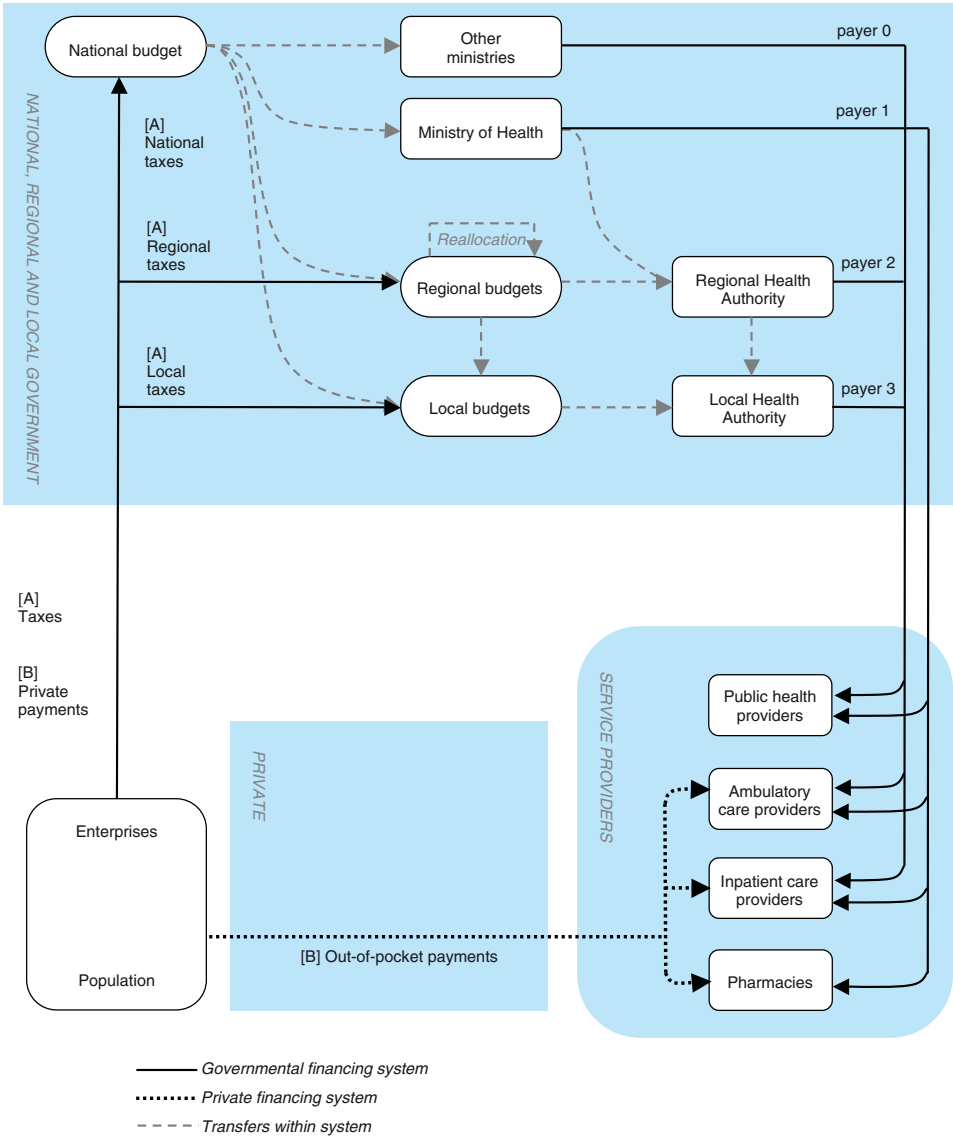
Fig. 3.5

Percentage of total health expenditure according to source of revenue, 2011



Source: WHO, 2013.

Fig. 3.6
Financial flows, 2013



Access to health services is universal and formal user charges are confined to dental and optical care. Most people have to purchase prescription outpatient pharmaceuticals at full cost price, but certain essential drugs (such as those for treating diabetes, asthma, TB, HIV and some others) are available free of charge. Certain categories of people (such as veterans) are also able to

access pharmaceuticals, dental services and optical care with discounts or full reimbursement from public funds. Informal charges are not tolerated by the authorities (see section 3.3.1 *Coverage*).

3.3 Overview of the statutory financing system

3.3.1 Coverage

The whole population of Belarus has extensive entitlements to health care, guaranteed by Article 45 of the Constitution. Entitlement is based on citizenship, the system is universal and directly funded through general taxation, and the breadth of coverage is not a significant issue. There is no system of social health insurance and there is only limited private VHI. Although there is no explicit list of services covered under the Belarusian Constitution, primary, secondary and tertiary care costs are de facto covered and there is no rationing of services in the state sector. The Law on State Minimal Social Standards (11 November 1999, No. 322-III) defined the areas in which the state has an obligation to provide social benefits (including health care), as well as the minimal levels of support citizens could expect. In practice, this means that as well as diagnostic and treatment services, emergency care, out-of-hours care and public health services, some long-term care for the elderly and all long-term care for people with mental health problems are covered by the statutory system. In addition, workers in certain sectors and enterprises have access to parallel services funded through the relevant ministry or enterprise. These parallel services also cover some aspects of occupational health care and spa treatments. There are only limited funds available to citizens in need of treatment abroad, and there is a long waiting list for accessing these funds. Treatments needed usually include complex transplant therapies or innovative cancer treatments, which are unavailable in Belarus, and children are prioritized over adults in need.

Significant OOP payments only exist with regard to costs for pharmaceuticals, dentistry and opticians. Prices are determined centrally by the Ministry of Health and costs are a less significant factor than politics in determining co-payment levels. For historical reasons, opticians and dental costs are covered only at a very basic level by the state system, and most patients choose to pay out of pocket for dental treatment and spectacles, if they can afford to. In general, patients pay full costs for pharmaceuticals in outpatient care; however, some citizens are eligible for discounts (see section 3.4).

3.3.2 Collection

Health-care financing in Belarus has been decentralized to the local level, where the main source of revenue remains local enterprises rather than payroll contributions. This is a distinctive feature of the Belarusian system that reflects the nature of the wider economic system, which is largely unprivatized so that profits or revenue from local enterprises are channelled (unearmarked) through local budgets. This is very similar to the financing arrangement under the prior Semashko system. The nature of the socially oriented market economy therefore means that corporate taxation of private businesses is a more significant source of funding than income tax from the general population. The only other significant source of funding is OOP payments, which are mainly in the form of formal co-payments for pharmaceuticals and private services such as cosmetic dentistry (see section 3.4).

Most revenue for health is raised at the local level and spent in accordance with centrally determined budgets (see section 3.3.3 *Pooling of funds*). The collection and administration of taxes takes place at the local level, according to tax rates specified by the Parliament. Local taxes include corporate tax and income tax, but most revenue at the local level comes from publicly owned enterprises and rental incomes. Excise duties and value added tax (VAT) are collected at the national level, and funds distributed through the health budget. However, there are no specific taxes earmarked for health. There have been recent moves to simplify the tax system and make it more transparent. To encourage compliance, tax rates were even lowered. However, the key issue is the inequality between local governments in their capacity to raise revenue because the number of successful state enterprises is not evenly distributed across the country. Consequently, the regions that are the most economically disadvantaged are also the regions that face the most difficulties in fulfilling their statutory obligations to provide particular health services.

3.3.3 Pooling of funds

Local government (the district authorities) acts as the third-party payer for primary and secondary health-care services for their designated populations. The republican government acts as the third-party payer for specialized tertiary care and vertical programmes for the whole population. Local government acts as the main collecting agency, collecting taxation contributions from enterprises and individuals, along with other revenue, such as rent and profit from state-owned enterprises; it also acts as the main pooling agency for health services in the specified territory. A portion of local revenues is then sent to

the central state budget, the collecting agency at the national level, from which the Ministry of Health receives its allocation; the Ministry of Health is thus the national-level pooling agency (see Fig. 3.6). The overall health budget allocation is set by the Ministry of Health and the Ministry of Finance in line with the will of the Parliament and the President. Budget decisions are then passed down to the local level for implementation. In theory, this should ensure that a minimum level of services is provided and financed according to agreed norms from local budget revenue; however, some regions and districts are able to raise more revenue than others and it has been hard for some areas to finance services at the required level because they have fewer successful enterprises. Funding for parallel services is allocated by the relevant ministry from their budgetary allocation and, as such, these services are not paid for from the general health budget. However, the integration of these parallel systems into the main statutory system is ongoing.

Although there are overlapping national- and local-level pools, the revenue collection, pooling and purchasing functions are integrated so the resource allocation mechanism to purchasers is implicit. The global budget for overall spending on health is determined annually, according to political criteria, as health care is considered to be a priority policy area by the President and the Parliament and the aim is to increase allocations to the health budget as a proportion of GDP in accordance with their key political concerns. Particularly important health concerns are addressed through centrally funded "vertical programmes", which are administered and funded through the Ministry of Health rather than local government. The Ministry of Health acts as adviser to the central government in determining priority areas in health policy, but also decides the level of resources to be allocated to different tertiary care providers, the sanitary-epidemiological system and so on. At the regional and district levels, local governments can choose to allocate more resources to health than is required according to national norms, but few are in a position to do so.

There is a system of local budget revenue equalization, using a formula which includes norms for per capita budget expenditure on health services, but these norms are not risk adjusted. A key concern is that Gomel and Mogilev should receive more money, as they were most seriously affected by the Chernobyl disaster. The per capita norms are based on the mid-year population figures for the *oblasts* and the city of Minsk, as estimated by the National Statistical Committee. Allocations to hospitals are made on the basis of prospective funding, based on expected future expenditure and using fixed budgets. These budgets are calculated annually, and previously relied on a

combination of historical precedent and political negotiation at the district, regional and national levels; however, allocation and budgeting can now be done using data reflecting actual expenditure and this is considered the first step towards the introduction of case-based payments (see section 3.7.1 *Paying for health services*).

3.3.4 Purchasing and purchaser–provider relations

The organizational relationship between purchasers and providers is based on an integrated model, in that all personnel are directly employed by the "third-party payers" (i.e. the relevant level of government), which also own the facilities. Historically, funding for services in the main statutory system was determined by capacity criteria, namely the number of beds in a hospital and the number of patient visits to polyclinics, outpatient clinics or FAPs. However, new norms have been introduced, detailing how many beds and staff are considered "optimal" for all the different types of facility and facilities are not paid more for having greater capacity than is recommended. This has been combined with the use of per capita financing arrangements in primary care as a means of tackling excess capacity.

Provider behaviour is controlled through a combination of hierarchical management and strictly enforced norms. The continued use of line-item budgeting, as well as centralized purchasing of, for example, medical equipment and most pharmaceuticals, means that providers are not really in a position to deviate from the agreed plans. Budgets are also "soft", that is, if there is a shortfall and local authorities are not able to cover provider costs, they can usually come to a suitable arrangement.

3.4 Out-of-pocket payments

Despite significant fiscal challenges, Belarus has maintained a relatively low share of private spending in total health expenditure through a combination of political will and very strict regulation of markets and informal activities. Private spending is dominated by expenditure on outpatient pharmaceuticals which are generally excluded from the guaranteed package of benefits; this includes, for example, antibiotics, anti-hypertension drugs and cholesterol-lowering drugs which all have to be purchased out of pocket.

3.4.1 Cost-sharing (user charges)

Cost-sharing is not a notable feature of the system and the introduction of formal charges to access services would be politically unacceptable and even unconstitutional. Most OOP expenditure comprises direct payments for pharmaceuticals and private services, usually dental services. The only cost-sharing is for outpatient prescription pharmaceuticals, which are generally purchased by patients at cost price, but certain groups pay only a percentage of the full cost and the pharmacy is reimbursed for the balance (see section 5.6). However, moves to introduce controversial user charges for intoxicated patients are being discussed (see section 2.9.5).

3.4.2 Direct payments

State health facilities are entitled to provide private services if they are considered supplementary to core services, which should be provided free of charge. Such services include more comfortable hotel facilities for inpatients or elective diagnostic procedures and treatments. This is most common in the fields of dentistry and cosmetic surgery, but it is a growing feature of the system and it is considered an important future source of funding for state health facilities as money which would have been spent in the private sector could come directly back into the state system. To foster the development of such private services facilities have been given the freedom to spend such revenue instead of passing it back to the budget holders.

3.4.3 Informal payments

Although there is some scope for informal payments or gift-giving in the Belarusian health system, as there was in the Soviet system, it is not as widespread as in other countries of the CIS and it is not tolerated by the authorities. A recent survey found that in 2010, 21% of respondents indicated that informal payments were prevalent in the health system, up from 12% in 2006 (World Bank, 2013a). Nevertheless, utilization levels would certainly indicate that informal payments are not a significant barrier to accessing care, although this has been the case elsewhere in the CIS (Balabanova et al., 2004, 2012).

3.5 Voluntary health insurance

While it is possible to buy VHI from the state-owned insurance company, VHI is not a significant part of the health system and the VHI market is undeveloped. Temporary visitors from most countries are obliged to show that they have suitable health insurance coverage for their stay in Belarus, and policies can be purchased through the state-owned insurance company if they are not adequately covered for their stay. The policy in effect grants the visitor the same access to the same package of benefits that is available to Belarusian citizens.

3.6 Other financing

3.6.1 Parallel health systems

Some line ministries (and large enterprises) have their own parallel health systems, which provide services to their current and retired employees. These occupational health-care facilities include both inpatient and outpatient services. As a rule, the occupational service facilities at the big enterprises consist of a polyclinic with the principal specialists, diagnostic facilities and occupational therapists available. The patients enrolled with the parallel health-care services can always access the main health-care system according to their place of residence.

However, from 2005 the system of railway hospitals and polyclinics has gradually been absorbed into the main health system, despite objections from former patients and the doctors working in these facilities. Such integration is necessary because parallel services are not generally well coordinated with the statutory system and represent a significant area of excess capacity in Belarus. According to Presidential Decree No. 251 of 13 May 2008, the Ministry of Health must control the work of other parallel health-care services, so these providers have been gradually absorbed. Inpatient services were centralized under the Ministry of Health in 2008 and outpatient services (polyclinics) were integrated in 2010 (Malakhova, Novik & Migal', 2010). Consequently, services provided through these facilities are now funded in the same way as all other health services according to the same tariffs.

During the Soviet era, such parallel services were considered to be much higher quality than those services provided by the main health-care system. While it is not possible to say whether this is still the case, these services are

still perceived as being of higher quality, as the doctors have a lighter workload and there are shorter waiting times. The doctors are also still better paid (despite integration into the Ministry of Health) and have better working conditions, as they are relieved of numerous duties that those working in the main health system are obliged to carry out.

3.6.2 External sources of funds

While multilateral and bilateral donors are active in Belarus supporting various technical projects in the health sector (see section 2.3), external sources of funds contribute less than 1% to total health expenditure in Belarus and it has never been a significant source of funding for the health sector (WHO, 2013). The main international technical projects are Global Fund projects on HIV and TB.

3.7 Payment mechanisms

3.7.1 Paying for health services

Health-care services are paid for prospectively, using global budgets based on weighted capitation for primary care and on line-item budgets in turn based on historical incrementalism in secondary and tertiary care. For example, the number of diagnostic imaging procedures and clinical laboratory services is estimated and funded on the basis of the actual expenditure of the previous year, with some adjustments. Funds are earmarked for different uses and cannot readily be reallocated. Only pharmaceuticals supplied through state pharmacies free of charge or at a discounted rate are reimbursed retrospectively by the District Executive Health Committee at the rates decided by the President and Council of Ministers. Outsourcing is not a feature of the health system in Belarus.

In order to improve efficiency in resource allocation, the purchasing of health services shifted in the year 2000 from one based on inputs (such as bed numbers) to one based on the population served (capitation funding). Capitation funding is achieved through the setting of social standards for the volume of medical care that should be provided as a minimum, with prices now being costed since the introduction of NHA. The introduction of meaningful costing for services provided is considered the first step towards the introduction of diagnosis-related groups (DRGs) as the main provider payment mechanism.

Global budgets (without line-items) for some republican facilities were being piloted in 2012 in order to encourage savings. Global budgets are unlikely to be rolled out quickly, however, as they would also need to be piloted at the local level beforehand, and the training needs of the chief doctors who run health facilities would be considerable, as few currently have the capacity to budget effectively. A key concern in the pilot was ensuring that adequate quality indicators were in place to ensure that costs were not reduced to the detriment of quality of care.

3.7.2 Paying health workers

All health-care personnel working in the main statutory system are salaried according to salary scales set at national level by the Ministry of Health, with standard increments based largely on years of service, qualifications and positions held. The salaries of health-care personnel working in primary and secondary care are paid from the local budget; all other salaries at the tertiary level derive from central Ministry of Health funds. Those working in the parallel health services can be paid more, but are nevertheless salaried. Personnel working in the private sector (some pharmacies, some dental clinics and some diagnostic centres) can earn significantly more as their wages and bonuses are decided by the managers of those enterprises within the constraints of Belarusian employment laws.

Salaries are not used to provide financial incentive structures for health-care personnel beyond the need to regularly update training in order to progress up the salary scale (see section 4.2.4 *Doctors' career paths*). There are some bonuses to attract and retain primary care doctors in rural regions, but because the overall wage level is so low, the financial incentive is not that significant. However, this could change with the piloting of global budgeting. A living wage for staff would still need to be guaranteed to ensure costs were not cut by simply cutting salaries, but a more flexible payment system would be made possible, with staff bonuses being part of the stimulus package for facilities which set their own budgets.

The main problem with the current methods in place for paying health-care personnel is that, although the wage bill is huge, individual salaries are very low. Quality improvement drives have involved the use of norms and directives, rather than incentives for clinical staff to change their ways of working. As a consequence, expectations of staff are higher than ever and their bureaucratic workload has increased significantly, but their salaries have remained at the same low level. Recent pay increases have done little more than keep up with inflation. Low morale and professional satisfaction are also significant issues particularly in relation to staff working in primary care.

4. Physical and human resources

The capital stock in Belarus is extensive and reasonably equitably distributed across the country. Decisions on investment funding are made by the district or regional local authorities in accordance with the annual planning and annual budgets for health care. The purchase of the expensive equipment is funded in accordance with state programmes approved by the government.

Belarus has maintained a large medical workforce since independence, even after 2010 when the internationally recognized definition of a "practising doctor" was adopted. It is hoped that the move towards new definitions will help in workforce planning as the uneven distribution of staff between regions and specialties will be clearer. Despite the large number of doctors and nurses, human resources in health care in the country are unevenly distributed, and there is a shortage in primary care in both rural and urban areas.

To study medicine, applicants have to pass the centralized entrance tests and only those with the best results can study for free. Students entering the medical universities have to choose one of eight major medical faculties and the choice of faculty largely determines their future medical careers. Basic medical training lasts five or six years, after which, on passing the state medical examinations, the graduate receives a medical diploma, and is allocated a hospital placement for one year of practical training. Training takes nearly three years for nurses and *feldshers*. Graduate doctors, nurses and *feldshers* should all complete an obligatory two-year placement (usually in a primary care facility) as their first job. There are minimum standards for the continuing medical education of all practising doctors and nurses. However, continuing medical education is not linked to a process of revalidation as doctors and nurses are not registered or licensed in Belarus.

4.1 Physical resources

4.1.1 Capital stock and investments

In Belarus, there are 1437 polyclinics (including polyclinic departments at hospitals), 87 specialist clinics (*dispansery*), 140 ambulance stations, 604 rural outpatient clinics (*ambulatorii*) and 2358 FAPs. The number of hospitals declined from 793 in 2001 to 651 in 2004 and has remained relatively stable; in 2011 there were 644 hospitals in total of which 102 were hospitals for nursing care (*bol'nitsa sestrinskogo ukhoda*). These hospitals for nursing care were previously small rural (*uchastkovye*) hospitals which have been converted into homes for long-term nursing care, primarily for older people living in rural areas. Care in these facilities is nurse-led and they are considered "social beds" but the hospitals for nursing care are still included in the total number of hospitals nationwide. The capital stock is reasonably equitably distributed throughout the country.

Routine surveys on the condition of infrastructure at various levels of care are not undertaken. Indicators for the performance of cleaning and maintenance teams, the condition of the premises and fire safety are monitored on a regular basis by the district centres of hygiene and epidemiology (formerly sanitary-epidemiological centres) and by the district departments of the Ministry of Emergencies (formerly the district fire departments). The centres of hygiene and epidemiology monitoring reports influence decisions about investments in health-care facilities, although they are not routinely made public. However, the priorities for investment are dependent on the financial capacities of the local authorities. Backlogs of maintenance problems occur frequently in the economically deprived districts because of insufficient financing from the local budgets for health-care infrastructure (Richardson et al., 2008). Consequently, renovation and capital investment for poorer (often rural) regions comes through Ministry of Health programmes from the national level.

Capital investment in the health-care sector is funded in different ways, according to the status of the hospital. Hospitals can be republican centres (tertiary care), or regional and district hospitals (secondary care). The republican hospitals and institutions are mostly located in Minsk city and are funded directly from the national budget through the Ministry of Health. Regional hospitals are funded from the regional budgets and district hospitals are funded from the district budgets. Minsk city is a separate administrative unit and has its own separate budget for health-care facilities in the capital. Investment funding capacities depend strongly on the economic circumstances of the

local authority. Decisions on investment funding are made by the district or regional local authorities in accordance with the annual planning and annual budgets for health care. As a rule, the purchase of expensive equipment is funded in accordance with state programmes approved by the government (see section 4.1.3 *Medical equipment*).

A large number of standard national state programmes are almost automatically renewed by the government, with some amendments, upon expiry (programmes on psychiatry, healthy lifestyles and so on). In these programmes, the major source of finance is the local budget within the limits of the current health-care budget. However, some programmes receive extra financial resources from the central budget, the renovation of the operating theatres and intensive care units in all districts being one example. Such programmes are usually initiated according to the political will of the President in accordance with state public health priorities.

4.1.2 Infrastructure

Funding allocations for hospitals moved to per capita criteria from capacity-based criteria (such as the number of hospital beds) in 2000. As a consequence, the number of hospital beds per capita fell significantly after 2001, although the number has not declined since 2004 and Belarus has among the highest number of hospital beds per capita in the WHO European Region – 11.3 per 1000 population in 2011, which is well above the average for both the CIS (8.3 per 1000 in 2011) and the EU (5.5 per 1000 in 2010) (WHO Regional Office for Europe, 2013).

The changes in the balance between different types of hospital bed have been relatively small (see Table 4.1), with the exception of a significant expansion in the number of paediatric care beds and a doubling in the number of beds for long-term care, which is part of specific policy to develop long-term care capacity to better meet the needs of an ageing population (see section 5.8).

The average length of stay for all hospitals has been falling since 1997 reaching 11.3 days in 2011 (see Fig. 4.1). Although this is high compared with countries of the EU (8.1 days in 2010), it is lower than the average for countries of the CIS (11.6 in 2011) (WHO Regional Office for Europe, 2013). The bed occupancy rate for Belarus has not been included in the Health for All database since 1994, and the only capacity data for Belarusian hospitals showing bed numbers cover all hospitals, and these data are not available for acute care hospitals only (see Fig. 4.2). This limits the conclusions that can be drawn from the operating indicators available.

Table 4.1

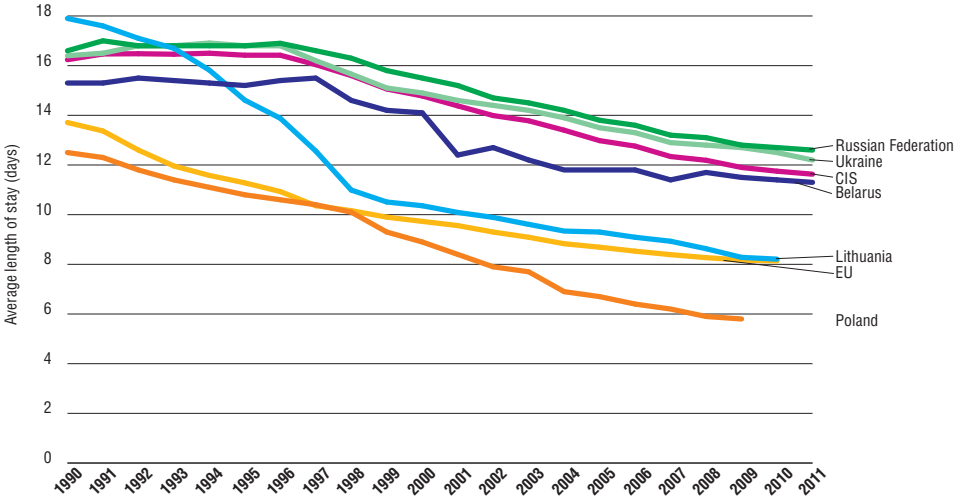
Number of hospital beds by specialty per 10 000 population, selected years

	2000	2005	2008	2009	2010
Therapeutic	39.1	32.3	31.4	31.3	31.2
Surgical	20.9	18.9	18.6	18.6	18.5
Oncological	3.8	4.0	4.0	4.0	4.0
Gynaecological*	10.9	9.0	8.5	8.3	8.3
TB	4.4	5.4	5.8	5.8	5.6
Infectious diseases	6.4	5.4	5.5	5.5	5.3
Ophthalmological	1.8	1.5	1.7	1.8	1.9
Otorhinolaryngological	2.2	1.8	1.6	1.6	1.6
Dermatovenerological	3.2	2.1	2.0	2.0	1.9
Psychiatric	10.1	7.3	7.0	7.0	7.0
Narcological	1.8	1.5	1.7	1.8	1.9
Paediatric (non-infectious)**	48.1	60.7	64.2	63.4	64.3
Maternity***	23.7	20.9	21.9	22.1	22.1
Others (including long-term care)	2.3	2.9	4.7	4.7	4.7
Total hospital beds	126.8	113.0	113.2	112.6	114.6

Source: Belstat, 2011b.
Notes: * Number of beds for gynaecology is calculated per 10 000 women; ** Number of beds for paediatrics is calculated per 10 000 children aged 0–17 years; *** Number of beds for maternity services is calculated per 10 000 women aged 15–49 years.

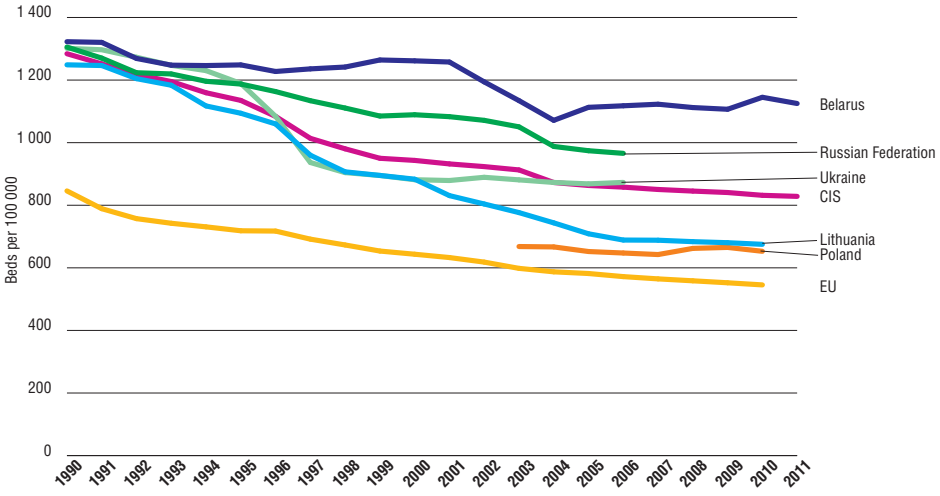
Fig. 4.1

Average length of stay, all hospitals in Belarus and selected other countries



Source: WHO Regional Office for Europe, 2013.

Fig. 4.2
Number of hospital beds per 100 000 in Belarus and selected other countries



Source: WHO Regional Office for Europe, 2013.

4.1.3 Medical equipment

"Big-ticket technologies" (such as computerized tomography (CT) and magnetic resonance imaging (MRI) scanners) are usually administered by regional (secondary or tertiary care) specialists. Big-ticket technologies are only available in the public sector. However, it is possible to undergo diagnostic CT or MRI scans without a referral on a fee-for-service basis, even in public hospitals. As it is so expensive, such sophisticated diagnostic equipment is purchased from central or regional funds and distributed at the regional level as essential equipment for use at the tertiary specialist level of care. As a rule, there is no access directly at the primary care level to big-ticket technologies, as referrals may only be made by regional specialists. While CT and MRI scanners are available at the tertiary care level, data on the actual number of scanners in use in Belarus are not generally available.

4.1.4 Information technology

Belarus has experienced a steady growth in the use of information technology (IT) and in 2011 there were 39.6 Internet users in the country per 100 people, which is higher than access and usage in Ukraine (30.6 per 100 population in 2011), but lower than access and usage rates in the Russian Federation (49 per 100 population in 2011) and well below the European average of 59.7 per 100 people (World Bank, 2013b).

Since 2008, the development of IT in the health system has become a bigger priority. According to internal Ministry of Health data, at the end of 2012, 74.4% of primary care facilities had local computer networks, 95.6% had introduced the electronic appointment booking systems (*Registratura*), 58.7% had introduced the health check monitoring database (*Dispanserizatsiya*) and 73.2% had introduced the system for recording outpatient contacts by diagnosis (*Statistika*) (see section 5.3). The introduction of these systems is to form the basis for the fuller development of IT systems in primary care. The government programme for the development of IT in health has the following main directions:

- installing automatic information systems in health facilities to enable the introduction of digital medical records and medical cards;
- providing e-mail and Internet access for all health facilities to facilitate the exchange of information and documents;
- creating a single electronic space for the Belarusian health system based on a corporate information exchange network;
- facilitating the electronic exchange of medical (hospital discharge letters, test results, disease notifications, etc.), normative and accounting documents using a single corporate information exchange network and digital signatures;
- developing telemedicine technology;
- developing a population health status and epidemiological well-being monitoring system; and
- developing an open-access health information resource for the general public covering issues such as healthy lifestyles.

In some primary care settings, computers are used for the statistical reporting system. Information on health-care performance (the number of consultations, diagnoses and so on) is kept at the institutional level and subsequently entered into regional and national statistical reports on morbidity and on the main indicators of performance, such as the number of consultations, home visits, hospital admissions, ambulance calls and so on. Computers are available for the electronic booking of appointments with specialists and primary care doctors, but there is no hospital appointment booking system in use as of June 2013. Within the health system, the use of computers is therefore generally limited to the reporting of major statistical data on the number of consultations and reported illnesses.

The introduction of electronic medical records has been put on the agenda of the Ministry of Health, but computers are not currently used for keeping electronic patient records for inpatient or outpatient care. The legislation

regarding the use of electronic documents in health care would require modification for electronic patient records to be developed further. For example, paper records remain the only eligible documents required for the investigation of patient complaints in cases of malpractice.

4.2 Human resources

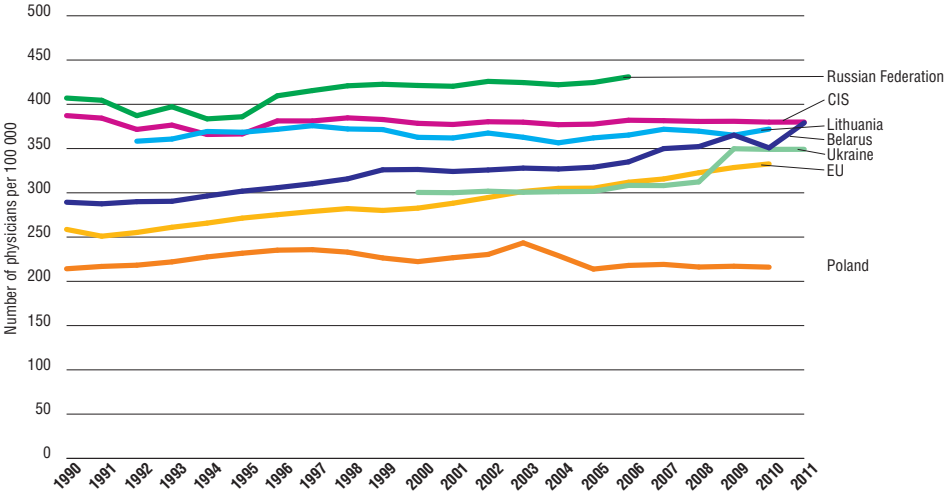
4.2.1 Health workforce trends

Belarus has maintained a large medical workforce since independence, but until 2010 the total number of "doctors" working in the system included all of those who have a degree in medicine, including not only those working in sanitary-epidemiological or diagnostic services but also researchers and managers who do not treat patients. From 2010, health workforce statistics have been transitioning to the internationally recognized definition of a "practising doctor", excluding those who have a medical degree but who do not practise medicine. It is hoped that the move towards a new definition will help in workforce planning as the uneven distribution of staff between regions and specialties will be clearer. According to the new definition, 32 131 doctors were working in the health system under the Ministry of Health in 2011 (33.9 per 10 000 population), up from 29 575 (31.2 per 10 000 population) in 2010. The total number of doctors per capita working in the system is therefore comparable to the average for countries of the EU, but this is not actually reflected in data submitted to the European Health for All database (see Fig. 4.3). Some specialties have also changed definitions from 2010, for example psychiatrists and narcologists (addiction specialists) are now counted together, but in total practising doctors are grouped into more than 70 specialties, many of which are quite narrow (Ministry of Health of the Republic of Belarus, 2011).

Despite the large number of doctors and nurses, human resources in health care in the country are unevenly distributed, and there is a shortage in primary care in both in rural and urban areas. There are also some geographical inequalities in distribution in rural areas generally, but particularly in the regions that are close to the Chernobyl contaminated areas – the shortage of doctors is more pronounced in the rural areas of Gomel and Mogilev regions. A number of initiatives have been undertaken to try to encourage young health workers to stay in rural areas and in primary care, by providing higher-quality accommodation and other social benefits, but maintaining adequate staffing levels remains a challenge. Although the number of physicians per capita has been rising overall, fewer of them are working in primary care. There are three

Fig. 4.3

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



Source: WHO Regional Office for Europe, 2013.

types of primary care physician: in some of the rural outpatient clinics and all urban polyclinics, district internists (treating adults) and district paediatricians (treating children); and GPs in some of the rural areas (treating both children and adults). GPs in Belarus have been trained since the late 1990s, and the GP model has been widely accepted for rural areas (see section 5.3). The number of GPs has risen from 36 in 1996 to 564 in 2010, mostly due to the retraining of practising rural district internists and district paediatricians as GPs (see Table 4.2).

Table 4.2

Health workers in the state health system in Belarus, selected years

	1990	2000	2007	2008	2009	2010
Physicians (total, including dentists)	37 927	42 587	41 743	42 153	42 891	39 194
Primary care doctors (*uchastkovye terapevty*)	-	-	-	3 427	3 415	3 386
GPs	36	78	483	540	544	564
Surgeons	1 613	1 626	1 593	1 575	1 559	1 373
Dentists	1 889	2 275	2 111	2 014	1 991	1 858
Pharmaceutical chemists (*Provisory*)	3 261	3 088	2 924	2 944	2 985	2 668
Feldshers	18 629	10 987	9 779	9 504	9 436	9 321
Midwives	11 776	6 177	4 777	4 719	4 657	4 716
Nurses (total)	54 028	70 901	74 468	73 245	73 078	73 862
Pharmacists	6 133	4 571	4 092	3 892	3 821	3 771

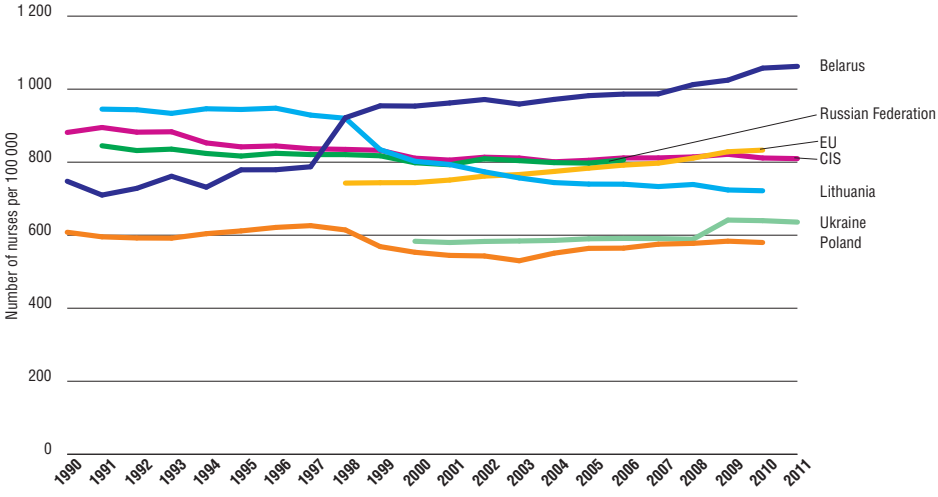
Source: Ministry of Health of the Republic of Belarus, 2011.

A large number of narrow specialists work in urban polyclinics and specialist care is fragmented. The number of specialists has been growing steadily since 1990, with a tendency towards further fragmentation. There are two levels of narrow specialists (polyclinic-based and hospital-based); they are subdivided by specialty and then again according to whether they are adult or paediatric specialists. As a rule, there is no difference in training, qualification and equipment used by the main categories of narrow specialists working in polyclinics and the same type of specialists working in hospital settings. The narrow specialists require only the minimal four-month extra retraining course for initial specialization, but ideally they will also complete the extended minimum two-year clinical training (*ordinatura*). There is no distinction between specialists working in different settings in the statistics; thus, while a large number of specialists appear, it is not clear which work in primary care and which in secondary/tertiary care.

From 2010, the international definition of a nurse (which excludes midwives as a separate category of mid-level health worker) has also been applied and in 2011 there were 74 064 nurses (78.2 per 10 000 population) and 4737 midwives (5 per 10 000 population) active in the health-care system. This is considerably higher than in many other countries of the CIS (see Figs. 4.4 and 4.5). Belarus has also retained a higher number of pharmacists and dentists per capita than other countries of the CIS (Figs. 4.6 and 4.7).

Fig. 4.4

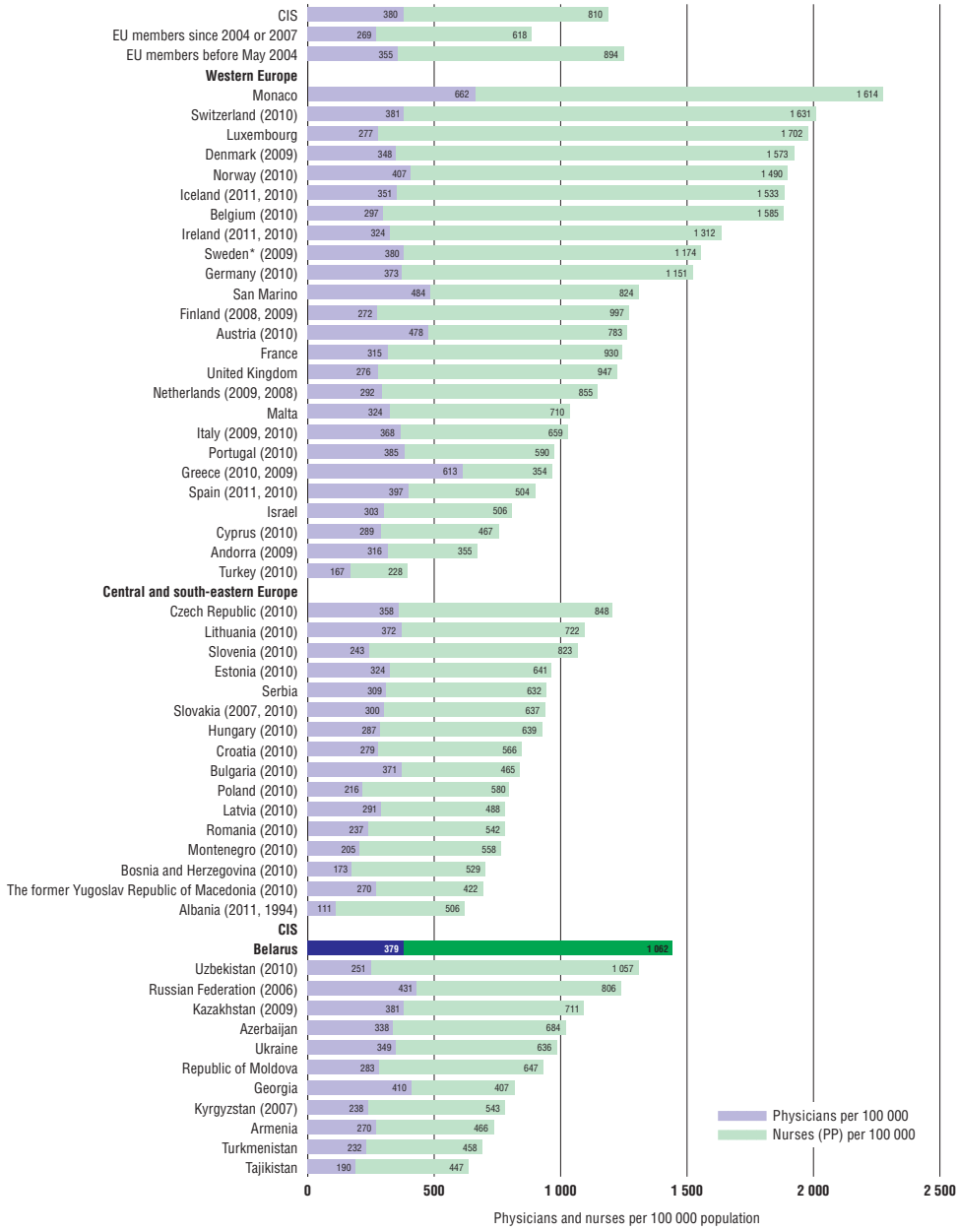
Number of nurses per 100 000 population in Belarus and selected other countries, 1990 to latest available year



Source: WHO Regional Office for Europe, 2013.

Fig. 4.5

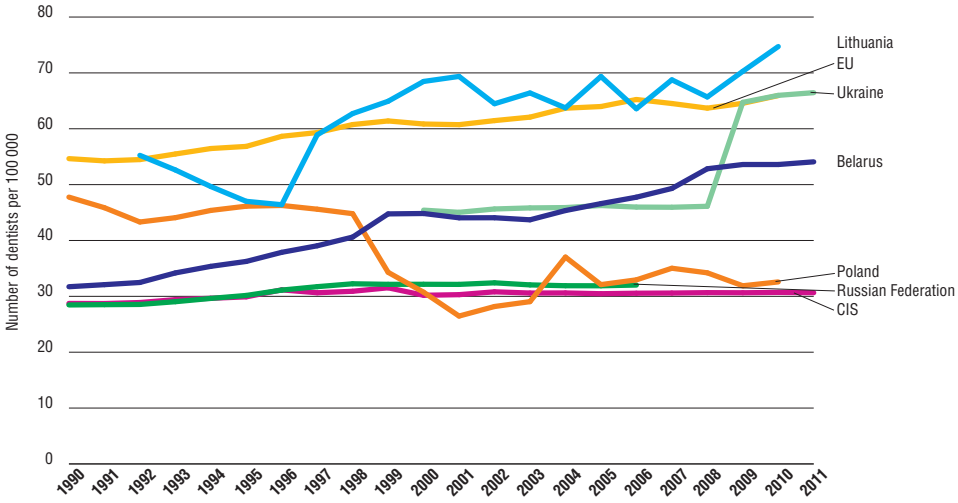
Number of physicians and nurses per 100 000 population in the WHO European Region, 2011 or latest available year



Source: WHO Regional Office for Europe, 2013.
Notes: * Eurostat data for nurses for Sweden (EC, 2013); PP: Physical persons.

Fig. 4.6

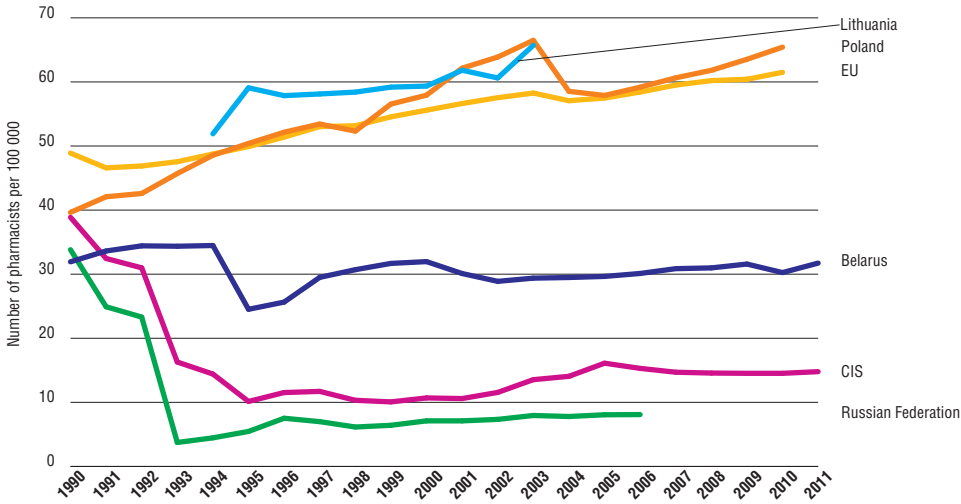
Number of dentists per 100 000 population in Belarus and selected other countries, 1990 to latest available year



Source: WHO Regional Office for Europe, 2013.

Fig. 4.7

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



Source: WHO Regional Office for Europe, 2013.

4.2.2 Professional mobility of health workers

The move towards clarifying the quantification of the health workforce has been part of moves to increase monitoring of migration patterns – those leaving the Belarusian health system, but also those moving from primary care to work in hospitals. The aim is to better monitor trends to inform workforce planning and personnel policy, including medical education and training policy. Around 3000 doctors leave the statutory health system annually; of these around 800 retire, die or have to leave for health reasons. Up to 30% do not give a reason, but it is likely that they move to the private sector or leave the country. Internal mobility is mainly the flow of more highly qualified staff from rural to urban areas and from the *oblasts* to the capital.

The international recruitment of health workers is not a notable feature of the Belarusian health system, but as wages can be higher in the Russian Federation and the union allows the free movement of health workers, it is likely that many health workers leave the country. The improved tracking of qualified staff should mean that such migration can be better quantified in future and reflected in policy-making.

4.2.3 Training of health workers

There are four medical universities in Belarus that provide basic medical training for doctors (in Grodno, Gomel, Vitebsk and the Belarusian State Medical University in Minsk). There is also a separate institution (BelMAPO), which coordinates all postgraduate education as well as continuing medical education for doctors and for some nursing specializations. There are no private profit-making or non-profit-making institutions in the health education sector. However, up to 15% of students in state-owned universities and medical colleges pay their own fees. Medicine is quite a popular career among young people, and on average there are 2.5–3 applicants for each training place. Traditionally, approximately 70% of students who enter the medical universities each year are women. To study medicine, the applicants have to pass the centralized entrance tests which are set and marked at the national level. Only those with the comparatively better results can study for free, which is approximately 75–80% of the students. There is also a system whereby approximately 15–20% of students can be admitted to study medicine on a self-funding basis, providing their test results, while somewhat lower than the required score to ensure funding, are not lower than the "pass" level. In 2011–2012, of 20 000 medical students, 65% were state-funded, 25% were self-funded and 10% were international students.

Students entering the medical universities have to choose the type of medical faculty in which they wish to study. There are eight major faculties: the curative faculty (*lechebnoe delo*), the paediatric faculty, the dental faculty, the medicoprophylaxis faculty, the medical diagnostic faculty, the medical psychological faculty, the pharmacy faculty and the nursing faculty. The choice of faculty, to a large extent, determines their future medical careers and places some limits on their career paths from the earliest stages. The most popular and universal faculty is the curative faculty. It provides basic medical education (six years in duration) for doctors who will treat adults. During the six-year study period there is a *subordinatura* that divides the students into three streams: internal medicine (the most popular), surgery and gynaecology. After six years of study and passing the state medical examinations, the graduate receives a medical diploma with the specialty of physician, and is allocated a hospital placement for one year of practical training (*internatura*), as well as an obligatory two-year placement (most likely in a primary care facility) as their first job. The obligatory appointment (*raspredelenie*) to the first working placement is a reintroduced Soviet practice, which attempts to tackle the uneven distribution of human resources and the shortage of primary care doctors in both rural areas and the cities. Of new graduates, 10% are sent to villages, 20% to small towns, 20% to *oblast*-level facilities and 50% are sent to work in district (*raion*) level facilities, although the exact percentages are reviewed annually to reflect demand. The regulations in place allow the graduate to reimburse the state for the cost of six years of basic medical education if the young doctor refuses to go to their allocated placement after receiving their medical diploma. Despite the obligatory first appointment system, in 2011, approximately 50% of empty doctors' posts and 60% of mid-level health workers' posts remained unfilled. Around 30% of junior staff change jobs as soon as the two-year obligatory placement is completed. This highlights how ineffective many of the local government schemes are for retaining staff and strengthening local capacity.

Basic medical training in the paediatric faculty is also six years in duration but graduates are trained in paediatric surgery, internal medicine for children and childhood disease management, and their medical diploma gives their specialty as paediatrician. This basic training is followed by the same system of one-year *internatura* and obligatory two-year work placement (again, most likely in primary care) as their first job. In principle, if there is a need to retrain an adult internist as a paediatrician, this can be carried out within the continuing medical education scheme on an initial four-month paediatric specialization training course.

The dental faculty offers five years of basic medical education, with the same one-year hospital internship and two-year obligatory appointment (most likely in primary care) as the trainee's first job. The medicoprophylaxis faculty offers a six-year basic medical education course and graduates are then clinical hygienist-epidemiologists. They also have a one-year clinical *internatura* and two-year obligatory appointment (for their first working placement), but for this type of graduate the placement is usually in a Centre for Hygiene and Epidemiology. The graduates can also work as doctors in clinical laboratories. In the pharmaceutical faculty the basic medical training takes five years. Graduates receive the diploma of pharmaceutical chemist (*provisor*). They also have one-year period of practical training and an obligatory appointment to their first working placement.

Specialization for doctors can be achieved in two ways. The first is an initial period of specialization that takes 3–4 months. This can take place after the six years of basic medical education (and subsequent granting of the medical diploma) and one year of practical training (*internatura*). A request from the prospective specialist's polyclinic or other medical institutions is also needed for them to enter the initial specialization course. Most narrow specialists working in the polyclinics follow this path of specialization. The second means of specialization and further training is through a clinical *ordinatura*, which is to some extent similar to a residency in western European countries, lasting two years and providing the more profound clinical expertise necessary to work as the head of a clinical department. Clinical *ordinatura* training is carried out by the medical universities and at BelMAPO. They include self-study on-the-job training as well as formal instruction.

There are minimum standards for the continuing medical education of all practising doctors. Doctors are obliged to follow two 14-day upgrading courses, with a minimum of 80 learning hours, in every five-year period. BelMAPO trains or retrains around 15 000 clinicians annually. There are also financial incentives to attend upgrading courses at least at the minimal requirement level. However, continuing medical education is not linked to a process of revalidation as doctors are not registered or licensed in Belarus (see section 2.8.3 *Registration and planning of human resources*). Educational standards are elaborated by the medical universities on behalf of the Ministry of Health and are approved by the Ministry of Education.

The training of pharmacists, nurses and *feldshers* is carried out by 14 medical colleges in Belarus. Nursing is still a very popular career, with the number of applicants in some medical colleges higher than for the medical universities

(6–7 applicants for one training place). In 2011–2012 there were 11 000 students in medical colleges, 72% state-funded and 28% self-funded. The students can enter the medical college either with incomplete secondary education at the age of 15 years, or after completion at the age of 17 years. Since 2002 there have been big changes in the curriculum and the official list of specializations for nurses. Since 2002, medical training for nurses and *feldsher*-midwives has been the same: two years and ten months for both fields. The specialization of *feldsher*-midwife was the result of merging two separate training streams into one. There are also separate faculties for dental assistants and medicoprophylaxis faculties for the training of *feldsher*-laboratory assistants and assistant epidemiologists. Nurses and *feldshers* are also subject to the compulsory two-year work placement upon graduation. After beginning their allocated first work placement, the young nurse as a rule attends a course of initial specialization at one of the medical colleges that run continuing medical education programmes for nurses.

4.2.4 Doctors' career paths

The career path of the doctors working in outpatient settings starts after graduating from either the curative or the paediatrics faculty. After receiving the medical diploma, there is one year of practical training (*internatura*), mostly in a hospital setting, in one of the three major streams (internal medicine, surgery and gynaecology, or in paediatrics for graduates from the paediatrics faculty). Most students receive an *internatura* in internal medicine or in paediatrics. At the same time as receiving their diploma, the process of allocating the two-year obligatory first work placements begins (*raspredelenie*), most often in primary care settings. After the obligatory placement in primary care, most young doctors choose to pursue initial specialization or clinical *ordinatura* and follow specialist career paths, starting with working as a specialist in a polyclinic then moving into the hospitals as they become more qualified. The alternative is to remain a primary care doctor.

For doctors who stay in the same specialization, there is a system of increasing qualification grades which are linked to salary bonuses. There are four qualification grades for specialists: no grade (practical experience under three years); a specialist of the second grade (3–6 years of practical work and theoretical examination passed); specialist of the first grade (six years of practical work and theoretical examination passed); and specialist of the highest grade (nine years of practical work and theoretical examination passed). Once a doctor has the first grade, they can be promoted to head of department. After

this, some doctors choose a career as a head of the facility, which implies a shift of specialization to that of health-care manager. However, moving up through these grades is not automatic or obligatory and many specialists have no grade.

The promotion of doctors is influenced by the administration of the hospitals at which they work. The hospital administration is interested in increasing the number of doctors with high qualification grades for their reports. Although most of the documentation necessary for promotion through the grades (such as references and work result reports) is signed by the hospital administration, promotion is more often automatic, providing the doctor is prepared to go through the theoretical examinations. The examinations for the highest grade take place at BelMAPO, the Vitebsk State Medical University and at the office of the regional health-care authorities for lower grades (the second and the first).

4.2.5 Career paths for other health workers

The nursing career path starts after completing the two-year-and-ten-month training programme leading to the nursing diploma and the obligatory first appointment into positions as requested by regional health-care authorities. There are numerous sub-specializations within the core nursing specializations. The nurse enters the initial specialization course in the requisite field, as required by the relevant employer organization, and there are minimum requirements for continuing medical education for nurses consisting of at least one upgrading theoretical course (80 hours) every five years. There is also a system of qualification grades from no grade to the highest. A small proportion of nurses go into management positions as the head nurse of a polyclinic or hospital.

In 2009, a new category of mid-level health worker was introduced – the doctor's assistant in primary care. The aim is to widen the functions of nurses in order to relieve some of the burden on primary care doctors. By the end of 2012 there were 1016 doctor's assistants working in the system and their main responsibility was to provide ongoing care and monitoring for patients with chronic conditions (see section 5.3).

5. Provision of services

There is an extensive network of primary health-care providers throughout Belarus, but with an uneven distribution of health-care workers. All primary care facilities are owned by the state. The primary health-care network has two forms of service provision: traditional polyclinics in the cities, and rural outpatient clinics (*ambulatorii*) and FAPs in the rural areas. Primary care in the capital, Minsk, and five other regional centres is provided through the network of adult and paediatric polyclinics, where a number of preventive, diagnostic, consultation and referral services are offered. In rural areas there have been concerted efforts to introduce GPs who provide primary care services to both adults and children.

There is also an ambulance-centred system of emergency care, which also covers out-of-hours primary care, so coverage is available 24 hours a day, 365 days a year. Because the doctors and *feldshers* working in emergency care are also the first point of contact for patients, the ambulance system in Belarus is considered part of primary care.

At the secondary level of care there are district and regional hospitals. While district hospitals provide general secondary care services, regional hospitals deal with more complex cases and offer a wider choice of care. At the same time, each district and region has an outpatient polyclinic, which delivers specialized care for the patients in the community. A significant direction for health policy in Belarus has been the growth in the volume of high-tech services available in the health system – which has come about as a result of a specific policy push. Most of these high-tech procedures take place in the highly specialized republican centres which have the best human and material resources, but there are also now high-tech centres in some of the regional hospitals. The Ministry of Health has also been actively developing rehabilitation services by founding rehabilitation centres, to which patients can be referred for after-care following

various operations or treatments. In Belarus, the use of hospital beds for social and long-term care has been formalized and many rural hospitals have now been converted into hospitals for nursing care.

All hospitals and primary care facilities are publicly owned and directly managed by the relevant territorial level of government. At the secondary level they are owned by the district or regional Executive Health Committee, while tertiary-level hospitals are directly owned by the Ministry of Health. There are no privately owned hospitals or primary health-care facilities in Belarus, but diagnostic centres are a significant part of private sector activities in the health system. These centres are most often the commercial branch of public sector hospitals, which also raise private revenues by charging for private rooms for hospital stays and by encouraging medical tourism.

5.1 Public health

In Belarus there is a single centralized system of state sanitary inspection with facilities in every administrative territory; there are currently 139 sanitary-epidemiological facilities across the country. The State Sanitary Inspectorate (*Gossannadzor*) is the authorized state agency for the prevention of illness through preventing, detecting and stopping violations of sanitary-epidemiological legislation. The Inspectorate's core activities are quality control of living conditions, sanitary education of the public, encouraging healthy lifestyles, and the development and implementation of norms and legislation to ensure the sanitary-epidemiological safety of the population. The sanitary-epidemiological service covers the epidemiological safety of the population, environmental protection, occupational health, food quality and safety, and environmental health.

The State Sanitary Inspectorate is headed by the Chief Sanitary Doctor of Belarus, who is also a Deputy Minister of Health, and is responsible for the sanitary-epidemiological safety of the population and public health. The whole sanitary-epidemiological system includes:

- the Department of Hygiene, Epidemiology and Prevention in the Ministry of Health;
- the republican and regional centres of hygiene, epidemiology and public health as well as the municipal, district and zonal centres of hygiene and epidemiology;

- sterilization and disinfection centres and preventive disinfection centres; and
- republican scientific-practical centres for hygiene and for epidemiology and microbiology and state enterprises under the Ministry of Health with a sanitary-epidemiological profile.

In 2011, the sanitary-epidemiological facilities under Belarusian Railways and the Civil Aviation Medical Service were integrated into the sanitary-epidemiological system under the Ministry of Health.

The key elements of the public health system at the district level are the district and municipal centres of hygiene and epidemiology, which fulfil a range of functions for the prevention of infectious diseases. The centres of hygiene and epidemiology are staffed by doctors specializing in communicable disease control (CDC), called clinical hygienist-epidemiologists, and sanitary *feldshers*/assistant epidemiologists. The basic responsibilities of the district hygiene and epidemiology centres are monitoring and ensuring compliance with norms relevant to "sanitary safety" (environmental health) in shops, places where food is served (cafes, restaurants, canteens, etc.), kindergartens, schools and health facilities (see section 2.8.2 *Regulation and governance of providers*). They are also responsible for the immunization programme. Regional hygiene and epidemiology centres are subordinate to the regional authorities and the Department of Hygiene, Epidemiology and Prevention at the Ministry of Health.

There is also a national-level organization: the Republican Centre for Hygiene, Epidemiology and Public Health which coordinates the prevention of different illnesses (such as HIV) and the promotion of healthy lifestyles. Public health departments in the centres for hygiene, epidemiology and public health seek to influence health risks at the population level and the negative influence of environmental factors, and to develop activities to reduce and predict these factors; they also develop strategies and decide the fundamental directions of activities in the field of disease prevention and promoting healthy lifestyles. Environmental health and CDC are carried out in two ways: active monitoring checks on all premises open to the public and the registration of any cases of notifiable communicable disease. All health-care facilities should inform the district sanitary-epidemiological centres about any cases of notifiable communicable disease or infestation (scabies, head lice, gastroenteritis, all childhood infections, vaccine preventable diseases and so on). After receiving the information the CDC doctor investigates the reasons for and sources of the infection/infestation and possible measures to limit the outbreak.

Currently, the key challenge for the sanitary-epidemiological service is to move away from identifying and punishing breaches of sanitary legislation towards a strategy oriented towards preventing such breaches from occurring. In connection with this, a set of measures on the reform of state sanitary inspection for the years 2012 to 2015 was introduced. This pertained to the development and realization of a modern management system for the sanitary-epidemiological service, the development of a single information system across the sanitary-epidemiological service; the provision of technology for the State Sanitary Inspectorate; the development of the Inspectorate's laboratory services, and so on. With the aim of unifying the approach of the sanitary-epidemiological service, territorial centres of hygiene and epidemiology have developed a series of documents regulating inspection activities and the forms inspections can take, but the foremost of these documents is the recommendations on the implementation of the duties of the State Sanitary Inspectorate and the inspection schedule of its activities in places which require monthly monitoring.

On 11 December 2009, the governments of Belarus, Kazakhstan and the Russian Federation signed an agreement on joint sanitary measures for the Customs Union. The agreement instituted a single sanitary-epidemiological space for goods moving within the Customs Union, with a single standard set of paperwork demonstrating the safety of goods, which reflect an agreed single set of standards. This was an ambitious undertaking and has had a significant impact on the work of the State Sanitary Inspectorate.

There is a growing understanding of the need to expand health promotion and health education in Belarus. However, the traditional priority given to communicable disease prevention overshadows any health promotion activities relating to noncommunicable diseases or ill health. According to current Orders from the Ministry of Health, primary care doctors should spend six hours per year of their working time giving lectures on health to the population and then report these health education activities to the District Executive Health Committee. This practice has been carried over from the Soviet era, but its impact on health behaviour has not been fully evaluated. Similarly, much of the focus of health education has been awareness-raising events around specific days – 24 "days" against different diseases were noted in a total of 3985 preventive events in 2011. Much emphasis is placed on the number of lectures given, adverts shown, roundtables held and so on, but it is not clear that these initiatives are evaluated in terms of their impact on health or behaviour.

At the national level there are several factors that have had a major influence on the practice of public health. Belarus was one of the first CIS countries to sign up to and ratify the WHO Framework Convention on Tobacco Control, although the pace of implementation has been slow. There is also a State Programme for the prevention of alcohol abuse, as alcohol is recognized as being one of the major health hazards in the country. In addition, state programmes to promote healthy lifestyles exist, including measures to stimulate more physical activity and sports at the local level, and an increasing amount of social advertising targeting adolescents in order to inform them of the dangers of smoking and alcohol abuse. There are UNDP/Global Fund and WHO programmes assisting in the prevention of HIV infection and TB that are carried out in cooperation with the Ministry of Health and NGOs. This is particularly important as Belarus is a high-priority country for TB in the WHO European Region and, along with most other post-Soviet countries, one of the 27 high MDR-TB burden countries globally.

Immunization and child health monitoring activities are carried out in the primary health-care setting either by district paediatricians (in the cities) or GPs (mostly in the rural areas). There is a national childhood immunization programme and all routine immunizations are free of charge for all. Every newborn is to be seen by their primary care doctors three times during their first month and at least once a month up to the age of 1 year. In planning and implementing the immunization scheme, primary care doctors are supported by the primary care paediatric nurse, who visits the children at home. Immunization and monitoring of child health are considered to be the major responsibilities of district paediatricians and GPs. These activities are covered in their job description and have no extra funding incentives or bonuses attached. All vaccines are purchased from the central budget and distributed through the district centres of hygiene and epidemiology.

The strength of preventive medicine has always been considered to be the main feature and the key advantage of the Semashko system, however, it was not well suited to preventing noncommunicable diseases, which now predominate as a cause of mortality. Greater emphasis is placed on secondary prevention activities, in terms of early detection of diseases and treatment, rather than on the primary prevention of noncommunicable diseases. The secondary prevention approach has been realized through a broad range of screening initiatives. Nearly all the main narrow specialties have initiated elaborate screening programmes, the implementation of which is delegated to primary health care. Cervical cancer screening (pap smears) is carried out annually for

all women aged 18 and over and, according to official reports, covers almost 90% of the female population. Fluorography (small format X-ray of the chest) covers almost 95% of the adult population (from the age of 17 years). However, the fluorography screening programme for TB detection is not focused on reaching socially excluded groups, who are also most at risk. A mass screening programme for prostate cancer is being trialled in three districts of Minsk in 2013, although the effectiveness of mass screening for this cancer does not have a strong evidence base (Davidson & Gabbay, 2004).

Opportunistic screening for hypertension means all adults routinely have their blood pressure checked during any contact with primary health care. Oncology specialists introduced opportunistic screening for breast cancer for all female patients visiting a primary care doctor by palpation of the breast irrespective of the primary reason for the clinical encounter. There is also a cancer screening checklist for the possible first symptoms of cancer of the stomach (loss of weight, appetite), rectum (bleeding) and skin cancer, which should be completed annually. Any cancer diagnosis leads to the patient records being retrospectively analysed by oncologists to check whether all opportunistic cancer screening took place in the primary care settings in the proper way. Cardiologists initiated opportunistic annual electrocardiogram (ECG) screening for all patients over 40 years of age as a possible measure to combat ischaemic heart disease in the general population, but the efficacy of this screening programme has not yet been evaluated and it is not common practice elsewhere in the world. Ophthalmologists have initiated opportunistic screening for glaucoma by annually measuring the eye tonometry in the primary care sector for all patients over 40 years of age. District centres of hygiene and epidemiology are required to conduct opportunistic screening for scabies and head lice in all contacts, and the checks should be noted in patient records. Patient records are regularly checked at random by the relevant specialists to ensure compliance with current screening procedures. There is not a strong tradition of critically evaluating proposed screening measures in terms of evidence-based medicine, cost–effectiveness or potential negative side-effects of screening. The administrative pressure to fulfil planned target indicators can also negatively impact on the reliability of data on preventive activities.

Particularly significant public health issues, including TB and HIV/AIDS, are tackled through vertical programmes managed and executed in parallel to the main statutory system. Vertical programmes in Belarus are managed and funded directly both by the central Ministry of Health and the regional

and district health authorities. However, TB care is now better integrated into primary care and primary care doctors in the rural areas are involved in the directly observed treatment for patients with TB.

5.2 Patient pathways

For both rural and urban populations, patient pathways are broadly similar. A woman in need of a new hip because of osteoarthritis would take the following steps:

- The patient would first visit her GP/family doctor (in rural areas) or the primary care doctor (*uchastkovyi terapevt*) at the local polyclinic where she is registered. The visit would be free of charge. The primary care doctor makes an initial assessment of the problem and sends the patient for any necessary tests (which are also free of charge).
- Where there is an appropriate narrow specialist working in the polyclinic (such as a surgeon), the primary care doctor refers the patient to them for further investigation. If the patient self-refers to a narrow specialist working in the polyclinic, she may have to queue and wait but the consultation is still free of charge. GPs working in rural areas refer their patients to the central district polyclinic to see a narrow specialist there.
- After performing any necessary tests, either the primary care doctor or the narrow specialist can refer the patient to hospital.
- In an emergency, if necessary the primary care doctor can call an ambulance to transfer the patient to hospital.
- On referral to hospital, in most cases the patient takes a ticket and waits in a queue to see the specialist. However, for some conditions and complaints patients can see a doctor on the day without queuing if it is sufficiently urgent.
- All consultations, the operation itself and any after-care are all free of charge at the point of use. However, the patient can opt to pay out of pocket for extras such as a private room.
- Following the hip-replacement operation, the patient is referred to a rehabilitation centre, without being discharged home.
- Once discharged, after-care is the responsibility of either the day-care department (in urban areas) or the primary care doctor (in rural areas).

5.3 Primary/ambulatory care

There are two types of medical care – primary and specialized. The development of primary care services in Belarus is considered a priority. Funding for primary care has been increasing (see section 3.1), so in 2011, 38% of total health expenditure was allocated to the development of primary care, although this also includes the cost of narrow specialists working in urban polyclinics. There are two basic forms of care in the primary care system, with the traditional polyclinic system in the cities and general practice in rural and some peri-urban areas.

In towns and cities there are networks of polyclinics to provide primary care services, while in rural areas there are outpatient clinics (*ambulatorii*) and rural community (*uchastkovye*) hospitals. Preclinical care is provided in more remote rural areas by FAPs. All primary care providers are state-owned. Their activities are financed and controlled by one of the 120 district (*raionnye*) health-care authorities which are attached to the central district hospital. Primary care in Belarus is provided in district, *oblast* and republican-level health-care organizations as well as in inter-district, inter-regional and municipal centres and clinics.

FAPs and outpatient clinics

In remote rural areas primary care is organized at the premises of FAPs and outpatient clinics (*ambulatorii*), where GPs, district internists and district paediatricians, along with a team of nurses, are employed to provide primary outpatient care. In some remote rural areas the outpatient clinics have 15–30 beds; these are more often called rural community hospitals (*uchastkovaya bolnitsa*) and many of them have been reorganized into hospitals providing long-term nursing care. In addition, there is an ambulance service covering a high proportion of out-of-hours and emergency care (see section 5.5).

FAPs are very small health-care facilities, in which only one medical professional (a *feldsher*-midwife) is employed with the support of one auxiliary staff member (a cleaner). FAPs are placed in the remote rural areas, where the local population is not large enough to warrant employing a doctor. The *feldshers* at the FAPs are usually the first point of contact for minor diseases and common chronic illnesses, and they carry out home visits. Because of the substantial distances involved, in emergencies an ambulance will go to a distant location if the *feldsher* has called it. FAPs usually also have the important function of ensuring pharmaceutical supply to the community, as they are a part of the district state-owned pharmacy network. FAP staff no longer conduct

routine immunization. The FAPs are usually attached to the nearest outpatient clinic with a primary care doctor. The patient does not have to be referred by the *feldsher* to the primary care doctor and if necessary, the patient can go directly to the primary care doctor in the nearest outpatient clinic.

In rural areas, primary care doctors are most often employed in outpatient clinics (*ambulatorii*), of which there are 645 (Ministry of Health of the Republic of Belarus, 2012). GPs (retrained district internists or district paediatricians) work in 70% of rural outpatient clinics, while the remainder still have separate doctors for children and adults. The full team of medical professionals working in a rural outpatient clinic consists of at least one primary care doctor, a dentist, a *feldsher*, a midwife, two nurses, a physiotherapy nurse, a *feldsher*-laboratory assistant and auxiliary staff (cleaners, drivers, helpers for seasonal heating needs and so on). There were 471 GP practices in 2012. The general condition of the outpatient clinics – particularly when compared with the condition of the FAPs – has been much improved largely as part of the State Programme for the Revival and Development of Rural Areas.

Norms and regulations

The number of staff working in a rural outpatient clinic depends on the size of the local population and norms for staffing levels are centrally determined by the Ministry of Health. One full-time equivalent (FTE) GP is required for 1300 of the attached mixed population (both children and adults), one FTE district paediatrician is required for 800 children up to 18 years of age, and one FTE district internist is required for 1800 adults. Rural outpatient clinics are where almost all basic primary care services are delivered, including general medical care for children and adults, minor surgery and minor traumas, midwife-led antenatal care (deliveries are carried out in hospitals), postnatal care, sick leave certification and immunization.

The 24-hour availability of services in remote rural areas is not formally financed or regulated. In remote areas with just FAPs or rural outpatient clinics, there are no extra payments for being available on an on-call basis; the only bonus is for staff working in a rural area, which amounts to an extra 20% of the country's minimum salary tariff or US$ 30 per month.

Polyclinics

In the five regional cities and the capital, Minsk, almost all primary care is provided through the two parallel networks of polyclinics, often situated in separate buildings: children's polyclinics and adult polyclinics with women's (gynaecological) consultation units. The polyclinics in the cities have large catchment areas and are responsible for 10 000–70 000 of the resident

population. Urban polyclinics have at their disposal the main categories of narrow specialists for outpatient consultations (in adult polyclinics: surgeon; ear, nose and throat (ENT) specialists; ophthalmologists; neurologists; endocrinologists; cardiologists; and gynaecologists) and main diagnostic facilities (laboratory, X-ray, ultrasound and endoscopy). There are separate parallel networks of specialists and diagnostic facilities for adults and children, which lead to the duplication of diagnostic facilities at hospitals which have both adult and paediatric specialists.

Duplicating diagnostic services and then maintaining parallel diagnostic facilities are very costly and a source of inefficiency in the system in urban areas, but hospital specialists complain about the quality of diagnostics at the polyclinic level so they like to repeat diagnostic tests.

In urban areas, primary care for children is organized in children's polyclinics. A full-time district paediatrician deals with 800 children (those aged under 18 years) and is the first point of contact for children with health problems and childhood disease prevention programmes. However, because of the shortage of district paediatricians in primary care, the mean number of children attached to one district paediatrician is higher and could be as high as 1000–1300. District paediatricians at the polyclinics are assisted by a primary care paediatric nurse, who is also available for home visits for children under 1 year as part of routine surveillance. As a rule, there is also a separate nurse in the polyclinic who is responsible for planning and implementing the immunization programme following the necessary consultation with a district paediatrician. Children's polyclinics do not have inpatient departments but are served by full-time narrow specialists (paediatric surgeon, paediatric orthopaedic specialist, paediatric neurologist, paediatric ENT specialist, paediatric cardiologist and paediatric endocrinologist). Every child is supposed to be seen by all main specialists annually for a general check-up. Over-investigation and over-treatment is common after the annual screening of children by narrow specialists.

District paediatricians are also responsible for the illness certification of children and authorizing parental sick leave to care for ill children. According to regulations in place as of June 2013, only paediatricians can authorize absences from school or kindergarten in the event of ill health. As a direct consequence, district paediatricians have a very heavy workload, seeing 40–50 children and having 8–30 home visits per day, much of which is in connection with the certification and authorization of sick leave. Children's polyclinics are usually open from Monday to Saturday from 08:00 to 18:00. Out-of-hours cover is provided by district paediatricians or *feldshers* on call through the ambulance

service. Children with minor traumas or minor injuries go to the paediatric surgeon at their polyclinic, who can diagnose (using X-rays) and treat minor fractures (more complex injuries would be referred to a paediatric polyclinic with traumatology department or to a hospital). District paediatricians are also responsible for conducting the regular preventive check-ups in kindergartens and schools and these professionals are expected to spend six hours each month giving lectures on health education for children.

Primary care for adults is delivered through adult polyclinics, which are usually situated in another building, away from the children's polyclinics. Originally, outpatient care for children and for adults were separated in order to protect children from contracting infectious diseases from the adults and to reduce the burden on primary care doctors. These are also the most commonly used arguments against introducing GPs into the cities. The first contact for adults should be the district internist (*uchastkovyi terapevt*). One district internist should serve 1700 of the adult population attached to a polyclinic. Due to the shortage of district internists in primary care, the adult population could be as high as 2000–2500 per district internist, or even more. For anything other than internal diseases, patients can self-refer to the other narrow specialists in the same polyclinic (adult surgeon, neurologist, ENT specialist, ophthalmologist, gynaecologist, endocrinologist and cardiologist). Most often, women's clinics are simply separate departments within the adult polyclinic building; however, in large cities they are sometimes located in a separate building. Women's clinics are staffed by general primary care gynaecologists and more specialized gynaecologists who are often split into the following sub-specialties: gynaecologist-mammologist, gynaecologist-colposcopist, gynaecologist for ultrasound diagnostics, paediatric gynaecologist and sometimes a gynaecologist-endocrinologist. Female patients do not require any referral from their primary care gynaecologist and can visit a specialist gynaecologist about any gynaecological complaints and during pregnancy for monitoring purposes. Medical abortions are delivered in the outpatient setting, in the women's clinics. Maternity services are provided in specialized maternity hospitals (*rodilnye doma*).

Routine prevention and administrative tasks

Large sections of the population are required to have preventive health checks with the main specialists (neurologist, ENT specialist, surgeon, ophthalmologist, endocrinologist and gynaecologist). Children under 1 year of age are seen twice by all the main specialists and then annually from 1 year; pregnant women have two full preventive health checks in the course of their pregnancy. Annual check-ups are also provided for schoolchildren, students, war veterans, all

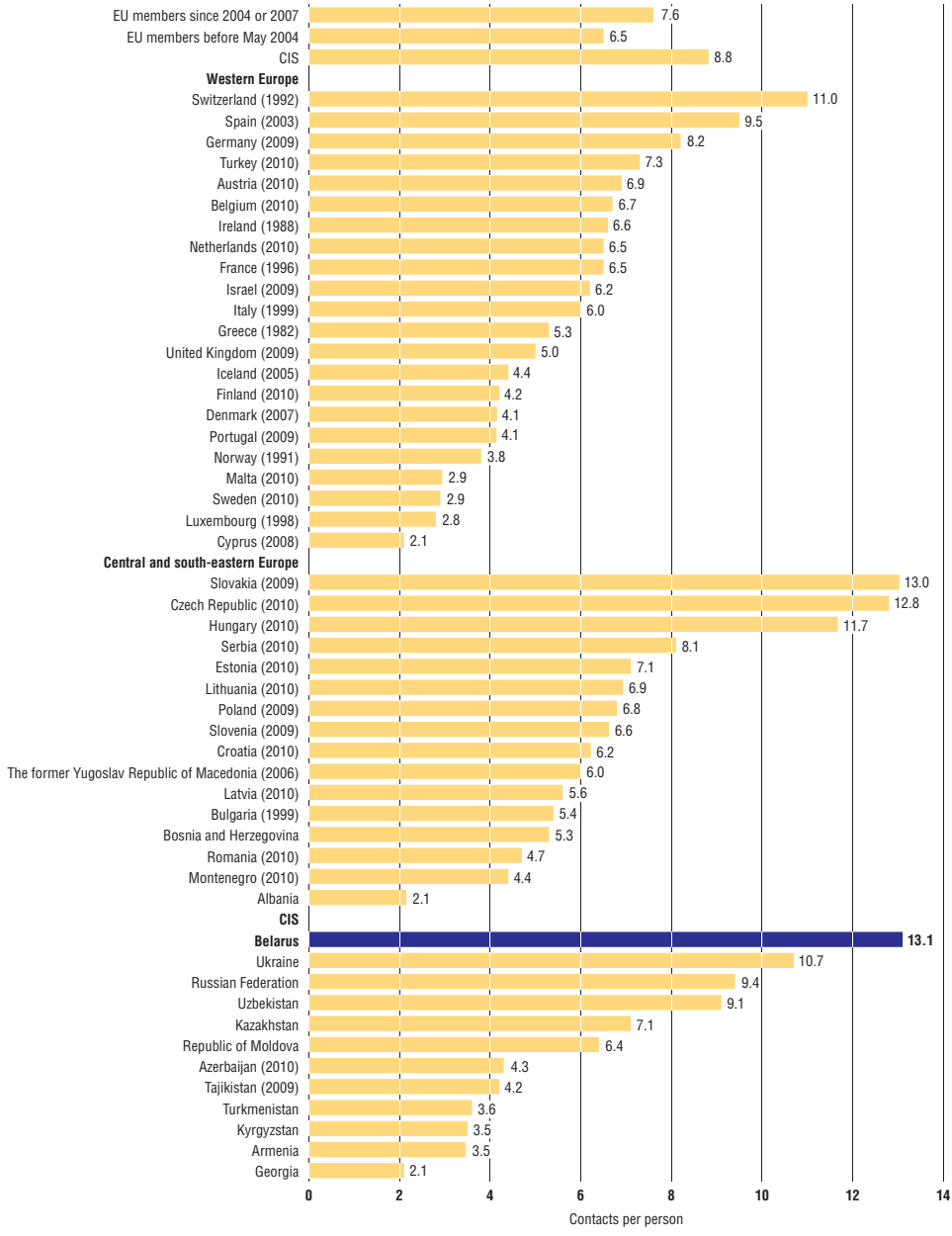
patients from the contaminated areas of the Chernobyl zone, patients with chronic diseases such as hypertension or diabetes, and certain workers in certain jobs. Such complex health checks account for approximately 15–22% of the workload of the narrow specialists at polyclinics, although their efficacy has not been tested (Kashtal'yan, 2005). The large number of routine check-ups (*dispanserizatsiya*) is one reason why there is such a high number of outpatient visits per capita per year (Fig. 5.1); in 2010, the average number of visits reached 13.4 per person per year (WHO Regional Office for Europe, 2013). From 2008 mass population screening (*dispanserizatsiya*) has sought to cover the whole adult population of Belarus, with an emphasis on those of working age. In 2011, 98.4% of the adult population, including 99.0% of the working-age population, had routine health checks and chronic conditions were revealed in 33% of men and in 34.7% of women.

District internists are formally responsible for the overall care of the patient. One of their main duties is to authorize sick leave from the first day of illness, and this results in a large unplanned workload and a large number of home visits, which could amount to 30 per day during an influenza outbreak. District internists are also responsible for the immunization of adults against diphtheria and tetanus (every 10 years) and for implementing opportunistic screening procedures (see section 5.1). Just like district paediatricians, the district internist is required to spend six hours per month giving health education lectures. District internists are assisted by a primary care nurse who sits in the consultation room throughout consultations, which can compromise the privacy of consultations on sensitive issues. The nurse is involved in a substantial amount of statistical reporting to all the main specialists regarding morbidity figures and performance in the relevant population area.

Since 2010, the post of "doctor's assistant" in primary care has been actively developing. The introduction of this post/position significantly broadens the functions of mid-level medical personnel, including independent consultation with patients, attending house-calls for acute illness and with the aim of dynamic monitoring of patients with chronic conditions, writing repeat prescriptions for outpatient medicines and working with healthy patients who have risk factors for the development of illnesses. The introduction of the post of doctor's assistant aims to reduce the burden of routine tasks on clinical staff. On 1 January 2011, there were 732 doctor's assistants and this grew to 872 by 1 January 2012.

Fig. 5.1

Outpatient contacts per person in the WHO European Region, 2011 or latest available year



Source: WHO Regional Office for Europe, 2013.

In 2011, a health sector programme for the re-equipping of outpatient and primary care facilities was completed, and this included improving the laboratory testing equipment, ultrasound facilities, and the overall working environment of narrow specialists. The development of IT in primary care has also been promoted, and the introduction of various systems is the biggest step towards building nationwide information systems in primary care (see section 4.1.4 *Information technology*). *Registratura* is the first step to introducing personal electronic medical cards for use at the primary care level, while *Dispanserizatsiya* is an electronic databank for population health check data to help provide better targeted screening and to ensure compliance. There is also a system called *Statistika* which records outpatient contacts by the diagnosis given.

Since 2002, primary care services in rural areas have used the *Vrach obshchei praktiki* (GP) information system, which allows patient records to be held electronically and supports the follow-up of patients eligible for comprehensive screening (*Dispanserizatsiya*). This system is used in 439 facilities or 72% of the total number of rural primary care facilities. From 2010, the indicator for adoption of *Registratura* and *Vrach obshchei praktiki* has been included in the outcome of activities model for the organization of health-care services.

Access to and range of provided services

Because the gatekeeping function of the district internist is virtually absent, narrow specialists in polyclinics are frequently called primary care specialists by Belarusian health managers. In fact, the gatekeeping function has been usurped by the narrow specialists of the polyclinics who can refer the patients to specialist secondary care at the hospitals. Primary care doctors can also refer the patients directly (without the patient needing to consult the relevant primary care specialist) to hospital departments for internal medicine or infectious diseases, as well as to other departments in emergency cases (appendicitis, trauma, poisoning and so on). Formally, if there is more than one doctor working at a primary care facility, patients are free to choose which doctor they prefer. If the patient is not satisfied with her/his doctor, the District Executive Health Committee or Chief Doctor (*glavvrach*) of the district hospital could register them with another doctor, but this seldom happens and the "popular" doctors have no incentives to register more (often more demanding) patients from neighbouring communities.

Since the late 1990s there has been ongoing reform of primary care in Belarus. One of the main reasons for primary care reform has been the growing realization that the extensive and expensive increase in the number of hospital

beds and specialists has had a very limited impact on population health (Zharko, 2007). WHO has also been influential through its presentation of the evidence showing the general practice-oriented model to be more efficient in terms of some health indicators and in the use of resources. However, there are also unrealistic expectations of the general practice-oriented model in terms of its capacity to deliver dramatic improvements in, for instance, life expectancy or child mortality without other developments in society.

A national survey conducted in 2005 found that GPs spend longer in consultations than district internists and they are much more involved in the treatment and follow-up of diseases (Rousovich et al., 2006). However, the same survey found that, overall, patients were satisfied with the accessibility of primary care services and their primary care doctors – irrespective of whether they were district internists or GPs. The satisfaction with primary care services was notably higher in rural than in urban areas, and rural respondents were much more positive about both the doctors and nurses providing their primary care than urban respondents (Egorov et al., 2006). Indeed, the effect of geography was more significant than whether or not the patient's doctor had retrained as a GP, in terms of patient satisfaction.

One of the positive features of primary care in Belarus is the even geographical distribution of health-care facilities throughout the country in both rural and urban settings. However, the challenge in both rural and urban areas is to recruit and retain primary care doctors. Making the work of primary care doctors more attractive in terms of material and moral motivation is a real challenge. Ensuring the mechanisms to enable a real shift in financing to the primary care sector and away from specialist tertiary and hospital sectors is also a difficult challenge, as the lobbying capacity of the specialist tertiary sector is so well developed. By contrast, the primary care sector has been singularly unsuccessful in lobbying to end inefficient activities and protocols, such as excessive paper reporting, simplification of sick leave certification for common diseases, mandatory check-ups by all polyclinic specialists and so on. The other remaining challenge is to improve the training of primary care doctors, and the recruitment and selection of doctors willing to work in primary care, as opposed to the model that is in place obliging inexperienced young doctors to work in primary care.

Since 2008, a series of measures to improve the accessibility of primary care services have been developed. The organization of doctors' appointments has improved, so that they can be booked in person, online or over the phone and appointments are available for booking throughout the day. Previously, patients

had to queue on the day and while they would certainly be able to see a doctor, they might have to wait for hours. To facilitate this, all polyclinic receptions have been provided with multichannel telephone lines so that the work can be organized on a "one window" principle. Subsidized medicines for people with chronic conditions can now be prescribed for up to six months at a time (previously it was up to three months). Future improvements include home care services for elderly people living alone.

5.4 Specialized ambulatory care/inpatient care

Specialized care is the second level of the Belarusian health system which is delivered by specialist doctors in a variety of settings. Specialized care is organized on a territorial basis, with a designated hospital and polyclinic serving each district and region across the country and funded through the local authority. Specialized services are also available in polyclinics from the district level upwards, for the basic specialist profiles – neurology, ophthalmology, surgery, otorhinolaryngology (ENT) and gynaecology. In general, district hospitals provide internal, surgical, obstetric-gynaecological and paediatric care. Some district hospitals also provide specialized services such as urology, neurology, infectious diseases and others. In each of the regions, inter-district centres or departments have also evolved which provide specialized care to people living in neighbouring areas for services such as rehabilitation, haemodialysis, urology, neurosurgery and so on. More complex cases can be referred to the regional hospital, which specializes either in adult or in paediatric care, and where a fuller range of specialties is offered. Outpatient polyclinics deliver specialist care for patients in the community. In larger urban centres these outpatient polyclinics are either for adults or for paediatric services, and in the largest cities the volume and types of specialized services are significantly broader, including specialized women's health clinics and dental polyclinics. Moreover, specialized services are provided in polyclinics attached to regional hospitals and republican scientific-practical centres. Highly specialized services are concentrated in Minsk, but there are some single-specialty hospitals in regional capitals which offer maternity services, orthopaedics, cardiosurgery and so on.

All hospitals are publicly owned and directly managed by the relevant territorial level of government. At the secondary level they are owned by the district or regional Executive Health Committee, while tertiary-level hospitals are owned by the Ministry of Health directly. There are no privately owned

hospitals in Belarus. Specialized ambulatory services and secondary care are provided according to an integrated method, as clinicians are directly employed. Tertiary care-level specialists work out of outpatient departments of hospitals or in single-specialty hospitals, but specialists also work in primary care in urban polyclinics (see section 5.3).

A significant direction for health policy in Belarus has been the growth in the volume of high-tech services available in the health system – which has come about as a result of a specific policy push. Most of these high-tech procedures take place in the highly specialized republican centres which have the best human and material resources, but there are also now high-tech centres in some of the regional hospitals (Malakhova et al., 2009).

There are persistent challenges with the integration of primary care and inpatient/specialist services. The duplication of diagnostic and laboratory services for outpatients at the polyclinics – who are then referred as inpatients to the hospital – is widespread, as diagnostic procedures carried out in primary care are often considered to be of inferior quality (see section 5.3). There are also weaknesses in feedback from specialist/inpatient care to the primary care level to support the coordination of patient care.

There are no private hospitals in Belarus, but diagnostic centres are a significant part of private sector activities in the health system. These were mainly limited to ultrasound, endoscopy, laboratory diagnostics, but now include high-tech services (MRI scans, CT scans, etc.) on a fee-for-service basis. A large proportion of patients choose to pay for diagnostic tests, partly due to advertisements, but also because fee-for-service providers provide a more pleasant environment for patients. These centres are most often the commercial branch of public sector hospitals, which also raise private revenues by charging for private rooms for hospital stays and by encouraging medical tourism. The export of health services has been growing as many patients (predominantly from other CIS countries) pay out of pocket for services in Belarus which are either more expensive or unavailable in their own country.

Although the share of health spending devoted to primary care relative to inpatient or specialist services has increased from 31.4% in 2008 to 38% in 2011, it is widely recognized that there is scope for a much greater shift in favour of primary care (Zharko, 2012). Change has been incremental, so there has not been a radical reorganization or rationalization of the hospital sector and hospitals (see section 4.1.2 *Infrastructure*). Nevertheless, the Ministry of Health is seeking to further reduce excess capacity in the health system and thus free up resources to invest in technologies which will substitute inpatient care,

as well as better maintaining health-care infrastructure. Proposals for future development remain the development of day care, home care and day surgery in order to better use resources in specialized outpatient and hospital care and to reduce the number of surplus hospital beds (Zharko, 2012).

5.5 Emergency care

Belarus has an ambulance-centred system of emergency care, which also covers out-of-hours primary care, so coverage is available 24 hours a day, 365 days a year. Because the doctors and *feldshers* working in the emergency care sector are also the medical professionals that are the first point of contact for patients, the ambulance system in Belarus is considered to be part of primary care. In 2011, the emergency care service consisted of 24 stations, 29 substations, 117 departments and 90 emergency care posts. Emergency care services are usually situated in a separate building away from the hospital in the large cities or are connected to hospitals or polyclinics in the smaller district centres. These are staffed by 856 emergency care teams, of which 116 are led by doctors (13.6%), 164 are led by specialist doctors (19.2%) and 575 are led by *feldshers* (67.2%). The minimum social standard for the provision of emergency care teams is 1 team per 12 500 for Minsk and 1 per 12 000 for all other regions. The team serving the smallest population in 2011 was in Vitebsk *oblast* where the ratio was 1 team for 9976 people. However, one of the key challenges faced in emergency care is the shortage of staff. In 2011, the emergency care service had 66% of the required number of doctors (down from 67.9% in 2010), and 87.5% of the required number of *feldshers* (down from 88.9%). Of the doctors working in emergency care, 30% are pensioners.

One of the main results of the implementation of the Concept for the Development of Health Care in the Republic of Belarus for the years 2003–2007 was the development of, and investment in, emergency care services alongside investments in primary care. Recent investments include the purchase of new ambulances, medical equipment and communications technology; nevertheless, more investment in the basic equipment and infrastructure of emergency care services is necessary. The emergency care substations and departments are frequently housed in buildings which do not have heated garages for their ambulances and all the space they require.

The ambulance teams consist of a doctor or a *feldsher*, a nurse and a driver. In the cities, the ambulance service answers patient calls out of hours (evenings, weekends and national holidays), thus contributing to the polyclinic network of

primary care in the urban setting. The ambulance service is one of the major expenses of the district health-care budgets, although it accounted for only 4.8% of total government expenditure on health in 2011.

Every year, almost a third of the population call an ambulance and, in 2011, the call-out rate was 339 per 1000 population (the prescribed norm is 300 per 1000 population) but this varies by region, from 292 per 1000 in Minsk city to 370 in Minsk *oblast*, and Minsk city is the only region to fall below the planned number of calls.

There is also a great deal of evidence that the ambulance service is misused and called too frequently for non-emergency cases. In many cases, the ambulance service is being used as free patient transportation for patients with relatively minor injuries, such as uncomplicated arm fractures or wounds needing stitches. Misuse of the ambulance service for the transportation of intoxicated patients is also common practice. The ambulance service has always been the first point of contact with the health system out of hours, and this accounts for much of the ambulance service utilization. For instance, of 3.66 million ambulance home visits in 2002, the hospitalization rate was only approximately 16% (Tsybin, Pavlovich & Malakhova, 2003). In many cases, the ambulance team merely conducted very simple diagnostic tests and treatment or just gave the patient reassurance. The mean estimated cost to the health system for one home visit by the ambulance team is the equivalent of one-tenth of a polyclinic doctor's monthly salary. The core problem facing the ambulance service is the need for maintenance of transport and equipment to maintain the whole system and the considerable burden of inappropriate use of what is such an expensive specialized service. The Ministry of Health is trying to reduce the number of home visits by ambulances through better cooperation with polyclinic doctors, who are not allowed to conduct emergency visits on their own during their regular working hours.

The emergency care service has had an expanding role nationally as a key element of disaster preparedness. The growth in the number and complexity of emergencies and catastrophes with serious medical and social consequences, as well as the threat of international terrorism, has meant that the emergency care service has had to take on extra challenges, which entails some reorganization of the system. This has included a programme for extensive first aid training for the general population, but particularly for those working in other emergency services. Programmes are now conducted for graduates of training centres for the Ministry of Internal Affairs, the Ministry of Emergencies, the Ministry of Transport and Communications, and teachers and workers in hazardous

industries to teach them all basic first aid. Moreover, the Ministry of Health has been given the task of developing advanced courses so that those working in primary care are able to provide emergency first aid when necessary. It is hoped that the training of a significant segment of the population in how to render first aid will reduce the number of deaths which occur before the ambulance team arrives if people are more aware of how to support vital organ function.

The main challenges faced in emergency care are therefore:

- the shortage of medical staff;
- the large share of unnecessary calls;
- the absence of a single, unified system of monitoring and management of ambulance services;
- inadequate coordination of pre-hospital and inpatient stages of emergency care provision;
- insufficient system of coordination for all emergency services (Ministry of Internal Affairs with Ministry of Health structures) in emergency situations;
- the absence of a single set of technological standards in the provision of emergency care and continuity of medical care;
- the inefficient system of financing for emergency care services;
- the absence of any equalization mechanisms to ensure the same technical, staffing and equipment levels are obtained in all districts, particularly in rural areas;
- the weakness of the research base for emergency care;
- the lack of a telephone triage and consultation system; and
- the continued Ministry of Internal Affairs initiated ban on doctors having narcotic painkillers and anticonvulsants (diazepam) in their emergency care kits.

The Belarusian health system faces the task of improving the quality and economic efficiency of emergency care for the whole population, which is reflected in a large number of state programmes for which the Ministry of Health is responsible (Malakhova et al., 2007). The basic concept for the development of emergency care is to ensure that there is a permanent functional reserve of emergency care teams which can be rapidly mobilized in an emergency or crisis.

5.5.1 Emergency care pathway

The patient or her relatives call for an ambulance. In large towns and cities it is possible that a specialized ambulance team will attend (cardiac, neurosurgical, trauma) where appropriate and available. In small towns and rural areas, a general emergency care team will attend with either a doctor or a *feldsher*. The emergency care doctor provides any emergency treatment *in situ* as required (to relieve pain, treat shock, set up a drip, etc.) and makes a preliminary diagnosis. After this the patient will be transferred in the ambulance directly to the appropriate department of the nearest hospital.

5.6 Pharmaceutical care

In 2011, there were 26 enterprises licensed to manufacture pharmaceuticals, of which 7 were GMP compliant. For those manufacturers which are not GMP compliant, manufacturing standards follow Soviet protocols. Domestic production is nearly all generics, which is why domestically produced drugs account for 58% of packs sold, but only 20% of the market by value. The Ministry of Health imports essential pharmaceuticals for the treatment of socially important diseases (such as TB, diabetes, cancer, HIV/AIDS and so on), as well as for vaccination programmes through a competitive tendering process. Belarusian pharmaceuticals manufacturers do export but this is mainly to other countries of the CIS, predominantly the Russian Federation. From 1 November 2011, plans for the further development of the pharmaceutical industry in Belarus have been introduced. The aim is to ensure the country has adequate production capacity to ensure that key drugs are available and affordable.

In 2012, there was a total of 2880 pharmacies nationwide, of which 58% are state owned and 42% are private; both can dispense the full range of drugs, but private pharmacies are usually relatively small scale, only selling medicines at full cost, and cannot provide reduced-cost or free prescriptions (see section 2.8.4 *Regulation and governance of pharmaceuticals*). There are also 131 hospital pharmacies around the country and 2831 rural pharmacies based in FAPs.

5.7 Rehabilitation/intermediate care

In recent years in Belarus, the Ministry of Health has been actively developing rehabilitation services, founding rehabilitation centres, to which patients can be referred for after-care following various operations or treatments (see

section 5.2). There are 326 medical rehabilitation departments in Belarus, of which 49 are inpatient departments (45 for adults, 4 for children); 36 are inpatient departments in medical rehabilitation centres (32 for children and 4 for adults); 232 are outpatient departments (187 for adults and 45 for children). The lead research institute for medical rehabilitation in Belarus is the Republican Scientific Research Centre for Medical Assessment and Rehabilitation.

5.8 Long-term care

Long-term care of pensioners, children and adults with disabilities, children living in care, and some categories of patient is the responsibility of the Ministry of Labour and Social Protection and often also the Ministry of Health. The types and volume of care provided to those with "socially significant" diseases remain the responsibility of the Ministry of Health together with any other interested ministries or agencies.

There are more than 102 hospitals for nursing care in the country (mainly in rural areas), some of which were previously under the Ministry of Labour and Social Protection but are now under the Ministry of Health. Hospitals for nursing care are run by a doctor or head nurse and provide both social and medical care for a wide range of groups, including elderly lonely patients with chronic diseases, patients who have no relatives to care for them and need palliative care. The indications for hospitalization could be of a medical nature (for example, after a stroke in elderly patients), in which case hospitalization usually lasts for about 21 days and care is free of charge to the patient. Where there are also social indications (for example, the will of the patients themselves or their relatives for them to be admitted), the patient could be admitted to these hospitals for 1–6 months, usually in the winter if elderly patients cannot cope with heating their houses. For these cases the hospital receives a fixed amount (70–80%) of the patient's state pension to put towards the cost of their care while they are inpatients. Patients retain a small proportion of their pensions and benefits in order to cover personal expenses.

Long-term care for the disabled is the responsibility of the Ministry of Labour and Social Protection. Patients who are broadly capable of independent living are supported by care workers (*sotsrabotniki*), otherwise most people in need of long-term care are looked after either by family members or in state care homes (*internaty*). As with the nursing wards in hospitals, patients pay for their care from their pensions and welfare benefits, but this is rarely enough to cover the full cost of care. Social support for veterans of the Second World War

is the subject of specific government policy. The Masherov Republican Clinical Hospital for Invalids of the Second World War is the main facility which provides medical care to Second World War veterans. All medical services for this category of citizen are provided without any waiting lists and veterans undergo full annual medical check-ups and rehabilitation. In every polyclinic a named doctor and nurse are responsible for the organization of work with veterans living in the catchment area. If necessary, home visits are arranged for veterans who cannot be transported or who live in remote rural areas for the check-ups to be conducted. Individual medical care and rehabilitation plans are then developed on the findings of these check-ups.

5.9 Services for informal carers

Care workers assist informal carers in looking after registered disabled relatives. These services are generally provided through organizations under the Ministry of Labour and Social Protection, but sometimes under the Ministry of Health. Moreover, the Red Cross, some NGOs, volunteers and church groups are involved in supporting informal carers. However, there is no integrated system or comprehensive services to cater for the needs of informal carers.

5.10 Palliative care

Since 2008, the Ministry of Health has been actively trying to develop a palliative care system in Belarus for all levels of the health system which includes care workers (*sotsrabotniki*), mid-level health personnel, district oncologists and palliative care specialists. There are 2 hospices in Belarus (in Minsk and in Baranovichi) that provide palliative care services to cancer patients and 11 regional palliative care departments. These facilities are intended to provide medical, social and psychological support to terminally ill patients, as well as psychological support to their relatives. There are also mobile services and home care services for terminally ill cancer patients in Minsk, Grodno and Mogilev. Patients are referred to palliative care services by the clinical-consultative commission that is responsible for the individual patient's care.

Currently, there are 282 palliative care beds in the hospices and regional palliative care departments, 233 for inpatients and 49 day-care beds; there are 17.25 FTE doctor posts, 7.5 psychologists, 2.25 psychotherapists, 79.75 nurses

and 54 auxiliary staff posts. There are some volunteers working in the palliative care system, but most work with patients is carried out by salaried clinical staff. The Republican Scientific Practical Centre for Paediatric Oncology, Haematology and Immunology is home to the Republican Resource Centre for the Palliative Care of Children.

There is also one well-established NGO – the Belarusian Children's Hospice – which provides paediatric palliative home care services in Minsk, Brest, Vitebsk, Mogilev, Gomel and Pinsk, along with one mobile adult service. The NGO came about out of the need for paediatric palliative care services in the aftermath of the Chernobyl disaster, as more children were presenting with cancer and blood disorders, but now provides support to the families of children with severe genetic disorders, life-limiting conditions or terminal illnesses.

5.11 Mental health care

Mental health services in Belarus are publicly owned and integrated directly within the mainstream health system, but services still operate independent of primary and secondary health care in specialist psychiatric or narcological facilities. The treatment of addictions (narcology) is not fully integrated into psychiatric services as it is considered separate specialty, although from 2009, the official number of psychiatrists also includes narcologists. Some specialist psychiatric care is provided for adults in polyclinics where there is a neuropathologist in attendance, but ambulatory care for mental health services is generally provided through psychiatric or narcological clinics, and inpatient care (usually for psychosis) at psychiatric hospitals.

In Belarus, mental health care is coordinated by the Republican Scientific and Practical Centre for Mental Health which has a total of 1782 beds, of which 1460 are psychiatric, 310 are narcological and 12 are for resuscitation. There are 13 psychiatric hospitals (with 4010 beds between them), one of which is the republican hospital (which has 300 beds). There are 12 psychoneurological specialist clinics (*dispansery*), of which 5 have beds (340 beds between them); 2 psychiatry-narcology regional centres (one of which has 210 beds); 5 psychoneurological departments (290 beds, including 160 for children) and 5 psychiatric departments (190 beds, including 40 for children); there are also 1257 places in day centres and small clinics for providing psychiatric, psychological and psychotherapeutic assistance in all central district and general hospitals. The overall number of psychiatric hospital beds per 100 000 population has fallen from 99.3 in 2001 to 68.7 in 2011. This has

occurred despite an increasing number of psychiatric patients because there have been strong moves away from the traditional model of psychiatric care involving long-term hospital treatment in favour of outpatient care – this is why there is now double the capacity in community settings than there is in inpatient facilities.

Legislation is in place on psychiatric care to protect the rights of those with mental health problems, specifically the 1999 Law on Psychiatric Care and Guarantees for the Rights of Citizens Receiving Care and the Law on Providing Psychiatric Care (7 January 2012), which seeks to ensure universal access to psychiatric care for all Belarusian citizens, as well as tackling discrimination and protecting the human rights of people with mental health problems. Those with severe mental health problems also have access to disability benefits. There has been little progress in reducing the stigma attached to mental health problems, but pressure for change in other countries has often come from the nongovernmental sector, which is not involved in mental health care in Belarus.

5.12 Dental care

There are both private and state dental services in Belarus and the network of providers is extensive, particularly as there is considerable provision through the parallel health systems. State dental services are provided through the primary care network, with specialized dental polyclinics in the larger towns and cities. Almost all rural outpatient clinics also officially provide dental services and should be staffed by a dentist, a dental nurse and a dental assistant. However, there has been a problem retaining staff, particularly dental assistants, as living and working conditions in rural areas are more challenging than in the cities.

Dental services and dental prostheses are not generally considered to be part of the state package of health care to be provided free of charge under the Constitution; consequently, there are significant co-payments for those patients not considered to be from vulnerable groups (such as children, pregnant women, pensioners and so on). The level of co-payments is determined by the Ministry of Health. Private dental services are concentrated in the cities and most often cover cosmetic dental treatments. As private health providers, non-state dental practices are closely regulated. Prices are determined by the Ministry of Health and are closely monitored by local government. These services have proved popular and there is a considerable drain of staff (particularly the most highly qualified) from the state to the private sector where wages are higher, the workload is lighter and working conditions are better. In order

to attract patients, private dental clinics ensure they have the most modern equipment. Re-equipping and modernizing the technical base of state dental service providers is now one of the most pressing issues for the development of the sector. This is particularly important as services outside the statutory package of benefits can be provided in state facilities for a fee and the lower technological base in state facilities makes it hard for them to compete with private providers for this revenue. In 2011, 37.2% of services provided in state dental facilities were provided for a fee.

There are comprehensive programmes to improve oral health in Belarus, particularly focusing on oral health for children. This effort has been supported by the school-based dental clinics that have continued since independence. The introduction of the Prevention Programme for the Main Dental Diseases Among the Population of the Republic of Belarus for the Years 2011–2021 and the Programme for the Primary Prevention of Dental Caries and Periodontal Disease Among the Population of the Republic of Belarus for the Years 2011–2021 should allow for more information on the dental health of the nation to be collected and made available.

5.13 Complementary and alternative medicine

The only complementary therapy available through the state health system is acupuncture, and it is used relatively widely. Otherwise, complementary therapies such as herbalism and homeopathy are available, but only through private clinics on a fee-for-service basis. There are no available data on popular alternative and complementary therapies in Belarus and there are no plans for the integration of such therapies into the statutory system.

6. Principal health reforms

The incremental approach, often using pilot projects to trial potential reforms, has been the main feature of health reforms in Belarus. Potential changes are discussed for a long time before they are introduced and some reforms have been discussed at length without ever being fully implemented. Discussions about reforms involve consensus building with all levels of government as well as capacity building in the sections of the health system which will be affected; only once such a consensus is in place does change materialize.

The main change in the organizational structure of the Belarusian health system is the ongoing integration of parallel health service providers into the main health system. Since 2005, the aim has been to unify all human resources, financing and infrastructure in health under a single management to encourage more rational utilization.

"Modernization" of the Belarusian health system has been a core aim of reform efforts in the last five-year plan. This partly reflects a need to "catch up" with developments in medicine which did not feature in the Semashko system, but it is also a means to earn extra revenues for the health-care providers as high-tech services can be exported. A similar "modernization" process has been initiated for the pharmaceutical sector and the new regulator – the Pharmaceutical Production Department – is also charged with attracting investment to develop the domestic pharmaceutical industry and ensuring the competitiveness of its products to encourage export (including achieving GMP compliance). The aim is also to reduce the dependence of the Belarusian health system on imported pharmaceuticals, but the integration of pharmaceutical production and regulation in one department could lead to significant conflicts of interest.

In 2010, after many years of intensive preparation and training, the first round of NHA was produced. NHA standardized the coding and classifications of income and expenditure in the health system and it will now be possible to estimate more accurately what services cost. While the introduction of NHA is a notable achievement in itself, it is viewed as just the first step towards transforming health-care financing in Belarus in order to improve the technical and allocative efficiency of the system. Discussions on future reforms therefore include comprehensive changes in the way health services are paid for.

6.1 Analysis of recent reforms

There have been many policy initiatives to reform the health system in Belarus, but the most notable feature of the reform programme has been its incremental nature. Potential reforms are discussed for a long time before they are introduced by law, decree and ministerial circulars for implementation and some reforms have been discussed at length without ever being fully implemented. Discussions about reforms involve consensus building with all levels of government as well as capacity building in the sections of the health system which will be affected; only once such a consensus is in place does change materialize. In this respect, although the system is strongly hierarchical, there is recognition that edicts issued from above without discussion are easily subverted or ignored in practice.

The focus in this chapter is on developments since 2007; significant reforms prior to this are detailed in the previous edition of this report (Richardson et al., 2008) and in section 2.2. The health system, like the rest of the state-owned economy, is run in line with five-year programmes. The current Programme on Socioeconomic Development runs from 2011 to 2015 and its implications are discussed in section 6.2.

Integration of parallel systems

The main ongoing change in the organizational structure of the Belarusian health system is the integration of parallel health service providers into the main health system. The aim is that this unification of human resources, financing and infrastructure under a single management will lead to more rational utilization. It has long been recognized that the overlapping service provision for certain citizens through parallel health systems is an inefficient use of resources. However, the integration of these systems into the main statutory system was resisted both by patients, who believed the parallel services provided higher

quality care than that available elsewhere, and by doctors working in these facilities (Richardson et al., 2008). Negotiations therefore had to allow staff to retain some of their previous privileges (such as higher wages and a lighter workload); and it is not feasible for the Ministry of Health simply to close surplus facilities and assurances had to be made to this effect. This allowed progress on a reform which was launched in 2005 (Richardson et al., 2008). In 2011, one of the largest parallel health systems (belonging to Belarusian Railways and the Civil Aviation Medical Services) was fully integrated into the statutory system with the parallel system under the Ministry of Education being integrated in 2012. According to Presidential Decree No. 251 of 13 May 2008, the Ministry of Health must control the work of other parallel health-care services. The progress of this reform highlights the iterative and gradualist reform process.

Pharmaceutical production

In agreement with Council of Ministers Resolution No. 1446 (28 October 2011), a Pharmaceuticals Manufacturing Department was set up as a separate body responsible for regulating domestic pharmaceutical production (see section 5.6 and section 2.8.4 *Regulation and governance of pharmaceuticals*). However, the Department is also charged with attracting investment to develop the domestic pharmaceutical industry and ensuring the competitiveness of its products to encourage export (including achieving GMP compliance). The aim is to reduce the dependence of the Belarusian health system on imported pharmaceuticals by increasing the volume and range of products produced domestically, including innovative products, but the integration of pharmaceutical manufacturing and regulation could lead to serious conflicts of interest.

National Health Accounts

In 2010 the Belarusian Ministry of Health began to actively use international standard classifications in the health system for basic indicators and, after many years of intensive preparation and training, the first round of NHA was produced. NHA standardized the coding and classifications of income and expenditure in the health system and they have paved the way for significant reforms of provider payments, as it will now be possible to estimate more accurately what services cost (Tkacheva, 2011; Zharko, 2011). Estimating the level of spending on different diseases (diabetes, TB, cardiovascular disease and so on) will also be possible. NHA should also facilitate health system performance assessment, financial planning, the monitoring of health-care reforms and international comparisons.

While the introduction of NHA is a notable achievement in itself, it is viewed as just the first step towards transforming health-care financing in Belarus in order to improve the technical and allocative efficiency of the system by moving further away from the line-item budgeting approach (see section 7.5). The problems faced in planning, allocating and using resources include the lack of any linkage between allocations to facilities and the activities of those facilities; auditing according to how money has been spent rather than results; the lack of incentives to increase productivity; the limited capacity to calculate risk-adjusted payments for providers; the lack of full information on all sources of finance and how they flow through the system.

Human resources

From 2009, partly in response to the impact of the global financial crisis, there have been some reforms in human resources policies. There have been reforms to increase the efficiency of roles and distribution of human resources for health: ineffective or outdated positions have been phased out; standards for population-to-staff ratios in outpatient care have been introduced; new posts within existing staffing levels have been introduced by filling vacant or inefficiently used positions; and, from 2009, a new category of mid-level health workers has been introduced – doctor's assistants in primary care (see section 4.2.5 *Career paths for other health workers* and section 5.3).

High-technology medicine

Increasing the technological capacity of the Belarusian health system, namely "modernization", has been an overarching aim carried over from the 2006–2010 five-year programme for social development; and investments in technology have officially been made by redirecting funds liberated from excess bed capacity. This partly reflects a need to "catch up" with developments in medicine which were not a feature of the Semashko system, but it is also a means to earn extra revenues for the health-care providers as high-tech services can be exported (see section 5.4). The incentives for providers to encourage medical tourism are considerable as they are allowed to retain any profits from this private practice. In 2011, 115 500 health tourists came to Belarus for treatment, and the export of these services brought US$ 21.4 million into the state health system (Zharko, 2012).

The Programme for Developing High-Technology Forms of Medical Care in the Republic of Belarus 2008–2010 covers tissue and organ transplant surgery, in vitro fertilization (IVF), cochlear implants, replacement hips/knees and a range of interventions for premature babies. While most of these high-tech

services are available only in the specialist tertiary care hospitals in Minsk, many regions now have the capacity to perform complex heart surgeries, such as coronary angioplasty, fitting stents and pacemakers. Making these high-tech services available to the Belarusian public as part of their standard package of benefits nominally free at the point of service carries great political importance. It has also revealed significant unmet need, particularly for replacement hip surgery. To better manage the waiting lists and to improve the quality of care, the Ministry of Health has started to keep a central register of joint replacement surgeries and also any reasons for repeat operations.

6.2 Future developments

The Programme on Socioeconomic Development for 2011–2015 was approved by Decree No. 136 of 4 January 2011 of the President of the Republic of Belarus. On 11 July 2011 the five-year plan to implement this Programme was approved by the government (Resolution No. 942). Health care has remained one of the top priorities in the social policy of Belarus. The focus of the five-year plan for 2006–2010 was modernizing the health system; for 2011–2015 the aim is to complete this modernization through introducing more enterprise, initiative and energy to the system (Zharko, 2012). This will include reforms to provider and health workforce payment systems. The remuneration of health workers should now also take into account workload and other features as well as qualification level and years of service (see section 3.7.2 *Paying health workers*).

In 2013, a pilot project to improve the planning, distribution and financing of health-care facilities will be launched in two regions. Under this project, a system of economic incentives is planned, based on quality indicators for rendering medical care. The key objective of this project is to estimate the size of a physician's bonus depending on the results and the quality of their work. Performance criteria (quality indicators) for physicians in both outpatient and inpatient facilities have been developed according to core activities: preventive work, managing chronic diseases, replacement of secondary (specialized) medical care and organizational issues. Also the pilot project should see the allocation of about 40% of the total health budget to outpatient care (including emergency care); the broadening of rights and increased independence of managers and heads of health facilities in the use of resources and to exercise cost management; restructuring hospital beds to better reflect the real needs of the local population and the structure of morbidity. Depending on the lessons

learned from these draft programmes and the pilot studies scheduled for 2013–2014, quite profound changes to health-care financing could be introduced in the medium term.

The Strategy for the Development of Health Care in the Republic of Belarus to the year 2020 also sets out a programme for the development of the health system over the longer term. In the Strategy, the priorities for the health system include:

- the gradual introduction of a new system of financing, which uses the minimum resources required for the system to function effectively, primarily by moving away from current payment mechanisms for primary, secondary and emergency care;
- the restructuring and modernization of health care to introduce more cost-effective technologies;
- moving towards devolved budget holding for primary care;
- the development of prevention services in the health system and increasing the sense of responsibility for health strengthening at the individual, local, regional and national levels;
- increasing investment in health care to develop capacity for raising extrabudgetary funds through paid medical services, by improving the competitiveness of the health sector in Belarus;
- improving the reproductive health of the population and protecting the health of mother and child;
- developing human resources policy and strengthening the role of medical research to focus them on addressing the demographic security of the country;
- the development of public–private partnerships in resolving problems in the health system;
- increasing the efficiency and effectiveness of environmental health monitoring;
- creating a single system for monitoring the health of the population and developing the ICT (information and communications technology) capacity of the health system; and
- developing international cooperation.

7. Assessment of the health system

The stated objectives for the health system include improving the health of the population, reducing morbidity and mortality rates, and improving average life expectancy levels. This is to be achieved by improving the quality of health care provided as well as its accessibility to the whole population, and through the strengthening of public health to address unhealthy lifestyle factors.

After fluctuations in mortality rates (particularly for Belarusian men) through the 1990s there has been some improvement in average life expectancy at birth, but male life expectancy is still lower than it was in 1990, and although female life expectancy is now higher than it was in 1990, it is not "healthy" life expectancy. Mortality amenable to medical intervention is lower in Belarus than in Ukraine or the Russian Federation, but given the burden of premature mortality, there is still scope for much improvement. Much premature mortality can be attributed to tobacco and alcohol consumption.

Equity in financing is a key factor in enabling access to the health system and OOP payments are a common barrier. Relative to other countries of Europe, OOP household spending on health in Belarus is low and service utilization is high, indicating relatively equitable access. OOP payments are dominated by outpatient pharmaceuticals costs and potentially there is significant unmet need in access to pharmaceuticals due to shortages. Barriers to services include waiting times and staff shortages.

The Belarusian health system absorbs considerable resources which are allocated to it as a matter of political priority although technical efficiency is less of a priority. A gradualist approach to reform has been embraced and the system retains some key features of the Semashko system inherited at independence but many of the changes which have been made have sought to address the inherent inefficiencies of the Soviet model: rebalancing the system

in favour of primary care; integrating parallel health systems; and changing the incentives in provider payment systems. However, there is still significant surplus capacity in the system, particularly for inpatient care. Evaluations are undertaken to provide evidence on the effectiveness of new medical technologies, but systematic evaluations of the effectiveness, costs and impact of established practices are not generally used to inform policy-making.

It should be noted that 72.6% of the population was satisfied with the quality of care provided by the public sector and patient satisfaction would appear to be improving over time, particularly in rural areas. However, insufficient data are available to assess the overall quality of care provided. Public participation in the development of health policy and programmes or in setting the broader health agenda is still in its nascent stages – transparency and accountability in the health system are not high on the political agenda.

7.1 The stated objectives of the health system

The explicit objectives of the health system are rooted in the Belarusian Constitution, which guarantees citizens universal access to health-care services, free at the point of use. Implicit objectives for the health system include improving the health of the population, reducing morbidity and mortality rates, and improving average life expectancy levels. This is to be achieved by improving the quality of health care provided as well as its accessibility to the whole population, and through the strengthening of public health, working with individuals and community groups in order to address lifestyle factors which impact on health (Zharko, 2012).

7.2 Financial protection and equity in financing

7.2.1 Financial protection

Relative to other countries of Europe, OOP household spending on health is quite low (see section 3.1). In 2010, OOP spending on health accounted for 19.9% of total health expenditure in Belarus, which is by far the lowest level in the CIS, the next lowest being the Russian Federation where it accounts for 31.4% of total health expenditure, and is on a par with Belgium (20.2%) and Italy (19.6%) (WHO Regional Office for Europe, 2013). OOP spending in Belarus is dominated by payments for outpatient pharmaceuticals; it has been estimated

that purchasing medicines accounted for 73% of OOP spending in 2010 (World Bank, 2013a). Private spending as a proportion of total pharmaceutical expenditure in Belarus fell to 68.8% in 2010 from 85.2% in 2006, but this is still comparatively high (WHO Regional Office for Europe, 2013). Even with the economic shocks experienced as part of the global financial crisis, policy-makers were able to cushion the population from the full impact of price rises for imported pharmaceutical products. Since 2011, a memorandum on cost-containment of medicines has been signed between the Ministry of Health and leading medicines producers and distributors. However, pharmaceutical costs may also have been contained in some areas if shortages meant that patients were not able to purchase them (see section 7.3).

Service utilization levels would certainly indicate that OOP payments are not a significant barrier to accessing care, although this has been the case elsewhere in the CIS (see Fig. 5.1). Representative population surveys have also shown that people who forego health care when they feel they needed it generally opted to self-treat (52.9%, CI = 47.6–58.1%); only 0.3% (CI = 0.0–0.8%) felt that services were unaffordable while 2.9% said they could not afford the drugs (CI = 1.1–4.6%) (Balabanova et al., 2012). Opting to self-treat is sometimes indicative of unaffordability, but in Belarus it is likely that other factors are at play, such as shortages (see section 7.3). However, proposed amendments to the Health Law in 2013, which would mean that "intoxicated" patients would have to pay for their care out of pocket, could have serious implications for financial protection and equity.

7.2.2 Equity in financing

Income inequality in Belarus as measured by the Gini coefficient was 32.5 in 2008, which would indicate that the country is reasonably equitable (see section 1.2). Research has shown that the levels of income inequality have remained quite stable largely as a result of economic policies such as maintaining state ownership of enterprises, the narrow wage spectrum and relatively generous pensions (Yemelyanau, 2008). The way in which budgetary revenues are raised, with the reliance on corporate taxes rather than personal income tax, would therefore appear reasonably progressive (see section 3.3). However, the relatively high OOP spending on outpatient pharmaceuticals is by its nature highly regressive and increases poor households' vulnerability to external shocks given that imported pharmaceuticals predominate.

7.3 User experience and equity of access to health care

Although user experience and equity of access to health care appear to be "hot" topics for popular mass media in Belarus, there is very little reliable and scientifically robust data available on these matters. Several surveys conducted on the national level in the past few years have been of limited scope and have covered only some aspects of the health-care system responsiveness and social justice issues. Together with the studies described in section 2.9.5. *Patient participation*, a national survey conducted by the National Statistical Committee of the Republic of Belarus in 2011 (Belstat, 2011a) adds some relevant data on access to health care and public satisfaction with the health system.

With regard to access to health care, it was found that 13.3% of the population could not access health-care services when they needed them, at least once in the previous year. Waiting times and the lack of a needed specialist were determined to be the main reasons for this in the public sector by 44.8 % and 36.6% of the population respectively. The high cost of health care in the private sector has made it unaffordable for 85.2% of the population. Also, the survey has found that 14.4% of the population could not obtain the pharmaceuticals and other medical goods they needed, at least once in the previous year. For 62.1% of these respondents the main reason was high prices, and for 35.7% the main reason was the lack of pharmaceuticals and other medical goods in local pharmacies (Belstat, 2011a).

With regard to public satisfaction with the health system, the same survey has found that 72.6 % of the population was satisfied with the quality of care provided by the public sector. According to the survey, every third inhabitant of Belarus had received health care at a private health facility, and 94.5% of them were satisfied with the quality of care provided (Belstat, 2011a). As noted in section 2.9.5 *Patient participation*, patient satisfaction would appear to be improving over time, particularly in rural areas.

7.4 Health outcomes, health service outcomes and quality of care

7.4.1 Population health

The core implicit aims of the health system are to improve population health by reducing morbidity and increasing life expectancy (see section 7.1). After fluctuations in mortality rates (particularly for Belarusian men) through the

1990s there has been some improvement in average life expectancy at birth, but male life expectancy (64.8 years in 2009) is still lower than it was in 1990 (66.3 years), and although female life expectancy is higher than it was in 1990 (up to 76.6 years in 2009 from 75.8), it is not "healthy" life expectancy as DALE for Belarusian women was just 66 years in 2007 (see section 1.4). It is always difficult to disentangle the contribution that health care makes to improving health from overall improvements in socioeconomic conditions but research has shown that the incremental approach to socioeconomic reform since independence has had a protective effect on population health (Grigoriev et al., 2010).

Mortality amenable to medical intervention is lower in Belarus than in Ukraine or the Russian Federation and there have been substantial improvements from 2005 (Staetsky, Nolte & McKee, 2010), but given the burden of premature mortality, there is still scope for much improvement. Possibly the biggest improvements in avoidable mortality have been in the field of neonatal care, where concerted efforts to upgrade and re-equip maternity hospitals have no doubt contributed to the sharp reduction in the neonatal mortality rate since 1994 (WHO Regional Office for Europe, 2013). However, the health system has not been uniformly successful in reducing unnecessary deaths. While the thyroid cancer death rate is extremely low in Belarus (due to the comprehensive screening programme put in place following the Chernobyl disaster), the five-year cancer survival rate for patients diagnosed with prostate cancer in 2000–2004 was on average 43.0% in Belarus and 64.5% in Lithuania. The survival rates were substantially higher in Lithuania for all age groups and at all but stage IV cancer where there was no difference (Smailyte et al., 2011).

Much premature mortality can be attributed to tobacco and alcohol consumption. In the Slutskii *raion* (Minsk *oblast*) the retail of low-end fortified wine was prohibited from 1 June to 31 July 2011 (Minoblispolkom directive No. 101r of 22 March 2011 "On the set of actions for the struggle with drunkenness in Minsk *oblast* in 2011"), and the ban has remained in place since this time. The number of deaths from alcohol poisoning fell 22.3%, from by 23.3 to 18.1 per 100 000 population, largely because "fruit wine" of around 20% ABV was so widely consumed in large quantities by very heavy drinkers. On the basis of these results, the Minsk *oblast* regional authorities banned the sale of all such drinks across the region from 1 January 2012. From 1 January 2013, "fruit wines" have been removed from sale across Belarus. However, total per capita alcohol consumption in Belarus is still high and further controls on the alcohol industry are warranted in order to reduce consumption.

7.4.2 Health service outcomes and quality of care

Although quality of care is one of the hot issues in the health-care sector in Belarus, it is difficult to measure as data on avoidable hospital readmission rates, patient-reported outcome measures (PROMs) and patient safety indicators are not routinely collected or necessarily made available to researchers. If the quality of preventive care can be measured in terms of vaccination coverage rates, then it should be assessed as high – herd immunity should have been achieved as official coverage rates for DTP (diphtheria, tetanus and pertussis), measles and polio are all over 98% and certainly the incidence of diphtheria, pertussis and measles, for example, is low (WHO Regional Office for Europe, 2013). It is not currently possible to meaningfully assess the quality of chronic care or patient safety using the data available. However, methodological recommendations on quality assessment are being developed.

7.4.3 Equity of outcomes

Studies and data on health services outcomes in Belarus cannot yet be meaningfully broken down by socioeconomic group, gender or geographical region. For health outcomes, the most striking inequality is between men and women. Women live longer, healthier lives than men and the gender gap is largely attributable to differences in lifestyle – particularly higher rates of tobacco use and heavy alcohol drinking among Belarusian men compared with Belarusian women (see section 1.4). For this reason the fall in male smoking is particularly encouraging, although female smoking rates are still climbing (see section 1.4).

7.5 Health system efficiency

7.5.1 Allocative efficiency

The Belarusian health system absorbs considerable resources which are allocated to it as a matter of political priority. However, official discourses focus on improving population health as well as the quality and accessibility of services; improving the efficiency of the system was not an expressed aim but increasingly is now. A gradualist approach to reform has been embraced and the system retains some key features of the Semashko system inherited at independence, but many of the changes which have been made have nevertheless sought to address the inherent inefficiencies of the Soviet model. For example, the proportion of total health expenditure on inpatient services

has been gradually reduced from 60% in 2000–2001 to 44% in 2010, as policy-makers have sought to rebalance the system in favour of primary care services and thereby improve health outcomes as well as efficiency (see section 3.3). Overprovision through parallel health systems is gradually being addressed as the facilities are being merged with the statutory system (see section 3.6.1 *Parallel health systems*). Similarly, providers are no longer paid according to capacity criteria (such as staff numbers or bed numbers) but according to "optimal" norms which do not encourage providers to "hoard" staff or retain more beds than has been deemed necessary (see section 3.7.1 *Paying for health services*). However, it should be noted that the Belarusian health system still has a huge infrastructure, with more beds per capita than any other country in the CIS or the EU. This may well indicate that there is still significant surplus capacity in the system, particularly for inpatient care.

Since 2011, evaluations have been undertaken to provide evidence on the effectiveness and cost–effectiveness of new medical technologies (see section 2.7.2 *Health technology assessment*). But systematic evaluations of the effectiveness, costs and impact of medical technologies in use are not generally used to inform policy-making. Consequently, it is not possible to demonstrate the effectiveness of very resource-intensive technologies such as mass population screening (*dispanserizatsiya*), and the impact of the latter in terms of health outcomes is not clear (see section 5.3).

There is a system of local budget revenue equalization to reallocate funds from more affluent to less affluent regions which uses a formula including norms for per capita budget expenditure on health services, but these norms are not risk adjusted (see section 3.3.3 *Pooling of funds*).

7.5.2 Technical efficiency

It is hard to assess the technical efficiency with which health care is produced, but with the introduction of NHA and full costings in some areas of the system, this will become much more achievable. In hospital care, the average length of stay fell rapidly following the introduction of norms-based (rather than capacity-based) provider payments and, although it is still relatively high, it has continued to fall, and the Ministry of Health is seeking to further reduce excess capacity in the health system and thus free up resources to invest in technologies which will substitute inpatient care. Proposals for future development remain the development of day care, home care and day surgery in order to better use resources in specialized outpatient and hospital care and to reduce the number

of surplus hospital beds (Zharko, 2012). However, the constitutional right to access health care is a significant barrier to improving efficiency in the system as patients often overutilize inpatient services out of personal preference.

The Ministry of Health aims to contain pharmaceuticals expenditure through the use of generic pharmaceuticals, the implementation of tendering procedures and the supply of pharmaceuticals to retailers at cost price (see section 2.8.4 *Regulation and governance of pharmaceuticals*). Cost-containment through restrictions or protocols for prescribing in primary care has not been comprehensively introduced. It has proved difficult to encourage generic substitution for outpatient pharmaceuticals prescriptions, partly because patients perceive brand-named products to be better quality, but also because doctors tend to use brand names rather than generic names in their prescriptions (see section 2.8.4 *Regulation and governance of pharmaceuticals*).

7.6 Transparency and accountability

Public participation in the development of health policy and programmes or in setting the broader health agenda is still in its nascent stages (see section 2.9.5 *Public participation*). Patient empowerment more broadly is not a key feature of the Belarusian health system. Priorities are set by central government in line with the will of the President and Parliament, and the Ministry of Health is held accountable for the health of the population, in the same way that doctors are held accountable for the health of their patients (see section 2.8.2 *Regulation and governance of providers*). Priorities for improving the efficiency and impact of the health system as well as standards for care are set by experts working in the Ministry of Health. The capacity for government to monitor the performance of the health system will improve greatly with the introduction of NHA from 2010 (Zharko, 2011).

8. Conclusions

The Belarusian government has made health a political priority and has managed to maintain a health-care delivery system that provides a comprehensive package of care to the entire population, which is generally free at the point of delivery. Financial protection for the population is good, OOP payments make up only a small share of total health expenditure and the population is generally satisfied with the system they have. The stability in service provision was achieved by introducing incremental reforms to the inherited Semashko system. However, the incremental approach has not been so successful in reducing excess hospital capacity, improving service quality, developing primary care, or tackling noncommunicable diseases. The necessity of moving forward with the reform programme, even at an evolutionary rather than revolutionary pace, is therefore evident in the cost of maintaining a system which relies so heavily on inpatient care. The political priority afforded to the health system has protected health spending even through the global economic crisis, but it has become clear that significant efficiency gains now need to be made.

The health system has been rapidly "modernized" in that many complex high-technology procedures are available domestically; however, creating an extra source of revenue by attracting medical tourism and exporting services has been a key driving force behind this development. An important concern for policy-makers, therefore, is maintaining the focus on equity of access, which is a constitutional right, so that the incentives for state-owned facilities to provide profit-making services do not create a "two-tier" system.

The high-technology approach may also have been successful in reducing mortality from cardiovascular diseases, but prevention is the only effective long-term solution for addressing the high levels of premature mortality among

working-age men. The key causes of ill health cannot be addressed by the Ministry of Health alone; multisectoral efforts to develop more active measures against the alcohol and tobacco industries are needed.

The main lesson to be learned from the Belarusian experience is that, with unwavering political support, an incremental approach to economic and health-care reform can sustain access to health care for the population and protect population health from some of the harshest aspects of socioeconomic transition. However, it is not enough on its own to substantially improve population health or ensure efficient use of funds. Over the last decade, a combination of socioeconomic, demographic and ecological factors in society has negatively impacted not only on population health but also on the health system. The continually rising demand for medical services on the one hand and the limited material and financial resources on the other, have created a series of problems in the provision of medical care. A key challenge is to address shortcomings in technical and allocative efficiency while ensuring that the quality of care or access do not suffer. Improving clinical efficacy by ensuring that treatment and diagnostic procedures are evidence-based would help move towards achieving both these goals.

Alongside the stability an incremental approach to reform affords, it also makes it possible for policy-makers to build consensus to ensure that once reforms are passed into law, they can be implemented more swiftly. This is a real opportunity to support the health workforce and for all stakeholders at all levels of care to become involved in the development and not just implementation of future reforms.

9. Appendices

9.1 References

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9.2 Useful web sites

President of the Republic of Belarus official web site – includes links to sites for all the Regional and District Executive Committees (Russian, Belarusian and English versions): http://president.gov.by/

Ministry of Health of the Republic of Belarus (Russian and English): http://www.minzdrav.by/

Meditsinskii vestnik [Medical bulletin] – weekly newspaper published by the Ministry of Health (Russian only): http://www.medvestnik.by/

Voprosy Organizatsii i Informatizatsii Zdravookhraneniya [Issues of Organization and Informatization of Health Care] – academic journal published by the Ministry of Health (Russian only): http://minzdrav.gov.by/ru/static/jurnal_voprosy_inform

National Statistical Committee of the Republic of Belarus (English and Russian): http://belstat.gov.by/homep/en/main.html

Republican Scientific and Practical Centre for Medical Technologies, Informatization, Administration and Management of Health (RSPC MT) (English and Russian): http://rnpcmt.belcmt.by/

9.3 HiT methodology and production process

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

Authors draw on multiple data sources for the compilation of HiTs, ranging from national statistics, national and regional policy documents to published literature. Furthermore, international data sources may be incorporated, such as those of the OECD and the World Bank. The OECD Health Data contain over

1200 indicators for the 34 OECD countries. Data are drawn from information collected by national statistical bureaux and health ministries. The World Bank provides World Development Indicators, which also rely on official sources.

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

1. Introduction: outlines the broader context of the health system, including geography and sociodemography, economic and political context, and population health.
2. Organization and governance: provides an overview of how the health system in the country is organized, governed, planned and regulated, as well as the historical background of the system; outlines the main actors and their decision-making powers; and describes the level of patient empowerment in the areas of information, choice, rights, complaints procedures, public participation and cross-border health care.
3. Financing: provides information on the level of expenditure and the distribution of health spending across different service areas, sources of revenue, how resources are pooled and allocated, who is covered, what benefits are covered, the extent of user charges and other out-of-pocket payments, voluntary health insurance and how providers are paid.
4. Physical and human resources: deals with the planning and distribution of capital stock and investments, infrastructure and medical equipment; the context in which IT systems operate; and human resource input into the health system, including information on workforce trends, professional mobility, training and career paths.

5. Provision of services: concentrates on the organization and delivery of services and patient flows, addressing public health, primary care, secondary and tertiary care, day care, emergency care, pharmaceutical care, rehabilitation, long-term care, services for informal carers, palliative care, mental health care, dental care, complementary and alternative medicine, and health services for specific populations.
6. Principal health reforms: reviews reforms, policies and organizational changes; and provides an overview of future developments.
7. Assessment of the health system: provides an assessment based on the stated objectives of the health system, financial protection and equity in financing; user experience and equity of access to health care; health outcomes, health service outcomes and quality of care; health system efficiency; and transparency and accountability.
8. Conclusions: identifies key findings, highlights the lessons learned from health system changes; and summarizes remaining challenges and future prospects.
9. Appendices: includes references, useful web sites and legislation.

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

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

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

9.4 The review process

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

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New Zealand (2001)
Norway (2000, 2006)
Poland (1999, 2005[k], 2012)
Portugal (1999, 2004, 2007, 2011)
Republic of Korea (2009)
Republic of Moldova (2002[g], 2008[g], 2012)
Romania (2000[f], 2008)
Russian Federation (2003[g], 2011[g])
Slovakia (2000, 2004, 2011)
Slovenia (2002, 2009)
Spain (2000[h], 2006, 2010)
Sweden (2001, 2005, 2012)
Switzerland (2000)
Tajikistan (2000, 2010[gl])
The former Yugoslav Republic of Macedonia (2000, 2006)
Turkey (2002[gi], 2012[i])
Turkmenistan (2000)
Ukraine (2004[g], 2010[g])
United Kingdom of Great Britain and Northern Ireland (1999[g])
United Kingdom (England) (2011)
United Kingdom (Northern Ireland) (2012)
United Kingdom (Scotland) (2012)
United Kingdom (Wales) (2012)
United States of America (2013)
Uzbekistan (2001[g], 2007[g])
Veneto Region, Italy (2012)

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
i	Turkish
j	Estonian
k	Polish
l	Tajik

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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.

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