Health Care Systems in Transition

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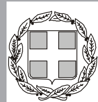
Republic of Moldova

2002



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Keywords:
DELIVERY OF HEALTH CARE
EVALUATION STUDIES
FINANCING, HEALTH
HEALTH CARE REFORM
HEALTH SYSTEM PLANS – organization and administration
REPUBLIC OF MOLDOVA

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Suggested citation:
MacLehose, L. in McKee, M. (ed.) *Health care systems in transition: Republic of Moldova.* Copenhagen, European Observatory on Health Care Systems, **4**(5) (2002).

European Observatory on Health Care Systems:
WHO Regional Office for Europe
Government of Greece
Government of Norway
Government of Spain
European Investment Bank
Open Society Institute
World Bank
London School of Economics and Political Science
London School of Hygiene & Tropical Medicine

EUR/02/5037245 (MDA) 2002

ISSN 1020-9077 Vol. 4 No. 5

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Foreword

The Health Care Systems in Transition (HiT) profiles are country-based reports that provide an analytical description of a health care system and of reform initiatives in progress or under development. The HiTs are a key element of the work of the European Observatory on Health Care Systems.

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

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

The HiT profiles are produced by country experts in collaboration with the Observatory's research directors and staff. In order to facilitate comparisons between countries, the profiles are based on a template, which is revised periodically. The template provides the detailed guidelines and specific questions, definitions and examples needed to compile a HiT. This guidance is intended to be flexible to allow authors to take account of their national context.

Compiling the HiT profiles poses a number of methodological problems. In many countries, there is relatively little information available on the health care 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 WHO Regional Office for Europe health for all database, Organisation for Economic Cooperation and Development (OECD) Health Data and data from the World Bank. Data collection methods and definitions sometimes vary, but typically are consistent within each separate series.

The HiT profiles provide a source of descriptive information on health care systems. They 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 care systems. This series is an ongoing initiative: material is updated at regular intervals. Comments and suggestions for the further development and improvement of the HiT profiles are most welcome and can be sent to observatory@who.dk. HiTs and HiT summaries are available on the Observatory's website at www.observatory.dk. A glossary of terms used in the HiTs can be found at www.euro.who.int/observatory/Glossary/Toppage.

Acknowledgements

The Health Care System in Transition (HiT) profile on the Republic of Moldova was written by Laura MacLehose (European Observatory on Health Care Systems) and edited by Martin McKee (European Observatory on Health Care Systems). Martin McKee was also research director for the Moldovan HiT.

The Observatory gratefully acknowledges Viorel Soltan (Soros Foundation Moldova), Sarbani Chakroborty (World Bank) and Andrei Mochniaga (WHO Liaison Office) for reviewing the HiT.

We are also grateful to Valeriu Sava (Scientific Practical Centre of Public Health and Health Management), Pavel Ursu (WHO Liaison Office), the Ministry of Health of the Republic of Moldova and the Institute for Mother and Child Health.

This HiT takes forward the Health Care Systems in Transition profile on the Republic of Moldova of 1996, written by Boris Goroshenko, Victor Volovei and Andrei Mochniaga and edited by Suszy Lessof.

The current series of Health Care Systems in Transition profiles has been prepared by the research directors and staff of the European Observatory on Health Care Systems.

The European Observatory on Health Care Systems is a partnership between the WHO Regional Office for Europe, the Governments of Greece, Norway and Spain, the European Investment Bank, the Open Society Institute, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine. The Observatory team working on the HiT profiles is led by Josep Figueras, Head of the Secretariat, and research directors Martin McKee, Elias Mossialos and Richard Saltman. Technical coordination is by Suszy Lessof.

Administrative support for preparing the HiT on Moldova has been undertaken by a team led by Myriam Andersen, and comprising Uta Lorenz, Anna Maresso, Caroline White and Wendy Wisbaum. Design, production and copy-editing were managed by Jeffrey V. Lazarus, with the support of Shirley and Johannes Frederiksen and Thomas Petruso. Special thanks are extended to the WHO Regional Office for Europe health for all database, from which data on health services were extracted; to the OECD for the data on health services in western Europe; and to the World Bank for the data on health expenditure in central and eastern European countries. Thanks are also due to national statistical offices that have provided national data.

Introduction and historical background

Introductory overview

The Republic of Moldova is a land-locked country situated in south-eastern Europe. The Ukraine and Romania border the country to the east and west respectively. It covers 33 843 km^2, around 80% of which is dedicated to arable land, crops and pasture *(1)*. The country is densely populated, with 4.2 million people in 2000 *(2)*, yielding a population density of around 124 people per km^2. Around 54% of the population live in rural areas *(3)* with agricultural and food processing activities dominating the economy.

The Moldovan population is made up of a number of ethnic groups, with Moldovans constituting the largest (64.5%). Ukrainians and Russians form the next two largest groups at 13.8% and 13%, respectively. Gaugaz, Jewish, Bulgarian and other groups form the remainder *(1)*. The majority of the population are Orthodox Christian. The official language is Moldovan (in reality identical to the Romanian language).

The Republic of Moldova became independent in August 1991 with the collapse of the former Soviet Union. This was the latest in a series of independent reincarnations since the first Moldovan state was declared in 1365. Stefan cel Mare (Stefan the Great), ruler between 1457 and 1504 and a Moldovan hero to this day, characterized the spirit of the republic and the difficulties of maintaining its sovereignty. Moldova's location on the fringe of Europe has meant that it has been caught between great military powers over the centuries. In the mid-16th century, it became a Turkish protectorate. Parts of the country were then ceded to Austria and the Russian Empire (Bessarabia) in 1812 *(4,5)*, as a consequence of the Russian–Turkish war. Bessarabia again became briefly independent after the collapse of the Russian Empire in 1917. As a result of the Bolshevist call for self-determination, a local government was formed. In 1918

Fig. 1. Map of the Republic of Moldova[1] *(1)*

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[1] The maps presented in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the European Observatory on Health Care Systems or its partners concerning the legal status of any country, territory, city or area or of its authorities or concerning the delimitations of its frontiers or boundaries.

the majority voted for unification with Romania and as a consequence Bessarabia was within the Romanian Monarchy until 1940, when the Soviet Army entered the territory. In 1924, a small part of Bessarabia and some Ukrainian territories were put together to form the Moldovan Autonomic Soviet Socialist Republic (Moldavskaia ASSR), with its capital in Balta. During the Second World War, Moldovan territory was a battle theatre for German and Romanian forces confronting the Soviet army. As a result of the defeat of the German/Romanian forces, Bessarabia was again annexed to the Moldovan ASSR in 1944, forming the Moldovan SSR, which was a part of the former USSR up to the Republic of Moldova's recent independence in 1991. Since proclaiming independence, there has been civil strife in Transdniestria, which had been heavily influenced by Russians from 1812 to 1991. The region declared its independence in 1991, going unrecognized both internally and internationally, leading to a secessionist war in 1992. The region remains effectively outside central government control, and its status is still being negotiated; thus, some of this report's statistics do not include it. Special autonomy status was granted to the Gagauz region (Territorial Administrative Unit of Gagauzia) in 1994. Moldova joined the Commonwealth of Independent States (CIS) in 1991, and has been a member of the United Nations since 1992. The Moldovan lei was introduced as the national currency in 1993, replacing the rouble.

At independence, Moldova was faced with a health system with numerous facilities and staff but few resources to sustain them. Despite some reductions in capacity, in 1997 Moldova had one of the most extensive networks of health facilities and health staff in either western Europe or the countries of the former Soviet Union *(6)*. It attempted to maintain this high level of provision despite the collapse of the economy in the early 1990s. The economy, along with an emphasis on tertiary care in the health system and little awareness of preventive health measures in either the health profession or the general population has meant that the Republic of Moldova faces many health system challenges.

Demographic and health indicators

Four years after independence in 1995, the Republic of Moldova was on the verge of a public health crisis. Life expectancy was declining and the incidence of communicable diseases such as syphilis had increased dramatically. However, steady progress has been made in reversing this situation and today a number of health indicators such as life expectancy are better than those of 1991, though still below those of the late 1980s.

At independence the population of the Republic of Moldova was 4 361 727 *(7)*. By 2000, it had decreased to 4 281 200 *(2)*. A natural population decline of 0.7% was recorded in 1999 *(2)*. A combination of decreasing birth rates,

increased mortality and out-migration is contributing to this trend. In 1997, a survey estimated the total fertility rate (TFR) to be 1.8, below the threshold of 2.1 needed for a population to reproduce itself *(8)*. Emigration is high, including illegal migration to Italy and other European Union (EU) countries. Flows of funds back to the Republic of Moldova as a result of work undertaken overseas are substantial, placed by one estimate at around US$ 170 million in 2000 *(9)*. Official figures from the International Organisation of Migration (IOM) report that over 56 000 people left the country in 1989 but that this had fallen to around 13 000 by 1996 *(10)*. However, these figures are likely to underestimate the overall movement of people out of the country. Over 14% of the population, mainly from the younger segment, is thought to have left the country in search of work since independence. A number of reports have documented villages losing around a fifth of their able-bodied populations *(9)* and hospitals losing substantial numbers of nursing staff. Unfortunately, one aspect of the large and unregulated illegal emigration is an increasing participation of vulnerable emigrants in the international sex-trade. Almost certainly as a consequence, a dramatic rise in sexually transmitted infections (STIs) has occurred over the past ten years *(7)*. Syphilis, for example, (which may be underreported) increased to thirteen times its 1990 level in 1996, then dropped to around seven times the 1990 level in 1999 *(7)*.

A major decrease in life expectancy at birth, from 69.09 in 1989 to 65.88 in 1995, has also contributed to the decreasing size of the Moldovan population. This drop followed improvements from 1985 to 1989, when life expectancy was 66.14. The drop from 1989 was reversed in 1995. In 2000 life expectancy was 67.75 *(7)*. Infant mortality dropped throughout the 1980s but also showed a rise in the 1990s, from 18.25 in 1992 to 22.89 in 1994. It has started dropping and in 1999 was 18.54, a figure still three times that of the EU average of 6.07 *(7)*. Maternal mortality rates improved for a decade from the early 1980s, but climbed again, peaking in 1993 at 52.89. From 1998 onwards, great strides have been made in improving maternal mortality; the 2000 rate was 27.07 *(7)*.

The main causes of death in the Republic of Moldova are diseases of the circulatory system followed by cancer, diseases of the digestive system and injury and poisoning *(2)*. Smoking, a contributory cause for circulatory diseases and cancer is widespread with approximately 46% of the male and 18% of the female population estimated to smoke *(11)*. Alcohol abuse is also widespread. An official survey found that more than 8% of the population had undefined health problems caused by excessive alcohol consumption *(12)*. The main causes of infant mortality are perinatal pathology, followed by respiratory diseases and congenital malformations *(13)*. The high rates of maternal mortality are, in part, likely to be associated with poor availability of equipment and drugs,

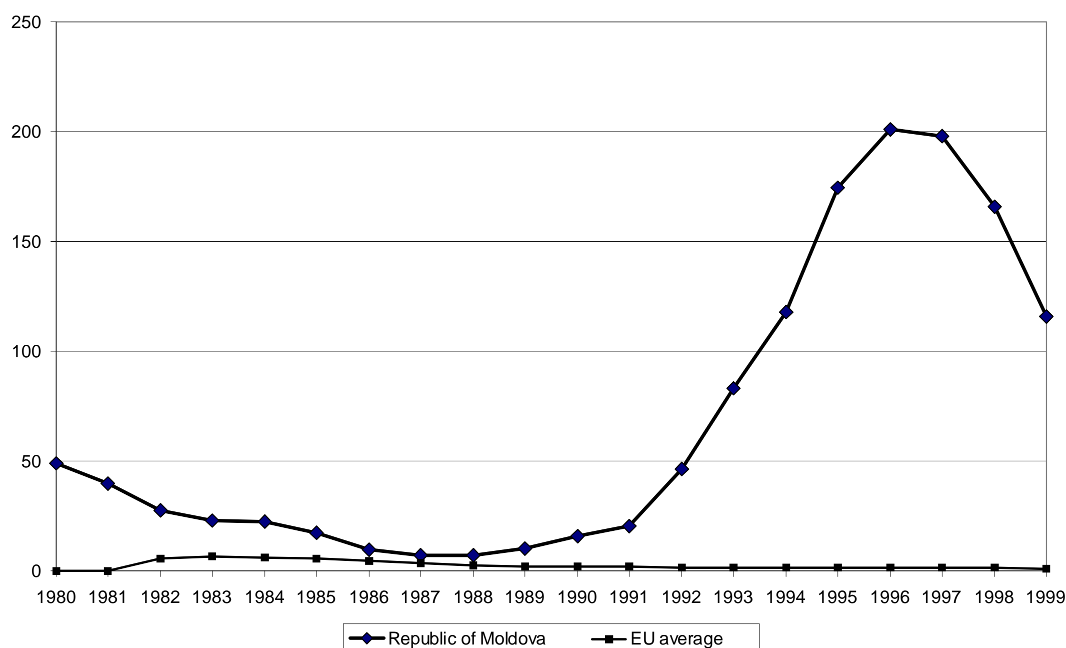
abortion complications and, more recently, increasing financial constraints in accessing services. However, in contrast to these factors, a 1997 reproductive health survey found that almost all women (99%) had received pre-natal care, with 77% of it at a level of adequate or better *(8)*. Abortion rates are high, with a total induced abortion rate of 1.3 per woman in 1997, and a high contribution of abortion to maternal mortality. In 1998, one third of all maternal deaths (12.1 per 100 000 births) were associated with abortion *(7)*. Despite an increasing demand for contraception, many families face difficulties finding affordable supplies.

Several decades of progress in reducing the incidence of communicable diseases were reversed for a number of illnesses in the years following independence, although decreases are now being seen again for some. Increasing poverty, weakened prevention and control programmes in the early period after independence and increasing international movement of the population are three of the likely causes. Moldova, like a number of neighbouring countries, suffered a major diphtheria outbreak between 1994 and 1996, peaking in 1995 with over 9 reported cases per 100 000 people *(14)*. Over 700 people were infected in 1994 and 1995 *(15)*. A cholera outbreak also occurred in 1995. Sexually transmitted infections have sharply increased since independence, with syphilis showing one of the biggest increases. In a ten-year period, STIs have risen by a factor of nearly thirty, from 7.1 cases per 100 000 in 1989 to 200.1 cases per 100 000 in 1999 *(16)*. Moldova has reported relatively few HIV cases, the majority in injecting drug abusers *(17,18)*. However, other estimates suggest that the country has a much higher incidence. The very large increases in STIs indicate that preventive behaviour messages for have not been heeded, and without a change in practices the Moldovan population is at risk of a further increase in HIV infections. Moldova has had very high rates of viral hepatitis in the past, but this is now declining. Nonetheless, Moldova's rate of hepatitis B is still seven times the EU average (22.1 versus 3.68 in 1998) *(7)*, thought to be due to unsafe injection practices *(19)*.

Tuberculosis is another major communicable disease problem facing the Republic of Moldova, particularly in the prison population. Although coverage with BCG has remained high, the incidence of TB has been rising since 1990 after dropping from the early 1980s *(7)*. In 1998, 65.6 cases per 100 000 population of all forms of TB was recorded. However, rates in prisons are much higher. In 1999, a rate of 2 640 cases per 100 000 prison population was recorded *(20)*. In some prisons, up to 85% of inmates have been found to have tuberculosis *(21)*.

A number of environmental hazards have posed threats to health. The Chernobyl nuclear accident in 1986 in neighbouring Ukraine is thought to

Fig. 2. Syphilis in the Republic of Moldova and EU per 100 000



Source: (7)

have exposed parts of the Moldovan population to dangerous levels of radiation. Around 3500 Moldovan workers helped build the concrete casing to seal off the contaminated nuclear reactor site, of whom 80 have already died and around 700 are incapacitated. More generally, the quality of drinking water is decreasing and the level of pesticides in food production is a concern. In 1999, 75% of all well water (used by 90% of the population) did not meet sanitary and bacteriological safety standards. Pesticide and nitrate content of food also increased between 1998 and 1999 *(2)*. In terms of food safety regulation, legislation and follow up to ensure adequate salt iodization has been strengthened recently.

Socioeconomic indicators

Since independence, the Republic of Moldova has faced serious economic challenges that have impacted on incomes and funding available for health and other social development activities. Despite an ambitious economic reform programme started at independence, which included the establishment of the Moldovan currency, privatization of many enterprises, removing export controls and freeing interest rates, internal and neighbouring economic difficulties have produced a serious drop in prosperity *(1)*. According to the Human Development Index, the Republic of Moldova ranks in the list of 174 countries as follows: 75th in the 1994 Report, 81st in 1995, 98th in 1996, 110th in 1997, 113th in 1998, 104th in 1999 and 102nd in 2000 *(22)*. Traditional trading arrangements

with partners from the USSR collapsed with the demise of the Soviet Union. The subsequent economic problems in neighbouring Romania and Ukraine and the economic turmoil in Russia in 1997 compounded economic difficulties. The traditionally agriculture-based Moldovan economy has suffered from a loss of export markets (total exports in 1995 were US $745.5 million, in 2000, US $477.4 million) *(23)*, and has also had difficulties importing adequate energy. A drought in 2000 hindered some parts of the agricultural production *(24)*. The conflict in the Transdniestrian region, and subsequent needs of 100 000 to 130 000 displaced people *(10,25)* also absorbed significant funding at a time of negative economic growth.

From 1993 to 1999 *(23)* GDP has decreased by about 60% *(6)*. In 2000, GDP per capita was US $353.50. *(23)*. Wages are often paid substantially in arrears. Data show that more than 90% of the population lived on less than US $1.00 per day, and real income has not even reached 80% of the 1997 level *(23)*. Based on the 2000 Household Budget Survey, some 40.5% of all households had monthly incomes under the poverty line *(23)*. This "poverty threshold" was calculated at 30% of the national subsistence minimum. Wealth distribution is increasingly unequal in the country. The "Gini coefficient" (a measure of dispersal of income across the population, in which zero symbolizes absolute equality and one absolute inequality) highlights this pattern. For the first quarter of 2001, the Gini coefficient was 0.43. The value of the Gini coefficient has remained practically flat since 1998, fluctuating in the range of 0.41 to 0.43 *(23)*. Poverty alleviation is an urgent problem for rural areas. More than 80% of the "new poor" are villagers *(22)*.

Unemployment was estimated to be around 11% in 1999, although this is likely to be a considerable underestimate *(22*). However, the Republic of Moldova is now also home to a large-scale informal economy. The data of the Centre for Strategic Studies and Reforms indicate that the underground economy amounts to 65% of the entire economy. *(22)*. While the shadow economy is providing a living to some who might otherwise face financial difficulties it is also associated with low level of tax collection, which in turn creates difficulties for the provision of a number of services, including health care. The informal economy is also associated with increasing levels of organized crime such as the trade in illegal drugs. Distribution of wealth within the informal economy is thought to be very unequal.

Government administration

The Republic of Moldova was established as in 1991. It is governed by a constitution which was put in place in 1994 and which replaced the old Soviet constitution of 1979. It became a parliamentary republic in 2000. The head of

state is the president, elected by the parliament once every four years. The prime minister is nominated by the president and approved by the parliament, and is the head of government. The parliament is unicameral and has 101 seats. Members of parliament are elected by a popular vote for four-year terms of office. Following independence, the country was ruled by the Agrarian Party, with Mircea Snegur as President until 1996. From 1996 to 2001 the Alliance of Centrist Democrats was in power. Vladimir Voronin, leader of the Moldova Communists, was elected to the presidency in February 2001. Until 1998, Moldova was divided into 40 districts for administrative purposes. In 1999, the administrative arrangements were reorganized. Twelve administrative regions were established (10 judets and the municipalities of Chisinau and the Gagauzia), each with a regional administration and civil servants. As the regional administrations are becoming better established they are extending their responsibilities.

Historical background

Until the 18th century there were no formal health care institutions as such and no structured provision of health assistance or health services. The rural areas were especially disadvantaged, compared to the cities, with the situation continuing to some extent to the present time. One report looking at the rural areas around Chisinau in the early 20th century reported that one doctor served over 80 000 people and around two thirds of children failed to survive beyond infancy *(26)*. By the early 19th century an increasing number of hospitals began to open, largely based in Chisinau and in major municipal centres. This focus on secondary or inpatient care has continued to dominate the Moldovan system up until the most recent reforms.

The 19th and early 20th centuries

During the 19th century Moldova was a peripheral Russian *gubernia*, so its health system was developed as part of the Russian model. In 1832, in Russia a special Constitutional Law was adopted which instituted hygiene and sanitary services to prevent smallpox and other contagious diseases. This early concern for public health was followed by further development and expansion of the public health sector. Health care delivery became more systematic and public health services were extended into rural areas. This was particularly marked in the territory of Bessarabia, which is a substantial part of the territory of the present day republic.

The Zemstvo local government system was developed in Russia in the 1880s and its responsibilities covered the development of a local health system. The Zemstvo system developed a wide network of health providers and aimed at bringing medical care to throughout the rural areas, focusing on practitioner-led services and client-group specific health care issues. Progressive practitioners investigated rural public health issues and developed new forms of health care delivery. However, the prerequisites for sustainable development were lacking and advances were, at best, patchy. Despite these shortcomings the role of Zemstvo-led health care in Bessarabia was significant in extending the number and scope of both medical centres and physicians operating within the territory.

First World War and post-war period

Most of the gains made in the early 20th century were overturned by the First World War. Many of the new facilities closed. Private health care provision became increasingly dominant and the progressive momentum of the Zemstvo period was dissipated. The focus on the control of infectious diseases inspired by the concern for public health did continue to exert an influence, however, in the guise of a number of remarkable individuals working in the field of contagious diseases.

The post-war period (1918–1940) saw the unification of Bessarabia with Romania. The union was influential both culturally and in terms of the territorial organization of health care delivery. Health services relied heavily on formal out-of-pocket payments but at the same time a rudimentary Bismarckian insurance scheme emerged which divided health care delivery into a three-tier system related to ability to pay.

The period was one of economic and cultural expansion. Although the population faced a number of increases in infectious diseases such as bacterial dysentery, scarlet fever and malaria, there were nevertheless increases in the health system's capacity during this time. The number of health institutions and, in particular, the level of medical staffing grew. By 1940, there were 446 health institutions, 1055 physicians and 2400 nurses and midwives. During this period public health was a focus for the Romanian Government. Two modern tuberculosis sanatoriums were opened. The control of malaria and typhus were also important activities *(4)*. The Second World War, however, destroyed over 80% of all health care institutions.

Soviet Socialist Republic of Moldova (SSRM)

From the inception of the SSRM in 1940, steps were taken to control communicable diseases and prevent epidemics. However, the main health care

reforms took place only after the Second World War as part of the Soviet health care system. These sought both to alleviate the consequences of the war and to facilitate delivery of health care to the population as a whole.

The Soviet health care system was based on the following principles:

- state ownership and management
- health care free at the point of use
- linkage between science and practice
- extension of preventive activities.

Between 1951 and 1957 hospitals were united with polyclinics. These delivered outpatient services to the community while extending the dominance of the hospital sector over primary health care. From 1956 to 1957 there was a partial reorganization of rural health care, increasing the capacity of local hospitals and arranging public health related services such as provision of infant milk. There were some efforts to develop field health care services and to coordinate national, municipal and rural health care institutions.

From 1960, considerations of population health played an increasing role in planning and targeting health services. Investigations into health needs were performed to establish the health requirements of the rural population. This led to the clear statement of principles of health care delivery to rural areas and a commitment to improving their availability and quality. This was to be effected through the establishment of four special categories of clinics and health units.

The SSRM period saw an overall expansion in both the funding and provision of health care. Between 1950 and 1960, the number of beds grew from 27 to 44 per 10 000 inhabitants. Capital investment in the construction of health care institutions increased from 3.5 million roubles in 1955 to 40 million roubles in 1978. This focus on the provision of bed numbers persisted throughout the Soviet period. The capacity of municipal health care institutions increased from 189 beds in 1970 to 415 beds in 1994, and regional hospitals from 110 to 457 beds in the same period. Indeed, all indices determining hospital service and staff provision to the population increased between 1950 and 1994 (Table 1) *(27)*. The high provision of services was related to the Soviet Semashko norms that focused on high numbers of doctors and hospital beds rather than on outcomes of health care and other outputs. Alongside this, the centralized management and budgeting systems allowed little flexibility for local service management to better manage funds at the local level and unofficial payment requests were sometimes made to patients although all patients would have access to care.

Table 1. Development of the health care system in the Republic of Moldova, 1950–1994

Basic indicators	1950	1960	1970	1978	1994
State expenditure on the health care system and physical education million (roubles/lei)	21.2	50.9	114.2	172.0	315.0
Expenditure per capita (roubles/lei)	9.1	16.9	31.8	43.8	70.0
Number of outpatient health care institutions	376.0	405.0	428.0	515.0	559.0
Number of hospitals	236.0	343.0	364.0	339.0	305.0
Hospital beds per 10 000 population	45.1	72.3	99.1	116.6	116.0
Physicians per 10 000 population	10.3	14.3	20.5	29.3	37.9
Nurses and midwives per 10 000 population	32.6	54.0	77.3	89.5	104.0

Source: Health Care Systems in Transition: Republic of Moldova 1996. European Observatory on Health Care Systems.

Post-Soviet health services

As soon as the Republic of Moldova declared independence in 1991, new socioeconomic conditions threatened both health status and the inherited expansive health system. The health sector budget dropped dramatically both in terms of percentage of GDP allocated to health and in real health expenditure per capita. The severe lack of funding for the health sector combined with an emphasis on tertiary care and continued use of non-standard and more costly treatment protocols for some conditions (for example tuberculosis, child birth and mental illness) has threatened the provision of the most basic health services, including vaccination, for the Moldovan population. The national vaccination service almost stopped altogether between the years 1990 and 1993 due to a lack of resources. Physical deterioration of facilities and equipment and a lack of provision of basic drugs and contraceptive devices face many medical centres. Under the inherited health system, emphasis in terms of facility provision and funding was made on the tertiary sector. Primary health care and preventive health services were relatively under-resourced and continue to be so today, with approximately 85% of the programme vaccine and supply budget provided by international donors *(28)*. The World Bank calculated that in 2000, the 17 tertiary level hospitals and 40 district hospitals (now renamed regional and sectoral hospitals) consumed over 70% of the total health spending *(6)*. Of this, most was estimated to have been spent on the physical infrastructure of the hospital buildings rather than on medical equipment and pharmaceuticals, treatment or staff salaries *(6)*. Yet, many facilities have bed occupancy rates of only 20% while the poorest sectors of the population cannot access services due to prohibitive costs imposed through both formal and informal payment requirements. Despite a severe lack of funds to support the health sector, and

although a number of health laws have been passed and pilot and other projects initiated, the reform of the system has been slower than had been anticipated at independence. A high turnover of health ministers and other officials in the Ministry of Health has not helped facilitate the reform process despite the efforts of the Ministry staff. However, the pace of the reform process began to increase in 1998 with decreases made in medical staff and bed numbers, decentralization of some planning and funding mechanisms in 1999 and new health funding distribution mechanisms in 2001 (per capita rather than by bed numbers). The decrease in bed numbers and medical staff alone should have released a substantial amount of health funding for basic services. However, it is unclear whether these funds have been reinvested in basic health services or moved out of the health system altogether, and this is a concern to many in the health field.

Organizational structure and management

Organizational structure of the health care system

At independence in 1991, the Republic of Moldova inherited the extensive Semashko health care system structure of the former Soviet Union. The Semashko model was highly centralized with key decision-making and planning taking place in Moscow. In 1991 decision-making and fund-raising powers were therefore moved from Moscow to the Moldovan capital, Chisinau and have since been decentralized further to the country's twelve regions. While it was initially proposed to retain the former health system, economic and other pressures helped drive a major reform programme beginning on a large scale in 1998.

The Ministry of Health is responsible for the health care system overall, although it no longer funds or directly manages care within the regions. It does however, directly manage the national-level tertiary care facilities, the republican hospitals and also coordinates a number of special national-level programmes (such as immunization and tuberculosis control). The strategic direction and funding for all health activities must be approved by the parliament. Assisting the ministry in its planning is the Scientific and Practical Centre of Public Health and Management. Reporting to the Ministry of Health are eleven regional health administrations. A number of ministries, such as ministries responsible for railways, prisons and defence, directly provide parallel health services that come under the overall responsibility of the Ministry of Health. Despite developments in the health system, institutional capacity for organization and management remains weak at the national and regional levels of health administration.

Funding for the health service comes from three main sources: general taxation, regional taxation and direct private funding. The Transdniestrian region, like all regions, should fall under the control of the Ministry of Health, but the region does not necessarily follow all ministry directives and uses its own funding from local taxation. The health of certain other population groups is not covered by the Ministry of Health, but by other relevant ministries such as the Ministry of Justice in the case of prisoners.

The health system structure can be visualized in two ways: by the financial flows or by formal structure according to the new health regionalization plan. By *financial flows* it is divided into activities covered by local budgets (primary health care services, certain inpatient care, emergency care and some specialist services) and those funded nationally (parallel services and national or "republican" hospitals, research and certain programmes such as tuberculosis). Local taxes, collected and disbursed at regional level, fund activities managed at the regional level. General national taxation, allocated to health, covers the nationally funded services. The republican hospitals and special national programmes, such as tuberculosis control, are managed by the Ministry of Health. By the *new health regionalization* plan, the structure can be envisioned as one that is headed by the Ministry of Health, to which eleven new regional health administrations report. The Law on Local Public Administration (1999) provided the legal basis for this transition. The reform and decentralization of the governmental structure in 1999 set up the new regions, which replaced 40 regions (raions) and 4 municipalities. This change provided the framework for decentralization of the health structure. A regional health administration was established in each of the regions or judets to administer both national and locally raised funding, programmes and contracts for health services in that area. Parallel to this system is the national san-epid system (communicable disease control and environmental health), which has also been modified to fit into the new regional structure. Within the new regionalization structure more emphasis is given to provision of primary health care and family medicine, although funding for these and other programmes is inadequate.

The key players in the health system are summarized as follows:

Parliament: Every year the parliament approves the "Annual Budget of the Republic of Moldova", including the health budget. A parliamentary Committee on Health and Welfare monitors the activity of the Ministry of Health and interministerial coordination in the field of health services.

Ministry of Health: The ministry has overall responsibility for health care. However, as more responsibilities have been moved to regional administrations, its role has shifted from provision of services to setting guidelines, monitoring and limited provision of specific nationwide health services. National

programmes administered by the ministry include the national immunization and tuberculosis control programmes, and the national-level "republican" hospitals and research institutions. Ministry departments cover health service personnel planning, pharmaceutical regulation, mother and child health, health reform issues, medical technology, family planning and other areas. The new regional health administrations report to ministry headquarters. The so-called Transdniestrian Ministry of Health is effectively responsible for the funding and management of the health services in its region.

Regional health administrations: The regional health administrations, set up in 1999, plan and manage health services in each of the eleven regions.

Republican health institutions: State level research and hospital institutes, such as the Republican Institute for Mother and Child Health, and the Cardiology and Oncology Institutes are found mainly in Chisinau. They are funded directly by the Ministry of Health and undertake both service provision and research.

Scientific and Practical Centre for Public Health and Management (SPCPHM): The SPCPHM collects data from the primary care and hospital levels and undertakes analytical research. It produces annual reports to be used to assist policy making and planning. It has a role in defining health system guidelines. It is staffed by around 50 people, including statisticians and epidemiologists.

National Centre for Preventive Medicine (NCPM): The NCPM was established in 1999 as part of the restructuring of the san-epid system. It has regional offices in each of the new judets. It establishes standards and guidelines for environmental health, communicable disease, occupational health and other areas.

Ministry of Finance: The Ministry of Finance collects and distributes funds to parts of the health care system.

Other ministries running parallel health systems: A number of other ministries run hospitals and other health services. These include the ministries for railways, defence, internal affairs and intelligence. Additionally, the "Fourth Department" continues to provide special health services to certain ministry, government and other high-level officials.

Ministry of Education: The Ministry of Education is responsible for running medical education for health services staff. The Ministry of Health oversees content of the education.

Professional associations: The Nurses Association of Moldova was founded in 1994 as a nongovernmental professional organization. It was formerly the Association of Medical Assistants. It is a dynamic organization, affiliated with the European Nursing Forum. There are also a number of professional medical associations such as the Association of Surgeons and the League of Physicians.

Patient groups: Moldova is home to a number of local patient groups and advocacy organizations, including the Patient Rights group, the Association of Patients on Haemodialysis, the Association of Diabetic Patients and the Association of Handicapped and Paralysed Patients.

Nongovernmental organizations: A range of both international and local nongovernmental organizations focusing on health operate in Moldova. Examples include Pharmaciens Sans Frontières and the International Committee of the Red Cross.

Task Force on Health Reform: The task force was established in the late 1990s to discuss planning for health reforms in Moldova. It brings together representatives of the international community and government. The group has met several times but its work remains in the early stages.

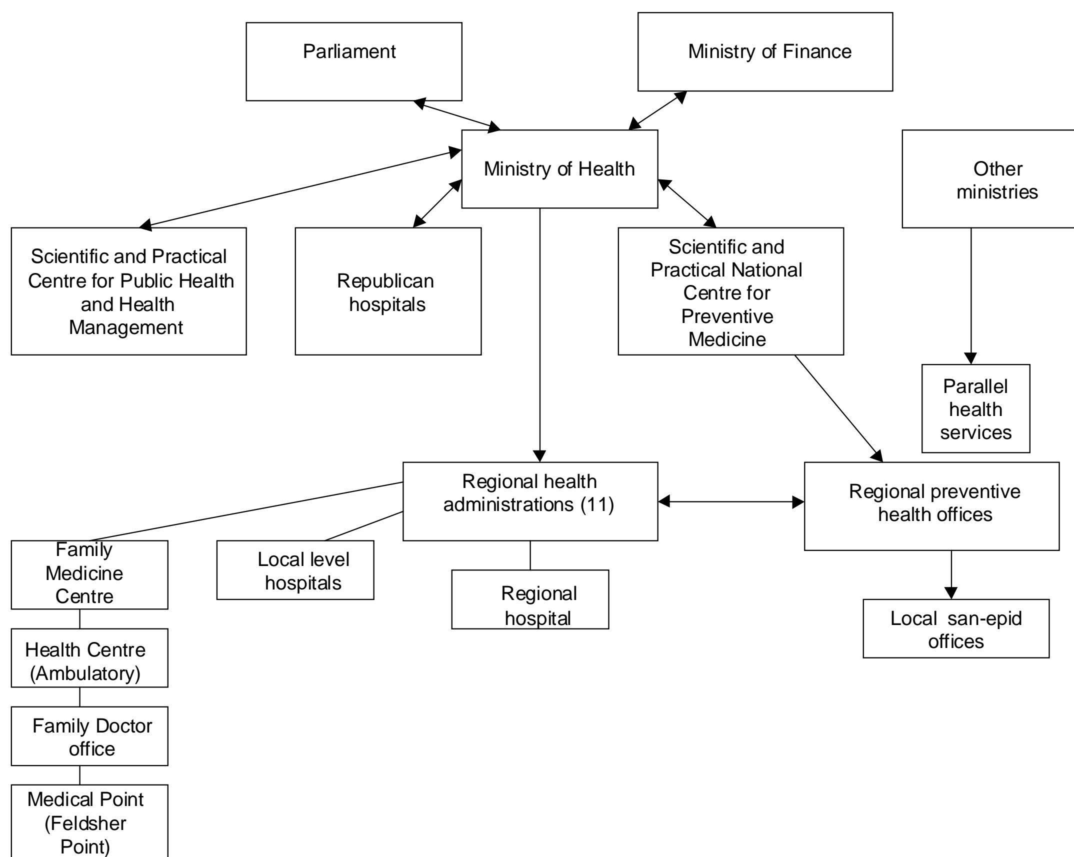
International donors and UN agencies: The health sector in Moldova benefits from a range of international donors. The UN agencies, such as UNICEF, UNFPA, WHO and EU (TACIS programme) provide both material and technical support. Major financial support is also provided to health related activities bilaterally from governments such as the US and Japan. The World Bank provides support to the health sector through large scale loans for health reform activities.

Planning, regulation and management

Planning is mainly the responsibility of the Ministry of Health. However, an increasing role in this process is being given to the new regional health administrations. Under the Ministry of Health, several national (Republican) institutions, such as the Republican Institute for Mother and Child Health and the National Centre for Preventive Health Medicine, contribute to this process through provision of data and technical expertise. The majority of health facilities continue to be publicly owned and funded. The Ministry of Health takes a traditional approach to planning, regulation and management, focusing on the provision of health services rather than on financing, regulation and strategic planning issues. However, if purchaser and provider functions are separated in the future (an issue currently under review) it is likely that the ministry will have to further develop its planning and management expertise.

The Scientific and Practical Centre for Public Health and Management (SPCPHM) contributes to the planning process through the provision of epidemiological and demographic data. However, much of the planning is focused on allocating the minimal resources to the large number of facilities inherited at independence. Up until 2000, budget allocation still followed bed

Fig. 3. Organizational chart of the health care system



numbers rather than population characteristics. However, analyses showed that this method did not effectively match budgets to needs. In 2001, the budget began using a weighted per capita figure in an effort to ensure more equitable distribution, in line with population needs. Citizen input into planning and monitoring is limited.

A large amount of decision-making and planning takes place at the level of the regional health administration, but planning and management capacity at this level is limited and needs strengthening.

Development of a National Health Policy to guide health activities and bring together partners for health has been in development since 1998, when the President officially launched the effort. Finalization and adoption of the policy was expected in December 2000, but was delayed. The National Health Policy envisages the establishment of a National Intersectoral Commission, with a permanent coordinating secretariat and themed task forces to plan and monitor work. Broad goals for the health system and its reform were set out in the “Strategy for Health Care Reform 1997–2003.”

Workforce planning is undertaken within a specialist unit in the Ministry of Health. An ongoing review of staffing levels within the health system has identified significant over-provision of both doctors and nurses. The Ministry of Health has responded by curtailing the numbers of applicants accepted by medical and nursing schools.

In terms of regulation and management, all medical staff are supposed to undergo regular performance reviews and training following the old Soviet model of attestation. Five-yearly reviews and training courses are undertaken. The Ministry of Health is responsible for regulating standards of medical training while the Ministry of Education administrates the training programmes. Management responsibility for individual health facilities lies with the hospital director. Regulation of pharmaceuticals and medical technology is the responsibility of the Ministry of Health.

Decentralization of the health care system

To address the perceived over-centralization of the health and other services inherited from the Soviet era, the law on local public administration was passed starting a process of the regionalization of government administration in 1999. As part of this, regional (*judet*, county) health administrations were set up in each of the eleven regions. The new arrangements have increased the scope for enhanced decision making and planning at local level. The regional (judet) health authorities are responsible for planning and administering locally collected taxes (with some subsidies from the Central Budget) for health services in the region. However, the inadequate funding of the regional administrations has limited the creation of new local-level arrangements and undertaking other reforms as the authorities struggle to meet salaries and other basic requirements.

The Basic Law on Health Care (Law on Health Care), passed in 1995, made provision for some privatization of health care. Since then, few large hospital facilities have taken up formal private status but at the local level the reverse is found. About 54% of the outpatient/polyclinic health care facilities and 6% of hospitals in the country are fully private *(29)*. The majority of hospital facilities therefore remain in state or local government hands. Pharmacies and dental clinics, however, are almost all privatized (although the state remains a shareholder in some). This change occurred following the passing of the Law on Privatization in 1999. Following the passing of the Law regarding the "Minimum Package of Free Medical Assistance Guaranteed by the State" in 1999 and the "Regulation on Fee for Health Services", hospitals may now generate income additional to that received through national or local budgets.

Income may be earned through fee-for-service activities. Additionally, hospital directors now have powers to raise and use funds in their facilities by being able to take employment decisions and through earning funds through sub-letting space within health facilities for private pharmacies, for example.

Health care financing and expenditure

Main system of financing and coverage

At independence the health system was wholly funded through general government revenues. Although some preliminary legislation was passed in 1998 (the Law on Compulsory Health Insurance) to facilitate a move to a social insurance financing system, no major changes have been made in the national financing arrangements except the introduction of charges for some health services. However, since the passing of the preliminary legislation allowing social insurance, much work has been done on the necessary regulations to support the system. Technical support has been provided by the World Bank and WHO in this area. Latest estimates suggest that the new insurance system may be introduced in January 2003, although it is unclear if preparations will be adequate by this date. Until any introduction of the new insurance mechanisms takes place, the Republic of Moldova theoretically continues to have a completely tax-funded health care system, covering the entire population; there is no provision for "opting-out" of the health service. The "Basic Law on Health Care" (1995) followed by the "Law Regarding the Minimum Package of Free Medical Assistance Guaranteed by the State" (1999), limited the liability of the state to provision of only a basic set of health services (and legalized payments for other services). The Basic Law is in accord with the the Republic of Moldova Constitution, Article 36 which guarantees that a minimum provision of health care services should be provided free of charge to the population. Despite this limitation of services, the low level of government financing is inadequate to meet even these minimum requirements. Consequently, both formal and informal payments form an increasing source of financing for health care in the Republic of Moldova. International funding for certain aspects of the system is also an important source of financing.

The amount of funds to be allocated centrally to health is determined annually by the Law on the “State Budget of the Republic of Moldova” and agreed by Parliament. The 2000 budget was set at 2.4% of GDP (and 17% of the national budget), down from 5 to 6% between 1994 and 1996 and 3.8% in 1998 *(17)*. In 1999, the health budget was reduced by 35% *(6)*. Furthermore, not all funds allocated to the health system are always received. Funds allocated through the public sector for health equal approximately US $10 per capita *(6)*. Direct private payments for health care are believed to equal or exceed the amount spent on health through the tax-funded system, bringing annual health expenditure per capita from all sources to about US $20.

As shown in the health financing diagram, the consolidated national health budget is divided into state (nationwide) and local components with funding for the overall budget coming from both national and local taxes. Forty percent of the overall budget is allocated to state programmes and 60% to local programmes. The state budget, funded through national taxation, is divided into two components: 10% to parallel health services run through other ministries, and 90% to republican institutes, children’s homes, the National Centre for Preventive Medicine, the Institute for Mother and Child Health (MCH) and certain special programmes (diabetes, tuberculosis, mental health and immunization). The local budget, funded through local taxes, is divided up into four main areas: 35% to primary health care, 15% to emergency services, 45% to inpatient care and 5% to certain specialist services (for example, opthalmological services). Although the budget arrangements now earmark a certain amount of funds for primary health care, the budget continues to be fairly heavily committed to inpatient care. The budget for the Transdniestrian region is not included in this financing diagram. This region is funded through the officially unrecognized Transdnestrian Ministry of Health.

Until 2000, funding was allocated on a formula based on existing bed numbers. With over-provision of beds, concentrated in the capital, this formula did not accurately reflect population needs. In 2001, the Ministry of Health moved to a per capita funding formula to distribute health funds to the eleven regions. The formula reflects the population number of the region and also gives different weightings for different population mix by age-group. Three groups, children to 14 years of age, adults and pensioners, are used to calculate funding, with most allocated per capita to pensioners and the least to children under fourteen.

Alternative systems of financing are being piloted in some areas. UNICEF, in conjunction with the Ministry of Health, is piloting a community-based voluntary contribution project in Hincesti district that aims to increase access to basic services for the most vulnerable. The scheme, begun in 1999, followed

a study on accessibility and affordability of services *(30)* which showed the need for greater equity. The project focuses on provision of a basic package of services and emergency care. UNICEF has provided basic equipment to health facilities, training on new heath management techniques and initial stocks of essential drugs. A fund based on voluntary local contributions, which started in late 2000, is intended to finance the programme. As noted above, large-scale voluntary insurance financing of the health system is now under development on a wider scale across Moldova. It is likely that lessons from the pilot project will be used to inform this ongoing wider scale development of social insurance.

Health care benefits and rationing

Under the former Soviet model of health care, the population theoretically received unlimited free services, although it is well recognized that provision was very limited, in particular provision of modern pharmaceuticals. At independence it was clear that the country could no longer afford to maintain this system. Under the "Law on Health Care", and later in the "Law regarding the Minimum Package of Free Medical Assistance Guaranteed by the State", only a minimum package of services were to be provided. Provision for formal co-payment or full payment for some services also was made in this legislation. Under the minimum package, pregnant women and children under 5 years are supposed to receive free medical treatment. Others are entitled to only certain services. In theory, to access these free services the patient must go through the family doctor for direct provision of the treatment or, where a specialist is required, must obtain a referral from the family doctor. To cap excess referrals of patients to specialists, the Ministry of Health defined a limit to the number of patient referrals per family doctor practice per year. Thus, in theory, only the most needy cases should be referred to a specialist for free treatment. The minimum package was supposed to be defined annually according to the health budget and details of the package were supposed to be published in newspapers to inform the public of their entitlements. But in reality, free health care provision is very limited; a large number of patients refer themselves to higher levels of care and pay for it themselves.

To guide treatment practice and related issues such as length of stay for particular procedures, a revised set of treatment guidelines is being developed by the Ministry of Health to replace the current set which was developed post-independence. The existing guidelines continue to include a number of practices contrary to internationally accepted best practice, such as requiring a lengthy

Box 1. Minimum package of free medical assistance guaranteed by the state

- Primary health care provided by general practitioner/family doctor (GP/FD) in the ambulatory unit or at home;
- Consultative services provided by physician-specialists in policlinics and hospitals (when patient is included on the list of GP/FD and is referred by GP);
- Limited range of diagnostic tests and elementary investigations conducted in ambulatory laboratories (when prescribed by GP/FD);
- Immunization (through National Immunization Programme);
- Urgent and emergency services for life-threatening situations;
- Hospital care for treatment of tuberculosis, mental disorders, oncology, asthma, diabetes, AIDS and "social related-diseases" and a number of other contagious diseases.

stay following a normal delivery. The development of these new treatment protocols is parallel to a number of other treatment guidelines under production including those under the UNICEF/Ministry of Health pilot described above.

Although the minimum package has been defined, provision of these services is, in reality, not guaranteed due to a lack of funding and the commitment of much funding to maintenance of buildings and salaries. Variation in health budgets between the different regions (judets) also results in different levels of funding for provision of the minimum package. Public knowledge of which services should be free is also questionable, although every health centre is required to clearly display the prices of their available services. Mechanisms for providing some aspects of the minimum package, such as pharmaceuticals to eligible children, are also unclear and it thus seems unlikely that this benefit is received by the population. Certain components, such as vaccination, have support from donors and are fully accessible to all parts of the population.

Complementary sources of financing

Moldovan health legislation passed since independence has legalized certain payments (official user charges) for health care. Unofficial ("under-the-table")

payments and informal contributions (supplying drugs and food) are increasingly an important source of financing for health care. The World Bank estimates that direct payments by individuals at least match government funding of the health care system *(6)*. The high level of direct payments requested of individuals is impacting on the equity in access to health care. The 1997 UNICEF study on accessibility of health services found that a lack of money was the main reason why the rural population did not seek health care in the event of illness *(31)*.

Out-of-pocket payments

Official fee-for-service payments were introduced in 1999. Formal charges are made for certain services and pharmaceutical supplies not covered under the minimum package defined by the government. Formal charges were introduced in an attempt to offset both the unregulated increases in post-independence health care charges and the decreases in government funding beyond a minimal level. As described earlier, a set of treatment protocols and costs were produced by the Ministry of Health in the 1990s and a revised version is now in the process of production.

Although formal fee-setting was introduced as part of the health reforms, high levels of informal payments have continued to be levied on patients. Both of these types of charges have made accessing health services difficult for the poorest parts of the population. In UNICEF's study of accessibility of health services, 33% of those surveyed revealed that lack of funds prevented them from accessing health services *(30)*.

Voluntary health insurance: It is unclear to what extent private voluntary insurance is used by the population. However, private insurance taken does not exempt the payer from national or local taxes.

External sources of funding

The Republic of Moldova receives international assistance for a range of health projects. Planned assistance to the health sector in 1999 had approximately doubled overall since 1995 *(3)* although some areas, such as family planning, have had substantial decreases recently. Around US $12 million in aid was planned in 1999 with around 95% of this spent in the primary health care sector and around 1.5% on immunization and other disease-control campaigns. Major donors to the health sector include the UN agencies and the Japanese government. The European Union has also provided funds to the health sector through the EU emergency fund, ECHO, and as technical assistance to the health reform process. For some health programmes, such as immunization,

external sources of funding are the main source of funding. In 1999, external donors funded all purchases of vaccine and disposable supply purchases in 1999 *(13)*.

In 1999 the World Bank approved a new Country Assistance Strategy for the Republic of Moldova and a second structural adjustment loan was put in place. However, the fall of the government in 2000 delayed disbursement of this loan. In the interim between governments, some sectoral loans were made to help maintain the momentum of the reform process. Since then the new government, elected in mid-2001, has given its full support to the health reform programme and unanimously approved the new World Bank Health Sector Reform Project. The new funding brings together contributions from the Government of the Netherlands and the World Bank loan. The overall project thus comprises a major new loan and grant for development of the health sector with emphasis on strengthening primary care. The World Bank credit of US $10 million will be complemented by a grant of US $8.4 million and co-financing of US $1.6 million from the Moldovan Government *(6)*. The project will create a "Health Investment Fund" to upgrade emergency and primary health care, reduce excess capacity and strengthen policy-making. judets will be asked to apply for funding from the fund for equipment and other expenditure. Granting of funding will be conditional on reforms to be undertaken in the facility. A Social Investment Fund was also launched by the Bank in the 1990s, intended for building capacity in the community for social services delivery.

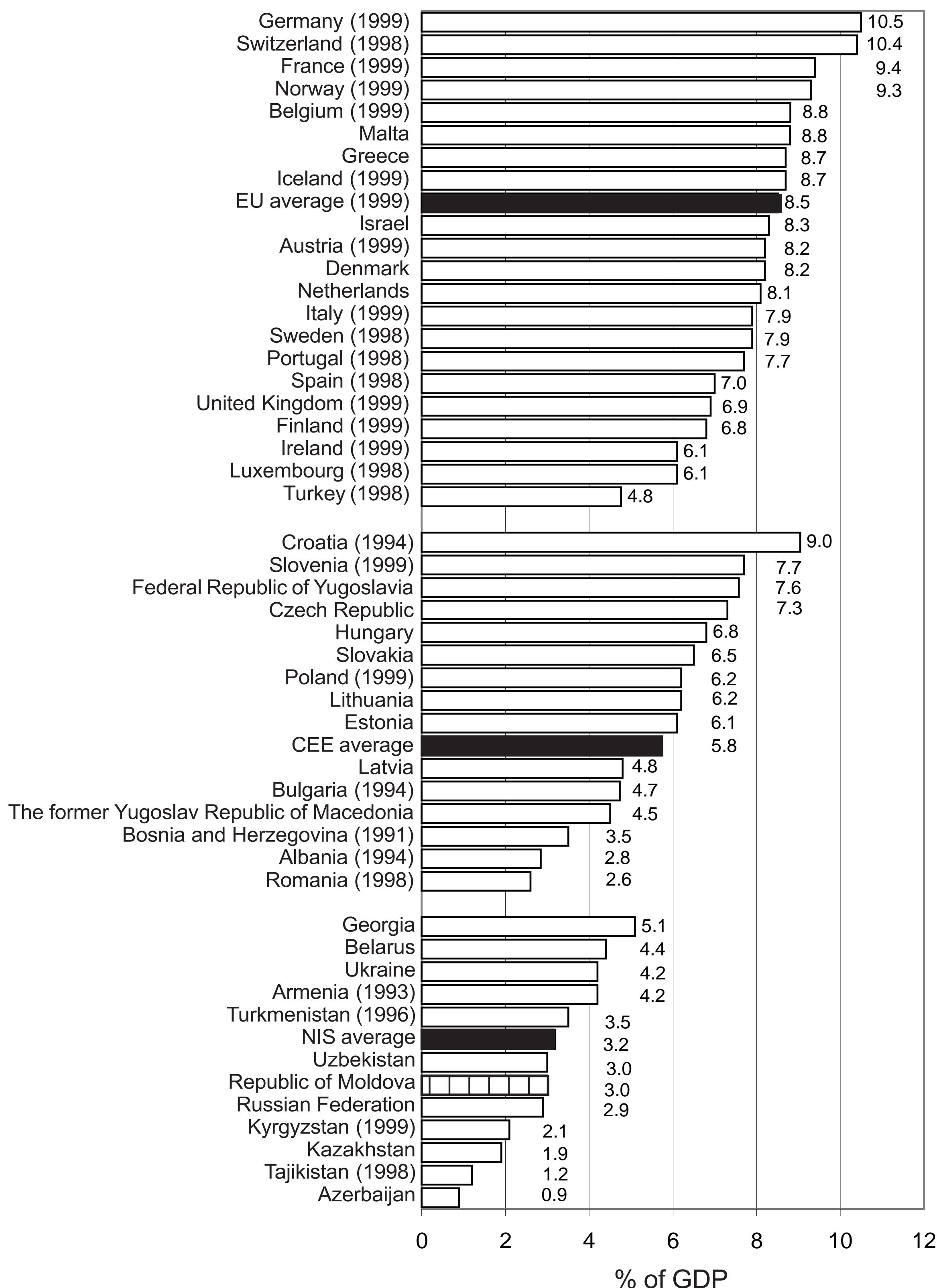
Health care expenditure

Table 2. Trends in health care expenditure in the Republic of Moldova, 1995–2000

	1995	1996	1997	1998	1999	2000
Value in current prices per capita (US $PPP)	89.7	–	90.0	83.7	59.1	63.3
Share of GDP (%)	5.8	6.9	6.0	4.3	2.9	3.0

Source: WHO Regional Office for Europe health for all database.

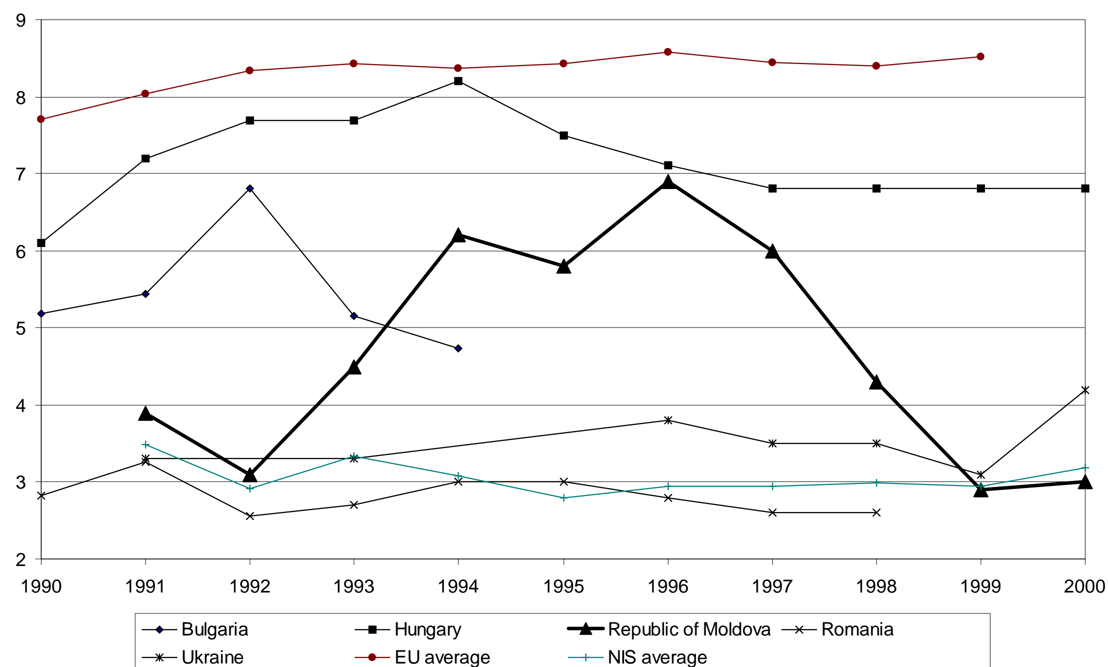
Fig. 4. Total expenditure on health as a % of GDP in the WHO European Region, 2000 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database.

CEE: central and eastern Europe; EU: European Union; NIS: Newly independent states.

Fig. 5. Trends in total expenditure on health as a % of GDP in the Republic of Moldova, selected countries,EU average and NIS average, 1990–2000



Source: WHO Regional Office for Europe health for all database.
CEE: central and eastern Europe; EU: European Union; NIS: Newly independent states.

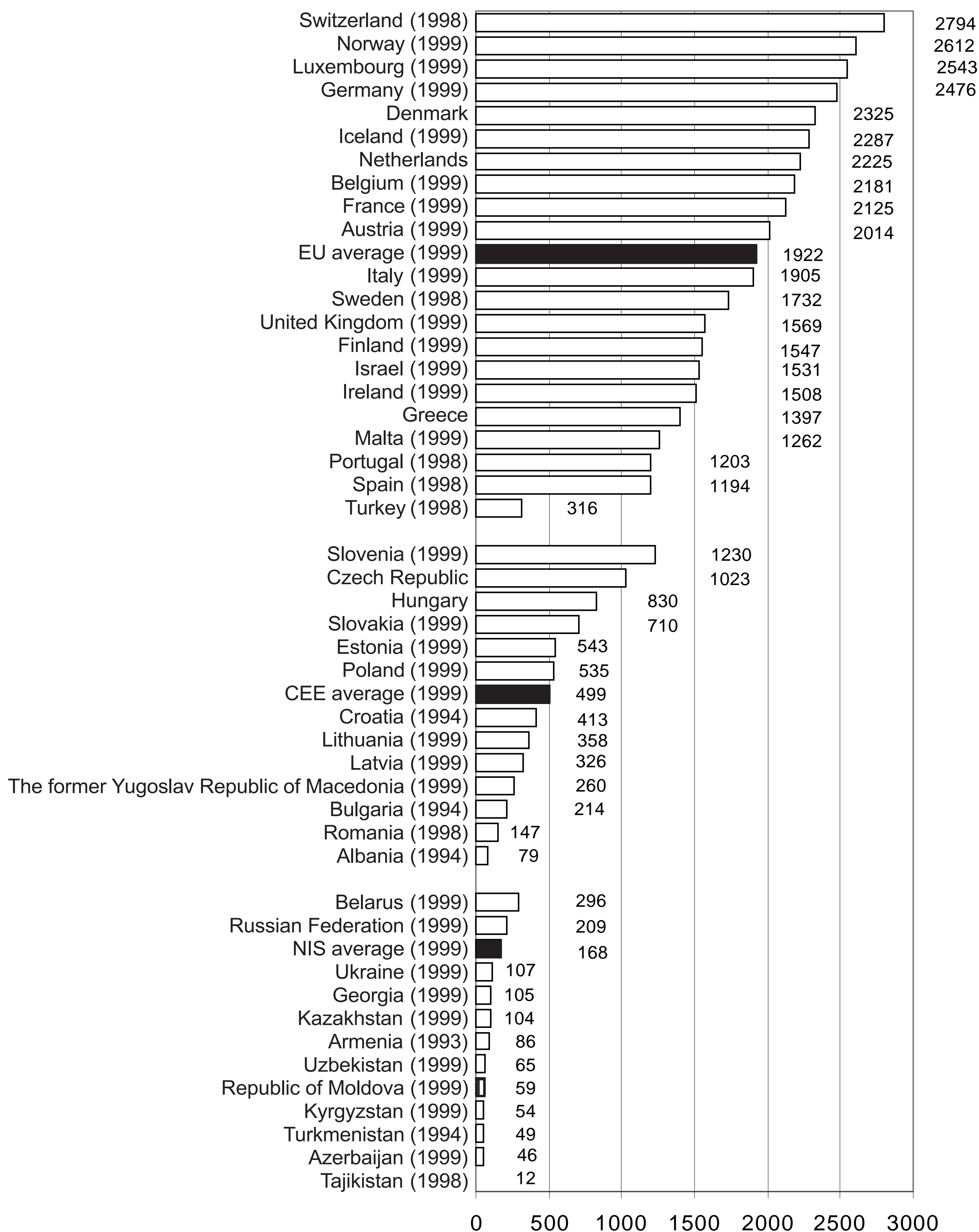
Structure of health care expenditures

Table 3. Health care expenditure for pharmaceuticals (as percentage of total expenditure on health), 1995–2000

Total expenditure on	1995	1996	1997	1998	1999	2000
Pharmaceuticals (%)	13.7	11.9	14.0	10.6	11.3	11.1

Source: WHO Regional Office for Europe health for all database.

Fig. 6. Health care expenditure in US $PPP per capita in the WHO European Region, 2000 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database.
CEE: central and eastern Europe; EU: European Union; NIS: Newly independent states.

Health care delivery system

Health care delivery has, since 1999, been organized through a decentralized regional (judet) system. This marked a key change from the highly centralized delivery system inherited from the Soviet era. Health care delivery has traditionally been heavily focused on the hospital sector. Today, despite reductions in the number of hospitals and specific allocations of funds for primary care, the health system continues to be heavily weighted in favour of tertiary care. However, a number of primary care pilot projects are under way, and under the new round of World Bank financing primary care will receive further strengthening.

Health services are delivered through a hierarchy of facilities ranging from doctor's assistant health posts to national specialist institutes. At the local level, health posts, family doctor offices, health centres (formerly ambulatories) and family doctor centres form the key elements of primary health care and are linked to local level hospitals. Each region has a regional hospital. At the national level, republican (state level) institutes, based mainly in Chisinau, provide a range of specialist care.

The delivery system is facing severe challenges from drastically reduced funding. Staff receive low and often delayed pay and many hospital beds and primary care facilities are lying empty. Outdated or missing equipment and outdated care protocols also contribute to problems in delivering adequate care. Many people are avoiding the health system altogether, despite some worsening health indicators, due to inability to pay charges frequently demanded for care. Others seeking care not covered by the minimum package are self-referring themselves to higher levels of care and avoiding the primary care facilities. Reforms to the health care delivery system have started but have proceeded relatively slowly since independence although much faster from 1998 onwards.

Primary health care and public health services

In accordance with the 1999 law regarding "Minimum Package of Free Medical Assistance Guaranteed by the State", each citizen has the right to receive a package of basic primary care and public health services. The services, which were outlined in Box 1, are delivered by the facilities and practitioners outlined below.

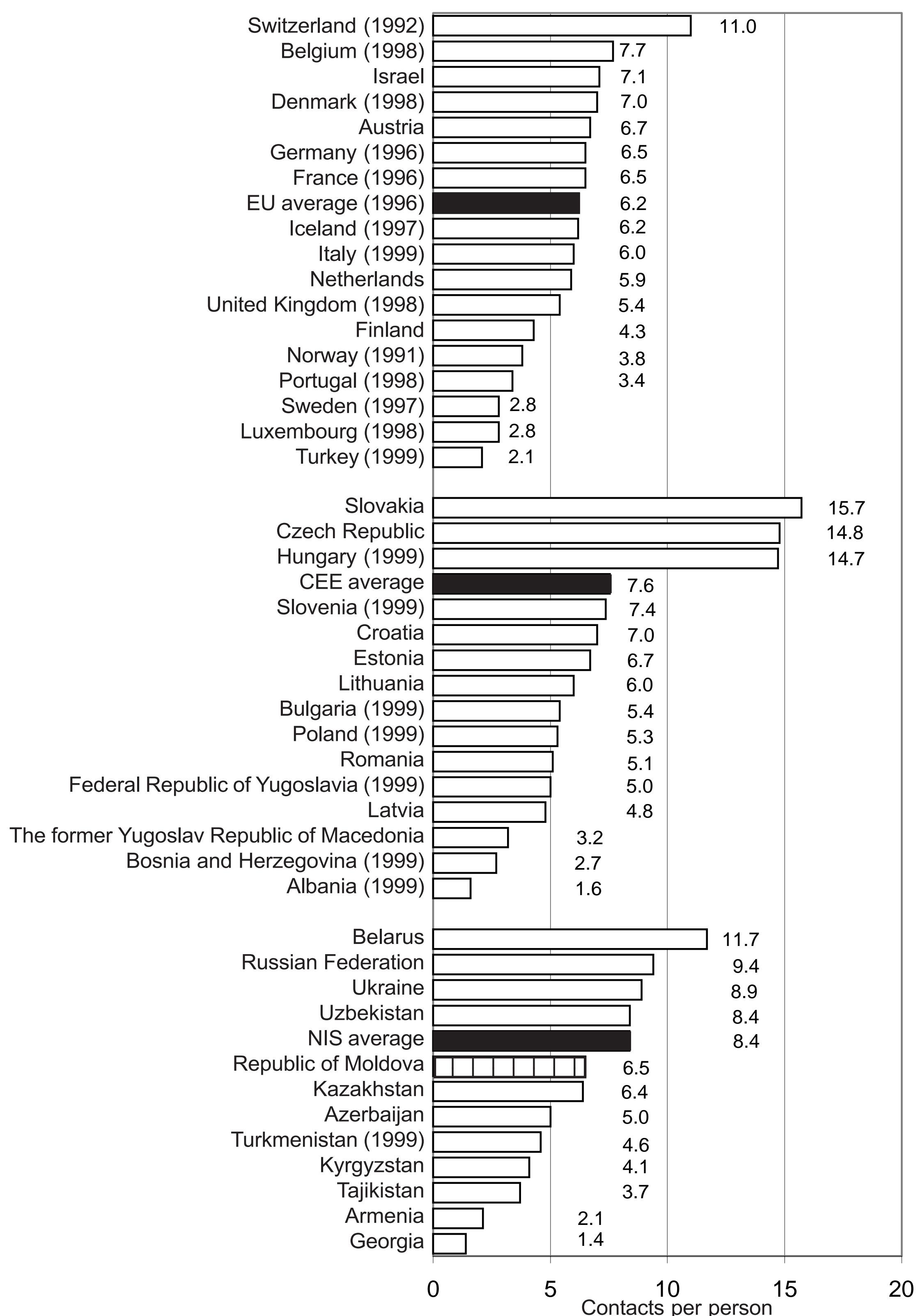
Primary care

Primary care is defined as the first point of contact by a consumer with the health care system, and includes general medical care for common conditions and injuries, as well as health promotion and disease prevention activities. In the Republic of Moldova, as in many former Soviet states, primary care was offered both in small primary care outposts and also within outpatient departments of larger hospitals. While Moldova is home to over 800 primary care facilities, they were traditionally used as referral points to higher-level treatment rather than as providers of a full range of primary care services themselves. Efforts are now being made to strengthen primary care and improve services at this level.

Today primary care provision through clinics and health centres is the responsibility of the judet or regional health administrations. Primary care at the local level is in the process of being reorganized into the previously-mentioned types. In 2000 primary health care services were rendered by 36 family doctor centres, 366 health centres and 441 general practitioner (GP) offices. In addition to these services, the rural population also receives basic first aid in 585 doctor's assistant health posts. Of these primary care facilities, 189 are run by the Ministry of Health (through the regional health administrations), 88 by other ministries and 294 are private enterprises *(2)*. Primary care staff receive salaries through the regional health administration.

The new primary care programme aims to provide high quality care and health promotion activities at the local level through the new arrangement of primary care facilities. The primary care facilities will move from being mainly referral offices to providing a range of basic services to the community. The primary care centres are also to be the cornerstone for the provision of the minimum package. Any specialist care available under the minimum package will be available only where a patient has been referred through a family medicine doctor. Although the primary care facilities are being restructured to play a key role in the health system, they are currently severely under-resourced, in terms of drugs, equipment and staff salaries. They have difficulties in providing the primary care components of the minimum package. Some

Fig. 7. Outpatient contacts per person in the WHO European Region, 2000 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database.

CEE: central and eastern Europe; EU: European Union; NIS: Newly independent states.

facilities have reported receiving less than 50% of what is required to even provide these limited services *(32)*.

The under-funding of primary care has led to its low utilization. Public satisfaction surveys undertaken by UNICEF in some limited areas testify to the situation. In one district surveyed, 71.7% said that they believed that the primary care services had worsened over the last ten years *(32)*. This is in spite of the new ongoing restructuring of the secondary and tertiary care sector (explained in more detail later) that is supposed to channel savings made from hospital closures into strengthening primary care, and new legislation defining a minimum investment in primary care in the national health budget. Regions must now ensure that 35% of the regional health budget (22.75% of the national health budget) is spent on primary care. This is up from less than 10% of the national health budget prior to this legislation.

However, in spite of the funding difficulties, much progress has been made in starting the development of family medicine as the basis for the national primary care programme. In theory, additional funds should become available to the sector through the reductions in expenditure in the secondary and tertiary care sectors. Overall, about 2000 doctors have undergone some training in family medicine (for example, short primary care conversion courses for paediatricians). Some particular areas of care, such as perinatal care, have also undergone major strengthening at the primary care level and the referral system for the more at-risk cases to higher levels of care improved. In addition, the country is trying out a number of fairly large-scale pilot primary care projects to look at ways of improving provision of a minimum package of services. UNICEF is working with the Ministry of Health on trials of a community fund concept covering 180 000 people.

Family planning services also come under the responsibility of the Ministry of Health. Under the former Soviet system, family planning services were somewhat limited in availability and mainly offered in maternity centres. In part linked to this limited provision and related state policies, Moldova had a very large number of children placed in children's care homes. Since independence, family planning provision has undergone expansion and change. Forty new family planning offices were opened in 1994 (around one per district) with the support of UNFPA and other international and local organizations. These were attached to maternity consultation rooms. However, under the new health administration structure maternity consultation rooms are now considered specialist level for which referrals are necessary or fees must be paid. Thus, plans are under way to move broad scale family planning provision to the new local level family medicine offices. Three model women's clinics have also been set up with the support of the nongovernmental organization AIHA. Family

planning remains the preserve of physicians rather than nurses. Despite the new initiatives and pilot programmes, contraceptive provision has again become inadequate in many parts of the country and the population is unable to access adequate family planning services in these areas.

Public health services

Despite the large burden of preventable noncommunicable disease, such as cardiovascular disease and smoking-related cancers, public health remains focussed on the traditional functions of the old sanitary-epidemiological (san-epid) service. The emphasis of the service is on control of communicable disease and environmental health. These activities are run as separate vertical programmes with their own structures and generally apart from the health care delivery system (with the exception of immunization) and the regional health administrations. The san-epid system, which was developed during the Soviet era, had three main functions: environmental health protection, control of communicable disease and monitoring the health of the population. Although the focus on public health remains on the old san-epid functions, some parts of the public health service have been reformed and expanded including efforts to introduce broader health promotion activities to address issues such as smoking and HIV prevention. The National Health Policy has also called for a broader focus on public health to ensure that noncommunicable disease and chronic conditions are adequately addressed in future health planning.

Public health services are provided under the overall responsibility of the Ministry of Health. Since independence, services have been divided up into several specialist centres. Health promotion, epidemiological services and environmental health activities are run by the National Scientific Practical Centre of Preventive Medicine. The Scientific Practical Centre of Public Health and Health Management collects national health data and analyses it for use in strategic health planning.

The National Scientific Practical Centre of Preventive Medicine focuses on communicable disease control and environmental health issues. The centre was formerly the national centre of the sanitary-epidemiological (san-epid) service and in a large part, carries out generally the same sanitary and epidemiological activities as it did previously. It was restructured in 1999 to fit in with the new regional health structures and to strengthen its own regional capacity. The establishment of judet-level public health departments is planned within the next 2 to 3 years, which would bring together the centre's work and that carried out through the Regional Health Administrations. Management of the national immunization programme forms a key part of its communicable disease activities. The centre now has a special section devoted to health

promotion. In 1995 a "Healthy Lifestyles" centre was developed. In 1998, the national health education programme was drawn up, bringing together a range of ministries to work with the health promotion section. These include the Ministries of Education, Information and Defence. Health education programmes focus on HIV prevention, smoking reduction, and mental health issues. Moldova also takes part in the European Health Promoting Schools programme. The health promotion section is, however, severely under-funded and has thus been limited in its reach and impact. National tuberculosis control efforts are also being expanded and updated in line with international guidelines. However, prisons, where tuberculosis is concentrated, do not fall under the centre's mandate. Other key programmes include prevention of viral hepatitis, diarrhoeal disease and cholera, anti-rabies programmes and iodine deficiency disorders prevention. Environmental health issues are of great importance due to fears of contamination related to the large agricultural sector and previous high pesticide and fertilizer use.

The Scientific and Practic Centre of Health and Health Management was established in 1997 to collect and summarize health data, produce guidelines or norms for use in health planning and to conduct research on health related issues. It produces the annual "Public Health in Moldova report".

A new national immunization programme was established in 1994, covering eight target diseases (polio, diphtheria, tetanus, measles, pertussis, tuberculosis, hepatitis B and mumps). Vaccination is provided free to all children. Moldova has achieved good coverage through the programme. Official routine figures report coverage of over 90% for all vaccines, although other surveys, such as the more accurate MICS 2000, found slightly lower coverage. Coverage was lower in the east (less than 60% for all vaccines) but over 70% in the west of the country *(16)*. Moldova has also participated in regional polio eradication efforts *(33)*. While the national vaccination programme is achieving good results, it is highly dependent on external support from international donors. In 1995 external donors provided around 90% of all consumables and cold chain equipment costs. By 2000 the government had taken on additional responsibility in this area *(28)* but the programme remains unsustainable without external support unless resources are released to the programme from other parts of the national budget.

Secondary and tertiary care

Secondary care refers to specialized ambulatory services and basic hospital care (excluding long term care institutions). Tertiary care refers to specialist

Fig. 8. Levels of immunization for measles in the WHO European Region, 2000 or latest available year (in parentheses)

Source: WHO Regional Office for Europe health for all database.

medical services of higher complexity and usually higher cost. In practice, in the Republic of Moldova, as in other former Soviet republics, secondary and tertiary care facilities also provided basic primary care services in addition to specialist care.

The Soviet health care system left the Republic of Moldova with an enormous and unsustainable number of facilities and practitioners providing secondary and tertiary care. In 1994 the country had 305 hospitals, more than 50 000 beds and over 1000 polyclinics. This translates into over fourteen beds and around four doctors per 1000 people, almost double the numbers found in the central and eastern European countries as a whole in the same period *(7)*. The continuation of such a high level of provision was beyond the financial capacity of the country post-independence. The service provision in 1994 was calculated at around five times the level sustainable by an economy the size of that in Moldova *(34)*. Within the overall large allocation to the secondary and tertiary care, it was estimated that in 2000 the 14 national level specialist (republican) hospitals and 40 district hospitals (now renamed as regional and sectoral hospitals) consumed over 70% of the total health spending *(6)*. The high provision of specialist care came largely at the expense of the primary care. Reduction of the over-capacity in the secondary and tertiary care provision (and channelling savings to the primary level) thus became an unpopular but pressing concern for health reforms following independence.

Reductions in secondary and tertiary care provision began on a large scale from 1998. This was provoked by major reductions in available funding for this sector between 1996 and 1998 (by 35% per year) and through the realization that the available funding was being spent on basic utilities rather than on direct patient care or hospital equipment. The initial reductions in bed numbers and staffing were undertaken through reducing beds within hospitals rather than reducing the overall number of hospitals. These reductions did not produce the savings expected, however, as fixed costs, at about 40% of all health expenditure at this level, remained unchanged. At the same time, bed occupancy was becoming increasingly low. Thus, a new hospital restructuring plan was developed involving the Ministry of Health and the regional health administrations in 1999. This new medium- term plan called for each region to keep one general hospital and close all other large hospitals. In practice, this means closing around ten hospitals per region. Closure of some hospitals has already begun in the regions. However, specialist care provision remains very high in Chisinau, which continues to be home to fifteen municipal hospitals and nine specialist centres (republican hospitals). This includes areas of duplication, particularly in paediatric care, and concerns have been raised about how to maintain quality across numerous facilities, each treating few patients.

At the same time as the regional reductions, the restructuring plan calls for polyclinics to be transformed into family medicine centres. From the start of implementation of the plan in 1998 until June 2001 the number of hospitals had been reduced from 305 to 65 and the number of beds reduced from 14.4 to 6.5 per 1000 people (these figures refer only to hospitals under the responsibility of the Ministry of Health and do not include facilities in the Transdnestrian region). The savings generated from these closures are intended to be reallocated into improving primary health care provision.

In addition to these health reform efforts, international donors are also supporting a number of specific aspects of improving care in the secondary and tertiary care sector. One example of this is the strengthening of the perinatal care service being piloted in one region under the guidance of the Republican Institute for Mother and Child Health. Under this initiative, diagnostic, care and referral skills are being improved at the primary, secondary and tertiary care levels.

In addition to the specialized Ministry of Health provision, other ministries run parallel health care facilities. In 2000, the Ministry of Defence owned facilities with 350 beds; the Railways, 685 beds; the Ministry of Internal Affairs, 160 beds; Intelligence Services, 150 beds; the Ministry of Justice (in the penitentiaries system), 315 beds; the Frontier guard troops, 100 beds; and the Medical Service of the State Chancery (previously the Fourth Department), 65 beds. The Fourth Department is a legacy of the Soviet era, which provided free, high-quality specialist care for members of the political elite. Today it continues to serve the same function in the Republic of Moldova although other citizens are now able to access its health services if a fee is paid. The Fourth Department facilities may be considered a disincentive for reform, as the elite can escape the realities of the national health care provision.

Hospital utilization

Despite the very large provision of hospital beds, prior to independence the bed occupancy rate in acute hospitals was reported at just over 90% *(7)*. At that time, clinical guidelines called for long hospital stays for a range of conditions (such as over 10 days for postnatal recovery). Hospitals were also encouraged to maintain high occupancy rates and high bed numbers as large and full facilities were considered by the Ministry of Health to be optimal. Following independence occupancy rates have dropped dramatically. Official figures for acute care occupancy gave 71% in 1999 *(7)*. However, this figure should be treated with caution and is likely to be a gross overestimate. Although there were major bed reductions from 1998 onwards, many hospitals were still reported to be almost empty. At the time that occupancy levels were declining there

Box 2. Secondary and tertiary care provision in the Republic of Moldova

Type of facility	Role	Number of facilities or beds
National tertiary facilities		
Republican hospitals	Large specialized tertiary hospital (mainly in capital city)	14 (7995 beds)
Dispensaries	Specialized care for STDs and dermatology, drug addiction	2 (170 and 360 beds, respectively)
Parallel services	Provision of services for staff of Ministries of Defence, Railways, Internal Affairs, Intelligence Services, Justice, Frontier Guard troops and the Medical Service of the State Chancery	1825 beds in different facilities
Regional-level secondary and tertiary facilities		
Regional general hospitals	Provision of tertiary care to the population of each administrative region	10 hospitals
District “sector” hospitals	Provision of mainly secondary care to local population	30
Municipal hospitals	Provision of mainly secondary care to the local population	11
Polyclinics	Provision of both primary and secondary care and family planning services	36 plus 5 medical-territorial associations (in Chisinau)

have been reports of hospitals increasing the length-of-stay of patients in an effort to boost their occupancy rates. This trend is not clearly reflected in official length-of-stay figures, which have stayed steady at around 17 days for all hospitals since 1980 *(7)*. This average length of stay, is however, very high compared to around 10.5 for countries of central and eastern Europe in 1999 and just under 10 for the United Kingdom *(7)*. New clinical protocols are under development that may reduce lengths of stay for some conditions in the future.

Table 4. Inpatient utilization and performance in acute hospitals, 1980–1997

	1980	1985	1990	1995	1996	1997	1998	1999
Admissions per 100 population	21.7	24.6	23.5	20.7	18.9	19.3	18.3	15.1
Average length of stay in days	17.9	16.5	16.4	17.5	18.1	18.0	17.6	16.3
Occupancy rate (%)	91.5	93.5	84.5	85.5	80.8	80.0	77.6	71.0

Source: WHO Regional Office for Europe health for all database.

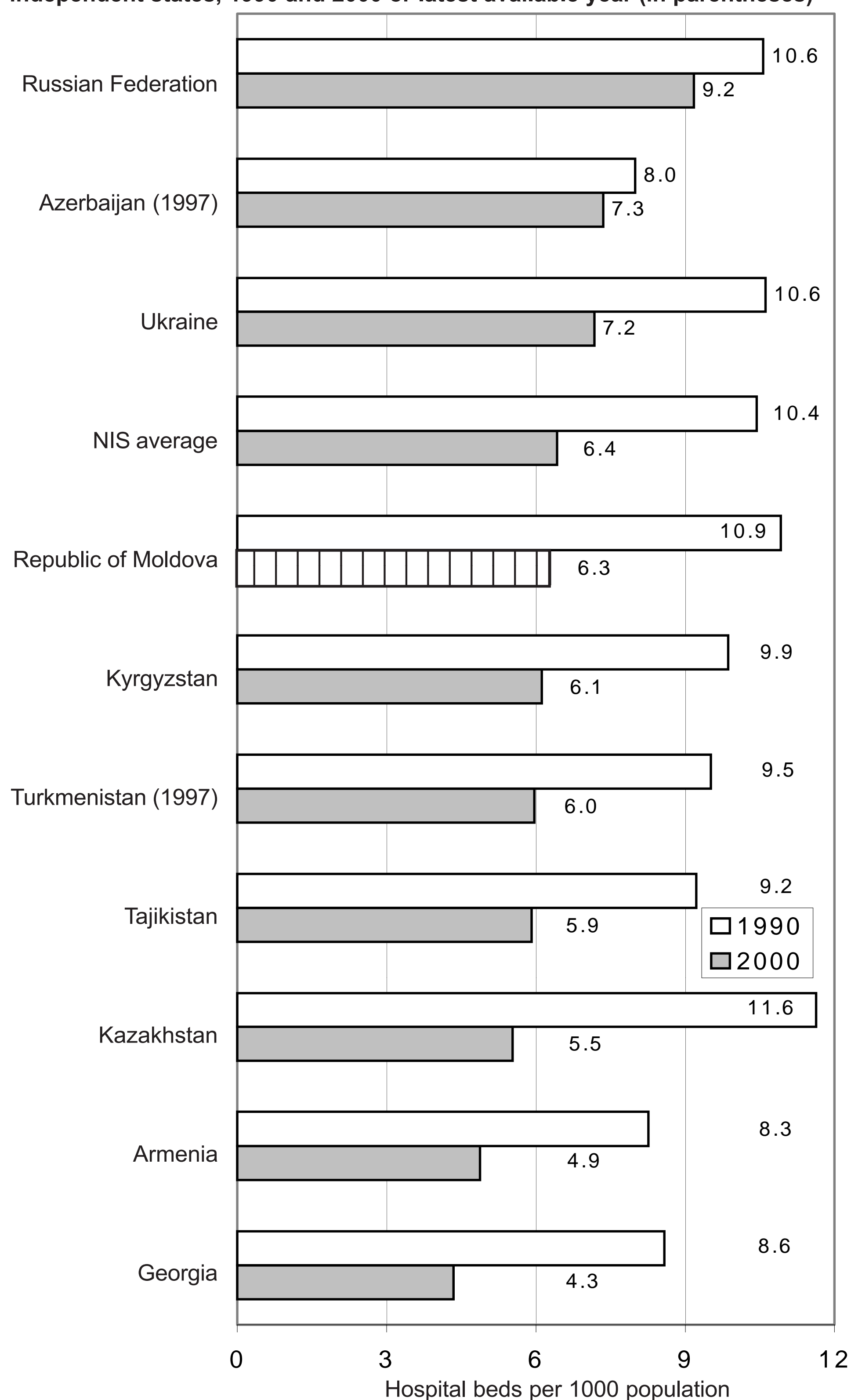
The official data on admissions, length of stay and occupancy rate should be treated with caution as all three are likely to be overestimated over the last decade. Hospital managers and doctors have had incentives to over-report these

Table 5. Inpatient utilization and performance in acute hospitals in the WHO European Region, 2000 or latest available year

Country	Hospital beds per 1000 population	Admissions per 100 population	Average length of stay in days	Occupancy rate (%)
Western Europe				
Austria	6.2	27.2	6.3	75.5
Belgium	5.5[b]	18.8[b]	8.7[b]	79.9[b]
Denmark	3.3[a]	19.1	5.5	79.9[a]
EU average	4.2[a]	19.0[b]	8.2[b]	77.0[b]
Finland	2.4	20.2	4.3	74.0[e]
France	4.1[a]	20.0[a]	5.5[a]	77.4[a]
Germany	6.4[a]	20.3[a]	10.7[b]	81.6[b]
Greece	3.9[a]	14.5[c]	–	–
Iceland	3.7[d]	18.1[e]	6.8[e]	–
Ireland	3.0[a]	14.1[a]	6.5[a]	83.0[a]
Israel	2.3	17.5	4.3	94.0
Italy	4.5[b]	17.1[b]	7.1[b]	74.1[b]
Luxembourg	5.5[b]	18.4[f]	7.7[b]	74.3[f]
Malta	3.7	11.2	4.6	75.5
Netherlands	3.3	9.1	7.7	58.4
Norway	3.1	15.5	6.0	85.2
Portugal	3.1[b]	11.9[b]	7.3[b]	75.5[b]
Spain	3.0[d]	11.2[d]	8.0[d]	77.3[d]
Sweden	2.5	15.6[b]	5.5[a]	77.5[d]
Switzerland	4.0[b]	16.4[b]	10.0[b]	84.0[b]
Turkey	2.2	7.6	5.4	58.7
United Kingdom	2.4[b]	21.4[d]	5.0[d]	80.8[b]
CEE				
Albania	2.8[b]	–	–	–
Bosnia and Herzegovina	3.3[b]	7.2[b]	9.8[b]	62.6[a]
Bulgaria	–	14.8[d]	10.7[d]	64.1[d]
CEE average	5.9	19.1	8.3	72.8
Croatia	4.1	13.9	9.2	86.3
Czech Republic	6.3	18.7	8.8	70.7
Estonia	5.6	18.7	7.3	66.1
Hungary	6.6	22.4	6.7	72.5
Latvia	6.1	20.0	–	–
Lithuania	6.3	20.9	8.3	76.0
Slovakia	6.9	18.9	9.4	71.0
Slovenia	4.6[a]	16.1	7.6[a]	73.2[a]
The former Yugoslav Republic of Macedonia	3.4	8.9	8.4	60.1
NIS				
Armenia	4.9	4.9	10.3	28.2
Azerbaijan	7.3	4.7	15.4	28.5
Belarus	–	–	–	88.7[f]
Georgia	4.3	4.5	7.8	83.0
Kazakhstan	5.5	14.1	11.5	97.0
Kyrgyzstan	6.1	15.5	12.3	90.2
NIS average	6.4	15.3	12.9	84.6
Republic of Moldova	6.3	13.1	11.9	66.6
Russian Federation	9.2	21.1	13.5	85.8
Tajikistan	5.9	9.0	13.2	59.8
Turkmenistan	6.0[c]	12.4[c]	11.1[c]	72.1[c]
Ukraine	7.2	18.4	12.7	88.1

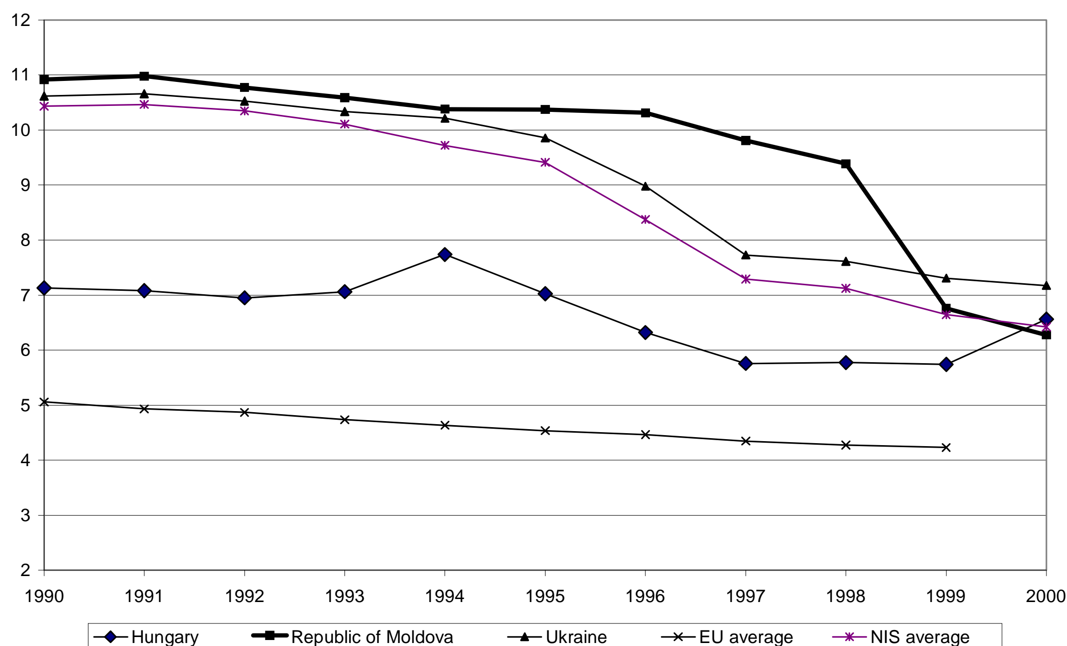
Source: WHO Regional Office for Europe health for all database.
Note: [a] 1999, [b] 1998, [c] 1997, [d] 1996, [e] 1995, [f] 1994, [g] 1993, [h] 1992, [i] 1991, [j] 1990.

Fig. 9. Hospital beds in acute hospitals per 1000 population in the newly independent states, 1990 and 2000 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database.
NIS: Newly independent states.

Fig. 10. Number of hospital beds in acute hospitals per 1000 population in the Republic of Moldova, selected countries, EU average and NIS average, 1990–2000



Source: WHO Regional Office for Europe health for all database.
NIS: Newly independent states.

data for these indicators in efforts to prevent closure of their facilities during the government's hospital rationalization efforts over the last six years.

Social care

Social care is defined here as the non-medical care of dependent people, such as the very elderly, children without family support and disabled people. The Ministry of Labour and Social Protection is officially responsible for provision of social care although, as outlined below, the Ministry of Health contributes substantially to care of the elderly by default. A number of local and international nongovernmental agencies are also now contributing assistance to social cases or through the state welfare institutions, particularly those for children.

Social care provision in the Republic of Moldova takes the form of unemployment benefits, care for the disabled, elderly and other groups requiring assistance through financial or other measures and provision of a large number of child care homes. A large part of the Moldovan population currently faces financial or related social difficulties and requires some form of social care. At the same time, with the weak economy the state capacity to provide social

assistance for unemployment relief, services for the disabled or even pension entitlements has been severely diminished. Where pensions are paid, their value has dropped dramatically and the elderly are facing particular problems.

Provision of state care, in the form of senior citizen residences or home support, has not traditionally taken place on a large scale. In 1996 there were seven homes for the elderly. This inadequate provision has resulted in many hospital beds being used by elderly people no longer needing medical care but not well enough to look after themselves in their own homes. Although social care is the responsibility of the Ministry of Labour and Social Protection, the Ministry of Health has, to date, borne the costs of these people remaining in medical hospital beds. It is envisioned that in the future some of the hospitals undergoing closure as part of the health reforms may be converted into some form of elderly care homes.

In contrast to the low provision of elderly care is the very large provision of child care places. During the Soviet era, parents were encouraged to put children with physical or mental disabilities into state care homes. Single motherhood was also stigmatized and children born outside marriage were also frequently placed in state care. These practices continue to a certain extent today, when there remain some financial and health care incentives to place children in state care homes rather than caring for them in the family home. Two forms of children's homes are found in Moldova: "medical" and "non-medical". The former type is the responsibility of the Ministry of Labour and Social Protection while the latter falls under the mandate of the Ministry of Health. There are 3 children's homes with 415 children under the Ministry of Health responsibility at present. Overseas adoptions, which are quite common from the children's institutions, are allowed only from the medical homes.

Human resources and training

The Republic of Moldova has a large health workforce although there have been dramatic reductions in numbers since 1998. Most staff are employed by the state. Physicians are mainly described as specialists although, as detailed below, a large family medicine training programme has begun. There are approximately 2.3 nurses per physician. Moldova uses central planning to determine how many people can enter the health workforce. This is the responsibility of the Human Resources Unit in the Ministry of Health.

In 2001 there were about 14 000 doctors and 32 406 nurses employed in the Republic of Moldova by the Ministry of Health (not including the

Transdnestrian region), giving a rate of 3.3 doctors and 7.6 nurses per 1000 population. As noted earlier, this figure is lower than the 3.8 doctors per 1000 population (16 173 doctors) reported in 1998. The Republic of Moldova has about 0.4 dentists per 1000 population. The dentistry figure is similar to that of other central and eastern European countries *(7)*. Despite the large overall number of medical professionals in the country, it is estimated that around 15% of rural areas are not covered by doctors. In 1998 there were around ten urban doctors for every one rural doctor *(2)*. The reductions in doctor numbers are thought to be due mainly to physicians leaving the country to work abroad or remaining in the country but leaving the health sector rather than any major reductions in medical school admissions.

Training

Doctors from all parts of the country are trained at one of five state-certified medical colleges and at the State Medical University. A new medical school has opened in the Transdniestrian region (although students from this region are actively encouraged to attend the State Medical University) but its status is unclear and there are concerns about the quality of training offered. One private medical university recently opened but has not yet graduated a class. Training and accreditation of doctors through the official state medical university is strictly regulated. Doctors must also undertake additional training at five-year intervals. All doctors must pass state medical exams before doing residency and further training. However, in recent years, there have been concerns that standards in basic medical training and examination procedures may have been somewhat reduced. Improvements have been made, however, in postgraduate training in health management and family practice.

Nursing training takes place through five colleges of "secondary medical training". The number of nursing colleges was reduced from eight to five in 1999 to reduce perceived overproduction Around 600–700 nurses enter training annually. However, many nurses are leaving the profession each year, often in search of better paying and often non-nursing jobs overseas. Whether the current number of nurses in training is adequate in the face of this emigration remains to be seen. Raising the profile of the profession, a Department of Nursing was started in the State Medical University in October 2000. In this department, high-level nurses are trained in management, research, teaching and administration in the new four-year course. However, while postgraduate nurse training is being strengthened, concerns have been raised about the content and quality of basic nurse training.

New structures for enhanced primary care training are being put in place for both doctors and nursing staff. In 1996 the Family Doctor Training

Programme began. In 1998 the Faculty of Family Medicine was established at the State Medical University, and a Chair in Management Training and Public Health was established in 2000. The faculty benefits from links with a number of international medical schools. Two model family practices were established in Chisinau as part of the move to strengthen family medicine. Two forms of family medicine training are provided: either take a three-year specialization in family medicine or a four-month course. In total, by 2001, over 2000 doctors had received some training in family medicine. However, some doctors have expressed concerns that the short programme is inadequate and needs to be lengthened and the curriculum strengthened. Another concern is that the career structure for family medicine professionals is not yet developed enough to employ the graduates of the training programme. It has been estimated that 20–30% of family medicine graduates go back to work in posts in hospitals. However, with the expansion of family medicine clinics across the country it appears that the graduates will have more opportunities for work in the future.

Salaries and working conditions

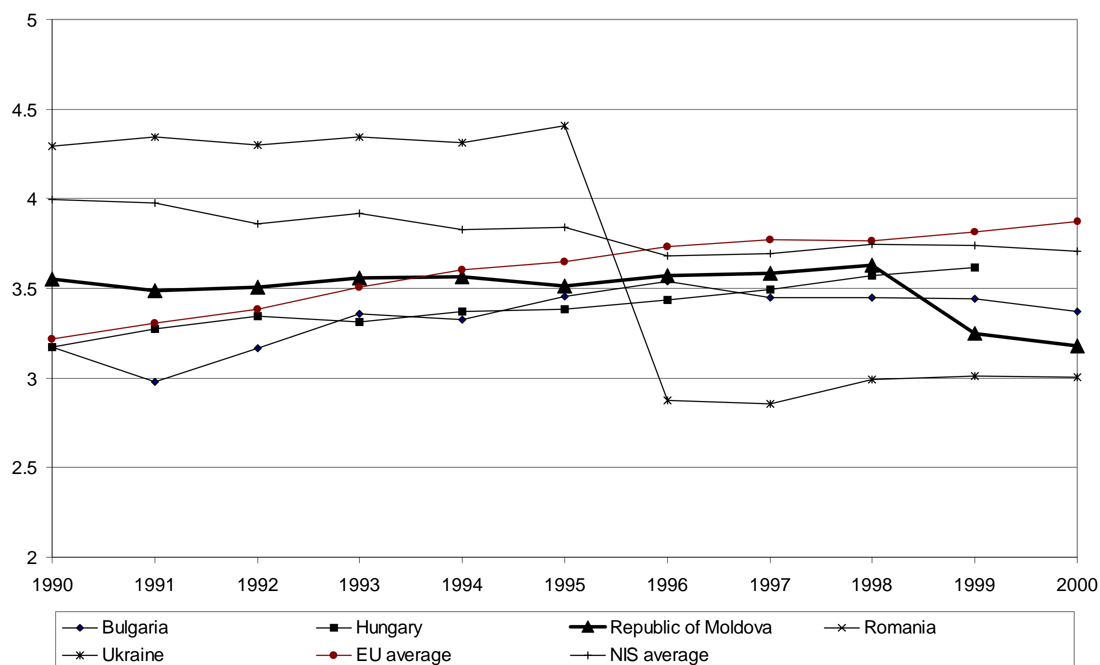
Health staff face difficult working conditions at present. Staff continue to be salaried employees of their institutions and there are no plans to move to any work-load type payments. However, salaries are very low and often delayed by three to four months. Informal payments are therefore frequently requested of patients, even for services intended to be provided free by the state. Informal payments consequently make up a large part of income for many medical professionals. Working conditions within many of the medical facilities are also challenging for many staff. Many health facilities do not have basic medical equipment, some have an erratic power supply and are consequently dark and cold throughout the winter months and many have inadequate cleaning services. As an incentive to medical staff to practice in the rural areas, salaries are supposed to be about 15% higher in these posts. In addition, the Ministry of Health makes special efforts to recruit students from rural areas to train in the State Medical School. Salaries are also supposed to be higher for staff in family medicine clinics.

Table 6. Health care personnel per 1000 population, 1980–2000

	1980	1985	1990	1995	1996	1997	1998	1999	2000
Active physicians	2.82	3.30	3.55	3.51	3.57	3.58	3.63	3.25	3.18
Active dentists	0.34	0.40	0.45	0.44	0.43	0.43	0.43	0.42	0.37
Certified nurses	7.78	8.91	9.78	9.40	9.05	9.31	9.05	8.06	7.69
Active pharmacists	0.65	0.75	0.77	–	–	–	–	–	–

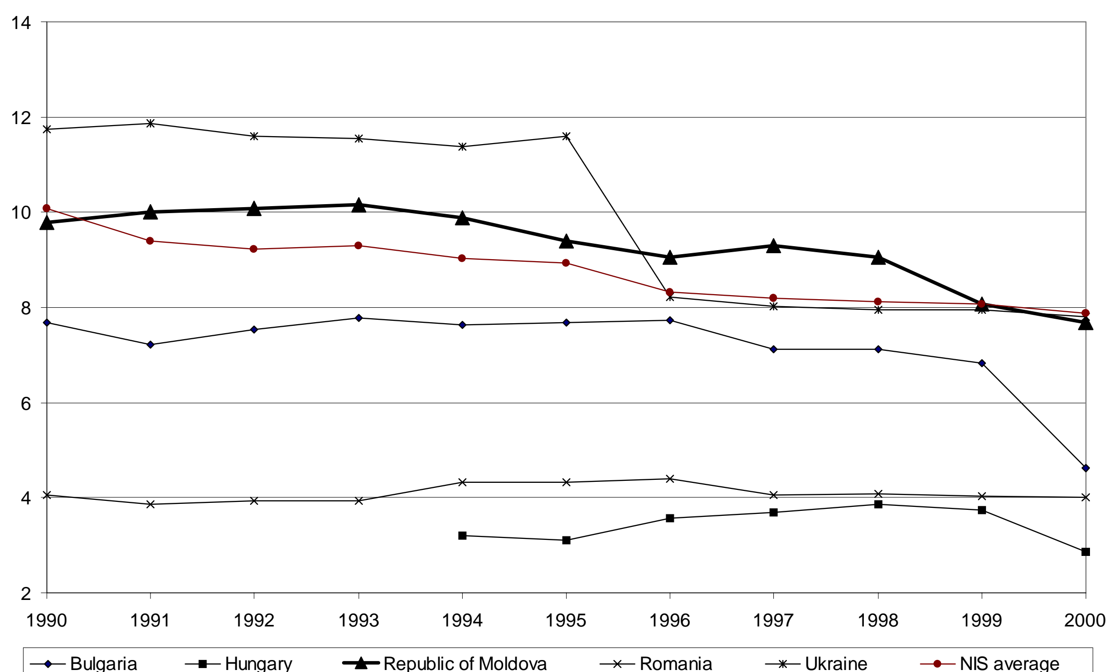
Source: WHO Regional Office for Europe health for all database.

Fig. 11. Number of doctors per 1000 population in the Republic of Moldova, selected countries, EU average and NIS average,1990–2000



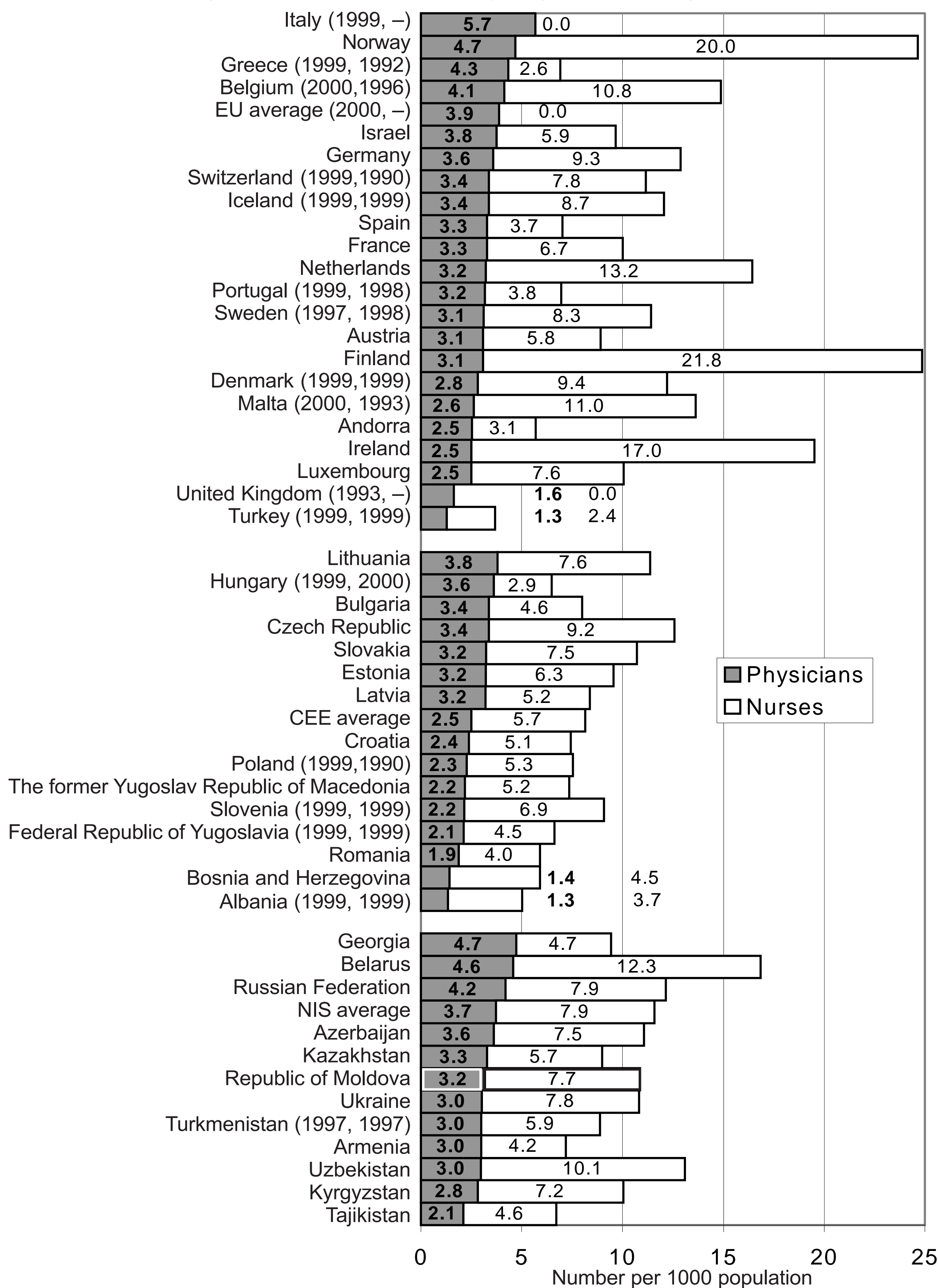
Source: WHO Regional Office for Europe health for all database.
NIS: Newly independent states.

Fig. 12. Number of nurses per 1000 population in the Republic of Moldova, selected countries and NIS average, 1990–2000



Source: WHO Regional Office for Europe health for all database.
NIS: Newly independent states.

Fig. 13. Number of physicians and nurses per 1000 population in the WHO European Region, 2000 or latest available year (in parentheses)



Source: WHO Regional Office for Europe health for all database.

CEE: central and eastern Europe; EU: European Union; NIS: Newly independent states.

Pharmaceuticals

The Moldovan pharmaceutical distribution sector underwent a major process of privatization in 1994. Today many pharmacies are privatized (although pharmacies in large hospitals are generally not). The state, however, remains a shareholder in a number of the privatized enterprises, so Moldova actually has a mixed system of state and private pharmacies. The large scale privatization was undertaken to try to ensure an adequate and regulated drug supply in the face of an economic collapse and the state's consequent difficulties running its own drug supply and distribution system. The weaknesses in the state drug supply and regulatory system that arose shortly after independence led to the formation of a large and unregulated black market in pharmaceuticals alongside a collapse in the national prescription system. Today, the black market is considered insignificant and regulation of sales through privatized pharmacies is helping to ensure quality of the pharmaceutical supply. With the exception of a few restricted items, however, drugs continue to be freely available from all pharmacies without a prescription, although this continues to be technically illegal.

Regulation of the pharmaceutical sector is a responsibility of the Ministry of Health. It has set profit limits (40% on wholesale price) on pharmacies on drugs and also regulates which drugs may be sold in the country. While the privatization of the pharmaceutical sector has helped ensure drug supply and the regulation has helped ensure that only approved drugs are marketed, the pharmaceutical privatization process has allowed situations to develop where doctors may have professional conflicts of interest. Many doctors bought pharmacies under the privatization programme and these are often in the clinic or hospital where they work. Unscrupulous professionals might be interested in prescribing expensive or even inappropriate drugs to patients to increase their own pharmacy profits. To help rationalize prescribing and encourage doctors to prescribe effective but inexpensive drugs, an essential drugs list was drawn up in 1998, based on WHO recommendations. It was reviewed and revised in 2001.

Moldova has one main generic drug production company, Farmaco, which manufactures a limited range of products, and around twelve smaller drug production companies. The country thus imports most of its drug requirements. Prior to independence, Moldova was able to obtain and distribute drugs through the centralized Soviet pharmaceutical system. It became clear at post-independence that it could no longer continue this centralized approach to drug purchasing. As part of the health reform process, it moved to a system of local hospital-level purchasing. Exceptions to this new system include certain drugs

such as insulin and haemophilia drugs that are supposed to be supplied directly to the hospitals by the state. The state is often unable to provide these items but sometimes the shortfall is met by nongovernmental organizations such as Pharmaciens Sans Frontières (PSF). Under the local purchasing scheme, hospitals are supposed to receive money for specified drugs and prepare tenders to purchase these competitively. However, the money from the state budget for these drugs purchases is often inadequate. Humanitarian agencies continue to play an important role in supplying basic drugs to the population. In some hospitals, up to 50% of the pharmaceutical supply for children is supplied by the international aid community. At the national level, international agencies such as UNICEF provide direct support to the pharmaceutical supply by providing vaccines for the national immunization programme.

Access to pharmaceuticals is difficult for many people because of the costs. For patients with chronic conditions, such as diabetes, the situation is very precarious. Although under the minimum package most drugs for children under 5 years supposed to be free, the mechanism for this is unclear and it is unlikely that many children are benefiting from this arrangement.

The Law on Pharmaceutical Activity (1993, amended 1998), that outlines who can perform pharmaceutical duties, and the importing, production and registration of drugs, and the Law on Pharmaceuticals (December 1997), that covers quality control issues of pharmaceuticals, manufacturing and trials, form the key parts of the Moldovan pharmaceutical regulation.

Financial resource allocation

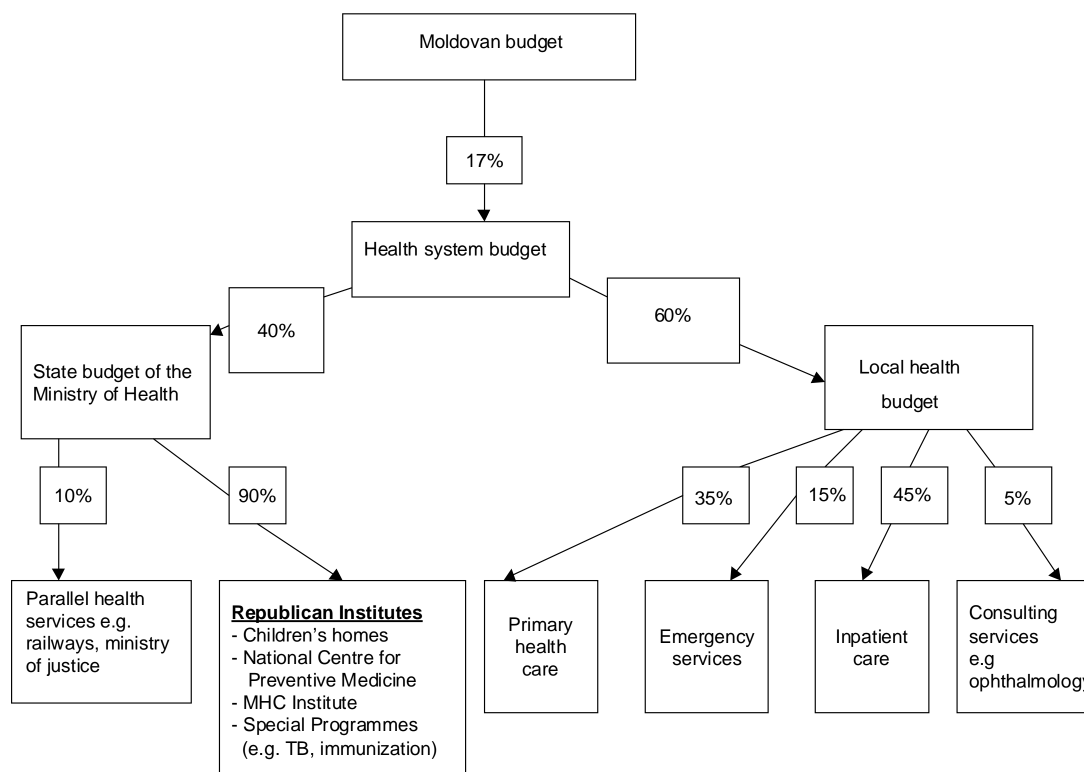
Third-party budget setting and resource allocation

The national health budget is set annually. Since 1999, each region (judet*)* has formed a regional health budget and submitted this to the Ministry of Health. The regional budget outlines requirements for provision of the minimum package and provision of care through the regional health facilities. From 1999 onwards, health budgeting has moved from being based on bed numbers to an age-weighted capitation system. The regional budgets must thus outline the regional population in age categories. The Regional Councils must approve the regional health budget plan before it is submitted to the national level. These regional budget submissions are then combined into one overall Ministry of Health budget. Together with the regional submissions, the Ministry of Health budget also incorporates the budget requirements for the republican hospitals and for the national level programmes. The overall health budget is then submitted to the Ministry of Finance for approval and for inclusion in the national budget. The Ministry of Finance must submit the draft national budget to Parliament for review and eventual passage. When the Parliament approves the national budget, the “Budget Law” is passed.

Payment of hospitals

The key providers of healthcare services are public primary health care facilities and public hospitals. The hospital sector is most affected by the economic crisis and by inefficient management of resources. The financial resources

Fig. 14. Financing flow chart



disbursed by the budget for health care overall have been less than US $10 per capita per year over the last 2–3 years.

Although according to Decree 420 of the Ministry of Health (1998) financing of the primary health sector must amount to no less than 35% of the local health budget, implementation of this decree is not yet fully under way. About 80% (instead of the target maximum 65%) continues to go to the hospital sector, of which most is spent on utilities and salaries.

Local governments (or in the case of republican hospitals, the Ministry of Health) finance hospitals from state funds in line with the provision of inputs (i.e. the numbers of staff and the volume of bed days/numbers of outpatient visits) and hospitals in turn disburse funds to their associated polyclinics.

Most republican services (transplant, dialysis, etc.) are carried out in hospitals funded entirely by the Ministry of Health. When regional hospitals carry out screening or other services that are part of the centrally agreed republican package, they may be reimbursed on a case payment basis at prices set by the Ministry of Health.

Hospital budgets are formally divided into spending headings including: salary, benefits, pharmaceuticals, food, building maintenance expenses, staff deployment, purchase of equipment and disposables. Hospital directors, as part of the health reforms, now have greater autonomy than under the Soviet system but are still allowed only limited discretion in varying budget allocations within their own institutions. However, they do now have the autonomy to levy charges in certain instances and are permitted to retain any income generated by their hospital to supplement state budget provisions. While opportunities for earning income are still limited, this represents a significant break from Soviet precedent. Sources of supplementary hospital income include:

- *Sub-let space*: It is now legally permissible to lease surplus space in health institutions to the private sector and to retain the rent fees to cover ongoing expenses.
- *Charging for services*: Those services not included in the minimal package may be offered on a fee-for-service basis at prices set by the Ministry of Health in accordance with the "Regulation on Fee for Health Services".
- *Contracting*: hospital directors now have the right to enter into contracts with private insurance companies, enterprises, etc. to offer coverage to agreed patient groups on a fee-for-service basis. The Ministry of Health determines the prices of all interventions, but hospitals are able to keep any savings made.

Although hospitals develop budgets, they do not always receive all funding they had estimated that they need. As a result, hospital administrators try to cover the deficit of public money by raising the cost of health services and selling more of them directly to inpatients who must pay "from their pockets". Patients are often doubly charged: officially and unofficially. This has contributed to inequities in accessing health services by different income groups with the poor severely affected. The measures taken by government to limit and regulate the fee-paying process through the "Law regarding Minimum Package of Free Medical Assistance Guaranteed by the State" and the "Regulation on Fee for Health Services" have proved to be weak and inefficient.

The Ministry of Health plans to institute major reforms of hospital financing introducing compulsory health insurance and extending the use of contracts to ensure that payment will be on the basis of the volume and quality of services provided. The reorganization will oblige local (territorial) branches of the National Health Insurance Company to establish a contract system with regional hospitals, which will pass the procedure of accreditation according to the "Law on Evaluation and Accreditation in Health Care" (2001). The Ministry of Health will continue to establish and maintain health care standards to monitor the quality and volume of local hospital activity.

Payment of health care professionals

Physicians and middle-level medical staff are paid a salary that reflects their hours at work rather than their levels of activity. Salaries are fixed by the "Law on Remuneration of the Republic of Moldova", with the amount any physician receives being determined by years of service, qualification and position held. This approach means remuneration tends not to reflect the levels of responsibility assumed by health care personnel and neither encourages them to upgrade their professional skills. The salaries of medical staff are very small, on average only US $32 per month, and this creates low morale and conditions for under-the-table payments.

The Ministry of Health plans to incorporate changes in labour remuneration into the health care reform process, seeing it as an essential step in enhancing morale and both the quality and efficiency of care. Experiments with the payment of general practitioners in pilot areas, whereby a basic salary is "topped up" by capitation fees, are already under way. It is hoped this model will be extended throughout the primary health care network, possibly introducing bonus or target payments to encourage the achievement of particular objectives. It is unclear, as yet, how hospital physicians' remuneration will be tailored to encourage efficiency.

Health care reforms

Aims and objectives

Since independence Moldova has been in transition from a centralized political and economic system to a more democratic and market-oriented system. The collapse of the USSR brought severe economic and social problems while at the same time creating opportunities for progress. GDP decreased by more than 60% between 1991 and 1999 *(6)* and in 1997 it was calculated that 90% of the population were living on less than US $2 per day *(35)* and 21% living on less than US $0.50 per day, less than 30% of the national minimum subsistence level *(36)*. At the same time health indicators were worsening. The health system found itself both unable to provide adequate, consistent and affordable basic health care or to sustain the enormous provision of specialist care that it had been designed around and that was drawing funds away from the basic care level. A number of preventive programmes, such as the national immunization programme, were on the verge of collapse in the early 1990s. Increasing informal charges had deterred many from attending health facilities at all. The inherited system was highly centralized and planning was designed around funding bed numbers in specialist facilities with little real opportunity for effective local level planning. Although there was concern about political and social implications of reducing capacity, the government realized that health reform had become a pressing issue.

Content of reforms

The process has initiated a number of steps starting in 1999 when the government passed the laws on the "Minimum Package of Free Medical

Assistance Guaranteed by the State" and "Regulation on Fee for Health Services" which legalized formal payments for some health services and allowed the privatization of the dental and pharmaceutical sectors. Although a range of legislation was passed on aspects of social insurance and other funding issues, the real reforms began in 1998 after the publication of the health strategy document "Health Strategy 1997–2003" which outlined the following priorities:

- a priority approach to health issues
- equity and solidarity
- effective structures for processing, implementing and monitoring a National Health Policy
- intersectoral relations, joint programmes, responsibility and recording
- consultation and consensus, with broad community participation.

These themes were further developed into practical steps (the "five pillars" of the health reform strategy) in the joint Government of Moldova/ World Bank project financing agreement *(6)*. The five themes are as follows *(31)*:

- Restructuring network of medical services, redistributing the overcapacity of resources from tertiary medical care and to allocate them to primary care;
- Strengthening the first aid network by granting funds for financing a setup of efficient network of general doctors;
- Legalizing illegal payments, eliminating payments for random or excessive medical services, especially those burdensome to the poor population;
- Setting up a new package of medical services which would correspond to the budgetary resources, allocating most funds to first aid;
- Centralizing medical care financing in order to improve the distribution of funds between sectors.

Reform implementation

The Republic of Moldova began the health reform process cautiously. Privatization of many dental clinics and pharmaceutical services was implemented relatively early, but major efforts to address the unaffordable large provision of specialist care and channel funds from this to primary care did not really take off until 1998, when a medium hospital restructuring plan was agreed. Since then major inroads have been made into redeveloping the health system to meet the needs of the country and it has also successfully

negotiated and approved a US $20 million financing agreement with the World Bank to support further reform efforts.

One of the key reform measures undertaken so far includes the development of a minimum package of health care in 1998. Although the package is, in reality, not yet available to all due to funding constraints, it is helping guide health planning towards providing a minimum level of basic services with whatever funds are available. The move from bed numbers to a weighted population measure in planning the health budget also represents a big step in making health planning more realistic and closer to the needs of the population. In a major move to ensure more accountability and reflection of local needs in health planning, the creation of the regional health structure has brought a high level of decentralization to the health system.

Actions to respond to the call for strengthening the primary care services started in 1997 with the beginning of family medicine training. Since then over 2000 staff have been trained in aspects of family medicine. Over 500 family medicine centres have been opened. To support the family medicine plans, the state and regions are now obliged to give at least 22.75% of the overall health budget to primary care (35% of the local budget), up from a level previously around 10%. The massive restructuring of the secondary and tertiary care has resulted in a reduction of over half in staffing and bed numbers at this level. This restructuring is supposed to have released additional funds to the primary care sector. However, whether all funds released through these reductions have been passed to the primary care sector or even remained within the health sector at all is unclear, as primary care facilities remain severely under-funded and under-equipped. The newly agreed World Bank health-financing package should shortly bring additional resources to the primary care sector.

Moldova has thus taken large steps in the health reform process, but has proceeded at a steady pace to ensure that key stakeholders gave their support to the achieve the goals laid out in the 1997–2003 strategy document. It is unlikely that users of the health system will have felt many or any benefits from the reforms undertaken to date since the major changes have been undertaken very recently. However, as long as funds released from restructuring to date are reinvested back into the health system, benefits to the population should be realized in the near future.

Three factors have been identified that have supported the reforms to date *(34)*. Firstly, change was in the interest of all key-decision makers. At the same time, political risk through making change was spread throughout all levels of government. Secondly, agreement was reached between the central Ministry

of Health and the Regional Health Authorities on a medium-term restructuring plan for the reform process. Finally, consensus was reached among donors and the World Bank on the direction and pace of reform.

Conclusions

The Republic of Moldova has just passed ten years of independence. It has been a decade of great challenges for the health system and one that has resulted in a number of changes. Immediately after independence the health system faced both worsening health indicators of the population and severely diminished resources for the health system. The new health reforms are beginning to address some of the pressing issues of the system. At the same time, the picture of the population health is gradually showing improvement. The health reforms have taken some time to develop but are now beginning to focus on using the limited resources available to the best effect. Moldova has started the process of rationalizing the size of its health system, both in terms of numbers of facilities and staff. It has also begun innovative training for health staff in new methods of management and care. Although the health system still has far to go in ensuring equal access to all to a basic level of care, it has started the journey towards meeting this goal.

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