European Observatory on Health Care Systems

Health Care Systems in Transition

The former Yugoslav Republic of Macedonia

The European Observatory on Health Care Systems is a partnership between the World Health Organization Regional Office for Europe, the Government of Norway, the Government of Spain, the European Investment Bank, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine in association with the Open Society Institute.

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Foreword

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

The Observatory is a unique undertaking that brings together WHO Regional Office for Europe, the Governments of Norway and Spain, the European Investment Bank, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine in association with the Open Society Institute. This partnership supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of the dynamics of health care systems in Europe.

The aim of the HiT initiative is to provide relevant comparative information to support policy-makers and analysts in the development of health care systems and reforms in the countries of Europe and beyond. The HiT profiles are building blocks that can be used to:

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

The HiT profiles are produced by country experts in collaboration with the research directors and staff of the European Observatory on Health Care Systems. In order to maximize comparability between countries, a standard template and questionnaire have been used. These provide detailed guidelines and specific questions, definitions and examples to assist in the process of

developing a HiT. Quantitative data on health services are based on a number of different sources in particular the WHO Regional Office for Europe health for all database, Organisation for Economic Cooperation and Development (OECD) health data and the World Bank.

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. Most of the information in the HiTs is based on material submitted by individual experts in the respective countries, which is externally reviewed by experts in the field. Nonetheless, some statements and judgements may be coloured by personal interpretation. In addition, the absence of a single agreed terminology to cover the wide diversity of systems in the European Region means that variations in understanding and interpretation may occur. A set of common definitions has been developed in an attempt to overcome this, but some discrepancies may persist. These problems are inherent in any attempt to study health care systems on a comparative basis.

The HiT profiles provide a source of descriptive, up-to-date and comparative information on health care systems, which it is hoped will enable policy-makers to learn from key experiences relevant to their own national situation. They also constitute a comprehensive information source on which to base more in-depth comparative analysis of reforms. This series is an ongoing initiative. It is being extended to cover all the countries of Europe and material will be updated at regular intervals, allowing reforms to be monitored in the longer term. HiTs are also available on the Observatory's website at http://www.observatory.dk.

The HiT on the former Yugoslav Republic of Macedonia was completed in December 2000 and reflects the picture of the health care system at that time. As with all countries in transition, reform initiatives and legislation are ongoing. For the most recent updates of health system initiatives in the former Yugoslav Republic of Macedonia, please see the Observatory's website.

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The current series of the 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 Government of Norway, the Government of Spain, the European Investment Bank, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine in association with the Open Society Institute.

The Observatory team working on the HiT profiles is led by Josep Figueras, Head of the Secretariat and the research directors Martin McKee, Elias Mossialos and Richard Saltman. Technical coordination is by Suszy Lessof. The series editors are Anna Dixon, Judith Healy and Elizabeth Kerr.

Administrative support, design and production of the HiTs has been undertaken by a team led by Phyllis Dahl and comprising Myriam Andersen, Sue Gammerman and Anna Maresso. 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

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The former Yugoslav Republic of Macedonia

Introduction and historical background

Introductory overview

The former Yugoslav Republic of Macedonia has an area of 25 713 km^2 and is located in the middle of the Balkan Peninsula in south-eastern Europe. It borders the Federal Republic of Yugoslavia to the north, Bulgaria to the east, Albania to the west and Greece to the south. It is a landlocked, mountainous (some 80% of its total area) country with three natural lakes towards the southern end. The climate is a combination of the Mediterranean, the continental and the mountainous, with average air temperatures ranging from 0.3°C in January to 22.2°C in July.

At the 1994 census, a population of 1 936 877 was recorded while the estimated population for July 1999 was 2 022 604. Of these, 66% are classified as ethnic Macedonians, 23% Albanians, 4% Turks, 2.3% Roma, 2% Serbs and 0.4% Vlachs. The predominant religions are Orthodox Christian (67%) and Islam (30%). The capital city is Skopje with around 550 000 inhabitants. Urbanization continues with, at the 1994 census, 57% living in an urban setting: an increase from 53.9% ten years earlier.

The official language is Macedonian, using the Cyrillic alphabet, and this is the primary language of 70% of the population. Other languages spoken are Albanian (21%), Turkish (3%) and Serbian and Croatian (3%). The constitution requires that, where ethnic groups other than Macedonian constitute a large proportion of a community, the language and alphabet of the other ethnicity be also in official use.

The population is growing at a rate estimated in 1999 to be 0.64% per annum. In 1997, life expectancy at birth for males was 70.4 years and for females 74.8 years (Table 2). The population is a young one, with nearly 24% under the age of 15 years in 1997 (Table 1). The average age is 32.7 for men and 33.9 for women.

Fig. 1. Map of the former Yugoslav Republic of Macedonia[1]

Source: Central Intelligence Agency, The World Factbook, 2000.

Table 1. Demographic indicators

Indicators	1990	1991	1992	1993	1994	1995	1996	1997	1998
Population, million	2.03	1.92	1.92	1.93	1.95	1.97	1.98	2.00	2.01
% Population aged 0–14	–	25.9	25.6	25.2	24.9	25.6	24.2	23.8	–
% Population aged 65 and over	–	7.8	8.0	8.3	8.5	8.7	8.9	9.1	–
Live births per 1000 population	17.5	18.2	17.3	16.8	17.2	16.4	15.8	14.8	14.6
Crude death rate (per 1000)	–	7.7	8.3	8.1	8.1	8.3	8.1	8.3	–

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

[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.

Table 2. Health indicators

Indicators	1990	1991	1992	1993	1994	1995	1996	1997
Female life expectancy at birth	–	74.0	73.3	74.2	74.3	74.1	74.9	74.8
Male life expectancy at birth	–	69.7	68.8	69.4	69.7	69.9	70.4	70.4
Infant mortality rate (per 1000 live births)	31.6	28.3	30.6	24.1	22.5	22.7	16.4	15.7
Maternal mortality (per 100 000 live births)	–	11.5	9.0	6.2	12.0	21.8	–	3.4
Abortion rate (per 100 live births)	61.8	66.5	59.7	57.0	49.2	49.2	45.1	40.9
Mumps Incidence rate (per 100 000)	64.3	9.5	9.4	129.1	11.8	11.0	53.3	18.2
% Children Immunized against Measles	94.0	93.0	53.0	96.0	86.0	97.0	91.0	98.0
SDR diseases of circulatory system, 0-64[a]	–	114.8	125.2	121.7	130.9	125.4	129.1	121.5
SDR diseases of circulatory system, all ages[a]	–	570.4	637.8	606.9	618.4	653.5	619.6	635.5
SDR ischaemic heart disease, all ages[a]	–	102.0	111.2	106.6	115.3	109.4	119.9	117.3
SDR cerebrovascular disease, all ages[a]	–	171.6	188.6	188.1	188.5	200.8	199.7	215.3
SDR malignant neoplasms, all ages[a]	–	141.5	143.4	145.5	156.7	151.2	160.0	164.4
SDR external causes injury & poison, all ages[a]	–	41.6	38.2	42.9	37.5	31.6	34.4	35.8
SDR infectious and parasitic diseases, all ages[a]	–	15.1	17.1	15.6	15.4	13.9	10.2	11.0

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

[a] Age-standardized death rate per 10 000 population.

Circulatory system diseases such as ischaemic heart disease and cerebrovascular disease show a general increase since the time of independence. Cancer mortality too has increased in the past few years. External causes of death have been relatively stable, whilst infectious disease mortality appears to be on the decrease. As in other former Yugoslav republics that have experienced large-scale population movements, accurate assessment of the true population must await the next census and, until then, mortality rates must be treated with some caution.

The recorded abortion rate, at 41 per 100 live births, is still relatively high (although it has decreased by one third since 1990). It is likely that termination of pregnancy is still being performed as a means of birth control. Other contraceptive practices may be increasing, as suggested by the decrease in abortion in the context of an overall decrease in birth rate.

The early years after independence were characterized by a steady decline in gross domestic product (GDP) and by near hyperinflation (Table 3). Whilst inflation and GDP growth have been brought into check in the past few years, unemployment has continued to rise from an already high base, reaching 41.7% by 1997. This is the highest official unemployment rate in the European Region, and is likely to have significant implications, both in terms of the health needs of the population and of the costs of health service provision. The industrial and mining sector contributed 17.5% of GDP in 1996 (down from 35% in 1990) on the basis of current prices (*2*). The financial services sector has shown steady growth in its contribution to GDP since 1992.

Table 3. Macroeconomic indicators

Indicators	1990	1991	1992	1993	1994	1995	1996	1997
GDP growth rate, % change[a]	-9.9	-12.1	-21.1	-8.4	-4.0	-1.4	1.1	2.0
Annual inflation rate, %[b]	–	–	1 690.7	349.8	118.9	15.9	4.2	4.4
GDP per capita, US $[b]	2 165	2 060	1 832	1 659	1 616	1 583	1 581	1 593
GDP per capita, US $PPP[b]	–	–	–	-	3 965	4 058	–	–
Gross industrial output, % change[a]	–	-17.2	-13.0	-9.0	-7.0	-6.0	2.0	–
Share of agricultural sector, % of GDP[a]	10.3	13.8	16.8	15.8	16.5	17.8	–	-
Government expenditure, % GDP[a]	–	–	48.2	54.5	54.2	46.5	44.3	39.7
Registered unemployment rate, %[b]	23.6	26.0	27.8	29.3	32.0	35.6	38.8	41.7

Source: [a] UNICEF, The MONEE Project, 1998 (*3*); [b] WHO Regional Office for Europe health for all database (*4*).

The first half of the 1990s saw a marked decrease in living standards, partly as a result of the United Nations trade sanctions against the Federal Republic of Yugoslavia, one of the main trading partners, and partly as a result of a blockade by Greece, which cut off access to markets in the south.

A stabilization programme, sponsored by the International Monetary Fund, assisted in a degree of economic recovery since 1996, although there remain barriers to investment in the form of low wages and living standards, and relatively high public expenditure and interest rates. The collapse of a savings house (TAT) in March 1997 further undermined consumer confidence in savings, and put exchange rates under considerable pressure.

The year 1999 saw increased economic pressures with the advent of the crisis in Kosovo. Whilst exports were being constrained by the disruption of the northward trade route through the Federal Republic of Yugoslavia, upwards of a quarter of a million refugees were living in the former Yugoslav Republic of Macedonia at the height of the crisis, placing significant strain on an already fragile economy. Investor confidence has also suffered, and these factors together have caused a significant (9%) decline in projected GDP growth; from

5% growth, the pre-Kosovo estimate, a 4% decline is projected for 1999 (*5*). As a result of this, the International Monetary Fund has granted additional credit to the country. Subsequent evidence indicates that the economic impact was less pronounced than had been feared.

The former Yugoslav Republic of Macedonia is governed through a multi-party democracy. The constitution affirms the presence of a market economy. Legislative power rests with a unicameral assembly of 120 members. Suffrage is universal and the assembly is elected through the alternative vote plus system of proportional representation, with 85 constituency-based members and 35 additional members. The term of office is four years.

The executive branch of the State is formed by the government and the President. The presidency, decided on a five-yearly basis by popular vote, is currently occupied by Boris Trajkovski, who was elected in the year 2000.

Historical background

The area was first colonized by Slavic peoples in the sixth century AD, and came under the rule of Bulgaria three centuries later. Bulgarian rule lasted some three hundred years. Over the next couple of centuries, rule over the ancient province of Macedonia was contested and passed back and forth between the Serbs, the Bulgarians and the Byzantine Empire. In 1371, Macedonia was conquered by the Ottoman Empire, under whose ambit it remained for five hundred years.

With the collapse of the Ottoman Empire and the rise of the nation states in the region in the late nineteenth and early twentieth centuries, the status of Macedonia was volatile. Pirin Macedonia had already been ceded to Bulgaria when, in the wake of the Balkan wars of 1912–13, Macedonia was partitioned, with Aegean Macedonia becoming part of Greece, and Vardar Macedonia being incorporated into the new Kingdom of Yugoslavia.

The First and the Second World wars saw Vardar Macedonia being occupied by Bulgaria. In the Second World War, part of western Macedonia, largely populated by ethnic Albanians, was incorporated into Albania by the occupying Italian forces.

The Socialist Republic of Macedonia was formed, from Vardar Macedonia, with the establishment of the Socialist Federal Republic of Yugoslavia by Tito in 1944. There had been significant disquiet between the wars at the Serbianization of the ethnic Macedonian people – the territory was often referred to as south Serbia – and these policies were reversed allowing the assertion of

a distinct Macedonian identity. This apparent act of liberalism was actually, for the most part, in order to counter pro-Bulgarian and anti-Serbian feeling prevalent in Macedonia at the time.

In spite of a longstanding policy to maintain the language and cultural identity of ethnic minority groups, there is a long history of ethnic tensions in the former Yugoslav Republic of Macedonia. The large ethnic Albanian community has a historical perception of marginalization and poor treatment at the hands of ethnic Macedonians and Serbs, and unrest has been kindled repeatedly since the 1960s, often as a result of situations across the border in Kosovo.

In the wake of similar changes in the northern Yugoslavian republics in 1989, the Socialist Republic of Macedonia moved towards pluralism in political organization, with the amendment of the constitution to allow multiple political parties. The first multi-party elections were held late in 1990. Unlike some of the other republics, the former Yugoslav Republic of Macedonia's secession from Yugoslavia was peaceful. In need of forces to fight the developing civil war further north, the Yugoslav President (Slobodan Milosevic) withdrew the Yugoslav army from Macedonian territories and did not intervene when, in September 1991, the former Yugoslav Republic of Macedonia voted to secede from the war-ravaged Yugoslav Federation.

International recognition of the new state was problematic, the use of the name "Macedonia" and the star of Vergina on the flag were said to be provocative and to amount to a territorial claim to the northern Greek province of Macedonia. A trade blockade by Greece, denying access to the Greek port of Thessaloniki, an important trade route, was established early in 1994, and was only lifted late in 1995 with the alteration of the Republic's flag. This caused significant economic hardship. Because of these sensitivities, the interim name recognized by the United Nations in April 1993 – the former Yugoslav Republic of Macedonia – remains. Diplomatic and trade links were established with Greece in 1996. Late in 1999, plans were announced for an oil pipeline to link Thessaloniki and Skopje (*6*).

Organizational structure and management

Organizational structure of the health care system

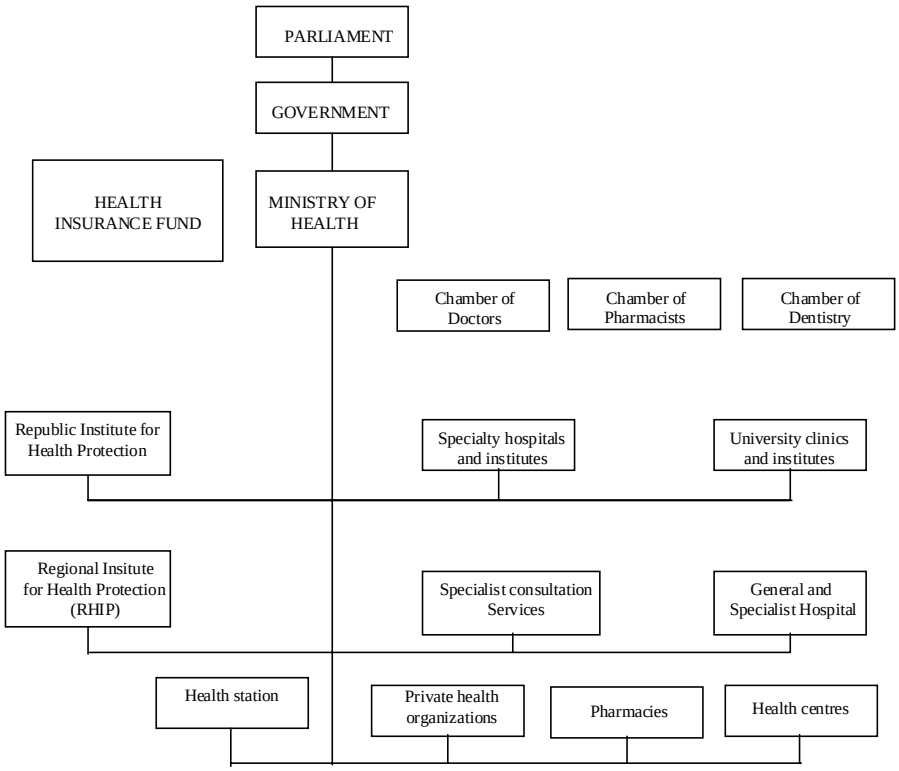
Prior to the enactment of the Health Care Law in 1991 (*7*) and the establishment of the Ministry of Health, the highly decentralized Yugoslavian system was in place, owned and operated by 30 local municipalities, with only large capital projects being centrally executed. This service delivery system led to significant overprovision and duplication of services. This legacy has also militated against the functional separation of primary and secondary care, and led to the proliferation of a variety of different provider units, which often contain elements of primary secondary and tertiary care.

The Health Care Law of August 1991 set the basis for the current healthcare system in the former Yugoslav Republic of Macedonia. It enshrined the basis of the health insurance system, the rights and responsibilities of service users and service providers, the organizational structure of health care and the disposition of funding streams. Prior to the enactment of this law, the system of health care, although offering universal accessibility, was fragmented, with little central governance or strategic overview. Financing was, for the most part, local. The ensuing structures were characterized by service duplication and ensuing inefficiency. In common with the other republics of the former Yugoslavia, local health services were managed and commissioned by the local municipality. This was set against a background of long-term resource constraint. The law also set out the areas of responsibility of the individual, the employer and the state for health and health care. The individual is responsible for his or her own health, the company is responsible for providing a healthy working environment, and the state is responsible for providing a healthy living environment. In addition, the State is responsible for the provision of preventive care for the population through the activities of the Institutes for Public Health and for ensuring that health services are available. The Republic's constitution states

clearly the principle of universality of health care access, and it was to this end that a system of compulsory health insurance was established. The Health Insurance Law of April 2000 (*23*) underscores the basis of the health services funding process and confirms independence of the Health Insurance Fund and its board of management.

The main organizations and groups involved in the health sector are set out in Fig. 2 and then described briefly.

Fig. 2. Organizational chart of health care system



Ministry of Health

The Ministry of Health, accountable to parliament, is responsible for the national health care system, and develops health policy and health care law. It also oversees the implementation of the relevant legislation at operational level. This ministry also has responsibility for the assessment of the impact of other areas of law on the health sector. It is responsible, using its own team of engineers, for the assessment of the infrastructure of hospitals.

Whilst much of the framework of the health care system is set out in the Health Care Law, certain specific areas of health or health care are the subject of additional areas of legislation. These include: communicable disease, spontaneous abortion and miscarriage, the pharmaceutical industry and drug abuse.

Health Insurance Fund

The Health Insurance Fund was established to coordinate health insurance for the population and to oversee health services. Initially subordinate to the Ministry of Health, it is now freestanding and accountable to parliament through a management board consisting of 13 members appointed by parliament. These include six representatives of service users. It is the single institution responsible for compulsory health insurance.

In addition to providing compulsory health insurance, the Health Insurance Fund contracts with health providers, dictating service specifications. It is indirectly responsible for the professional supervision of health care workers. The fund provides legal and managerial support to insurees with regard to health and health care. Legislation requires the fund to develop and maintain data related to insurance coverage and health care activity.

The director of the Health Insurance Fund is appointed by the management board and ratified by the government. Based in Skopje, the fund has some 30 branch offices around the country. These have a similar organizational structure, characterized by separate departments for collection of subscriptions and for insuree services. The manager of each branch office is organizationally accountable to the director of the fund in Skopje. The activities of the Health Insurance Fund are described in more detail under *Health care finance and expenditure*.

Ministry of Finance

The finance ministry sets the budgets for the other ministries, including the budgets for the Ministry of Health's centrally-funded vertical programmes (such as immunization and HIV). The finance ministry has a role in the scrutiny of new laws with regard to their financial consequences. It also has a role in the examination, evaluation and approval of proposed budgets for the Health Insurance Fund.

Ministry of Education

The faculties of the University of Skopje, which are responsible for the training of pharmacists, dentists and physicians, come under the ambit of this ministry,

as do the many schools that provide training to nurses and other health professionals.

Ministry of Construction and Human Environment

This ministry has responsibility for the built environment as well as, to a degree, monitoring atmospheric pollutants. Whilst not involved in health care, its activities can thus have a significant health impact

Ministry of Labour and Social Policy

This department both develops new, and implements existing conventions and policies in the area of social insurance and social welfare. In addition, it contributes to the health insurance fund both directly, in order to fund the care of "social cases" (which are tightly defined), and indirectly through the independent pension and unemployment funds that come under its supervision.

Ministry of Defence

The Ministry of Defence owns military hospitals that provide health services free of charge to the conscript army and the families of conscripts. They also provide services under contract with the health insurance fund to civilians and professional soldiers. Military hospital staff are funded through the defence ministry, and are army officers. With the planned transition from a conscript army to professional armed forces, the status of military hospitals may change.

Voluntary sector

The role of civil society in the health sector is limited at this time (other than in response to the emergency as a result of the Kosovo crisis). There appears to be a political will to see the expansion of this sector however, and some collaborative work with international agencies, including around pharmaceutical policy, has already been set in train.

General public

Public involvement in health policy setting is relatively underdeveloped, although service users are represented on the management board of the Health Insurance Fund. Decisions at local level are usually made with little consultation with service users. There is no formal patients' association.

Private sector providers

The Health Care law of 1991 permits private practice. By 31 December 1997, there were 1155 registered private health organizations. Of the 464 private medical practices, 261 are general medical practices, 175 specialty practices and 28 biochemical laboratories. There were also 361 dental practices and 330 pharmacies. By 31 December 1999, the number of private health organizations had increased to 1500. More than 300 private institutions, for the most part medical practices, have contracts with the Health Insurance Fund. There are no private hospitals. Whilst there is strict monitoring by the health insurance fund and detailed inspection of premises by the Ministry of Health is required to obtain a license and a contract, there is no relicensure, so it is unclear if the high standards required at initial licensure are maintained (*8*).

Professional groups

There are three "Chambers" responsible, under the supervision of the Health Insurance Fund, for the licensing and conduct of doctors, dentists and pharmacists respectively. The chambers do not yet have the right to remove the license to practice from a healthcare worker, although there are plans to introduce erasure on the basis of poor conduct, poor performance or failure to complete reaccreditation successfully. In addition to these supervisory bodies, there are the Macedonian Medical Association and the Macedonian Nursing Association. Established after the Second World War, these organizations are internally subdivided by specialty and are responsible for continuing professional development. There is no recertification at this time. Healthcare workers are represented by a single trade union that negotiates aspects of terms and conditions of service collectively.

Decentralization of the health care system

The trend over time in the former Yugoslav Republic of Macedonia has been towards the centralization of planning and control rather than towards decentralization. The system in operation in the Yugoslav era was highly decentralized, with health services under the control and ownership of local municipalities. There was no central planning or management resource. With the transition to an independent country there was a need for central health planning, and to this end, the Ministry of Health was established in 1991. This is a small country, with little pre-existing capacity and the development of

effective central planning infrastructures has been afforded higher priority than development of the managerial role at the periphery. With the development of the Health Insurance Fund central strategic and operational planning has been further strengthened. The central capacity remains weak and the number of permanent appointees at the Ministry of Health is small in comparison to other countries (fewer than 20).

Health care finance and expenditure

Main system of finance and coverage

As can be seen from Table 4 below, over 95% of official health care finance is derived either from contributions levied by the health insurance fund or from user charges. Of the remainder, half is derived from the state budget (funding vertical health promotion programmes and the care of social cases) and the remainder from other sources such as aid.

Table 4. Main sources of health care finance (%), 1991–1997

Sources	1991	1992	1993	1994	1995	1996	1997
Health Insurance Fund[1]	82.2	79.1	82.3	79.5	78.8	80.1	82.9
State Budget	–	–	–	2.5	3.1	3.5	2.2
Co-payment	–	3.7	2.3	4.0	4.9	–	–
Cash payment[2]	14.6	14.7	12.8	10.0	9.1	14.5[3]	13.0[4]
Other sources	3.2	2.5	2.6	4.0	4.1	1.9	1.9

Source: Health Insurance Fund 1997.

Notes: [1] Up until 1994, the finance derived from the state budget is included. [2] This includes an additional cash payment in early 1991, prior to the enactment of the health care law. [3] These figures include co-payments and cash payments, which are accounted for by the same budget line item at the health insurance fund. [4] There may be a degree of inflation to these figures through displaced secondary care prescribing.

Compulsory health insurance is the main source health care revenue. It covers those employed in the public or private sectors, the retired, students, the disabled, and their dependants. Certain citizens who are not covered by health insurance, for example stateless persons and social care recipients, are subsidized by the state budget, as is child and maternal care for the uninsured. Sources of revenue for the fund are set out in Fig. 3 and Table 5 below (*9*).

The rates of compulsory health insurance contribution for basic health care are as follows:

- Those employed in the public or private sectors contribute 8.6% of pre-tax income.
- Pensioners contribute 14.694% of net pension reimbursement.
- Farmers and the self-employed contribute 8.6% of the statutory minimum wage.
- The unemployed, veterans of the National Liberation War and the disabled, contribute at a rate of 12.465% of a notional basic indicator. This indicator is calculated as either 70% of the minimum wage (as defined by the Ministry of Labour and Social Policy), or, where this has not been declared, 65% of average earnings.

Employers are obliged to keep detailed personnel records for the purposes of health insurance premium collection by the Institute of Payment Operations (ZPP), through whom premia are channelled.

The unwaged do not directly contribute to the fund since their contribution constitutes a virement from other state agencies to the health insurance fund. For pension beneficiaries, the contribution is paid by the Pension Insurance Fund. For the unemployed, the contribution is paid by the Institute for Employment. For those in social care, veterans from the National Liberation War and the disabled, payment is provided by the appropriate national authority. The processing of deductions from such statutory bodies is supervised by the Institute for Payment Operations.

The remainder of insurees, the employed and the self-employed, have their contributions levied from hypothecated taxation. There is no employer's contribution and no earmarked sin taxes.

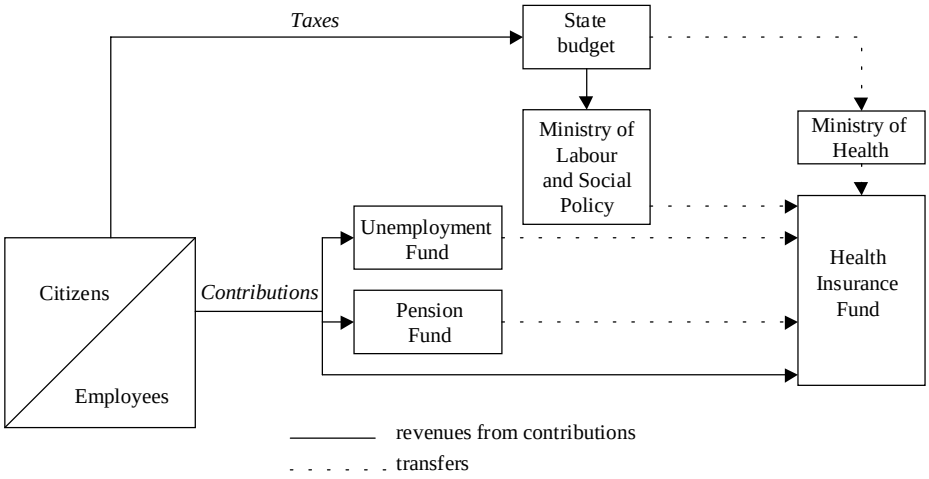
The Health Insurance Fund also raises about 2% of revenue from interest on its fund. The major resource streams for the health insurance fund are set out in Table 5.

Table 5. Sources of Health Insurance Fund revenues in %

	1991	1992	1993	1994	1995	1996	1997	1998	1999
Revenues from previous year	0.3	–	–	–	1.2	–	3.4	3.1	–
Personal contributions	79.4	75.1	79.3	73.8	68.8	64.8	62.9	60.1	62.8
Transfers from Fund for Pension and Disability Insurance	15.8	17.9	18.4	22.8	25.0	21.7	22.8	21.7	20.1
Transfers from Employment Institute	0.5	0.6	0.4	2.3	2.3	7.5	8.4	9.7	11.2
Transfers from Ministry of Labour and Social Policy	0.9	0.2	0.3	0.4	0.5	0.4	0.4	0.4	0.4
Transfers from the state budget	0.7	4.9	0.8	–	1.6	1.9	1.3	–	–
Other revenues	2.4	1.3	0.8	0.7	0.6	3.7	0.8	–	–

Source: Health Insurance Fund, 1997.

Fig. 3. Sources of finance for the Health Insurance Fund



As can be seen, most fund incomes (63%) are from the contributions of insured individuals. The proportion derived from the pension fund is also significant and has been increasing. The contributions levied from the employment institute also form a major proportion; as might be expected in the context of high unemployment, they have also shown a fairly steady increase over the years since independence.

Complementary sources of finance

Supplementary compulsory health insurance

Certain occupational groups are required to contribute additional funds to cover the risks of occupational disease or injury. This additional amount applies to all employees and to farmers. These premiums are levied from employers or, in the case of the self employed, directly. There are two rates of contribution. Non-profit organizations contribute at a rate of 0.5% of total salary cost whereas for-profit entities contribute 1.8% of their total profits. These contributions are paid directly to the health insurance fund.

In addition to organizations from whom such a contribution is levied, there are two instances where an individual was required to contribute further:

- Where an insuree has a second source of employment, he or she is required to contribute a further 2% of the additional earnings.

- Where the insuree has more than four other family members, an additional 2% of average earnings for each additional family member is levied.

The complexity of this system rendered it impossible to implement and the personal supplements were withdrawn in the Health Insurance Law in April 2000. The levies from for-profit and non-profit agencies are to be retained.

Co-payment

Co-payment, whilst not originally part of the national health plan, was introduced in 1992 by ministerial decree. The introduction of co-payment was challenged in the court and subsequently withdrawn in 1993, but was reintroduced by an amendment to the Health Care Law and has been in place since 1994 (*10*). Co-payment (or, more correctly in this case, co-insurance) was introduced with two basic ends in mind: demand management and raising additional revenue.

Whilst there is believed to have been some limited success in the achievement of the first goal, and over-utilisation of services is said to have been eliminated, as a revenue raising tool it has been less effective; co-payments contributed less than 5% to the revenues of health care providers. There are potential issues of equity in the introduction of copayments, with them serving to deter the sick form seeking help. Co-payment structures were revised in 2000 moving from a co-insurance model to a system of fixed tariffs with ceilings on total charges. Tariffs vary and are levied from all patients, including children. Injected drugs are charged at 70 denars per ampoule, magnetic resonance imaging 2000 denars, surgery for breast cancer 4000 denars and in patient care 120 denars per day. Average earnings are 10 000 denars per annum. In addition to the fixed co-payments, there remain some elements of co-insurance:

- 20% of the price of health services, accommodation and drugs for inpatient treatment;
- 20% of the total cost for approved overseas treatment
- 20% of price of hearing aids, orthodontic devices and dentures
- 50% of the price of braces and orthopaedic devices.

This is subject to an overall ceiling set by the Ministry of Health of 20% of average annual per capita health expenditure. Other exemptions from co-payments are set out below:

- selected physician check ups and emergency care for insured persons
- persons with psychiatric illness or learning disability accommodated in psychiatric hospitals

- aids and prostheses for young people under 18 years of age
- nominated social cases.

Cash payments

Additional revenues are realized by health care organizations through cash payments by the uninsured and for treatments that lie outside the basic state health care package. In addition, there is a gap between the costs of provision of the basic care package and the finance derived from the health insurance fund. Health care providers appear to use cash payments to defray this shortfall. A significant proportion of cash payment revenues are derived from the sale of pharmaceuticals both in hospitals and in state-owned pharmacies.

The extent to which informal payments are levied by health care providers in hospitals is difficult to assess. Whilst they are relatively widespread in neighbouring countries such as Bulgaria (*11*), they appear to be less common in the countries of the former Yugoslavia (*12*). The exception to this is amongst surgeons, who cannot easily work outside the hospital infrastructure, and thus whose external earning potential is limited. It is believed to be common for surgeons to levy informal payments.

Whilst some commentators estimate the degree of informal payment to be low, other assessments estimate them considerably higher. The 1999 household survey showed an increase of the proportion of private household expenditure on health care from 4.2% to 5.8% between 1995 and 1999 (*24*). This is borne out by an analysis by the Rand Corporation of the 1996 household expenditure survey, which found that 45% of total expenditure on health was from private sources (*25*).

Voluntary health insurance

The 1991 Health Care Law allows additional insurance for services outwith the basic package or for enhanced hotel services (such as single rooms, better food and televisions). This additional insurance is voluntary and may, in theory, be organized either with a private insurance company or the Health Insurance Fund. At present there is no such insurance package available. The provision has been restated in the Health Insurance Law. Services outside the state package are discussed later under *Health care benefits and rationing*.

Health care benefits and rationing

The basic care package provided for those who are covered by compulsory health insurance is defined in article 9 of the Health Insurance Law, as follows:

- periodic health checks
- preventative health care including immunization
- primary health care in institutional or domicillary settings
- emergency medical care in institutional or domiciliary settings including ambulance transport where deemed necessary
- health care for pregnant women
- maternity care
- dental treatment and disease prevention
- outpatient specialist health care
- inpatient specialist care, including hotel services and rehabilitation
- accommodation and food for an escort when it is necessary to accompany a small child up to three years of age, when it is treated in hospital not more than 30 days
- pharmaceutical products as included in the national formulary
- braces and orthopaedic devices as identified in national guidance
- reimbursement of salary during sick leave or maternity leave.

Preventative services form an important part of the package, and there are a number of vertical programmes for the primary prevention, identification and treatment of a variety of conditions. These are financed from the state budget through the Ministry of Health and include:

- communicable diseases
- HIV/AIDS
- brucellosis
- maternal and child health
- family planning
- blood donation
- immunization
- environmental health.

Public sector budgets are cash limited for each financial year, and it is in the context of these resource constraints and of the patterns of population need

that priorities are set. There is little public involvement in the priority setting agenda.

Areas of care excluded from the basic benefits package are:

- aesthetic surgical interventions that are not indicated medically
- bath treatment
- medical rehabilitation of degenerative (chronic) cases
- drugs, prostheses, orthopaedic devices and dental prosthetic devices that are not included in the national formulary
- general care, lodging and food in an institution for elderly people
- specialty-consultative and hospital health care, without referral from the selected doctor
- termination of pregnancy, if not clinically indicated
- treatment as a result of lack of compliance with the physician's instructions
- issuance of all types of medical certificates
- procurement of new prosthesis and orthopaedic devices, and other devices before the expiration date
- detoxification and treatment from acute alcoholic situation, as well as expenditure for intentional intoxication, not caused by mental disorders
- treatment abroad, without HIF approval, for expenditures that are higher than costs of the same services in the country
- treatment as a result of a criminal act or offence by the insuree
- vaccination which is not compulsory
- rehabilitation of over 30 days
- addiction treatment
- treatment from the consequences of treatment by nostrum/quack medicine.

With the continued commitment to comprehensive services, the main tool for rationing health care use has been demand management through the introduction of co-payment. The Ministry of Health claims that this has been extremely successful but there has been no evaluation of the impact on utilization or equity. It is inevitable that care for many will be rationed by virtue of the lack of funding for the health care system.

Whilst there are emerging standards for primary care pharmaceutical prescribing, there is no formulary restriction in secondary and tertiary care. This seems to lead to an increase over time in the prescribing of more expensive therapies, and an increase in the proportion of total pharmaceutical expenditure

in hospital care. Hospitals do not have prescribing policies. A primary care formulary was developed as part of a continuing medical education project funded through World Bank credit.

Health care expenditure

Data on health care expenditure are impossible to interpret in the absence of information in constant prices, and in the context of near hyperinflation over recent years (Table 6). The proportion of GDP recorded as spent in the formal health care system at under 5% care seems relatively stable since 1994 but data on both expenditure and GDP must be treated with caution.

Table 6. State costs for health care (millions of denars)

Costs	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total health care costs	68	564	3 283	6 973	7 837	8 770	9 150	12 436	10 341
Outpatient care	21	242	1 526	3 175	3 370	3 581	3 606	5 303	2 494
Hospital care (including inpatient prescribing)	30	202	1 170	2 576	2 870	2 877	3 593	4 702	5 482
Dental care	2	20	138	315	423	440	516	638	667
Positive list drugs in state pharmacies	11	88	328	623	784	939	946	1 214	1 249
Other health care costs	2.7	1.8	10.1	13.1	114.7	62.2	31.2	40.5	125.4
Treatment abroad	0.2	1.4	29.4	74.0	138.5	165.3	196.2	290.0	161.3
Investments and capital projects	–	4.1	50.8	173.5	16.6	99.2	67.3	35.6	38.9
Gross domestic product	920	11 793	59 164	146 409	169 521	176 444	–	–	–
Proportion of GDP spent on health care(%)	7.41	4.78	5.55	4.76	4.62	4.97	–	–	–

Source: Health Insurance Fund, 2000.

Table 7 shows a slight decrease in the proportion of public sector health care costs spent on inpatient care and an apparent reduction in pharmaceutical expenditure. The former may reflect the beginnings of a shift from secondary to primary care or it may relate to demand management through the introduction of co-payments, although there is little evidence for either of these. The introduction of a national drug list may have reduced pharmaceutical expenditure. The increasing involvement of private sector provision in the pharmaceutical sector is, however, the most likely factor, with the prescribing cost data solely derived from state pharmacies and unadjusted for private sector dispensing of publicly-funded pharmaceuticals.

Table 7. State health care costs per categories, (%) of state health care costs

Costs	1991	1992	1993	1994	1995	1996	1997
Outpatient health care[1]	31.2	43.0	46.5	45.5	43.0	40.9	39.4
Hospital care (including inpatient prescribing)	43.3	35.8	35.6	36.9	36.6	32.8	39.3
Dental care	3.4	3.5	4.2	4.5	5.4	5.0	5.6
Positive list drugs in state pharmacies	15.8	15.7	10.0	8.9	10.0	10.7	10.3
Other health care costs	3.9	0.3	0.3	0.2	1.5	0.7	0.4
Treatment abroad	0.3	0.2	0.9	1.1	1.8	1.9	2.2
Investments and capital projects	-	0.7	1.6	2.5	0.2	1.1	0.7
Vertical programme expenditures	2.1	0.8	0.9	0.4	1.5	3.1	2.1

Source: Health Insurance Fund, 1998.

Note: [1] There may be a degree of inflation to these figures through displaced secondary care prescribing.

Whilst Fig. 5 shows 98% of health expenditure to be in the public sector, other sources discussed earlier show that this is a marked overestimate. Nevertheless similar trends in inpatient expenditure and pharmaceutical spending are visible for overall health expenditure (Table 8) as for public sector expenditure.

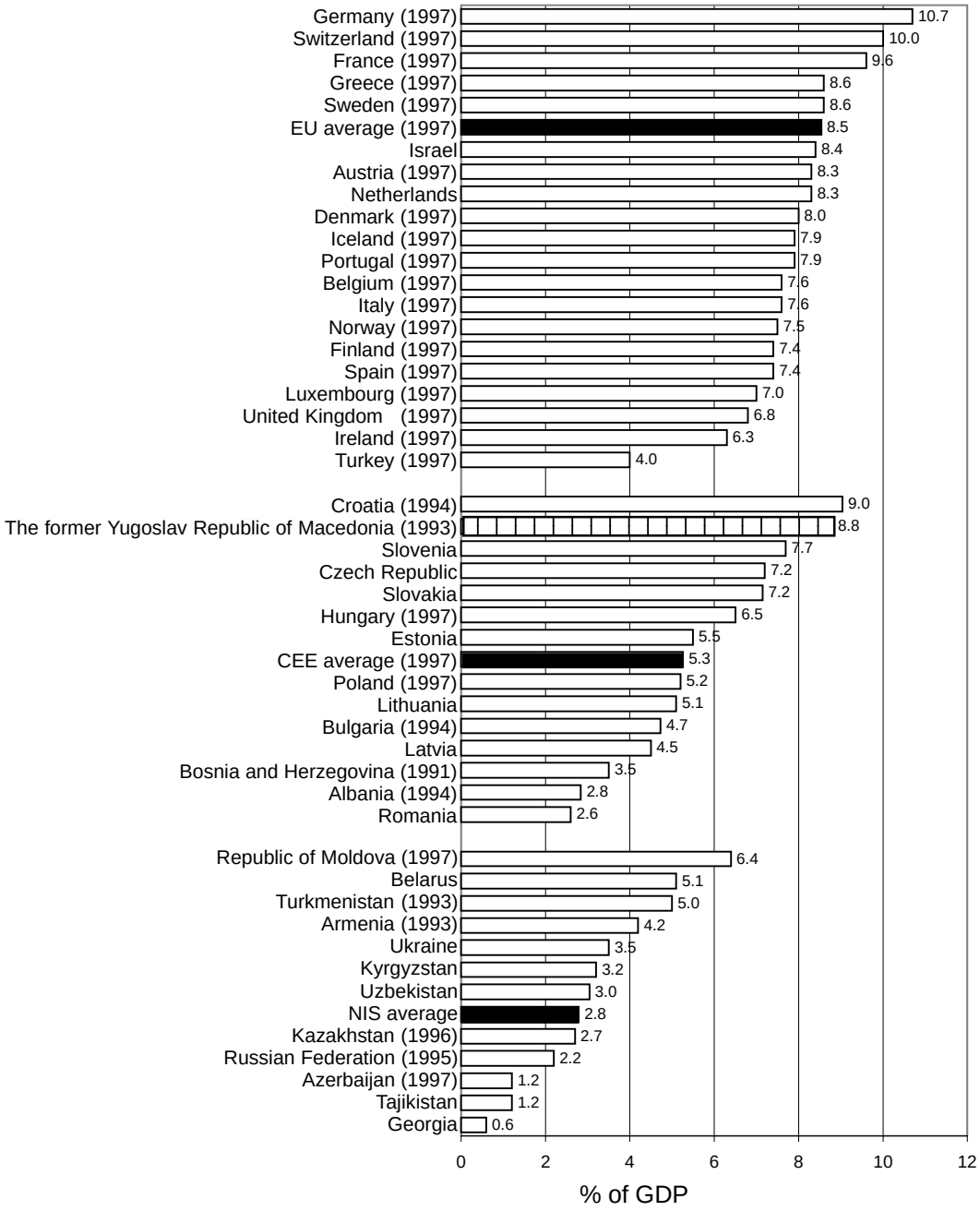
Table 8. Health care expenditure by category, (%) of total expenditure on health care

	1990	1991	1992	1993	1994	1995	1996
Inpatient care (%)	26.8	26.5	35.9	35.6	36.9	31.5	29.4
Pharmaceuticals (%)	6.9	8.4	15.7	10.0	8.9	8.6	9.6
Investment (%)	–	–	0.6	1.4	2.2	0.2	1.0

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

Fig. 4 would suggest that the former Yugoslav Republic of Macedonia spends a comparable proportion of GDP on health to EU countries and significantly more than many of the countries of central and eastern Europe. This appears also to be the case with other countries of the former Yugoslavia. Hospital expenditure is low relative to countries of central and eastern Europe. As already noted, these data must be treated with the utmost caution.

Fig. 4. Total expenditure on health as a % of GDP in the WHO European Region, 1998 (or latest year)



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

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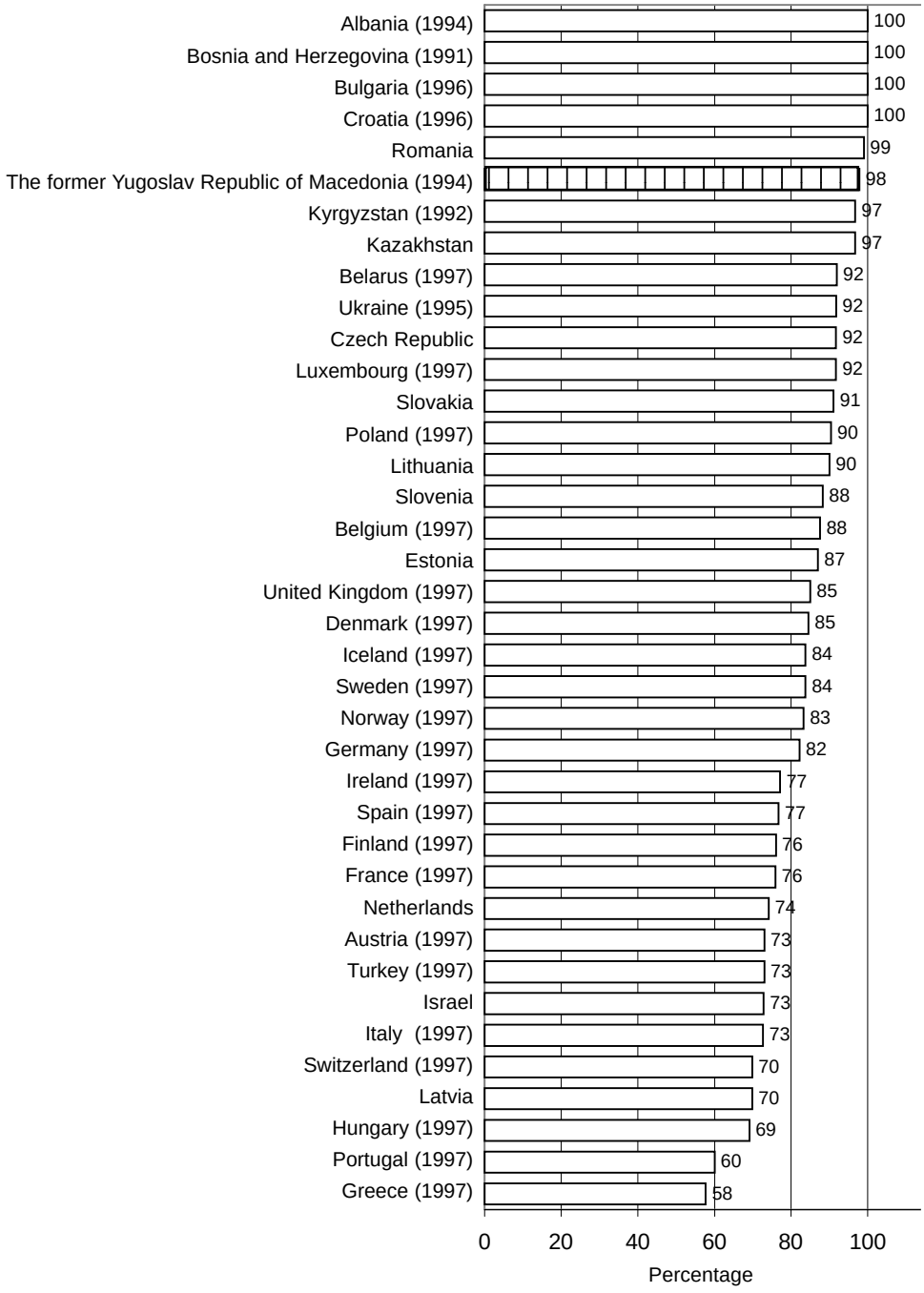
Fig. 5. Health expenditure from public sources as % of total health expenditure in the WHO European Region, 1998 (or latest available year)



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

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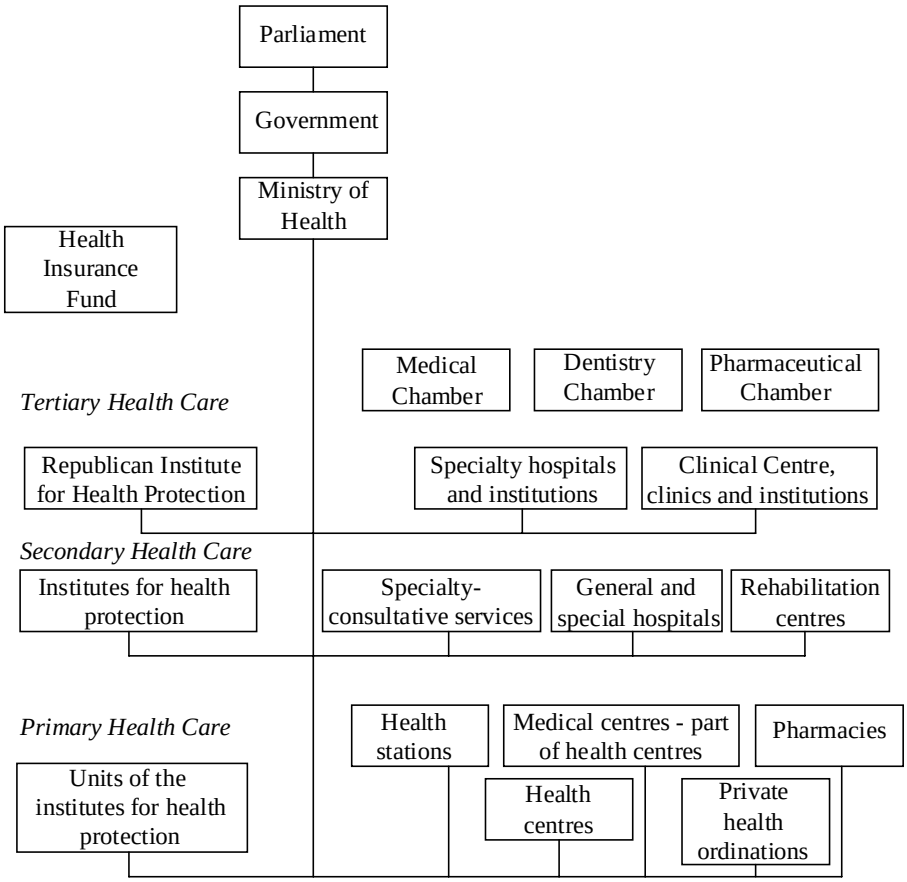
Health care delivery system

Health care is delivered by 77 organizations in the public sector: 11 preventive health care institutes, 3 health stations, 18 health centres that provide primary health care in small cities, 16 medical centres that provide primary and secondary health care, 15 specialist hospitals, 1 general hospital, 6 self-managing pharmacies, as well as a clinical centre (university hospital) with 28 specialist clinics, and a number of other medical and dental tertiary centres. Organizationally, the medical centres incorporate hospital services, ambulatory services and primary health care and are often spread over multiple sites. The health centres include primary health care and some ambulatory secondary care such as ophthalmology and otorhinolaryngology.

Most health care organizations are based in relatively new single-purpose health facilities. Medical equipment and vehicle stock are often old and in a poor state of repair. This is a particular issue in primary health care, where there are significant difficulties in securing the funding necessary for ongoing maintenance (*13,14*). Funds for primary health physician's equipment were part of the continuing medical education project funded through World Bank credit.

Health care is organized on the three conventional levels: primary, secondary and tertiary. These terms, however, relate more to the nature of the institution than to the care given there. Many institutions in the former Yugoslav Republic of Macedonia provide both primary and secondary care without a clear distinction. Tertiary care institutions also provide services which, in other countries would be considered secondary care or even primary care**.**

Fig. 6. Organizational chart of the health care delivery system



Primary health care and public health services

Primary care provides the first contact between the patient and the health care system. Care is multidisciplinary and is delivered in five separate streams (in addition to dental primary care). These streams are as follows:

- general medicine (therapeutics)
- occupational medicine
- children's medicine

- school medicine
- women's medicine.

Each stream is staffed by different specialist physicians, and provides general medical services and some specialist services to the group concerned. Within a family, therefore, each member may be under the care of a different physician and a different department within the same health centre. Roles are complex. Occupational medicine, for example, provides general medical services for the employed population as well as services in connection with employment. Children's medicine deals with all the primary care needs of children below school age (0–6 years), at which time they fall under the aegis of the school medicine stream. The women's medicine department provides primary care services to women in addition to gynaecological and obstetric services. These distinctions in service delivery are not present in rural settings. There are also separate services for tuberculosis prevention, dental care and "polyvalent patronage", providing general family health visiting services. Whilst in some cases the different departments are still geographically separate, they now come under the auspices of a single primary care provider institution.

Primary health care is delivered through in excess of 1200 separate facilities, or one for every 1600 people on average (of which 294 are rural units), and employs over 59% of physicians. Of the rural units, 174 have the full-time services of a physician. Overall, in rural areas, there are 271 physicians each with 1.6 health workers (mainly nurses) with advanced or intermediate level training. Advanced level training equates to two years' vocational experience whereas intermediate level training is obtained during high school (as explained later under *Human resources and training*). Average list sizes in rural primary care are approximately 3000 service users per physician. The standard for list size is 1800. In the urban setting, the situation is more complicated. There are 768 physicians within general medicine departments (with 1.3 advanced and intermediate staff per physician). There are also 687 specialists (in the other four streams of primary care) involved in the provision of urban general medical services. This constitutes 36% of overall primary care physician numbers (1885 based upon 1997 data).

Primary health care also has been provided in private health organizations since 1991. In 1997, 447 private practices were registered, 265 general practices and 182 specialty practices. Primary health care is provided in 209 private general practices in urban areas and 56 general practices in rural areas. Dental care is delivered in 365 private practices, of which only 28 are in rural areas. There are also 28 private laboratories and 342 private pharmacies (14 in rural areas).

There are no established standards for primary care staffing in the former Yugoslav Republic of Macedonia. As can be seen in Table 9, there are relatively few intermediate and advanced grade non physician staff in primary care. List sizes are roughly in accord with the neighbouring countries. It should be noted, however, that provision is relatively poor in rural settings. The relative overprovision of general medicine physicians in the urban setting (worse than appears in Table 9 due to rural underprovision), may in part be due to competition for patients with occupational physicians seeking to provide more general medical services in the context of increasing unemployment.

Table 9. Physician provision in primary health care, 1997

Department	List size	Health workers with advanced and intermediate professional training per physician
General medicine	1 297	1.4
Children aged 0–6	653	1.4
School children	2 221	1.2
Women	8 478	2.3
Occupational medicine	–	1.0

Source: Republic Institute for Health Protection.

In 1997, decrees were introduced to develop the selected primary physician (*15*). This physician, from the relevant department for the patient, provides basic care and acts as the gatekeeper to further services if to be funded through the health insurance fund. The primary health care physician is responsible for providing the following services:

- general medical services
- to prescribe prescription only medicines
- to make referrals for ambulatory specialist services
- to make referrals for hospital treatment
- to confirm temporary working disability up to 15 days
- to refer to a committee for review of temporary working disability if in excess of 16 days (a second referral is required at 60 days).

The selected primary physician scheme has only been partially implemented.

Health care provider institutions are subject to initial licensure to ensure that standards with regard to space, staffing levels and equipment are met. These standards are not fully enforced in public sector institutions and

reinspection and relicensure are not practised. Thus many facilities, particularly those in a rural setting lack basic infrastructure.

At three outpatient contacts recorded per person per year (Fig. 7), ambulatory service usage is one of the lowest in Europe. The validity of these dates are somewhat questionable.

Public health services

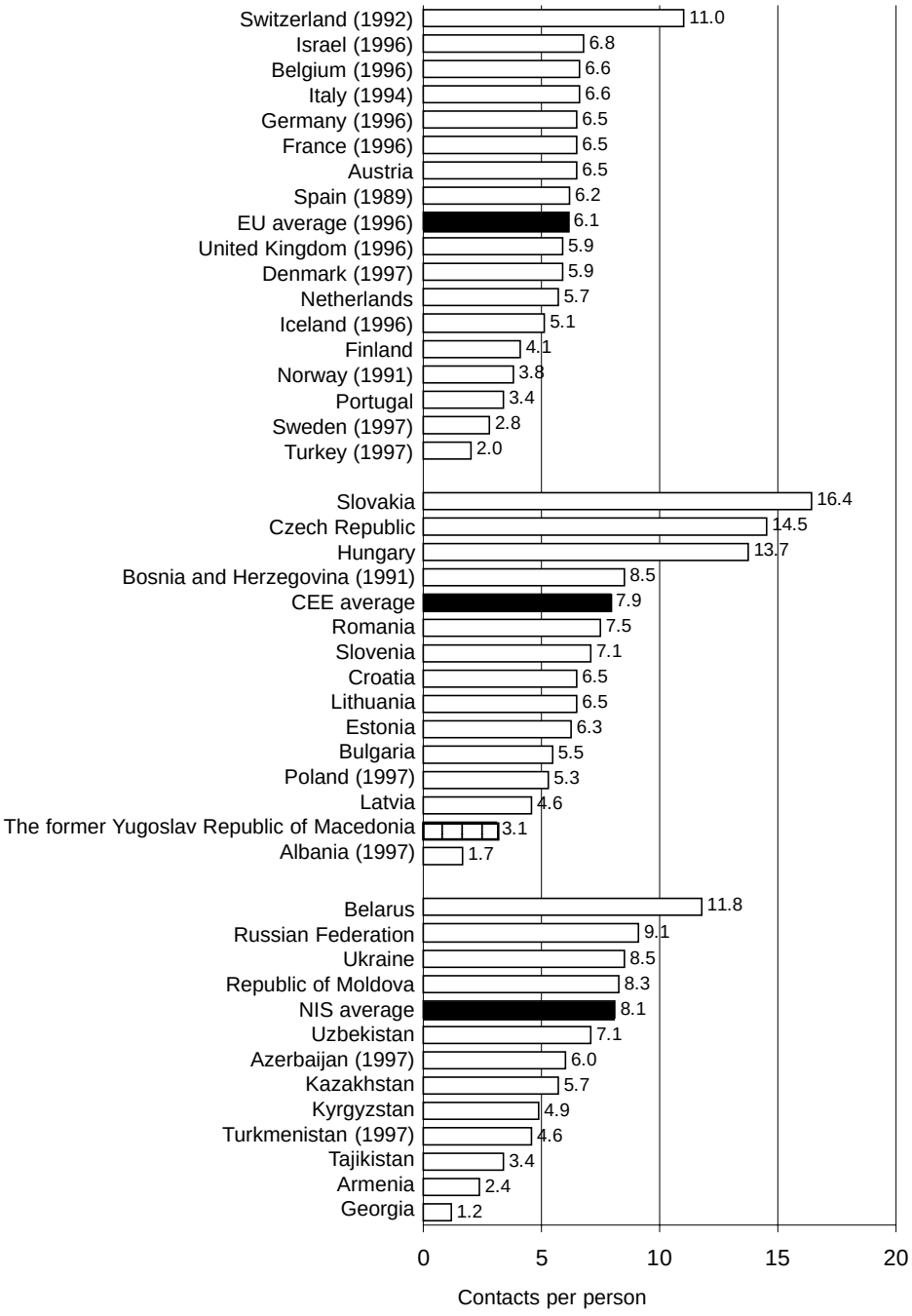
The Republic Institute of Health Protection is the central tertiary centre for public health activity. It coordinates teaching activity at the medical faculty, supervises and oversees the activities of ten regional institutes of health protection, and provides technical services to the clinical centre and to the country as a whole. The ten regional institutes have branch offices – a total of 21 – which provide services in the localities. As of 1993, institutes of health protection have been separate from health service delivery, and are charged with, amongst other functions, the delivery of vertical programmes such as that for HIV/AIDS. The regional institutes are located in the major municipalities: Bitola, Kochani, Kumanovo, Ohrid, Prilep, Strumica, Skopje, Tetovo, Veles and Shtip. Each regional institute employs around 100–150 staff. Services for Skopje are provided by the republic institute. The 21 branch offices of the regional institutes, or hygiene epidemiological surveillance stations, are located in health centres throughout the country. These also provide clinical laboratory services.

The institutes of health protection have four basic functions: microbiology, hygiene, epidemiology and social medicine. In addition to these functions, the republic institute of health protection provides virological, pharmacological/ toxicological and radiation protection services to the whole country.

The four divisions are (see Fig. 8):

- *Microbiology*: in addition to laboratory services, the microbiology directorate supervises and coordinates the immunization programmes and the vertical programme for HIV/AIDS. It is also responsible for the control of communicable diseases and the administration of quarantine legislation.
- *Hygiene*: in addition to sanitation and waste disposal, the hygiene directorate monitors food and water control sets standards in food and water hygiene, and also in terms of nutritional standards and nutritional analysis. It is the directorate responsible for the study and analysis of environmental pollution.
- *Epidemiology*: this directorate monitors disease patterns within the country, with a primary focus on noncommunicable diseases, it also monitors health behaviours.

Fig. 7. Outpatient contacts per person in the WHO European Region, 1998 (or latest available year)



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

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- *Social Medicine*: this directorate collects collates and processes demographic, epidemiological and healthcare activity data. At a national level, health economics, organization and informatics rest within this directorate.

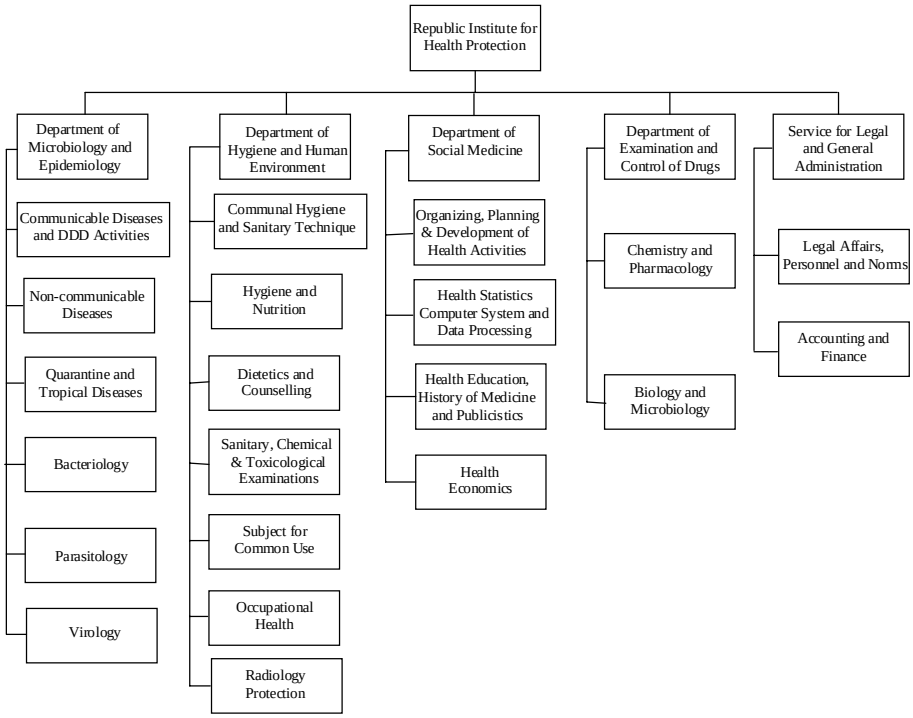
The main functions of the Republic Institute for Health Protection are: collection of data for health for all indicators; monitoring the health status of the population; reports and analysis of the health status and organization of the health care system; epidemiological surveillance; immunization; environmental monitoring; drug control; and advising the Ministry of Health on matters related to health policy. To these ends, the institute is responsible for:

- coordination of the operation of the 10 Institutes for Health Protection and other 21 hygiene-epidemiology stations;
- a reference centre for health statistics, for data processing and statistical analysis;
- design and development of national health information system;
- health promotion and health education;
- rapid response to communicable disease epidemics;
- a reference centre for the processing and analysis of biological samples or specimens, as well as physical and chemical analysis of environmental samples;
- development of emergency preparedness strategies and plans to deal with other untoward events;
- control of drugs, drugs components and auxiliary drugs;
- monitoring and control of ionising radiation;
- a training centre for public health, epidemiology and hygiene for health workers and others;
- development of professional development and governance frameworks and criteria for public health, epidemiology and hygiene workers;
- as an affiliated School of Public Health and Hygiene to the Medical Faculty in Skopje.

There are a number of centrally-funded vertical programmes which are, for the most part, delivered by primary care staff. Ongoing programmes include (*16*):

- general check-ups of school children and students
- mother and child health care
- blood donation
- immunization (compulsory)

Fig. 8. Structure of the Republic Institute of Health Protection



- tuberculosis prevention
- screening, protection and prevention of brucellosis
- AIDS protection.

These programmes, funded centrally by the Ministry of Health, obtain additional financial support through the World Bank and its Health Care Transition project.

Immunization is compulsory and reported levels are high, historically of the order of 92–98% coverage. The programme is delivered by primary care workers, and includes immunization against tuberculosis, diphtheria, pertussis, poliomyelitis, tetanus, measles, mumps and rubella (*17*).

There is a considerable emphasis on routine check ups: in 1996 there were 20 026 visits for well-person checks in general medicine units. A similar number were performed in occupational health units. Examinations have continued despite decreases in employment levels. There is no information on the effectiveness of these activities. Amongst physicians specializing in women's

health there are, on average, four well-woman checks performed per physician per day. Overall, women's health accounts for about 38% of check ups. Despite this large volume of activity there are no national programmes for interventions that have been shown to be effective, such as cervical cytology screening or for screening mammography. Rates of preventative consultations amongst children account for nearly a quarter of child health activity.

Patronage, a form of specialized nursing, also involves a number of public health functions. Akin to health visiting, it is a family-based service involving visits to mothers postpartum and to infants. In some regions, the patronage service has been augmented to include preventative and therapeutic interventions around ischaemic heart disease, tuberculosis and cancer. This is termed polyvalent patronage.

Communicable disease notification is mandatory for physicians but the extent of ascertainment has not been studied. There is also a compulsory system of laboratory-based reporting. Data are collated at the institutes of health protection.

Secondary and tertiary care

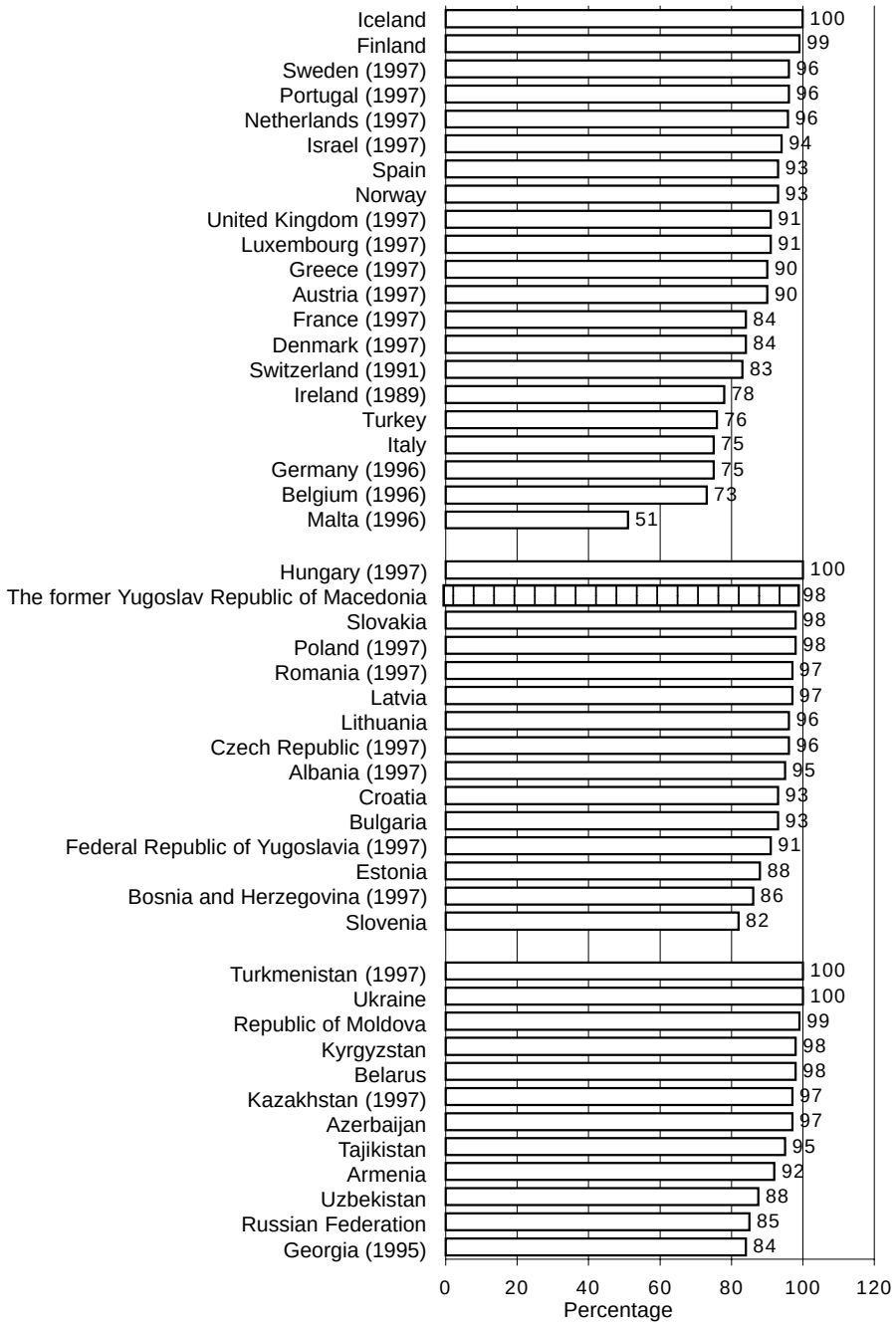
Secondary and tertiary health care are subdivided into "specialty-consultative" health care, which is responsible for ambulatory assessment and treatment, and hospital care which is, in turn subdivided into general and specialist care. Secondary care is organized through local health administrations called medical centres which include polyclinics and general hospitals and are often based on a number of geographical sites. Medical centres come under the managerial control of a director, an appointee of the Ministry of Health, who is usually a physician. There are usually two assistant directors, a legal director and a financial director.

Specialty-consultative health care

Specialty-consultative health care is provided under the auspices of the medical centres in ambulatory polyclinics. These also provide primary care services. Services provided include specialist treatment, diagnostic services and rehabilitation services.

In 1997 specialty-consultative health care was provided in 328 facilities, in which 580 physicians were employed, 89.3% of which are specialists, and 820 health workers with advanced and intermediate professional training (1.4 per physician). In the same year, a total of 1 924 299 consultations was recorded,

Fig. 9. Levels of immunization for measles in the WHO European Region, 1998 (or latest available year)



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

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1 375 099 of which were new patient appointments. This equates to 15.4 consultations per physician per day, and approximately 0.4 follow up consultations per new patient consultation.

Medical rehabilitation is delivered in 22 outpatient clinics, in which 40 physicians are employed (most of whom are specialists) and 152 health workers with advanced and intermediate professional training: 3.9 per physician. In 1997 a total of 82 677 consultations took place, 45 812 of which were first visits – 0.8 follow-up consultations per new patient consultation – and 7.4 consultations a day per physician.

Hospital health care

Access to hospital is via referral from primary care or secondary care (although there is free access to specialist services for the self-funding patient). Accident and emergency services are not part of Macedonian hospitals (this care is provided in a primary care setting); the only specialist accident and emergency unit is at the clinical centre in Skopje. This unit does not accept ambulatory self-referrals. Acute psychiatric care is provided in most general hospitals. General services delivered in a district hospital setting include:

- diagnosis, treatment, rehabilitation
- meals and ancillary services for patients in inpatient facilities
- round-the-clock specialist supervision
- admission of urgent cases
- consulting medical assistance
- collaboration in preventative health programmes
- specialist domiciliary care
- health education
- training of health care workers and collaboration with other parts of the care sector.

In certain instances, only part of the care package is covered. In specialist geriatric units, for example, patients are required to pay for their own "hotel" charges (of the order of 9000–10 000 denars per month) – although in cases of hardship the Ministry of Social Policy may contribute. Likewise in long-stay neuropsychiatric institutions – which provide long-term care for about 1500 people in somewhat dilapidated surroundings – medical costs are reimbursed by the health insurance fund.

There is a legacy, in Macedonian hospitals, of service provision not being based upon population need and service usage. The distribution of hospital

beds between specialties as well as between institutions is often not optimal. This is partly as a result of the system that was in place prior to 1991, where the local municipality determined provision, and certain services were provided as a matter of civic pride. In more recent times, information on excess and inappropriate capacity has been collected centrally. Service rationalization programmes have yet to be initiated.

Whilst medical centres are headed by directors, this role is more administrative role than managerial. A lack of management skills, coupled with line item budgeting and the absence of service frameworks, formularies and guidelines, further militate against rational service configuration and delivery. Collaboration between primary health care services and hospitals is through physician referral and laboratory reporting. Hospitals also provide postgraduate training courses for physicians working in primary health care services.

The total number of hospital beds in 1997 was 10 298: 5.2 per 1000 inhabitants. Average length of stay in hospitals was 13.4 days and occupancy rate was 68.5%. There is no separation between acute and long-term care beds.

As can be seen from Fig. 10, whilst there has been a steady decrease in hospital beds in the EU in recent years, bed numbers have been relatively static in the former Yugoslav Republic of Macedonia, at a level somewhat lower than the EU average.

Table 10 suggests inappropriate utilization of facilities, with low bed occupancies and long average lengths of stay. Both of these factors do appear to have seen some improvement over the past few years. This is attributed locally to the introduction of co-payments.

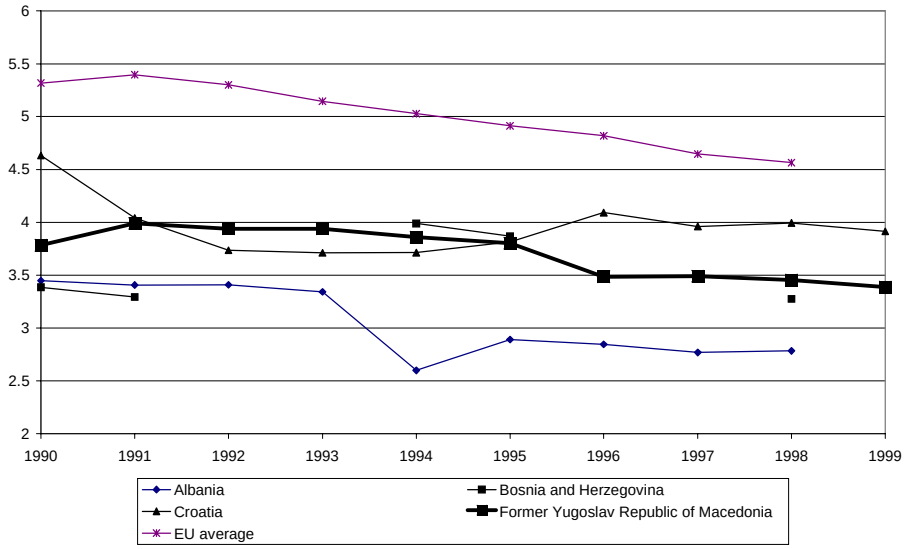
Table 10. Inpatient facilities utilization and performance

Inpatient	1990	1991	1992	1993	1994	1995	1996	1997	1998
Hospitals per 100 000 population	2.5	2.7	2.7	2.6	2.6	2.6	2.7	2.7	2.5
Total beds per 100 000 population	595	579	570	560	555	541	520	516	469
Admissions per 100 population (all hospitals)	9.7	10.0	10.3	9.8	9.9	9.8	10.0	10.0	8.9
Average length of stay in days (all hospitals)	15.4	14.4	16.6	17.6	14.0	14.3	14.0	13.4	12.7
Occupancy rate (% acute hospital beds)	69.0	64.9	68.2	68.2	68.0	67.4	67.1	63.9	66.5

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

The 16 general hospitals provide at least five specialties: internal medicine; surgery; paediatrics; obstetrics and gynaecology; and anaesthesiology. In this context, internal medicine is given a broad definition, including ophthalmology (non-surgical, largely optometry and spectacle provision), otorhinolaryngology and psychiatry.

Fig. 10. Hospital beds in acute hospitals per 1000 population in the former Yugoslav Republic of Macedonia and selected European countries, 1990–1999



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

Specialized hospital care is delivered in six specialized hospitals and seven rehabilitation centres with 2225 hospital beds, 34.8% of the total number of secondary care beds. The average length of stay is longer than in the general hospitals and works out at 72.3 days. Bed occupancy is 77.8%.

The length of stay is the longest in three specialist psychiatric hospitals in Skopje, Demir Hisar and Gevgelija with in excess of 300 days per case and in the Institute for Geriatrics-Skopje with 232 days per case.

As can be seen from Table 11, average lengths of stay remain long and bed occupancies low relative to many of the other countries of the region. Admission rates and number of beds per 1000 population are at intermediate levels. This needs, however, to be examined in the context of a very young population structure relative to other European countries. On this basis, admission rates may be considerably higher than one might expect. Fig. 11 shows a lower number of beds per 1000 population than most of the countries of central and eastern Europe.

Tertiary Health Care

Tertiary care is provided in specialist hospitals as well as in single-purpose research institutes and in the clinics and institutes of the Clinical Centre-Skopje.

Tertiary care institutions are all located in the capital, Skopje. As well as providing a tertiary care referral service, they provide secondary care for the local population. All tertiary care organizations perform teaching and research functions. In the Yugoslav era, tertiary units were distributed throughout the Federal Republic. Some tertiary care specialties were thus provided outside The former Yugoslav Republic of Macedonia. There are plans to provide more services within the country and to build capacity in tertiary care. To this end, a new cardiothoracic surgery unit has been developed in a military hospital, which also contracts with the health insurance fund to provide services to civilians. Access to tertiary care institutions is available through referral from primary care or secondary care physicians.

The Clinical Centre, Skopje is at the top of the health care pyramid, provides tertiary health care in a number of specialties, education and scientific research. It has 18 clinics and institutes, with more than 2000 beds. More than half of its patients are from outside the capital. The average length of stay in the Clinical Centre is 12.6 days, bed occupancy is 74.5%.

Overall, the total number of beds in other tertiary units is 1240. The average length of treatment in tertiary hospitals varies from 4.3 days in the specialist hospital for gynaecology and obstetrics in Chair to 128.0 days in the hospital for psychiatric diseases in Bardovci.

Social care

The social care sector is poorly developed, with care for older people being delivered either by the family in the home, or in long-stay elderly care beds in hospital – for which hotel charges are levied (although these can be recouped in exceptional cases). There are no residential old peoples' homes or nursing homes. Care for people with long-standing psychiatric illness is provided, for the most part, in long stay neuropsychiatric units, although home care is available on a private basis. The cost of such home care is relatively high – of the order of 8000 denars a day (pension income is 10 000 denars per month).

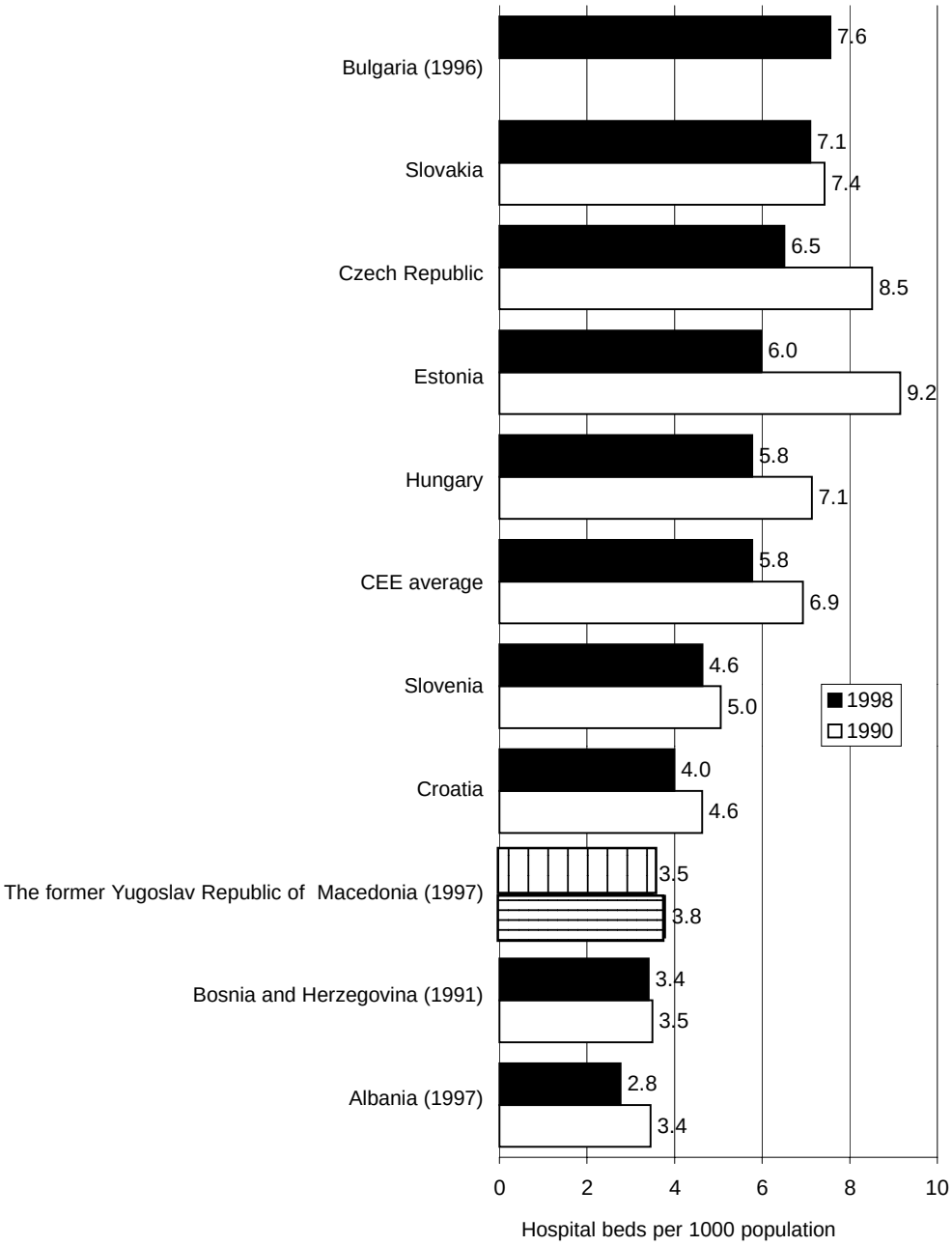
People with learning disabilities or with severe physical handicap are termed social cases and are afforded additional benefits such as exemption from all co-payments and user charges. The majority are domiciled in an institutional setting.

Table 11. Inpatient utilization and performance in acute hospitals in the WHO European Region, 1999 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	6.4[a]	25.8[a]	6.8[a]	75.4[a]
Belgium	5.2[b]	18.9[c]	8.8[b]	80.9[c]
Denmark	3.4[a]	18.7	5.7	78.3[a]
Finland	2.5	19.7	4.5	74.0[d]
France	4.3[a]	20.3[d]	5.6[a]	75.7[a]
Germany	7.0[a]	19.6[b]	11.0[a]	76.6[b]
Greece	3.9[g]	–	–	–
Iceland	3.8[d]	18.1[d]	6.8[d]	–
Ireland	3.2[a]	14.6[a]	6.8[a]	84.3[a]
Israel	2.3	17.9	4.3	94.0
Italy	4.5[a]	17.2[a]	7.1[a]	74.1[a]
Luxembourg	5.5[a]	18.4[e]	9.8[c]	74.3[e]
Malta	3.8	–	4.2	79.3
Netherlands	3.4[a]	9.2[a]	8.3[a]	61.3[a]
Norway	3.3[a]	14.7[c]	6.5[c]	81.1[c]
Portugal	3.1[a]	11.9[a]	7.3[a]	75.5[a]
Spain	3.2[c]	11.2[c]	8.0[c]	77.3[c]
Sweden	2.5	15.6[a]	5.1[c]	77.5[c]
Switzerland	4.0[a]	16.4[a]	10.0[a]	84.0[a]
Turkey	2.2	7.3	5.4	57.8
United Kingdom	2.4[a]	21.4[c]	5.0[c]	80.8[a]
CCEE				
Albania	2.8[a]	–	–	–
Bosnia and Herzegovina	3.3[a]	7.2[a]	9.8[a]	62.8[d]
Bulgaria	7.6[c]	14.8[c]	10.7[c]	64.1[c]
Croatia	3.9	13.2	9.4	87.2
Czech Republic	6.3	18.2	8.7	67.7
Estonia	5.6	18.4	8.0	69.3
Hungary	5.7	21.8	7.0	73.5
Latvia	6.3	20.0	–	–
Lithuania	6.4	20.6	9.1	78.8
Poland	–	–	–	–
Romania	–	–	–	–
Slovakia	7.0	18.4	9.6	69.8
Slovenia	4.6	16.0	7.6	73.2
The former Yugoslav Republic of Macedonia	3.4	8.8	8.8	63.0
NIS				
Armenia	5.5	5.6	10.4	29.8
Azerbaijan	7.5	4.7	14.9	30.0
Belarus	–	–	–	88.7[e]
Georgia	4.6	4.7	8.3	83.0
Kazakhstan	5.8	14.0	12.3	92.6
Kyrgyzstan	6.1	15.5	12.8	92.1
Republic of Moldova	6.8	14.4	14.0	71.0
Russian Federation	9.0	20.0	13.7	84.1
Tajikistan	6.1	9.4	13.0	64.2
Turkmenistan	6.0[b]	12.4[b]	11.1[b]	72.1[b]
Ukraine	7.6[a]	18.3[a]	13.4[a]	88.1[a]
Uzbekistan	–	–	–	–

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

Fig. 11. Hospital beds in acute hospitals per 1000 population in central and eastern Europe, 1990 and 1998 (or latest available year)



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

The former Yugoslav Republic of Macedonia

Human resources and training

There is a legacy of a large health care workforce. This is partly as a result of the setting of relatively high norms for the number of doctors in Yugoslavia, and partly as a result of the absence of entry quotas to health care professional training institutions. In recent years, official policy on admission to the medical faculty as well as to dentistry and pharmacology has become more restrictive, with the objective of aligning supply and demand in health care human resources. Target intakes for these three faculties have been reduced by 20% since 1998, although actual intakes have not reduced accordingly.

Physicians are trained at the medical faculty, Skopje University. Undergraduate medical education takes six years, and confers the title doctor of medicine upon graduation. In order to practice independently, the graduating physician has to complete a 12-month internship and pass a further examination. This confers a license to practice unsupervised as a general practitioner, or to practice supervised as a junior in a specialist training programme (*18*). The specialist training programme for primary care general medicine is, in effect, a repeat of the undergraduate training curriculum (*19*).

Healthcare institutions operate under a chef de service system, with organizational accountability of physicians channelled through a chief of staff. Clinical accountability does not follow this route and, whilst physicians are nominally accountable for their conduct and performance to the chamber of physicians, there have been very few sanctions exercised through this route and the chamber does not have the power of erasure. Continuing professional development is rudimentary, although programmes of compulsory ongoing education are being introduced. A continuing medical education project, funded through World Bank credit, has trained trainers and over 200 primary health care physicians.

Table 12 indicates the numbers of health care workers in public employment. With regard to physicians, in addition to approximately 4500 in public sector employment, there are 500 working in the private sector and approximately 1000 unemployed doctors. It is partly as a result of this high level of physician unemployment that medical school intake has been capped. Thus whilst Fig. 12 shows a modest two physicians per 1000 population the true overall figure is in excess of three per 1000. This is relatively high for central and eastern Europe, and approaching EU levels.

Table 12. Health care personnel numbers, 1980–1997 (physical persons)

Staff	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Physicians	2 538	3 561	4 396	4 487	4 564	4 528	4 505	4 516	4 464	4 491
Dentists	446	778	1 112	1 118	1 078	1 078	1 087	1 086	1 078	1 089
Certified nurses	6 844	8 825	10 374	10 280	10 433	10 440	10 544	10 666	10 646	10 647
Auxiliary nurses	1 159	1 099	891	851	829	771	653	–	–	–
Midwives	1 646	1 354	1 474	1 444	1 466	1 436	1 479	1 469	1 435	1 446
Pharmacists	173	277	372	393	414	358	357	349	342	335
Physicians graduating	159	311	166	161	177	161	158	164	156	171
Nurses graduating	277	–	–	–	–	–	–	–	–	–

Source: Health Insurance Fund, 1998.

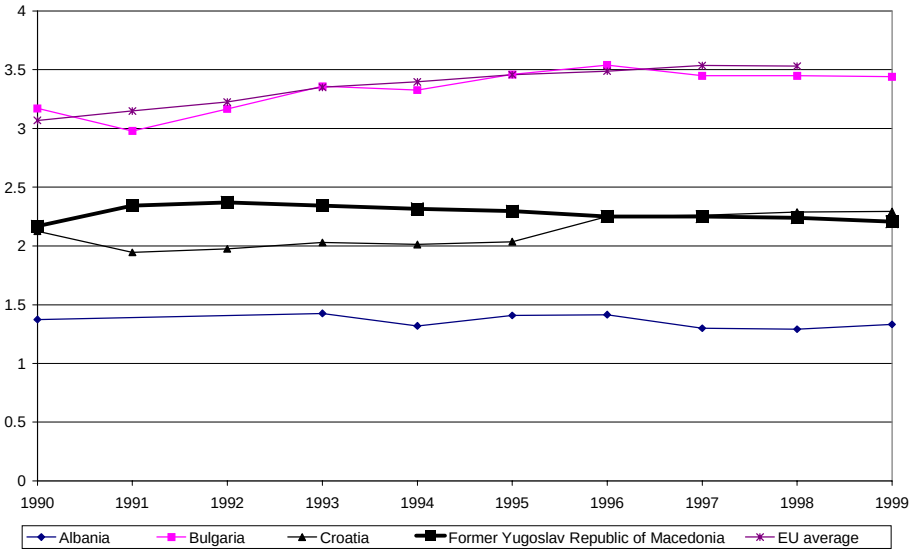
The Stomatology Faculty in Skopje trains dentists in a six-year undergraduate programme followed by a twelve-month internship and licensing examination. The Pharmacology Faculty in Skopje is the only school for pharmacists, with four-year undergraduate studies followed with a twelve-month internship and licensing examination.

Specialization is laid out in law, with specialist training programmes of between three and five years (*20*). The regulations indicate 30 medical subspecialties, 8 dental specialties and 8 specialties in pharmacy and pharmacology. Specialist primary care is provided by different types of physicians than those in the related specialty in secondary care, who have undergone different postgraduate training. Thus a primary care gynaecologist would provide only ambulatory care and would not be involved in hospital obstetrics and gynaecology. Training times for primary care subspecialties are as follows: obstetrics and gynaecology (48 months); paediatrics (48 months); school medicine (36 months); occupational medicine (36 months); and general medicine (36 months). Family medicine specialists are not a feature of the Macedonian health care system at this time.

Most nurses, and other middle level personnel are educated at vocational secondary schools. These include childrens nurses, physiotherapists, midwives, dental, pharmacy and laboratory technicians. These schools take pupils between the ages of 15 and 19, and are situated in Skopje, Ohrid, Bitola, Tetovo and Shtip. This training period is followed by a 6-month internship. There is also a school for nurses with advanced professional training in Bitola, offering a two-year undergraduate programme, followed by a nine-month internship and a licensing examination. The majority of intermediate and advanced level health care staff are trained at the expense of their employing institution.

In 1997 23 707 individuals were employed in the state health care sector. Of these, 17 575 or 74.1% are health professionals and 6132 ancilliary workers (25.9%). The numbers of intermediate and advanced health care workers in

Fig. 12. Physicians per 1000 population in the former Yugoslav Republic of Macedonia and selected European countries, 1990–1999



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

primary care is below the national targets with total number of 10 647 in the public health sector in 1997.

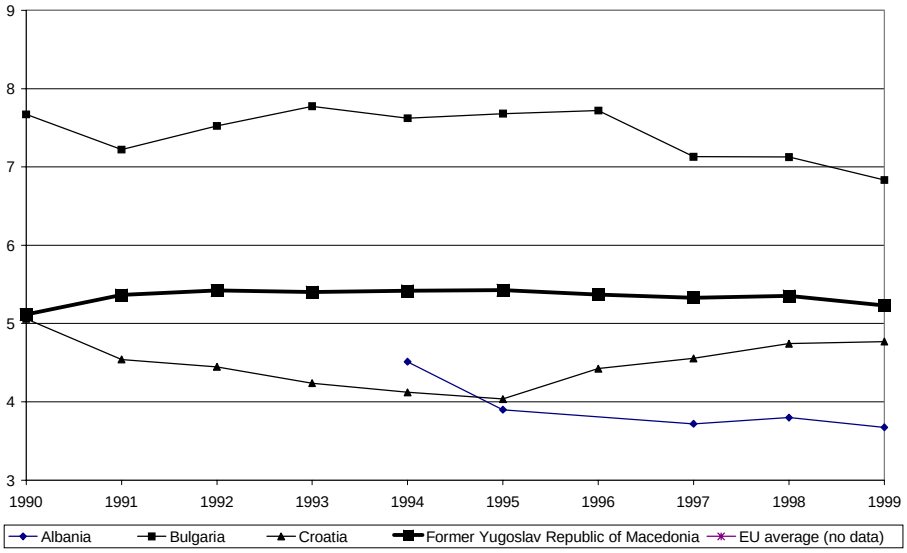
As can be seen from Table 13, The number of physicians has shown a decreasing trend since 1992. Within this the trend has been an increase in the number of specialists. The total number of specialists reached 2773 in 1997, an increase of 1.5% on the previous year.

Table 13. Health care personnel per 100 000 population, 1980–1997

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Doctors	134.4	180.9	216.8	234.2	237.1	234.3	231.5	229.7	225.1	224.9
Dentists	23.6	39.5	54.8	58.4	56.0	55.8	55.9	55.2	54.4	54.5
Nurses	362.3	448.2	511.5	536.7	542.0	540.2	541.9	542.5	536.8	533.9
Midwives	55.4	68.8	72.2	75.4	76.2	74.3	76.0	74.7	72.4	72.4
Pharmacists	9.2	14.1	18.3	20.5	21.5	18.5	18.4	17.8	17.3	16.8
Physicians Graduating	8.4	15.8	8.2	8.4	9.2	8.3	8.1	8.3	7.9	8.6
Nurses Graduating	14.7	–	–	–	–	–	–	–	–	–

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

Fig. 13. Nurses per 1000 population in the former Yugoslav Republic of Macedonia and selected countries, 1990–1999



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

Dental staff in the public sector represent the majority of provision of this service with 1089 stomatologists. There are a further 365 in the private sector. Overall there are 1374 patients per dentist.

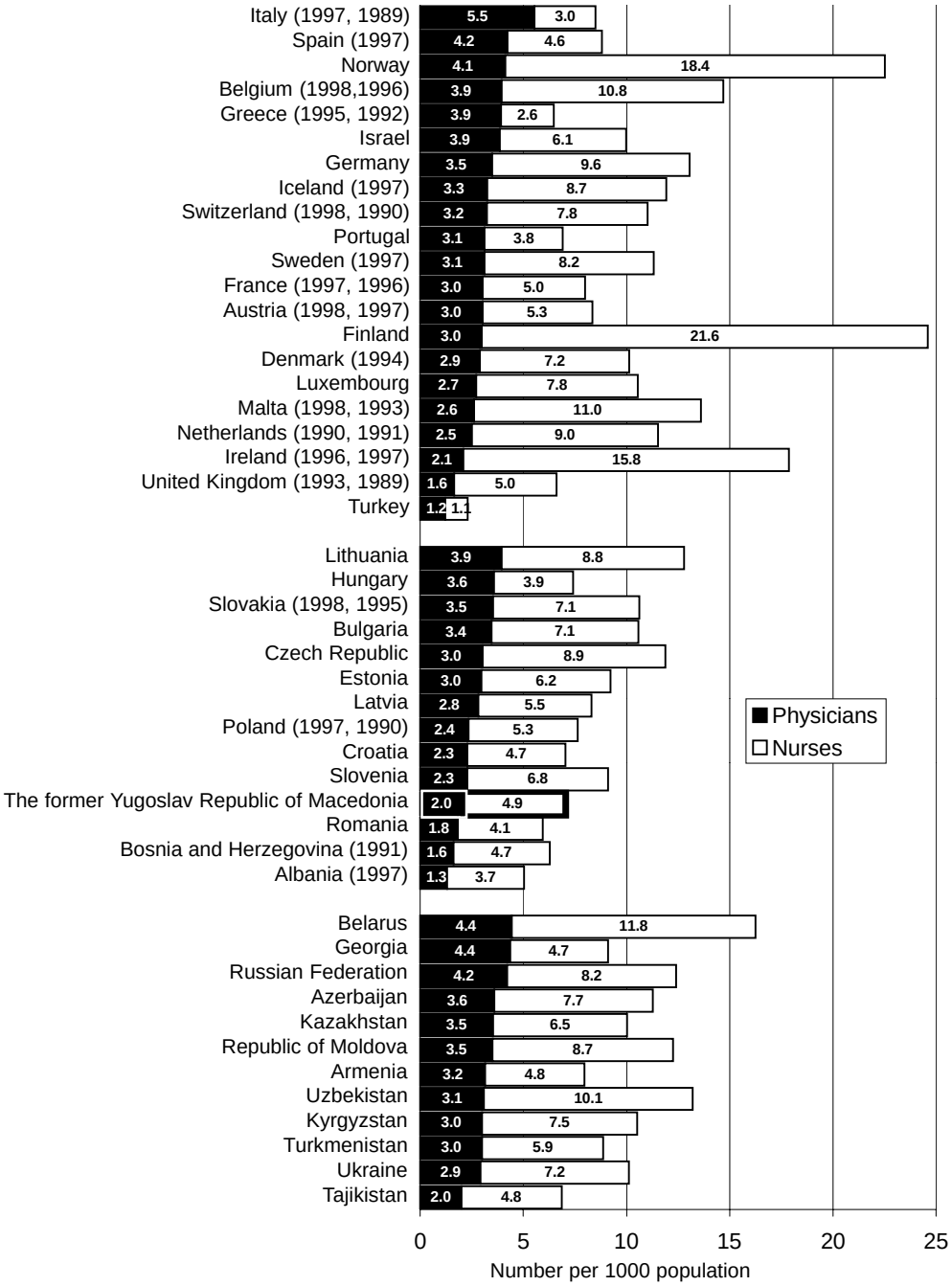
The majority of pharmacists now work in the private sector, some 51% in 1997, 342 out of 777. Unlike many other professions, unemployment amongst pharmacists is rare.

The institutes for health protection employ a total of 692 persons. Of these, 167 are physicians, including 38 hygiene specialists and 21 specialists in social medicine. There are also 13 pharmacists and 163 administrative staff. Secondary care institutions employ 4288 health workers (839 physicians) and tertiary care 5366 (987 physicians).

Pharmaceuticals

The pharmaceutical market of the former Yugoslav Republic of Macedonia totalled almost 40 million denars in sales in 1996, 25% of which was domestic production and 75% imports. The majority of imports come from manufacturers from the former Yugoslav republics.

Fig. 14. Number of physicians and nurses per 1000 population in the WHO European Region, 1998 or (latest available year)



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

The former Yugoslav Republic of Macedonia

Domestic producers are partly privatized, the large public wholesalers having been moved into the private sector and lost their distribution monopoly, whilst new private wholesalers appeared and private pharmacies were introduced. These changes have led to a significant degree of competition within the pharmaceutical sector.

Domestic production

There are two local producers: Alkaloid and Jaka 80. Alkaloid is a part-privatized company (less than 50% still belongs to the state), and is the dominant local manufacturer, selling more than 40% of its products on the domestic market and exporting the remainder. In addition to producing pharmaceuticals for human and veterinary medicine, Alkaloid also makes chemicals, film, cosmetics and paints. It produces about 200 pharmaceutical products, about half under license, and the remainder are generic products which are, unusually, marketed under their proprietary names. The second manufacturer, Jaka 80, is entirely in private ownership and has 4% of the domestic market. In recent years, domestic manufacturers had to step down production, largely as a result of a paucity of licenses and competition from imports. Some of this has been offset against an increase in the manufacture of generic products. There are a further two small producers.

Organization of wholesalers

The wholesale distribution system has seen significant changes. Prior to 1991 there was a centralized, state-owned distribution system – Replek. This was privatized in 1991, and competition introduced through a system of licensure supervised by the Ministry of Health. There are, at present, 83 licensed wholesalers, of which 20 are direct importers of pharmaceutical products. Only three wholesalers stock all the products on the national positive list, the remainder being niche market suppliers. Competition within the sector has intensified, with rebates and discounting of prices being commonplace and, as a result, the number of license requests for this sector has decreased markedly.

Organization of pharmacies

Since the liberalization of the sector in 1991, there has been a steady process of licensing of private pharmacies. Mostly in urban locations, there are now 323 such pharmacies. Around 91 public sector pharmacies remain (little changed from previous times). Rural areas are served by 56 pharmacy stations and depots

which, unlike pharmacies, are not staffed by pharmacists but with pharmacy technicians. Public sector pharmacies are technically subject to periodic assessment by the ministry of health; in practice, however, inspection is rare. Private pharmacies are initially assessed as part of the licensure procedure; there is no re-assessment or re-licensure.

Public pharmacies contract with the health insurance fund and are authorized to dispense drugs from the positive list, with reimbursement from the fund. Private pharmacies do not have such contracts. Drugs not on the positive list are often available without a prescription from a physician. Insured persons can recoup some of the costs of drugs on the positive list purchased at private pharmacies from the health insurance fund, primarily for the more expensive drugs.

The price structure

Prices of pharmaceuticals were liberalized in 1991 at the point of import or of manufacture. Further down the supply chain, however, the system remains complex, with fixed margins and discounting. Since 1997, a limited list of drugs had their price set by tender. Tender prices are very high by international standards.

Import duty on internationally sourced pharmaceuticals varies between 10% and 20%, depending on the precise category of drug concerned, and whether or not the product is covered by a bilateral import/export agreement. Mark-ups for the wholesale sector are 8% and for retailers 22%. Pharmaceuticals are publicly advertised at retail prices, and then heavily discounted to suppliers (between 20 and 40%). Supply direct to public pharmacies or hospitals often attracts the heaviest discounts. Public sector pharmaceutical purchasers often require extended periods of credit. There are no central reference prices for health insurance fund reimbursement of disbursed pharmaceutical costs.

General issues

The number of prescriptions issued has declined since 1991 accompanied by a far smaller decrease in pharmaceutical sector expenditure: 13.7% of health insurance fund disbursements in 1991 to 8.6% in 1995. This may reflect more expensive treatments, even in the context of a positive list and of patient co-payment. Prescribing guidelines are not common and there are no incentives for prescribing lower cost pharmaceuticals or generic drugs. There is no positive list in secondary or tertiary care.

There is no central pharmaceutical inspectorate. Laboratories provide some assays at the Republic Institute of Health Protection and at the school of pharmacy. Premises are inspected by the national health and hospital inspectorate, although it has no staff trained in pharmacy has a heavy workload.

The Pharmaceuticals Law was adopted in 1997 to accelerate the licensure process, and to bring drug-pricing policy under the ambit of the ministry of health. The necessary bye-laws to implement this law have not yet been introduced.

Health technology assessment

Whilst large capital investment projects are often funded from the Public Investment Programme, which is separate from the Ministry of Health budget, the majority of equipment purchases are channelled through the health insurance fund. To the extent that it occurs, planning of the health technology infrastructure is performed jointly by the health insurance fund and the ministry of health. It is unclear if there is an overall investment policy. Requests for new equipment from health care provider units are channelled through the ministry and the fund. Public providers also purchase equipment using private revenue.

Maintenance, repair and calibration of medical equipment are performed through maintenance agreements negotiated with the equipment suppliers. These are generally multinational corporations and employ their own engineers, so calibration and maintenance at a single site may be the responsibility of a number of maintenance teams.

More basic equipment and infrastructure are inspected and maintained by the national health and hospital inspectorate, which is said to be overstretched.

Financial resource allocation

Public revenues for the health sector in the period 1991–1995 declined by 40%. The biggest decline was in 1992, when revenue compared to 1991 declined by more than 50%. A variety of factors have contributed to this reduction, from the adjustment of accounting methods, through the movement of capital investment to a separate budgetary section, to actual changes in expenditure: for example, employee wage reduction. The health sector has received extensive humanitarian assistance.

Payment of hospitals

Revenues of health organizations

The major revenue source is the Health Insurance Fund. The framework of reimbursement was adapted by the Health Insurance Fund from the German system. This system was based on a system of points for individual services. The point prices were high as they include capital investment, interest and depreciation, funded by other means in the former Yugoslav Republic of Macedonia. This may have led to a degree of skewing of provision. This system provided post-hoc reimbursement of outlay and activity through the submission of invoices. These were submitted daily for each patient. Points values are set by the health insurance council. Its complexity led to its being abandoned in the public sector in favour of funding based on historical activity and inputs such as staff complement and bed infrastructure. Nevertheless, the public sector continues to submit inflated invoices. The points system has been retained for the reimbursement of services delivered by private sector providers.

Generally speaking, line item budgeting persists for ambulatory care institutions as well as for hospitals in the public sector. This may militate against

flexibility in funding allocation. There are no fixed population/needs formulae for capital investment.

Concern has been expressed about the nature of the scrutiny that invoices submitted are subjected to, with concern that they are checked only for mathematical accuracy, not for logic or clinical appropriateness.

Payment of health care professionals

Health care professionals are paid a salary, with scales decided through collective bargaining between the Ministry of Health and the health care workers union. One's position on the salary scale is determined by the complexity of the work, the seniority of the professional and overtime; for fully trained physicians, the monthly salary range is between 12 000 and 18 000 denars (as a yardstick, pensioners are paid 10 000 denars per month). This clearly provides an incentive for them to seek alternative sources of income.

Health care reforms

Aims and objectives

The goal of health sector reform in the former Yugoslav Republic of Macedonia is the creation of a system that is aligned to the needs of the population, which can operate efficiently within the resources available. Prevention has been afforded high priority within the reform plans, as have primary care development and the protection of vulnerable groups. These reforms have faced economic challenges and the transition to an independent sovereign nation, as well as pressures resulting from the embargo with the Federal Republic of Yugoslavia to the north and the blockade by Greece to the south. These economic pressures were exacerbated by the crisis in Kosovo. A further issue which has been identified is geographical inequity, with the majority of service provision being in the cities, and undersupply of primary care physicians in rural areas – something which the reform process also seeks to remedy. The translation of these ideas and goals into policy has been piecemeal and has lacked overarching strategy.

Much of the inherited system serves to militate against service efficiency and effectiveness. Relatively low salaries (with protected employment) and lack of pharmaceuticals may create additional strain as may the absence of efficiency incentives both at individual and at organizational level. Funding systems are based upon historical and infrastructural factors, providing perverse incentives to service rationalization. Skills shortages are also an issue, both in terms of technical professional skills and managerial ability.

The following priority areas have been identified in the national health care plan:

- quality of care
- service efficiency
- cost containment
- equity of provision.

Content of the reforms

The main changes have been the move from a disjointed system of municipality-funded health services to a social insurance funded model with central co-ordination and planning. This is the opposite trend to many of the countries of central and eastern Europe, although it is consistent with policies in other former Yugoslav republics which started from a similar position.

Health financing and management

The strategies are to develop fiscal incentives linked with managerial autonomy and to strengthen central planning. Central to this process is the development of information systems to collate activity data within the Health Insurance Fund in order to facilitate planning. There have been technical studies into capitation-based remuneration in primary health care. Through the introduction of the Health Insurance Law in 2000, a number of changes have been made. These include:

- revision of the basic benefits package;
- revision of the contributions, premia and penalties for non-payment to the health insurance fund;
- revision of the nature of user fees moving from co-insurance with multiple exemption categories to co-payment with fixed charging scales, an overall annual ceiling on charges levied of each patient in secondary care.

Basic health services

Several reforms are targeted at primary and preventative health care. The intention is to shift from a secondary care domination to a primary care led service. Vertical health programmes will continue to address particular health needs and preventative care. In addition to this, food safety and hygiene regulations are to be reformed and strengthened.

The functional separation of primary and secondary care is an intermediate goal. A gatekeeper role is envisaged, based on introduction of the selected physician reform. Since April 1998, the Health Insurance Fund, in theory, would only accept referrals or prescriptions in primary care written by the selected physician. Introduction of the selected physician has been patchy and the scheme was abandoned late in 1998. Its reintroduction is under review.

Refurbishment and reconstruction of rural primary care units has commenced, as part of a World Bank project (*21*), with 70 units having been

brought up to the defined standard in two pilot districts. This programme is being extended into urban primary care. In addition, free medical equipment will be provided to physicians participating in continuing medical education.

The historic difficulty in the recruitment of physicians to primary care is being addressed through recruitment and incentive programmes; the target is relatively modest – 50 primary care physician relocations from urban to rural areas (*22*).

The degree of subspecialization in primary care practice has been identified as an area for concern. Whilst the professional development of primary care support staff is being set in train, further rationalization of specialist primary care delivery and the development of general practice or family medicine is awaiting resolution of the selected physician issue.

Continuing medical education is developing rapidly. A school of continuing medical education was established in 1998 with a World Bank loan, and has been delivering a variety of programmes. Some are backed by incentives such as the free provision of medical equipment such as ophthalmoscopes, otoscopes, sphygmomanometers, glucometers, stethoscopes and peak expiratory flow meters. The three week courses include:

- introduction to the health reforms (including the basic benefits package, payment, role of the selected physician);
- finance, management, patients' rights and medical ethics;
- cost-effective primary care delivery;
- clinical topics in family medicine (paediatrics, minor surgery, cardio-pulmonary resuscitation, preventative health care, antenatal care and general medicine).

Specialist health services

As a part of the wider health sector transition project, the issue of perinatal mortality was flagged up as of particular concern. In order to address this, a project was set in train to address the infrastructure, training and audit policies of perinatal services nationally, especially at tertiary level. Accountable through the ministry of health, hospital equipment renewal and specialist training have been in place since November 1999.

Pharmaceutical policy and supply

Early reform in the pharmaceutical sector was directed at the development of competition and the revision of systems of public procurement. A positive list

was introduced in 1999 for primary care, and it is planned that further rational prescribing measures be introduced, such as hospital formularies and generic substitution. The system of prescription co-insurance is to be revised towards fixed co payment. In addition the criteria for exemption from co-payment have been revised; free ambulatory prescriptions are now only available to those meeting eligibility criteria on grounds of poverty.

Health for all policy

Data collection is normally performed through the Republic Institute of Health Protection. Data collection is complicated by resource constraint and is not timely or complete. There are currently no plans for health targets.

Conclusions

The health care system in the former Yugoslav Republic of Macedonia has undergone major changes both planned and unplanned. It has faced enormous challenges arising from the transition to independence, economic blockades and embargoes and a refugee crisis. Under these extreme circumstances it is difficult to evaluate the success of the reform process, although the maintenance of some form of basic health system is an achievement in itself. Although poorly documented, it is clear that major inequities remain. Geographical inequality is manifest with an excess of provision in the capital and a lack of services in rural settings. There are also financial inequalities, with easier access to specialist care for those who choose to pay.

In comparison with the previous fragmented system, with parallel provision and infrastructure poorly aligned to population need, the current system offers the potential to be more efficient. In common with other countries of the former Yugoslavia, and unlike other countries in the region, there has been a move towards the strengthening of central control and of peripheral accountability. Public health and hygiene services have been strengthened and are moving, albeit somewhat slowly, from simple data collection towards policy advice, although a major investment in capacity is still required.

The reform process has increased the uptake of continuing education. Professional power remains strong, and standard setting and performance assessment are difficult to implement. The historic form of multi-stranded primary care, and an over-reliance on secondary care remain. The development of family medicine, if it can be implemented, may counter these problems.

Health reform in the former Yugoslav Republic of Macedonia has had a few successes, in spite of the difficult context. It is hoped that the improving economic climate may provide an environment in which the remaining significant changes needed can be carried forward but the scale of the task ahead should not be underestimated.

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