



Evaluation of public health services in south-eastern Europe

**A project of the South-eastern Europe Health Network,
to be implemented within the framework of the
Regional Cooperation Council, successor to the Stability
Pact Initiative for Social Cohesion**



ABSTRACT

Today all countries face re-emerging and new health threats on a local and global level. These include rising rates of communicable diseases alongside new health threats associated with lifestyle and socioeconomic factors. Public health services focused on health promotion, health protection and disease prevention are an ever more important tool in combating health threats and addressing the causes and consequences of ill health. Yet in the past two decades both public health as a discipline and public health services in Europe have faced unprecedented challenges.

Public health in the countries of South-eastern Europe (SEE) has a long tradition but has undergone extensive reform during and since the period of transition. This report examines the current state of public health in the nine SEE countries and analyses the challenges they face and their potential solutions. The report is the outcome of a comprehensive self assessment and evaluation of public health services undertaken as part of the Strengthening Public Health Services Project of the South-eastern Europe Health Network.

Keywords

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The Council of Europe Development Bank

Objectives

The Council of Europe Development Bank (CEB) is a multilateral bank comprising 40 member states. As the oldest international financial institution in Europe and the only one with an exclusively social mandate, the CEB is a key instrument of solidarity policy in Europe. Its overall objective is to improve living conditions and to foster social cohesion in Europe.

Activities

The CEB provides loans at favourable interest rates to finance projects in development sectors aimed at strengthening social integration, managing the environment and developing human capital. Its activities complement those of the other intergovernmental financial institutions; it plays a key role in the financing of social infrastructure. Since its inception in 1956, the CEB has granted some €30 billion in loans.

In order to respond to the specific nature of each project to which it contributes, the CEB offers flexible long-term financing solutions to its member states, their regional or local authorities, and public or private financial institutions. Loans are granted in accordance with specific technical and social criteria and in strict compliance with public procurement rules. Moreover, interest rate subsidies and donations can be granted through trust accounts in order to finance technical assistance or for the financing of investment projects with a high social impact.

Achievements in south-eastern Europe

The Bank's activities in south-eastern Europe (SEE) show its long-standing commitment to the region's social and economic development. In the past several years, expanding operations in the SEE countries was one of the Bank's highest priorities. The total amount of approved loans for these countries reaches €3 billion over more than one hundred projects for social and economic development. This amount includes financing for a broad range of social projects involving health, education, social housing, vocational training, job creation in small and medium-sized enterprises, natural disaster reconstruction and prevention, environmental protection, municipal infrastructure in urban and rural areas, historic heritage. A particular attention is given to vulnerable groups of population such as refugees, migrants and displaced persons, minorities, victims of natural and ecological disaster, elderly and handicapped persons.

CEB support for the health sector in south-eastern Europe

In the health sector, the total amount of approved loans for the SEE region is worth some €200 million. These projects are located in Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Republic of Moldova and Romania. The purpose of these projects is to facilitate access to health care both in urban and rural areas. Concretely, the CEB participates in financing the construction and/or renovation of PHC services, emergency services; the (re)construction and equipment of hospitals; the structuring of blood transfusion services; the development of community-based services and facilities aimed at child welfare protection; and in particular the renovation and modernization of the Andrija Stampar School of Public Health (Croatia). It should be mentioned that part of these investments contributed to the reconstruction of areas damaged by conflicts in Bosnia and Herzegovina and Croatia. Supporting health, as an element of human capital, in the long term, promotes sustainable and equitable economic and social growth in the region for the benefit of collective well-being. Indeed, modern services in the health sector are essential in promoting growth, development and poverty reduction.

Abbreviations

CCDPC	The Centre for Communicable Disease Prevention and Control
CEB	The Council of Europe Development Bank
CEE	Central and Eastern Europe
CIDA	Canadian International Development Agency
COPD	Chronic Obstructive Pulmonary Disease
CPHA	Canadian Public Health Association
CNPHI	Croatian National Institute of Public Health
CPI	Corruption Perceptions Index
DALY	Disability Adjusted Life Years
DHA	District Health Authority
EAR	European Agency for Reconstruction
EU	European Union
Eurostat	Statistical Office of the European Communities
FBIH	Federation of Bosnia and Herzegovina
FPHI	Federal Public Health Institute of Bosnia and Herzegovina
GDP	Gross Domestic Product
Gini	Gini-coefficient measure of inequality
GNI	Gross National Income
GP	General Practitioner
HDI	Human Development Index
HFA	Health for All
HIA	Health Impact Assessment
HIF	Health Insurance Fund
HII	Health Insurance Institute
HIS	Health Information System
HR	Human Resources
IAEA	International Atomic Energy Agency
ICD	International Classification of Diseases
IDPs	Internally Displaced Persons
ILO	International Labour Organization
IOH	Institute of Occupational Health
IPH	Institute of Public Health
ISO	International Organization for Standardization
IT	Information Technology
MDGs	Millennium Development Goals
MICS	Multiple Indicator Cluster Surveys
MoH	Ministry of Health
NCD	Noncommunicable Disease
NGO	Nongovernmental Organization
NHIC	National Health Insurance Company
NHIF	National Health Insurance Fund
NIRDMI-C	National Institute of Research and Development for Microbiology and Immunology ‘Cantacuzino’
NSPCPM	The National Scientific Practical Centre of Preventive Medicine (Republic of Moldova)
PHARE	Originally, “Poland and Hungary: Assistance for Restructuring their Economies”, now expanded to 10 countries.
PHC	Primary Health Care

PHI	Public Health Institute
PHS	Public Health Services
PRSP	Poverty Reduction Strategy Paper
RIHP	Republic Institute for Health Protection (The former Yugoslav republic of Macedonia)
RIPCPH	Inspectorate for Protection and Control of Public Health
RSDB	Republika Srpska and District Brčko
SANEPID	Sanitary-Epidemiological System
SARS	Severe Acute Respiratory Syndrome
SDH	Social Determinants of Health
SEE	South-eastern Europe
SEEHN	South-eastern European Health Network
SMU	State Medical University
SSHI	The State Sanitary and Health Inspectorate
STI	Sexually transmitted infection
SWOT	Strengths, weaknesses, opportunities and threats
UNDP	United National Development Programme
UNICEF	United Nations Children's Fund
WB	World Bank
WHO	World Health Organization

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1. Introduction: Evaluation and analysis of Public Health in South-eastern Europe

The public health challenge

Since the end of the twentieth century, both public health as a discipline and public health services (PHS) in Europe have faced unprecedented challenges. The countries of the European Region, as elsewhere, face multiple health challenges, which include both communicable and noncommunicable diseases, such as the return and rise of new forms of tuberculosis, including drug resistant strains, the spread of HIV/AIDS, and a rising tide of diabetes, obesity, cardiovascular disease and cancer. The importance of promoting healthy behaviour and addressing the social and economic determinants of ill health is highlighted by the incidence and social topography of noncommunicable and in many cases communicable diseases. Across Europe, there are significant differences in life expectancy and health opportunity between countries and between different population groups and regions within the same country.

These challenges sit within a context of ageing populations and increased life expectancy and the widespread restructuring of health systems and services across many countries of the European Region over the past two decades, a process that continues today. Economic and social transition and widespread reforms to economic structures and health systems have an impact on both population exposure to the risk of ill health, and on the opportunities to be healthy. There are therefore significant inequalities in health across many dimensions of Europe's societies and among its nations. The traditional aim of public health to protect the health of the public primarily through the prevention of disease and the protection and promotion of health is more salient than ever.

Public health services have a vital role to play in meeting the health challenges that Europe faces. The World Health Organization (WHO), Regional Office for Europe is encouraging Member States of the region to put the strengthening of their health system at the core of cross-government policy and action by adopting clear plans and strategies. WHO is committed to helping the Member States achieve this and to support them in making appropriate choices, both in terms of the process they use for developing strategies and in their content. In order to perform this task, advice and recommendations will be provided through improved country work with both a short-term and long-term perspective.

Within this context, the Country, Policies and Systems (CPS) Unit of the WHO Regional Office for Europe is seeking to assist Member States to strengthen and improve their PHS, as a vital part of the health system, and as one of the principal areas of health services to focus on the prevention of disease and the protection and promotion of health.

Public health in SEE

The governance of public health in Europe is complex and multifaceted. The organization and delivery of PHS involves many distinct institutions and professions

within the health sector. The services and activities it includes are broad and varied. Before 1990, PHS in the central and eastern Europe (CEE), and south-eastern Europe (SEE) countries were organized largely according to the highly centralized sanitary-epidemiological system designed and set up as a part of the Semashko model of the health systems in the former Soviet Union and Eastern Bloc, known as the Sanitary-Epidemiological System (Sanepid). These hierarchical systems were created during the 1950s, with sanitary-epidemiological institutes at lower administrative levels (for example, districts) subordinate to higher-level (regional or national) institutes. The sanitary-epidemiological institutes were also part of the regional and district health services structure. The Sanepid system performed three main tasks: surveillance and control of communicable diseases, sanitary-hygienic inspection and control over all entities in the country that might pose risks to health, and health education. Institutes serving larger regions would typically have departments dealing with environmental health, general health, occupational health, nutrition and food hygiene, child and adolescent health and communicable disease control (epidemiology and microbiology) (1).

The Sanepid system made major contributions to progress in public health, with tangible results in areas such as vaccination programmes and communicable disease control. However, the system was far less effective in areas such as environmental health, occupational health and noncommunicable diseases (NCDs). The system had varying degrees of success across countries but in all countries the information base for public health has come to be regarded as inadequate and of poor quality.

Furthermore, the economic and political transition that occurred following the end of communist regimes in the SEE countries and the violent break up of Yugoslavia formed the backdrop and context to a decade of economic and social turmoil and stagnation in which economic growth stalled, social and political structures collapsed and conflict led to migration and emigration.

Health systems in transition

The political changes and economic crisis in the post-communist countries across central, eastern and south-eastern Europe, led to weakened, complex transitional status within their health systems. The shift from planned to market economies has been the principal driver of health system reforms, which in most countries have proved to be insufficient to maintain proper preventive programmes, such as child vaccination, and to provide universal access to basic health services.

The Sanepid systems have in many cases been allowed to deteriorate without being replaced with adequate alternatives. Since 1990, these systems have undergone varying degrees of reform in all the countries. In each country, the structures for and provision of PHS has evolved over the years according to different decisions made by governments and ministries of health. However, in all the countries, it is lagging behind the discipline of public health as now commonly conceived and in general there is strong evidence to indicate that the organization of PHS is in many areas not strategic or coherent, and there is a clear need to strengthen public health infrastructures.

The last two European Health Reports show a great discrepancy in the status of population health throughout the region. Tackling social and health determinants and

the main risk factors for ill health remains rudimentary. Both individual and population-based PHS need to be able to respond to these challenges through further strengthening and upgrading and their performance improved, as well as being made more cost efficient.

While many health indicators show that the region is below the European average, it is in general on an upward trend in most spheres. This, together with recognition of the weaknesses in public health infrastructure, as well as some of its enduring strengths, form a propitious background for the comprehensive evaluation of PHS in these countries.

Scope of public health services and activities

The evaluation of PHS undertaken with the WHO Regional Office for Europe, in SEE and other countries of the European Region, is based on a defined set of “essential public health operations”, which have their origins in attempts to identify the most important and fundamental aspects of PHS and activities.

A significant body of work underpins the definition of the essential operations, together with services and activities. The aim of this work has been to identify the core areas of PHS and activities that, while being comprehensive, are also understood as the basic ‘must do’ aspects of public health. ‘Essential’ is understood as being fundamental and even indispensable to meeting public health goals and to defining public health. This term also makes reference to the definition of the responsibilities of the state, through health authorities, considered essential to the development and practice of public health. Consequently, the essential operations are at the core of the definition of the entire public health field and, in turn, are indispensable to improving the health of populations. Other activities may or may not be added, but the essential ones form the core of public health activity.

The WHO has been involved in the ongoing discussion around defining the scope of public health and its essential services, including a series of worldwide discussions in 1997, involving 145 prominent leaders of public health in 67 nations from all regions of the world. The international Delphi study discussions aimed to define “essential public health functions.” (2) What is the minimum absolutely necessary to protect the health of the population? Work has also been undertaken at national level, in, for example, the United States (3) and the United Kingdom (4).

The approach of identifying essential areas of public health activity and services was an integral component in the elaboration of the WHO’s Health for All (HFA) policy. The Delphi study defined the concept of “essential public health functions” was defined and it tried to establish a consensus on what activities and services are essential, and to confirm which public health activities and services require the elaboration of performance standards. Modified “essential public health functions” are also published in the relevant publications of the Pan American Health Organization and of the WHO Regional Office for Western Pacific (5). In this last publication these were defined as:

...a set of fundamental activities that address the determinants of health, protect a population’s health, and treat diseases [of public health significance]. These public health functions represent public goods, and in this respect governments would need to ensure the provision of these essential functions, but would not necessarily have to implement and

finance them. They prevent and manage the major contributors to the burden of disease by using effective technical, legislative, administrative, and behaviour-modifying interventions or deterrents, and thereby provide an approach for intersectoral action for health.

This approach stresses the importance of numerous and varied public health partners. Moreover, the need for flexible, competent state institutions to oversee these initiatives suggests that the institutional capacity of states must be reinforced. It therefore in effect emphasizes the stewardship role of governments to ensure an intersectoral dimension to public policy in public health.

The Essential Public Health Operations in Europe

The approach used in this and other evaluations of PHS in Europe has built on this work in the context of the particular challenges parts of Europe face in undertaking reform of their public health infrastructures, as well as the usefulness of analysing PHS and activities within the framework of the four health systems functions of Stewardship, Resource Generation, Finance and Service Delivery (6). For reasons of clarity in discussing the interaction between the health system functions and the “essential public health functions”, we have opted to call the components of public health “operations”. As such, the evaluation of PHS here is based on a set of essential public health operations, which elaborate the detail of the health system functions for the field of public health.

The operations represent all the activities within the area of public health that are essential to the delivery of adequate and modern PHS. They cut across the health system functions to some degree but are concentrated in service delivery. They are divided into two groups: those focused on recognizable services, and those that define, support, feed into and enable those services to be delivered – in effect *instrumental* operations. These latter dimensions deal mainly with areas of stewardship, but also with resources.

The essential public health operations comprise the core public health areas of practice, which include: strategy development, workforce development, quality assessment, health information, health promotion, communicable disease surveillance, chronic disease prevention, public health dentistry, environmental health, occupational safety and health, injury prevention, food safety, public health nutrition, mother and child health, community genetics, global health and public health laboratories, and others.

The ten essential public health operations used in the evaluation in SEE are:

1. surveillance and assessment of the population’s health and well-being;
2. identifying health problems and health hazards in the community;
3. preparedness and planning for public health emergencies;
4. health protection (environmental, occupational, food safety and others);
5. disease prevention;
6. health promotion;
7. evaluation of quality and effectiveness of personal and community health services;
8. assuring a competent public health and personal health care workforce;

9. leadership, governance and the initiation, development and planning of public health policy;
10. public health related research.

The services and activities that make up the essential operations are usually not supplied by a single public health institution, body or profession. Indeed one benefit of the approach is precisely to identify horizontal activities rather than focus on the activities of institutions, in order not only to assess whether essential operations are being carried out but also so the approach can be applied to different institutional settings. Many PHS are to be practiced and delivered by many of the public health areas of practice at the same time. This may be through structures, institutions or groups of professionals within particular areas of public health, such as communicable disease surveillance, occupational health, environmental health or food safety. The dimensions are specifically intended to be applicable to all health system structures in the area of public health, across all countries, so that they are useful regardless of the type or particular structure of a health system.

The SEE Health Network and the PHS project

The Evaluation of Public Health Services in SEE countries and the production of National and Regional reports on PHS is a key undertaking of the South-eastern European Health Network (SEEHN) (7). The evaluation has formed the first component of the PHS project “Strengthening public health capacity and services”. The project is being developed and implemented by the WHO Regional Office for Europe with the financial support of the Council of Europe Development Bank (CEB) and with the in-kind support of the Department of Health for England. The project is one of nine regional projects of the SEEHN.

The SEEHN has overseen the implementation of the regional technical projects in the field of public health for the past six years. The regional cooperation in health was formalized with the agreement and the commitment of all the Health Ministers of the SEE region, stipulated first in the Dubrovnik Pledge (8), on 2 September 2001, and reconfirmed in the Skopje Pledge (9), on 26 November 2005. The Skopje pledge commits the members of the SEEHN to improve the health systems of the SEE countries to secure universal access to high-quality PHS.

Regional cooperation in health is not only important for the SEE countries’ aspirations for European Union (EU) integration and accession, under the framework of the Stability Pact for SEE and its successor the Regional Cooperation Council (10), but also because of the important contribution that health makes in the economic development of the countries, a fact also recognized in the Skopje pledge.

The purpose of the evaluation of PHS provision in the SEE countries is to understand where these countries now stand in public health, the legislative and system developments that are taking place and to identify strengths and weaknesses in their public health infrastructures and services in order to inform decision about investment and future reform.

The PHS evaluation marks a major step forward in understanding the challenges faced by the nine countries in reforming and developing their PHS, as well as the

opportunities available to them to improve the health of their populations. The National and Regional reports represent a valuable addition to the sum of knowledge about the state of PHS in the SEE countries, to the sharing of information and experience between them, as well as a platform on which to build appropriate policies, infrastructures and services for the development of PHS in the region.

Methodology

The evaluation process was undertaken by National Focal Points in each of the countries and managed and coordinated by a Regional Project Manager from the lead country for the project, the former Yugoslav Republic of Macedonia. The focal points were responsible for managing the whole process at national level, gathering information and bringing together the necessary expert opinion to make assessments of services. The Regional Project Manager was responsible for process management and the writing of the regional report, supported by WHO.

Each National Focal Point was responsible for managing the process of evaluation. To gather information, key actors within the national public health institutions were collectively responsible for answering a comprehensive questionnaire. Expert seminars and workshops were used in some cases to agree the main findings national recommendations and conclusions. Regional and international experts were also convened in workshops during the process to discuss information and findings and to contribute to the regional-level analysis of strengths and weaknesses and agree recommendations.

The principal outcome of the evaluation was this regional report. However the experience of the process, in which large numbers of people from diverse parts of the public health infrastructure and service delivery were brought together to discuss performance, also led some countries to think about their own ongoing discussion and analysis of their PHS and to set up permanent or ad hoc bodies for this purpose.

The ongoing experience of the evaluation has been shared in Roundtable discussions within the health network at its meetings in Sofia and Chisinau.

This experience includes the implementation of the self-assessment tool for the evaluation of PHS, a web-based instrument that enables judgements of performance to be made against a set of criteria and the results recorded as percentages of an ideal level. This is optionally available to all the participating countries and can be used on a regular basis, for example annually, to identify progress.

The PHS project has now moved onto the second component, which is the development of indicators for public health. This was chosen following the experience of the evaluation and on the basis of its recommendations.

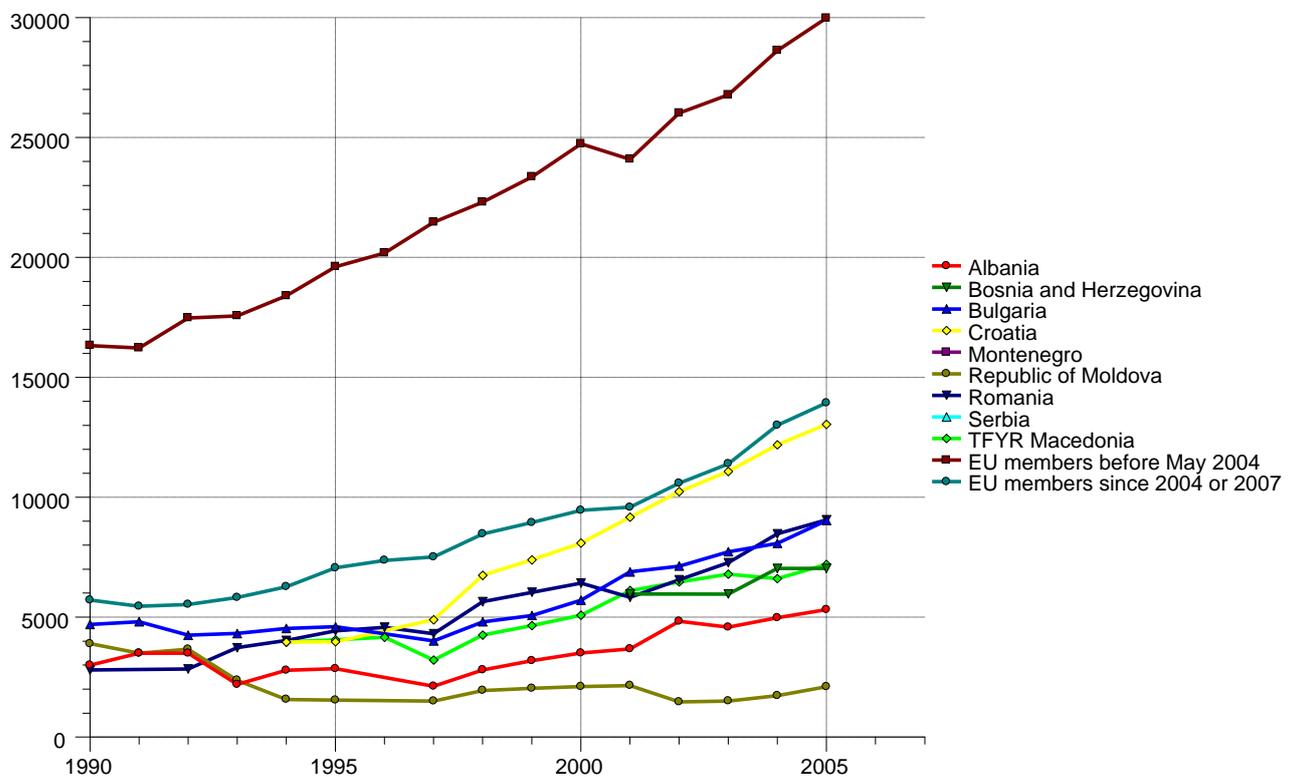
The following chapters represent a general overview – a “view from the balcony” – of the situation in all these areas in SEE countries following the evaluations of PHS.

2. Context: Socioeconomic situation, demographic profile and health status of the population

Socioeconomic situation

Most countries of the region showed no or little economic growth through most of the 1990s, in particular the first half of the decade, although a strong recovery has been under way since 2000 (see Fig. 1). The volatility of the region's economies in the 1990s, and in particular the first half of the decade, was reflected in high inflation, high unemployment and falling, stagnating or fluctuating Gross Domestic Product (GDP) growth. The effects of conflict on economic stability and growth have been particularly severe, with the real GDP of Bosnia and Herzegovina plummeting in the early 1990s (see Fig. 1).

Fig. 1: Real gross domestic product, PPP\$ per capita

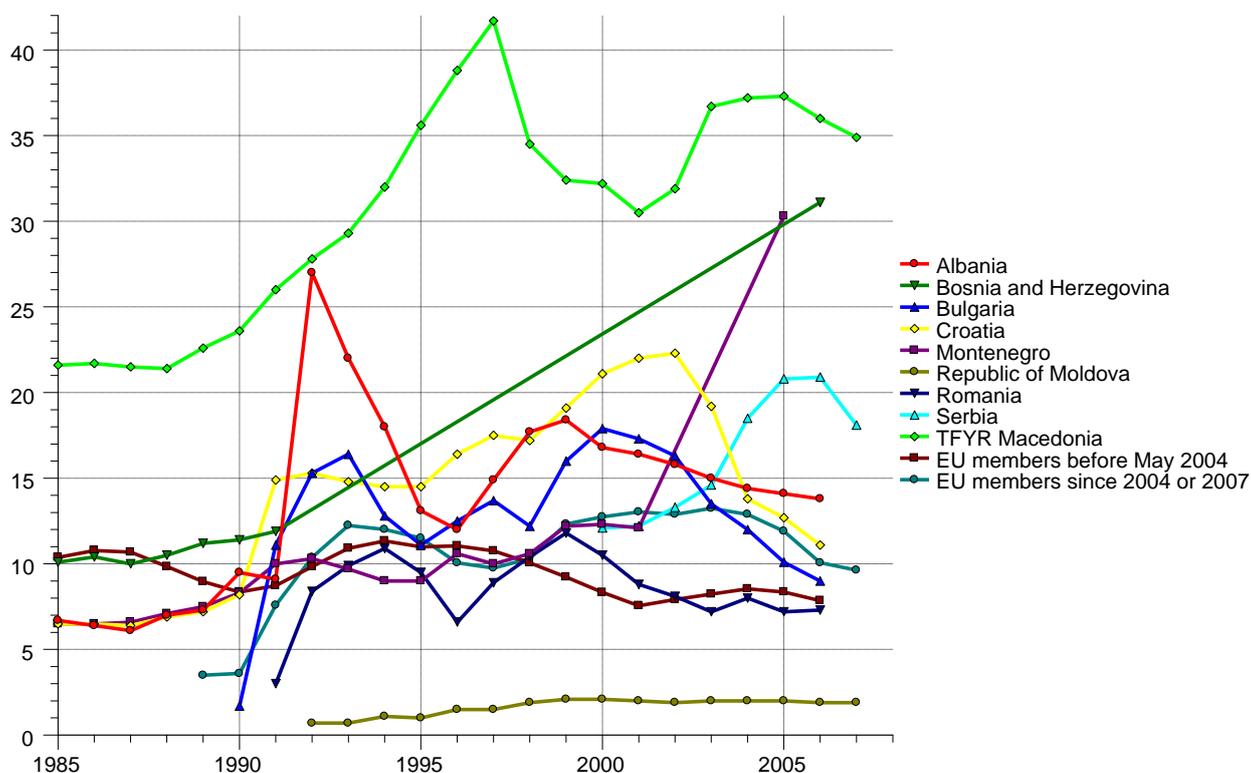


Source: WHO Health for All Database

Inflation spiralled out of control in many of the countries of the region during the 1990s and has been brought under control only recently. It reached over 1600% in the former Yugoslav Republic of Macedonia, around 1500% in Croatia and over 1000% in Bosnia Herzegovina at the height of the regional conflict in the early 1990s. The Republic of Moldova also suffered inflation of over 1000% in the same period, in 1992–1994, during its own conflict over Transnistria. Even those countries in the region that did not have such hyper-inflation suffered from price rises of 100–250% in the early 1990s.

Economic restructuring has created widespread unemployment and remains a significant macroeconomic problem for the region, hindering the collection of tax revenues and straining social support budgets (see Fig. 2).

Fig. 2: Unemployment rate in %



Source: WHO Health for All Database

Poverty and inequality

The socioeconomic problems of transition, coupled with the effects of political strife and war, and the economic and social fracture and displacement of people that resulted, has fed poverty across the region. While particular groups have suffered most from poverty – the displaced, the old and the unemployed – the particular form of economic crisis and political collapse in much of the region has meant poverty has affected large numbers of people, and been a ‘whole-economy’ phenomenon. Poverty remains a problem and several countries have poverty reduction strategies to address it (see Stewardship section).

The Gini index, a measure of inequality, demonstrates that inequality between groups within the SEE countries is often less than in most western European countries. The countries with the lowest Gini coefficients are the Scandinavian and other north European countries, including Germany, as well as some of the countries of CEE. Generally, the CEEs and SEEs score better on the Gini coefficient than much of western Europe, although the potential for this to be reversed with unevenly distributed economic growth is significant.

Table 1. Gini Index

	Albania	Bosnia and Herzegovina	Bulgaria	Croatia	The former Yugoslav Republic of Macedonia	Montenegro	Republic of Moldova	Romania	Serbia
Year	2005	2007	2007	2008	2003	2003	2003	2008	2003
Value	26.7	56.2	30.7	29.0	39.0	30.0	33.2	32.0	30.0

Source: CIA

Demographic profile

Unemployment and economic stagnation have also been an underlying factor in the demographic challenges that have faced the region. Large scale migration within countries owing to conflict has been accompanied by significant outward migration, owing to both political and economic factors.

Outward migration can be both a benefit and a hindrance. On the one hand it removes predominantly working age people from the economy, but on the other hand, remittances can be a source of badly-needed revenue as economic emigrants send money back home. In this way, even quite large-scale migration, at least as a temporary phenomenon, can be a source of cash for the domestic economy that can overcome a period of economic stagnation or collapse, with the country effectively exporting labour as a source of income. Many emigrants work specifically to send money back to their families rather than to re-locate in the long term (11).

It is estimated that around 600 000–800 000 Albanians have migrated abroad (mainly to Greece and Italy) since 1990, around a fifth of the total population. Bulgaria has lost around one million people since the early 1990s, a fall from 8669 million in 1990 to 7719 million in 2005. Serbia has a significant problem dealing with internally displaced persons (IDPs). Estimates of the number of IDPs have varied from 350 000 to 800 000, but according to latest available data (2003), there are an estimated 314 000 IDPs from Kosovo and Metohija living in Serbia, which is the highest number in Europe. The former Yugoslav Republic of Macedonia also has a significant number of IDPs.

Demographic challenges affect the health system in various ways. They create direct health problems to deal with, including problems of records and insurance as well as the need for service provision; they also create problems for the provision of personnel within the health system, as outward migration can also represent a brain drain.

Outward migration has exacerbated the general European trend of ageing populations, putting further strain on the economy as the balance between providers and dependants becomes less favourable.

Health status of the population

There are many challenges facing the health status of the population in SEE countries, from communicable diseases to the prevalence of risk factors for disease and the

growing incidence of NCDs among the population. Statistics from the WHO HFA database, among other sources, illustrate some of the challenges the regions faces.

Table 2. Life expectancy at birth

Albania	Bosnia and Herzegovina	Bulgaria	Croatia	The former Yugoslav Republic of Macedonia	Montenegro	Republic of Moldova	Romania	Serbia
73.9	74.3	72.4	75.2	73.9	73.2	68.1	71.5	73.2

Source: UN Human Development Report 2006

Table 3. Human Development Index 2006: Rank

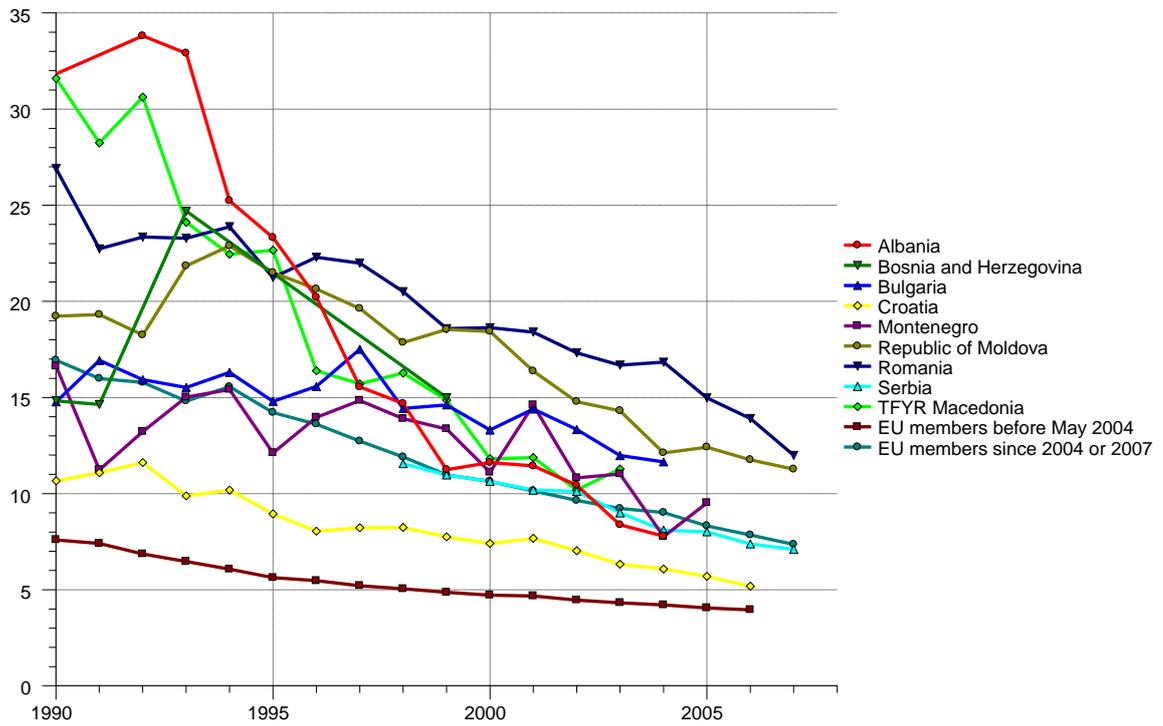
Albania	Bosnia and Herzegovina	Bulgaria	Croatia	The former Yugoslav Republic of Macedonia	Montenegro	Republic of Moldova	Romania	Serbia
73	62	54	44	66	n/a	114	60	n/a

Source: UN Human Development Report 2006

Indicators for infant and maternal deaths have improved markedly over recent years but there is still a significant gap with the EU15¹ countries. Progress in reducing mortality has also been volatile. Importantly, the reported figures are also much lower in some cases than the WHO/United Nations estimates (see charts). In some countries of the region, achieving EU15 levels in both infant and maternal mortality remain challenges for the health system.

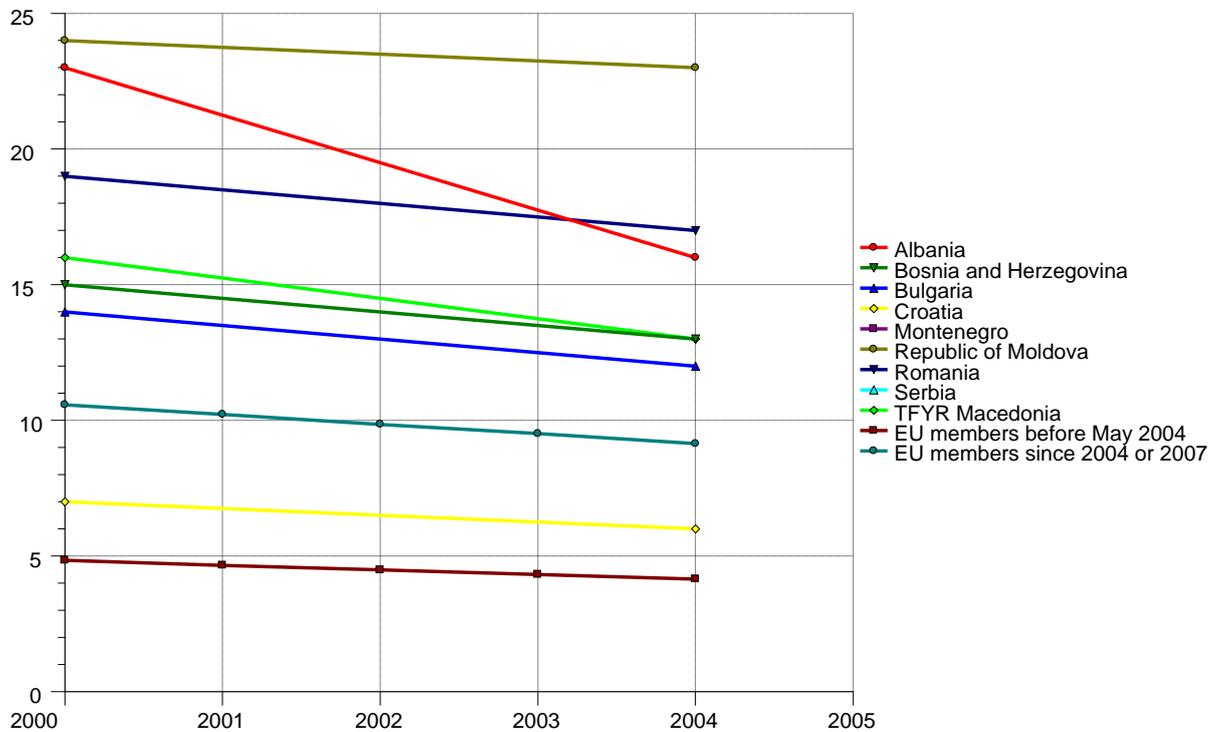
¹ EU15 refers to those countries belonging to the EU before May 2004

Fig. 3: Infant deaths per 1000 live births



Source: WHO Health for All Database

Fig. 4: Estimated infant mortality per 1000 live births (World Health Report)



Source: WHO Health for All Database

Fig. 5: Maternal deaths per 100 000 live births

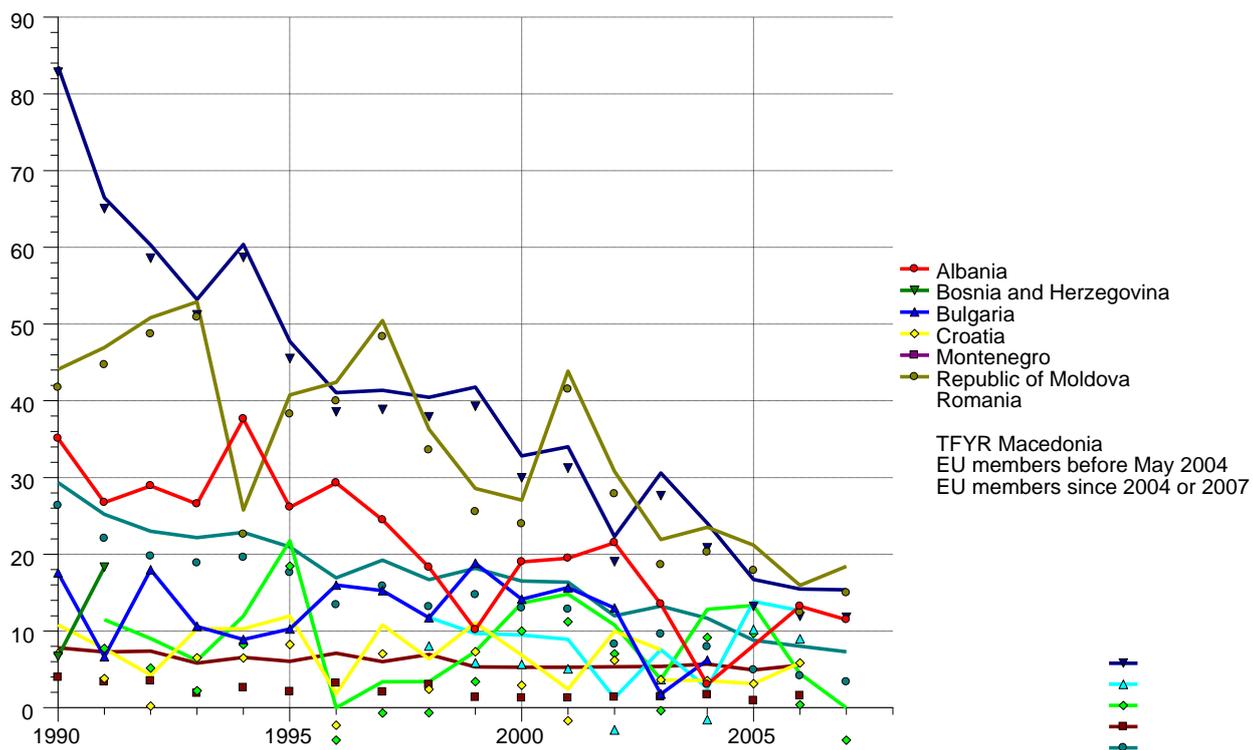
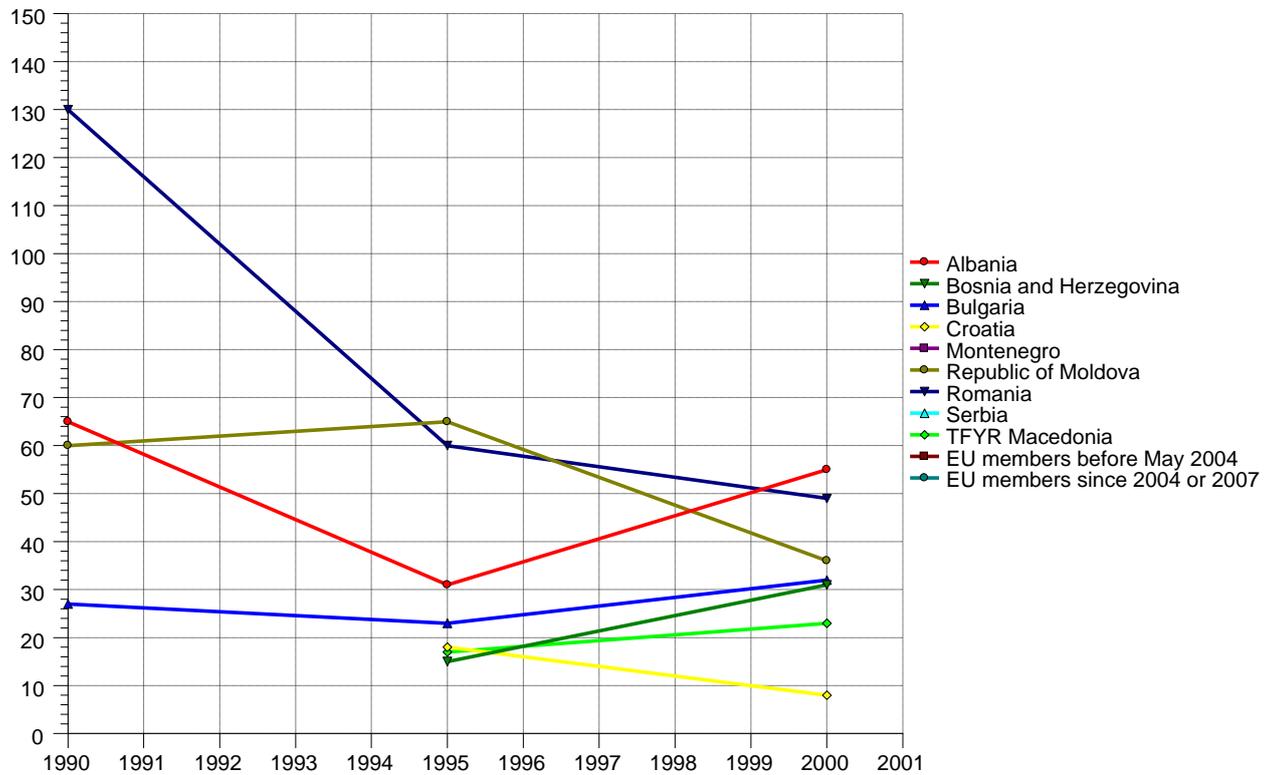


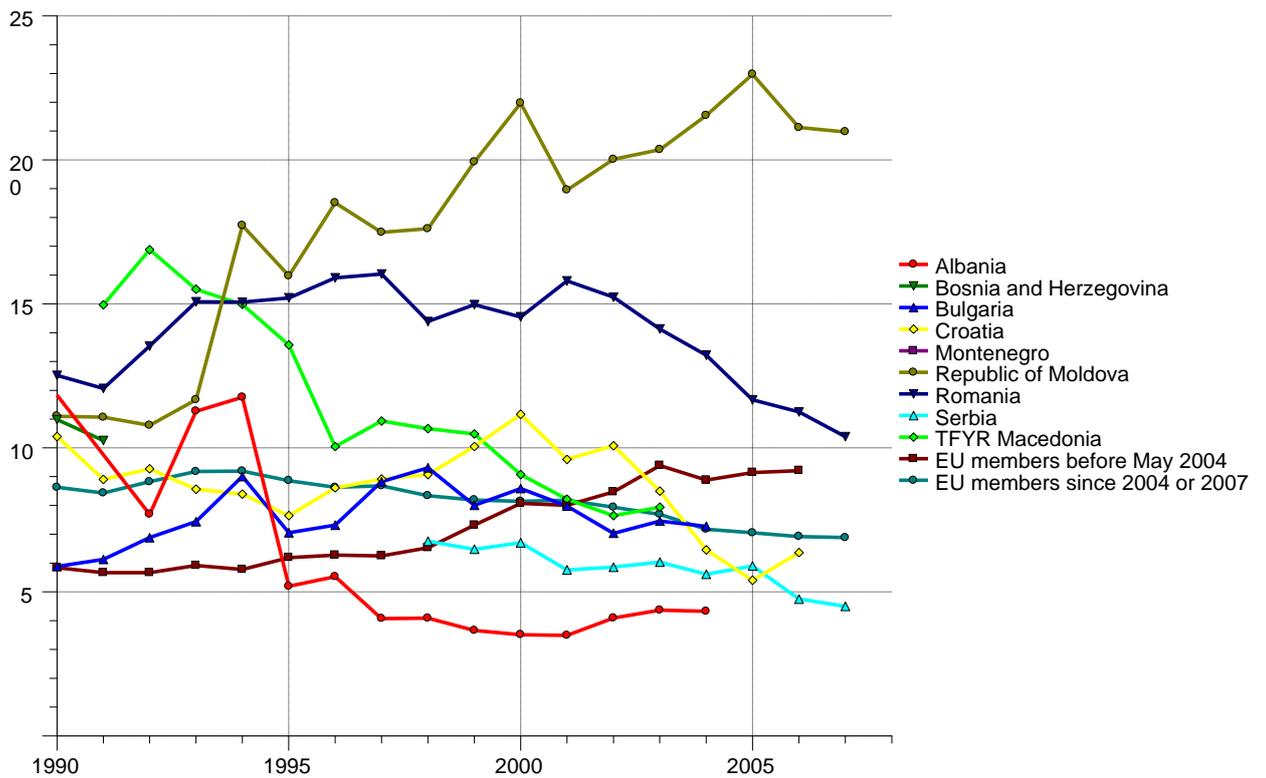
Fig. 6: Estimated maternal mortality per 100 000 live births
(WHO/UNICEFF/UNFPA estimates)



Source: WHO Health for All Database

Infectious diseases are still a concern for the countries in the region. There has been a significant rise in tuberculosis in the Republic of Moldova and Romania and this remains a significant public health concern. Romania and the Republic of Moldova also have problems with increasing HIV incidence among the population.

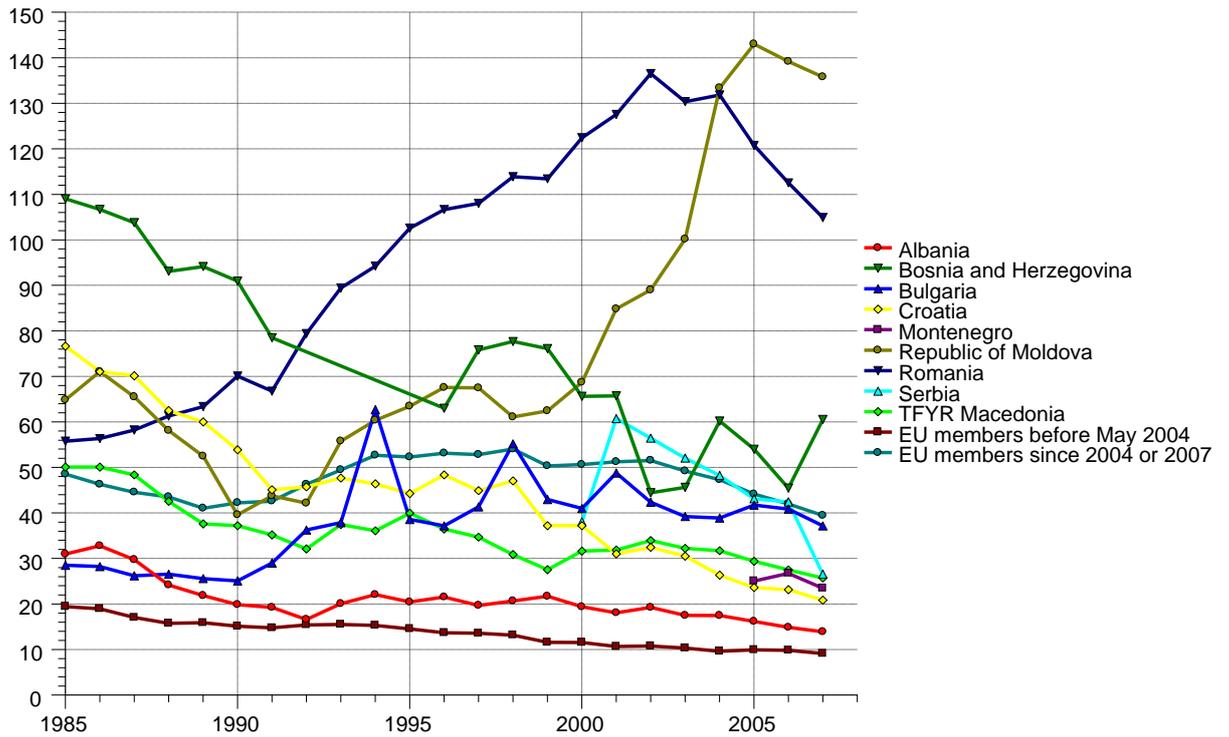
Fig. 7: SDR, infectious and parasitic disease, all ages per 100 000



Source: WHO Health for All Database

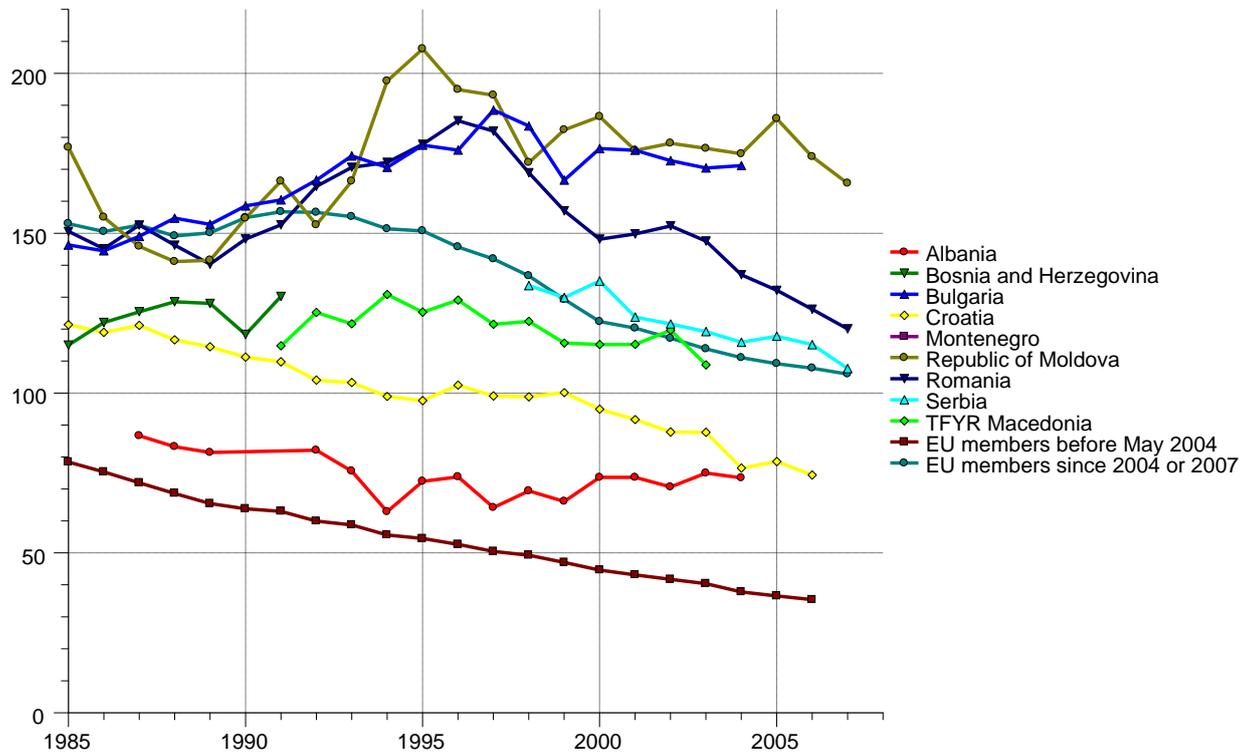
However, in parallel with high rates of TB and HIV, NCDs have become the main threat to health and the principal cause of avoidable years of life lost. This situation is the same as the rest of Europe and tackling NCDs is, across Europe, the main challenge that health systems face. All levels and areas of the health system are important for tackling NCDs, from the identification of problems, to the design of policy, its implementation and evaluation, the provision of resources and the delivery of services.

Fig. 8: Tuberculosis incidence per 100 000



Source: WHO Health for All Database

Fig. 9: SDR, diseases of circulatory system, 0–64 per 100 000



Source: WHO Health for All Database

3. Stewardship in SEE public health services: Governance, oversight and policy

Most countries of the region express principles of equal access to health services in their health laws and most define packages of services that should be provided, with varying degrees of specificity.

Policy framework and strategic vision

Most countries also have an ongoing process of strategic planning in some form or other, many in the form of roadmaps that have been drawn up several years ahead of time. The configuration of planning between national, regional and local levels varies throughout the region, not least owing to the size of the country in addition to the general structure of government. Some countries already have more devolved planning structures but a general trend in the region, even for countries currently more centralized, is the shift to more devolved decision-making in this area. The relationship between centre and regions and localities also differs in the extent of supervision by the centre of the provision of PHS at community level.

While there is a legal basis for the provision of services in the health sector across the region, most countries do not have a separate policy document dealing exclusively with Public Health. Rather, public health functions and services are defined within broader health sector legislation and policy.

In all countries, the Ministry of Health (MoH) is active in defining legislation, regulations and ordinances, either directly or by working with expert institutes. The region also has well-established institutes of public health which govern the implementation of policy in relevant areas.

The majority of countries conduct training of people responsible for complying with the law or enforcing it across areas of public health.

A variety of indicators is used in the field of public health. Demographic indicators and mortality and morbidity indicators are widely used. Immunization and communicable disease surveillance indicators are widely used in the countries. Rarely are lifestyle risk factors and social determinants of health (SDH) used as a basis for evaluating services and more generally the development and use of indicators is recognized as an area where improvements are needed but there is also some activity in this direction. In Serbia, for example, a comprehensive Public Health Strategy paper has been developed by the MoH in conjunction with the EU European Agency for Reconstruction (EAR) funded project “Support to Public health Development in Serbia (August 2003 – July 2005)” and is currently in a draft version. The strategy focuses on a wide range of measurable health objectives.

Poverty is a significant issue across the region, emerging as a widespread phenomenon during the period of transition of the region’s economies. With the return of economic growth after the 1990s, there are more levers for governments to address the issue. The region has established poverty reduction strategies with components relating to the field of health, many of which focus on access to services. The strategy in Bulgaria has included the provision of mobile medical units for remote regions and specific groups,

including Roma communities. Improving access of the Roma community has also involved the provision of primary health care (PHC) practices in housing blocks with Roma residents. Other countries have also established specific strategies for dealing with the health status of the Roma population and their social exclusion. In different countries of the region, strategies related to poverty also include mental health, reproductive health, disease prevention and health promotion, though none of these is incorporated widely into strategies.

The statutory framework for health promotion activity in the region varies among countries but all countries have incorporated some form of health promotion into their statutory mechanisms in some areas of public health. In some cases this is more general, in others defining activities in primary care or responsibilities of agencies and subnational institutes. In some countries there is definition of health promotion activities only in a few areas such as HIV/AIDS prevention or tobacco control. Recently, cancer prevention, adequate physical activity or heat wave protection has also been on the agenda.

More broadly, strategies to deal with and take account of the SDH also vary. All countries pay some attention to SDH in some areas of services, including, variously, nutrition, tobacco use, children's rights, strategies to reduce inequalities in health status and others. However, in general the region's approach in this field is underdeveloped and there are few broadly based strategies that seek to take account of housing, employment, education, social exclusion and so on into the formation or priorities of public health policy. The sort of comprehensive intersectoral approach that is needed to tackle SDH is, by and large, yet to be developed.

Case study 1: Poverty Reduction Strategy in Bosnia and Herzegovina (Federation)

The Poverty Reduction Strategy sets out strategic goals for the health sector. One of the goals is to ensure an efficient and transparent health system focused on health promotion and disease prevention. Strengthening of the public health role and multisectoral cooperation are recognized as priority activities. Bosnia and Herzegovina should adopt the concept of "new evidence-based public health" founded on intersectoral activities in society. The document also foresees the establishment of the Public Health Agency at the State level, which should perform a coordinating and regulatory role. In addition to the MoH, the following Ministries should also give their contributions: Ministry of Environment, Ministry of Work and Social Policy, Ministry of Finance, Ministry of Justice, Ministry of Transport and Communication, Ministry of Agriculture, Ministry of Internal Affairs. As key health indicators lie outside the reach of the health sector, multisectoral cooperation is essential. Notwithstanding the evident needs, there is currently a range of difficulties in practice to establish the connection between public health and other sectors of society, which results in delay in solving public health problems.

Health sector reforms in the region in recent years have focused on the financing and organization of the health system. Decentralization of decision-making has been one feature, as has the financial restructuring of health services provision, with the private sector having an increasing role. The sale of premises and equipment directly to General Practitioners (GPs) or health centres, for example, has taken place in Albania, Bulgaria and the former Yugoslav Republic of Macedonia. Ensuring equal access to services and the solidarity principle for funding has also featured among the region's reforms, as has the prevention and early detection of disease in several countries.

International collaboration

The role of international organizations in the health sector is substantial in the SEE region, and most countries have a significant number of ongoing internationally funded projects. The Global Fund to fight AIDS, Tuberculosis and Malaria is active in the region, with incidence of both HIV/AIDS and tuberculosis having risen rapidly in some countries in the past few years (see introductory section). United National Development Programme (UNDP), WHO and the World Bank (WB) are also active supporters of public health projects. The EU is active in some countries, principally through the PHARE programme in both Bulgaria and Romania, as new EU Member States. In addition, the EU is active in the special support given to Serbia, Montenegro and The former Yugoslav Republic of Macedonia through the EAR programme; and through the CARDS programme (Community Assistance for Reconstruction, Development and Stabilization) in the Western Balkans, which gives support in administrative capacity and other areas of political and economic reform.

The CEB is active in the SEE region. In recent years, expanding operations in the SEE countries was one of the Bank's highest priorities. The Bank has financed a broad range of social projects involving health, education, social housing, vocational training, job creation in small and medium-sized enterprises, natural disaster reconstruction and prevention, environmental protection, municipal infrastructure in urban and rural areas, and heritage. Particular attention is given to vulnerable groups of population such as refugees, migrants and displaced persons, minorities, victims of natural and ecological disasters, elderly and handicapped persons.

Intersectoral collaboration

A central facet of effective stewardship of modern PHS is the integration and collaboration across sectors of government. In many areas of public policy the activities of other departments not only impinge on important aspects of public health but also present possible contributions to it. Intersectoral collaboration is therefore an important mechanism for the achievement of comprehensive approaches to public health. Formalized and permanent structures for intersectoral collaboration are not widely established in the region. Many countries specify little in the way of robust strategic or operational mechanisms between departments and ministries.

In particular areas there are examples of operational collaboration, including coordination and interministerial bodies and informal committees in such areas as food policy in Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia and Bulgaria, and tobacco control in Romania. Some countries also have collaborative arrangements in place on an ad hoc basis, for the purpose of policy design, as is the case in Serbia. In Montenegro, several laws in the area of health protection were designed by or in conjunction with other ministries. For example, the law on food safety was prepared by Ministry of Agriculture, Forestry and Water resources, in cooperation with Ministry of Health, Labour and Social Welfare, the programme of prevention of iodine deficiency was prepared by the Ministry of Health, Labour and Social Welfare in cooperation with the Ministry of Education.

There are specific examples of policies introduced by other sectors, such as smoking bans and seat belt use, both of which operate in all countries of the region. No country

has a blanket public smoking ban but all have regulations designating certain types of premises as smoke free, such as health and education institutions and public transport, as well as regulations of smoking areas in restaurants and so on. Seat belt regulation demonstrates the importance of implementation, and some countries note that enforcement is not satisfactory. The use of fiscal instruments for public health is not widespread, but the region extensively taxes tobacco products, in some cases (notably Bulgaria and Serbia) earmarked for use in tobacco and alcohol control measures, or directed at tobacco related diseases. In the case of both road traffic laws and tobacco regulation, enforcement is a central concern.

In some particular areas of public health, the region demonstrates greater intersectoral collaboration, for example in environmental health. Nearly all countries of the region have collaborative arrangements, largely within the structures of national environmental health action plans, involving collaboration between ministries such as education, agriculture, economy, energy, as well as health. In mental health, violence and injuries prevention, most countries have comprehensive collaborative arrangements between sectors.

Case study 2: The National Environmental Health Action Plan (NEHAP) in Albania

The National Environmental Health Action Plan (NEHAP) reviews and analyses the situation in Albania, and identifies measures that must be taken in order to improve the status of environmental health and safety. Key among these are intersectoral collaboration across the government; improved health and environment information systems that will allow tracking and linking of environmental and health changes, with a focus on collecting data on vulnerable subgroups of the population; establishing a legal framework and standards for environmental protection and health; building local capacity for monitoring and implementing environmental health policy and programmes; and ensuring public participation in decision-making and access to information about the environment. Specific environmental risks addressed include water, air, noise and land pollution; food safety; radiation safety; and natural disasters and industrial accidents. The plan also includes specific actions to be taken in urban and rural settlements and in the workplace. Finally, it targets different parts of the economy with specific tasks for improvement, including industry (factories and mining), energy, transport, agriculture and tourism.

In occupational health there are few comprehensive collaborative arrangements but there is cooperation at both the policy/strategy and operational levels in some countries (see Service Delivery section). There are also examples of greater collaboration, such as in the former Yugoslav Republic of Macedonia (see Case Study 3: Intersectoral strategy in occupational health in the former Yugoslav Republic of Macedonia). Most countries do not have a comprehensive intersectoral strategy on sexual health, although there are areas of greater collaboration, especially around internationally funded programmes in the area of HIV/AIDS.

In the areas of health inequalities and the SDH, there are very few intersectoral arrangements. One or two exceptions do exist, including, as noted above, in approaches to integrating the Roma community in the former Yugoslav Republic of Macedonia and Bulgaria. However, in these areas where strategies and policy most require intersectoral collaboration because of their broad based causes and potential solutions, there is a notable lack of established collaborative structures across government and civil society.

Case study 3: Intersectoral strategy in occupational health in the former Yugoslav Republic of Macedonia

There is an intersectoral committee on health and safety at work and a strategy on health, healthy living and working environment and safety at work (a strategic document, adopted by the Government in 2006).

The following sectors have been included in the preparation of the Strategy:

- MoH, Ministry of Labour and Social Policy, Ministry of Environment and Physical Planning and the Food Directorate within the MoH, as well as the Directorate for Radiation Protection and Safety;
- State Labour Inspectorate, State Environment Inspectorate and the State Health and Sanitary Inspectorate;
- Scientific and research and educational institutions, Health Insurance Fund and the Pension and Disability Insurance Fund;
- National Institute for Labour Medicine; associations for protection at work;
- Organizations of workers and employers (Chamber of Economy, associations of employers, Trade Union), nongovernmental organizations;
- Bodies of local self-government units, Service for Protection at Work, the management team of enterprises, Labour Medicine Institute, Labour Medicine Services.

The Strategy should provide a national strategic framework for the application of national measures for health, healthy living and working environment and safety at work, in conformity with the relevant international documents in the domain.

The purpose of the application of the Strategy is:

- To provide a safe and healthy working environment;
- To reduce the number of work-related diseases and injuries of employees with improvement in the working environment, way of living and social factors;
- To keep and improve the health of working people (physical, mental and social);
- To improve and maintain working capabilities;
- To provide an optimum balance between the economic and business interest on one hand and the working capability and health of working people and the environment on the other;
- To provide services and production of products that are not harmful for the health of the population and the environment;
- To monitor and assess risks.

Health impact assessment

As well as a paucity of intersectoral structures and processes, there is very little use of Health Impact Assessment (HIA) in the implementation of policies from other sectors. There are a few attempts, as in the former Yugoslav Republic of Macedonia, where the protection of children's rights, the protection of women's rights, the National Environmental Action Plan, strategies and action plans for decentralization, family violence, traffic injuries and waste management are all subject to some form of HIA. In Montenegro, some specific policy areas are also subject to this kind of scrutiny, including noise, tobacco, radiation, food, water and air.

Health information

Health information and health intelligence are at the core of modern health systems, and the basis not only of effective and appropriately designed services but also of the strategies and policies that define and underpin them. It is an area in which the SEE region shows a mixed performance. The systematic use of health information to support

policy and strategy is not demonstrated in the region, although most countries incorporate research evidence in some areas and to some extent. This is more developed, and more routine, in some countries than others but there are few examples of where research evidence has been directly used to inform strategies and programmes for health promotion and NCD risk factors and health behaviour, and occupational health and the prevention of injuries.

Health information is vital in designing policy but its regulation is also recognized as important for issues such as data protection and privacy. Most countries of the region have some sort of legal provision for setting ethical standards and other rules for the production of health information, but this appears to be patchy. Several countries are undertaking reviews or developing laws in this area but in others the situation requires attention. There is also a mixed picture regarding the coordination of national health information systems (HIS), with both ministries and institutes of public health having a role. In some countries, however, the oversight of the HIS is not clear and requires further attention.

All countries collect information at various levels related to the functioning of the health system, although in a couple of countries improving capacity in this area is currently ongoing. On Health Systems Performance Analysis (HSPA), some but not all countries have an administrative unit devoted to this task. The picture is similarly mixed in respect of interagency coordination of the HIS, including between the MoH, national statistical office and other sectors. Progress has been made in this area but at the same time, the importance of international actors has meant that coordination of health information has been done within the framework of particular projects. In recent years, Romania has undertaken a programme to develop health information systems, with the support of the WB (see Case Study 4: Health Information System (HIS) development in Romania).

Case study 4: Health Information System (HIS) development in Romania

The MoH of Romania has been the beneficiary of the "Healthy Romania Project" funded by the WB. Some 250 servers, 750 workstations and other equipment were installed in all districts, during 1998 and 1999. One first important result of the project was the improvement of communications through Internet connections and e-mail facilities. Direct lines between the MoH and the National Centre for Health Statistics and between the MoH and each District Health Insurance House were established. The web page of the MoH has been constructed and it represents an important source of legislative and statistical information as well as other important information of public interest. Software for databases, resources management and other medical software have been produced and installed in the MoH, the National Centre of Health Statistics and Public Health Directorates from Neamt District. The implementation of the information system projects has taken place under difficult and complex circumstances because 1998 and 1999 were transition years for the health system in Romania, involving a multitude of major changes in the organization and functioning of the system, including, for example, the development of the health insurance system and the restructuring of the local public health authorities at district level. At the same time, other pilot projects of HIS in hospitals and outpatient departments have been developed within the framework of health programmes funded from national and international sources.

Research and information in the area of SDH

The link between socioeconomic information and policy is not clear in the region and appears to be weak. Most countries collect some forms of socioeconomic data, including the WB's Living Standards Measurement Study (LSMS) and the Multiple Indicator Cluster Survey (MICS). The LSMS have become an important tool in measuring poverty and the studies are conducted in several countries of the SEE region. MICS surveys are a major source of data for monitoring of Millennium Development Goals (MDGs), as well as the assessment of progress towards other international goals, such as those included in 'A World Fit for Children', and the United Nations General Assembly Special Session (UNGASS) on HIV/AIDS, etc. However, independent, nationally based research into areas such as housing, access to health services, identification of vulnerable groups, educational attainment and employment is less prevalent. There are also few mechanisms in place to ensure that SDH are fully taken account of in the design of policy and in decision-making, although some countries ensure survey results are sent to the appropriate institutions and the former Yugoslav Republic of Macedonia, for example, is in the process of introducing a system of indicators and monitoring of the broader determinants of health and implications for policy. Aside from the poverty reduction strategies in the region, which do have important implications for how social determinants are taken account of, there are no examples of where broader SDH analysis has fed directly into a public health policy or strategy. However, Serbia's poverty reduction strategy stands as an example of including socioeconomic concerns in policy development (see Case Study 5: Poverty Reduction Strategy in Serbia).

Case study 5: Poverty Reduction Strategy in Serbia

The Poverty Reduction Strategy Paper (PRSP) was adopted by the Government of the Republic of Serbia in October 2003. The main objective of the PRSP in the health sector is improvement in the overall health of the population and especially the reduction of inequalities through improving the health of vulnerable groups. The objective is to be achieved through health programmes aimed at vulnerable groups as well as the fairer distribution of health sector resources, as set out in the document "Health Policy in Serbia". The emphasis is placed on equal access to basic health services, which will be financed from the Republic Health Insurance Fund for those who are insured and from the state budget for all other citizens regardless of their socioeconomic status (including refugees and internally displaced persons). Strategic Policies are focused on health sector reform and improved accessibility of health services to the poor.

Information systems and the capacity for surveillance

The capacity for surveillance and assessment of population health is quite well developed in the region but with certain weaknesses and gaps, such as the collection of data on risk factors for NCDs. Most countries have a complete vital registration system, although notably one country in the region does not. Moreover, mortality and morbidity data are kept for the population as a whole but there is no disaggregation of data by socioeconomic groups or by ethnic groups, despite the problems of poverty in the region and the particular problems of some ethnic groups such as the Roma.

All countries undertake population health surveillance in some form and to some extent. Areas include occupational health, communicable diseases and NCDs. All countries

also undertake activities to define essential health problems. However, health information gathering is not comprehensive and in any particular area it is not universal. Additional information gathering on population health is needed to support appropriate policy design, especially in areas such as lifestyle and risk factors. Health surveys are conducted in most of the region's countries, and include the MICS studies. These studies are mostly supported by international organizations. Independent, nationally organized surveys are rare in the region, and those that take place are therefore not frequent, nor in many cases sufficiently broad-ranging and comprehensive to underpin public health policy.

Reporting to international organizations is wide ranging and all countries report to a variety of bodies, including the Statistical Office of the European Communities (Eurostat), WHO, International Labour Organization (ILO), UNDP, the WB. Cooperation with the compilation of country reports is also universal throughout the region.

Health-related research

All countries of the SEE region have capacity for epidemiological research, although public health research is limited. There is a region-wide lack of capacity in information technology and systems (see Resources section). In most countries the MoH has some role, either directly or through nominating individuals, in proposing research subjects to research organizations.

The dissemination of health-related research is relatively well developed across the region, with widespread use of journals, the media, web sites, press conferences, conferences and seminars and the like. Evaluation of research findings is less comprehensive, and in some countries, including the former Yugoslav Republic of Macedonia, this is recognized as an area in need of greater development.

There is a mixed picture regarding the formal mechanisms for relevant staff to identify solutions to health problems in the community. Some countries ensure staff are trained in areas such as priority setting and others that they are involved in the creation of project tasks and the identification of issues of importance.

The monitoring of best practice from other organizations, including internationally, is patchy in the region. Best practice monitoring can be a highly cost-efficient means of identifying solutions to problems in public health, as working models elsewhere, yet only a few of the SEE countries undertake this in a structured and regular way.

Community participation in research activity is included in some particular programmes, often in collaboration with international organizations, but again it is not highly structured or regularized throughout the region.

SWOT analysis (Strengths, weaknesses, opportunities and threats)

Strengths

While particular countries have greater strengths in some areas than others, there is a general regional picture that emerges. Equal access to health services is defined in law, and there are defined packages of services as well as activities in public health; with established public health institutes (PHIs) and legal frameworks for public health, and well-established processes for policy formation and strategy development. There is also generally a clear package of services legally defined and well defined activities and functions of areas of public health such as health protection services. The recent history of the region and the aim of SEE countries to accede to the EU mean that the role of international organizations and nongovernmental organizations (NGOs) is significant and working arrangements cooperative. There is a supportive international framework with many charters and agreements in the area of public health. There are also a number of intersectoral arrangements targeted at public health issues. There is capacity across the region for epidemiological research. Population health surveillance systems are established.

Weaknesses

While public health functions are largely well defined, in the SEE countries there is no separate legal document dedicated to PHS. While this is not necessarily a weakness, a separate legal definition of PHS can add greater clarity and political weight to specifically PHS focused on protection, promotion and prevention.

There are several key weaknesses that hinder the delivery of effective and comprehensive PHS. The integration of policy across sectors, including intersectoral assessment of the results of policies, strategies, programmes, is partial and patchy in all countries. Some examples of effective intersectoral cooperation exist but working relationships are not systematic across areas of public health or in all of the countries of the region. Systematic HIA does not exist.

There is only cursory and haphazard consideration of the SDH in the formulation of policy. There is some consideration of these issues, not least through internationally funded programmes, and some countries have made great strides in taking account of the socioeconomic conditions of particular groups in society, such as Bulgaria regarding the Roma population. However, the importance of SDH in long-term disease prevention and in the design of health promotion programmes, to take two examples, is underdeveloped. This is in part because of a lack of relevant data (which is not disaggregated by socioeconomic groups). In several countries, routine data on the prevalence of certain risk factors is inadequate.

While there are public health strategies and plans in place, the implementation of policy is a key concern across the region. Moreover, the monitoring of policy implementation is weak, for some countries more than others. There is inadequate systematic assessment and monitoring to provide feedback on the effectiveness of policy and programmes, and to feed back into the policy and operational processes of PHS, and there is no quality assessment for health care services, which requires the development of standards. Likewise, although surveys are undertaken in some form across the region, it is unclear

that their results and findings are fully incorporated into policy design. More generally, health information gathering is not comprehensive or universal and additional information gathering is needed to support policy design. While there are surveys conducted under the auspices of international organizations, independent, nationally organized surveys are rare.

A particular issue given the restructuring taking place in the health systems of the region is a lack of monitoring of private activity, and the effectiveness of private actors – in terms of both outcomes and cost effectiveness – within the system, or the systemic implications of private ownership of health premises and capital. Monitoring of best practice across organizations in the health system and international comparators is patchy.

Opportunities

There are significant opportunities to improve PHS through better and more effective stewardship and governance. An underlying factor affecting health and the health system is poverty and wider strategies (including intersectoral ones) for its alleviation would have a major knock-on effect. Devolved decision-making where decentralization is being undertaken could be an opportunity to improve local accountability and delivery of services. The processes of strategic planning that are taking place in many countries will enable the identification of existing problems and the potential for greater efficiency and effectiveness across the whole public health system. This could be aided by the establishment of dedicated planning units within ministries of health, where they do not already exist, to facilitate the coordination of activities among the institutions, agencies, ministries competent for public health functions.

The evaluation of public health programmes, in terms of operational effectiveness, efficiency and cost effectiveness could also be improved and underpin opportunities for generally more effective service provision. Accreditation of professionals, institutions and services in public health can also be built on to improve quality. Best practice monitoring of organizations, including internationally, could be a highly cost-efficient means of identifying solutions to problems in public health, as working models elsewhere, yet only a few of the SEE countries undertake this in a structured and regular way.

Although intersectoral cooperation is an area of weakness, there are examples of effective collaboration which can be built on and extended. Where this does not exist at all, the establishment of system for multisectoral cooperation for the broader health determinants presents many opportunities for addressing long term public health challenges. There may be significant opportunities to be gained from the use of HIA tools.

The process towards membership of the EU provides opportunities and a framework for progress in many areas of public health, including datasets and information systems, through harmonization of regulatory framework. The same applies through cooperation with international organizations. Public health ‘pressure’ of WHO, UNICEF (United Nations Childrens Fund), United Nations and other international agencies can create incentives for positive change.

Threats

Just as the alleviation of poverty is an opportunity affecting the health system, so worsening poverty (and inequality) might present a threat to health and the health system's functioning. There is also the push towards privatization that may undermine some essential services and functions if it is not properly monitored and managed. The process of decentralization in some countries can produce positive benefits but also poses the risk of increased differences in access to and provision of services between regions.

The provision of health information in some cases presents threats, where there is a failure to provide this in adequate or appropriate forms and the lack of computer based technology to support the identification of health threats and emerging health problems represents a potential threat in this area. Indeed the general lack of information technology (IT) resources (and in the context of stewardship, the failure to properly identify IT strategies) present a general threat to the modernization and efficiency of PHS (see Resources section).

The evaluation of the implementation of strategies is also important, and lack of evaluation represents a threat to the ongoing development of strategies. The science base of policy is also important in this regard and insufficient research is a threat to the formation of appropriate policy. Moreover, the absence of sufficient intersectoral cooperation threatens the economic effectiveness of activities in the public health sector. Intersectoral cooperation is important in creation types of activities, including gathering data in areas such as risk factors among vulnerable populations. Another factor that needs to be addressed at the policy and strategy level is the provision of human resources in the context of ageing professional staff. This requires a long term view of problems and needs (see also Resources section).

A significant driver of reform is the process towards EU membership, and any slowing of the EU integration process presents a potential threat to strategic developments in many areas.

<i>The stewardship of public health: SWOT analysis</i>	
Strengths	Weaknesses
<ul style="list-style-type: none"> • Equal access to services, defined in law. • Defined packages of services and well-defined activities and functions in the field of public health in most of the countries. • Established PHIs. • Legal frameworks for public health. • Well-established processes for policy formation and strategy development. • Positive role of international partners and NGOs. • The broader international context and framework is strong, with many charters and agreements in the area of public health. • Capacity for epidemiological research in all countries. • Population health surveillance systems are established. 	<ul style="list-style-type: none"> • No separate legal document for Public Health. • Insufficient intersectoral collaboration in many areas, including intersectoral assessment of policies, strategies, programmes. • No comprehensive use of SDH to inform policy, in part due to lack of disaggregated data. • Lack of comprehensive and routine Health Impact Assessment. • Routine data on the prevalence of certain risk factors is inadequate. • Inadequate implementation of legislation and regulations. • Lack of systematic assessment and monitoring of implemented policies, strategies and programmes. • No quality assessment for health care services, which needs the development of additional regulations and standards. • Survey research findings are not used sufficiently or systematically in the development of policy. • There are few independent nationally organized surveys of health behaviour. • Monitoring of private activity in the health system is needed. • Monitoring of best practice across organizations is patchy. • Health information gathering is not comprehensive or universal and additional information gathering is needed to support policy design.

The stewardship of public health: SWOT analysis	
Opportunities	Threats
<ul style="list-style-type: none"> • Opportunity of devolved decision-making, including local accountability for services. • Poverty reduction, as a major underlying factor in population health. • Establishment of planning unit for public health and policy analysis, and of an ongoing process of strategic planning. • Coordination of institutions, agencies, ministries competent for public health functions. • Establishment of processes for evaluation and monitoring of cost-effectiveness of public health programmes and activities. • Accreditation of professionals, institutions and services in public health can be built on. • Existing good practice in intersectoral cooperation can be built on and extended; multisectoral cooperation for the broader health determinants can be established. • Introduction of HIS as one of the main priorities. • Public health agenda in EU, and harmonization of the regulatory framework; the EU is a driver of positive change and the accession process a significant opportunity. • Public health 'pressure' of WHO, UNICEF, United Nations and other international agencies can create incentives for reform. • Best practice monitoring of other organizations is an opportunity to identify solutions to public health problems. 	<ul style="list-style-type: none"> • Poverty is an underlying threat to population health and to effectiveness of health system. • Lack of knowledge and understanding of public health issues among politicians and decision-makers. • Prevailing orientation towards privatization and market mechanisms. • Over decentralization may present risks of increased differences in the health conditions and provision of services among the different parts of the country. • Failure to provide health information (including due to lack of computer-based technology – see Resources section). • Failure to develop IT strategy. • Failure to evaluate existing strategies. • Insufficient interest in scientific research threatens basis of policy-making. • Threat to economic effectiveness of public health due to lack of intersectoral arrangements. • Lack of policy response to issues of ageing public health workforce. • Delay in the process of EU integration.

4. Delivery of services in SEE public health

Supervision and enforcement

Across the SEE region there are established institutional arrangements for many aspects of public health protection, involving supervision and enforcement from a variety of ministries, institutes, inspectorates and agencies.

The implementation of regulations in many areas of health protection requires the full input or a leading role for departments and agencies apart from the health ministries. Across the region, *compliance with control of infectious diseases* is largely supervised by sanitary health inspectorates and PHIs or dedicated centres for disease prevention and control, through well-defined and established institutional mechanisms and procedures and with robust crisis management arrangements.

Air quality monitoring is undertaken principally by environment ministries, although in some cases by health protection agencies and for some functions state sanitary inspectors. In some of the SEE countries, other ministries have a role, including tourism ministry. Regional PHIs and environmental agencies also play a significant part in inspections and enforcement of regulations. *Water quality and sanitation standards* are supervised, monitored and enforced variously by state sanitary and health protection institutes and inspections, as well as environment ministry, and including in one case the ministry of labour and social welfare.

Inspection of food production and supply is organized differently between the SEE countries. Ministries of health, state sanitary inspectorates, veterinary inspectorates within the ministry of agriculture etc., play a significant role. Bosnia and Herzegovina has established a dedicated Food Safety Authority which has responsibility for enforcement, and in Romania the National Authority for Consumer Protection, which has responsibility for the supervision of some actions. In several countries, supervision is undertaken by the Ministry of Agriculture. In one of these, it does not do so in conjunction with any health institution or authority and there is no public health based enforcement of regulations, raising the significant risk of a conflict of interest. Evidence suggests that having either dedicated food safety or consumer protection agencies, or at least public health based agencies or institutions, in charge of enforcement of food safety regulation is a more effective means of ensuring safe food supplies than leaving any part of this role to ministries of agriculture, which are likely to represent a clear producer interest.

Control of occupational health hazards is largely supervised by ministries of labour and employment and/or social affairs, as well as public health or occupational health institutes. Some countries (Croatia, Serbia, the former Yugoslav Republic of Macedonia) have a dedicated Institute of Occupational Health responsible for the supervision of action on some areas. One country in the region reports no formal supervision or enforcement of occupational health hazards.

Health related behaviour is supervised and enforced through state sanitary inspection, PHIs and ministries of health. There are other supervisory and enforcement actors in some specific areas, such as the ministry of interior relating to the smuggling of illicit

drugs. In the area of *health care facilities and programmes* health ministries and PHIs have the dominant role in supervision and enforcement. Regarding *goods with potential health impacts*, the majority of countries supervise and enforce regulations through health based agencies, either the MoH, sanitary inspection or PHIs, although in one country both functions are performed by an inspectorate of the Ministry of Trade. In one SEE country no formal mechanisms for the supervision and enforcement of regulations regarding goods exist.

Intersectoral cooperation

As the supervisory and enforcement functions in the area of health protection demonstrate, the legal, regulatory and operational role of sectors of government other than health are fundamental to the effective delivery of services. Moreover, productive relationships and cooperative ways of working are important in the design of policy in health protection, as well as its efficient implementation, supervision and enforcement. Intersectoral cooperation is a vital aspect of modern health protection. In the SEE countries, there is a mixed picture regarding such collaboration.

In agriculture, veterinary inspection is important in the area of food safety. Bosnia and Herzegovina (Republic of Srpska) the monitoring of meat, grain and other food imports is a defined role of the ministry. In both Bulgaria and the former Yugoslav Republic of Macedonia, the ministry has legal responsibilities relating to safe water sources, including, in Bulgaria, around chemicals, pesticides and fertilizers in the vicinity of drinking-water sources and in the former Yugoslav Republic of Macedonia towards protective zones around reservoirs.

Ministries of labour are centrally involved in the regulation of working conditions, both at a policy and operational level, and in some cases have responsibilities and roles in other areas as well, such as in the former Yugoslav Republic of Macedonia where violence prevention, drug addiction and the inclusion of the Roma community are in part responsibilities of the Ministry. Ministries of environment have central roles in environmental protection and water supplies. In Bulgaria, sanitary protective zones around reservoirs are the responsibility of this department (in contrast to the former Yugoslav Republic of Macedonia, where the same function falls to the MoH and Ministry of Agriculture).

Ministries of Education are increasingly important in aspects of health promotion activity, as long term risk factors become increasingly recognized. There are also important roles in health protection, such as children's health protection and environmental risk. More elaboration of on the role of SEE ministries of education in the area of health protection is needed. Interactions between health ministries and/or institutes of public health with ministries of science (which in the region is usually part of the same ministry as education) are also important in the area of research. Both Bulgaria and the former Yugoslav Republic of Macedonia have a cooperative relationship here, in terms of defining projects and funding (see also Chapter 3. Stewardship in SEE PHS: Governance, oversight and policy).

Case study 6: Intersectoral cooperation between Ministries of Health and Labour in Bulgaria in the field of Safe Working Conditions

Cooperation on safe working conditions (SHWC) takes place through the preparation of annual analyses on issues relating to activities for ensuring SHWC and proposal of measures for improvement. Ministries of Labour and Health collaboratively adopt rules and requirements for SHWC provision, and coordinate and participate in designing the regulations for SHWC: Through the Executive Agency 'Chief Labour Inspectorate', the Labour Ministry executes integrated control on compliance with legislation and responsibilities for SHWC in all branches and activities regardless of ownership; determines the conditions, rules and requirements for training, measurement and consultations in the field; assesses individually or together with other Ministries the compliance between health norms and occupational safety requirements; and participates in the National Council for Working Conditions.

The policy for provision of SHWC is made and realized after coordination within the structures of the tripartite cooperation at national, branch and regional level. The National Council for Working Conditions is the standing body realizing coordination, consultations and cooperation of the policy. The Minister of Labour and Social Policy chairs the Council.

Ministries of Interior have important roles regarding fire, traffic safety, violence prevention, illegal trade in dangerous goods, and other areas. Both Bulgaria and the former Yugoslav Republic of Macedonia have cooperative arrangements in these areas. Ministries of justice also have some areas of collaboration with ministries of health in the areas of terrorism, drugs, violence etc., and ministries of defence may be important in areas such as crisis management.

Case study 7: Intersectoral cooperation between Ministries of Health and Justice in the former Yugoslav Republic of Macedonia in the field of HIV/AIDS and tuberculosis

The programmes on HIV/AIDS and tuberculosis, supported by a grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria, through the Programme on Prevention of Drug Addictions, covers the imprisoned population. HIV Prevalence among the prisoners and percentage of prisoners reporting use of a condom are among the impact and outcome indicators in the study

Representatives from MoJ participate in a structured and ongoing way in the Committees of MoH on HIV/AIDS, drugs, violence and health. There is close cooperation in the area of protection of human rights (child, women, patients, other groups).

In summary, greater elaboration of the precise areas and form of cooperation between health ministries and other sectors in the implementation of health protection functions is needed in the SEE region. Forging better ongoing and institutionalized links between sectors of government is an area in need of attention.

Case study 8: Prevention of Injury and Violence in the former Yugoslav Republic of Macedonia

Injury prevention is a priority in the Health Strategy of the former Yugoslav Republic of Macedonia 2006–2015, prepared by the MoH. 'Goal No.9' refers to achievement of a significant and sustainable reduction in the number of injuries, disability and occurrence of death due to accidents and violence. The MoH has undertaken the leading role in primary, secondary and tertiary prevention of injury and violence, through the following activities:

- Commencement of a National Campaign for violence prevention as part of the Global campaign organized by Republic Institute for Health Protection (RIHP) in 2003, in collaboration with WHO, UNICEF, the Open Society Institute and ESE, an NGO for emancipation, solidarity and equity of women.
- Establishment of a Department for injury and violence control and prevention within the RIHP in 2004, with activities focused on preparation of strategic documents, organization, research and safety promotion through web site, media and publishing promotion materials.
- Violence and injury has been set as priority in the Biannual collaborative agreement signed between the MoH and WHO.
- Establishment of an interministerial and multidisciplinary National Commission for violence prevention and health protection, with representatives from MoH, Ministry of Labour and Social Policy, Ministry of Interior, Ministry of Education and Science, Ministry of Justice, Republic Institute for Health Protection, State Statistical Office, Institute for Promotion of Social Affairs, plus NGOs, media and WHO.
- Implementation of the Pilot project for documentation of interpersonal violence prevention programmes in the former Yugoslav Republic of Macedonia: established national electronic database with 47 systematically documented programmes for the prevention of interpersonal violence.
- Amendment of the legal documents related to family violence: Family Law and Criminal Code.
- Preparation of a Report on violence and health in the former Yugoslav Republic of Macedonia and a guide for prevention with comprehensive analysis of the epidemiology of violence in the country, its influence on health, public health approach in recommendations for violence prevention and support for victims of violence, particularly women and children.
- Preparation of a Report on a Survey of the emergency medical services in the former Yugoslav Republic of Macedonia has been undertaken in 2007 with situation analysis, challenges and recommendations for improvement.
- Focal point, youth delegate and National Intersectoral Commission for the First United Nations Global Road Safety Week have been appointed and many activities have been undertaken before, during and after the Week 23–29 April 2007.

Disease prevention

Disease prevention is a traditional and established area of public health but one that has expanded greatly over recent decades and years. To a large extent it is a moving target and in some areas all countries in Europe are therefore in a state of development.

Vaccination and primary prevention

The region has comprehensive vaccination programmes covering a full range of diseases. A typical list of compulsory vaccination coverage includes Tuberculosis, Poliomyelitis, Diphtheria, Tetanus, Pertusis, Morbilla, Parotitis, Rubella, Hepatitis B, and Haemophilus influenzae type B. A complete list of compulsory vaccination in the region is listed below.

Post exposure prophylaxis and post-exposure vaccination is also applied throughout the region to some degree or other. Immunization programmes operate according to epidemiological and clinical indications. An example from one SEE country includes Enteric, Lyssa, Tetanus, Yellow fever, Cholera, Diphtheria, Disease caused by haemophilus influenza type B, Meningokok meningitis, Diseases caused streptococcus pneumonia (pneumococcus), and Flu (12).

Table 4. Distribution of % of infants vaccinated against specific diseases among SEE countries

Country	% of infants vaccinated against Tuberculosis	% of infants vaccinated against Poliomyelitis	% of infants vaccinated against Diphtheria	% of infants vaccinated against Tetanus	% of infants vaccinated against Pertusis	% of infants vaccinated against Morbilla	% of infants vaccinated against Parotitis	% of infants vaccinated against Rubella	% of infants vaccinated against Hepatitis B	% of infants vaccinated against Haemophilus influenza type B
Albania	97.7	97.1	98.4	98.4	98.4	97.2	-	96.2	98.5	-
Bosnia & Herzegovina	95	95	93	93	93	90	30	88	93	50
Bulgaria	97.7	96.6	95.6	95.6	95.6	96.2	95.5	92.6	96	-
Croatia	98.3	96	95.9	95.9	95.9	95.5	94.6	95.72	98.9	95.7
Montenegro	98.2	93.2	93.1	93.1	93.1	91.6	91.6	91.6	91.6	91.6
The former Yugoslav Republic of Macedonia	98.8	97.5	97.1	97.1	97.1	96.4	96.3	96.4	90.81	-
Republic of Moldova	97.4	98.5	97.6	97.6	97.6	96.9	-	96.3	98.8	-
Romania	98.5	96.9	97.1	97.1	97.1	96.7	-	91	98.5	-
Serbia	97.8	97.8	97.7	97.7	97.7	95.6	92.8	95.9	65.1	-
EU before 2004	30.23	94.09	93.22	93.22	93.22	89.68	87.72	87.41	72.83	91.63

Source: SEE Health Network PHS focal points group

Information on health risks for prevention is provided across all the countries of the region to some degree or other. This includes information relating to communicable diseases and behaviour, such as HIV and sexually transmitted infections (STIs), information for mothers and children, and, variously among countries, checks on blood pressure, cholesterol and blood sugar. Some countries are more proactive than others in the area of health behaviour advice relating to tobacco, alcohol, diet and physical activity. Overall, this is not a widely developed area in the region, with a couple of exceptions. A problem identified in some countries is the lack of time of primary care practitioners to engage in any substantial counselling on health behaviour, except where particular programmes are organized that include counselling, such as for HIV/AIDS services.

Other types of primary prevention programme in the region include areas such as HIV/AIDS, tuberculosis, tobacco and drug control activities.

Case study 9: Iodine deficiency in SEE countries

The countries of SEE are part of Balkan Iodine Deficiency Region, and there are programmes specifically aimed at ensuring the provision in the diet of this micronutrient.

In Bulgaria there is a strategy for the universal iodization of salt. The implementation of this strategy has resulted in a reduction of Iodine Deficiency Disorder (IDD) to below 5% and the eradication of cretinism. The endemic character of this disorder had been eradicated in the former Yugoslav Republic of Macedonia with a very successful comprehensive programme.

In 2003, Romania launched a high-profile nationwide campaign to increase awareness about the dangers of IDDs and the benefits of using iodized salt, in collaboration with UNICEF and the MoH. The campaign aimed both to educate consumers and work with producers and retailers to expand the use of iodized salt.

Albania has significant iodine deficiency, particularly in the south of the country, where, in rural areas, very high deficiency has been reported. The MoH and Institute for Public Health have undertaken an Iodine Deficiency Survey, and the MoH, with the support of UNICEF, has begun a programme to ensure adequate iodine intake among the general population, especially in high risk areas, through the iodization of salt.

The former Yugoslav Republic of Macedonia has a Commission for Iodine Deficiency, and the iodine deficit is being eradicated. There are provisions for the iodization of salt.

In Bosnia and Herzegovina, the first Iodine Deficiency Survey in the Republic of Srpska, conducted in 1999, resulted in the adoption of a new Regulation on iodized salt. A recent second survey, The Republic of Srpska Iodine Deficiency Survey 2006, conducted among 1200 school children from 30 schools, revealed a mild iodine deficiency. Research of iodine status has also been conducted in the Federation of Bosnia and Herzegovina, supported by UNICEF, in 2005. Almost 9% of children were registered as having goitre, which corresponds to a 'slight' degree of iodine deficit (5–19.9%). Significantly larger presence of goitre has been found among children from rural regions, in particular among girls.

Screening programmes and secondary prevention

The role and organization of primary care services is critical for the effectiveness of disease prevention strategies and programmes. This is one area where GPs have an opportunity to engage in health promotion activities, as disease prevention programmes can identify high risk groups and individuals in some disease areas. In Croatia there is a network of School Health Services in PHI working on preventive health care for children and youth

All countries in the region have established screening programmes in some areas. For example in Bulgaria there are prevention programmes for child and maternal health and identification of groups at increased risk of diseases such as some cancers, diabetes and cardiovascular disease. There is a mass neonatal screening programme, covering 95% of newborns. This, for example, includes the mass screening for the detection of carriers of beta-thalassaemia. The former Yugoslav Republic of Macedonia has reported similar activities.

There are secondary prevention programmes in the region but these are developed to varying degrees. In Bulgaria, for example, there is the option for anonymous HIV testing, conducted in mobile consulting units. Several countries of the region have screening programmes in some cancers, and some countries are developing them, or have them in some areas and not others. However, the region demonstrates a split here with several countries largely underdeveloped in the area of screening for NCDs, with

very little systematic screening for cancers, and still fewer countries have systematic screening for cardiovascular health.

Health promotion

Health promotion is an essential cornerstone of a modern approach to public health, seeking not only to protect health and prevent disease but also to actively improve the health of individuals and the population at large, enhancing their quality of life and life chances.

The countries of the region are not inactive in the area of health promotion and there has been recent progress in identifying and addressing areas of ill health that are appropriate for health promotion activities. Most countries have some sort of health promotion activity in the area of communicable disease, notably HIV/AIDS, and in many countries this forms part of international programmes being implemented. Programmes on alcohol and tobacco use are quite widespread, with activities predominantly being around the provision of information and education, with a focus on schools. However, in several countries health promotion activities go further, although they are largely at a formative stage in their development.

There are programmes on nutrition and physical activity in several countries, at varying degrees of development and sophistication and comprehensiveness. Obesity is recognized in the region as a problem but strategies to tackle it are only just beginning to be developed, if at all. Health promotion on NCDs is non-existent in some countries, though in others there is a greater degree of activity, including advice on diet, physical activity, tobacco and alcohol either within the primary care system or through forms of publicity and communication.

In Bulgaria, there are some national programmes covering health promotion activities, some of which are stipulated in law, such as the Law for Physical Training and Sport, which aims to improve the physical activity of school children with a view to preventing osteoporosis. This is clearly a very long term strategy, and an example of how a programme inspired and defined by one particular public health goal can underpin far broader public health gains, as childhood exercise has positive health benefits in many other ways as well. Indeed, in Bulgaria, the focus on schools is broader, and there is a system for training relevant people on health promotion issues, including school medical staff in areas such as the promotion of physical activity, tobacco control, environment and children's health. What is not yet clear is the thoroughness of implementation of the law on the ground, and an evaluation of the effectiveness of the public health programmes supported by it.

In 2005, Romania's Centre for Public Health in Sibiu undertook a survey of physical activity, both work-related and exercise, which revealed low physical activity among the Romanian population, including 18% of the surveyed population who could not exercise owing to illness or incapacity. Albania has signed up to the European Charter for Counteracting Obesity and is devising a national plan, which to date has included making the public more aware of the issue of obesity and lifestyle choices. The former Yugoslav Republic of Macedonia has been active in several areas of health promotion, adopting a tobacco control strategy and new services for drug treatment and centres for sexual health; an alcohol strategy is in the process of being formulated and the WHO

food and physical activity and obesity declaration has been adopted in a 2004–2008 food and nutrition action plan which defines a healthy diet, although health promotion mechanisms for achieving uptake of its messages are not fully defined. Violence and injuries prevention are also on the promotion agenda. The Institute of Occupational Health in Skopje has been established as a Collaborative Centre for Occupational Health of the WHO. Injury prevention is a priority in the Health Strategy of the former Yugoslav Republic of Macedonia 2006–2015.

Case study 10: Health Promotion in Croatia

In the past decade or so, Croatia has adopted the modern concept of health promotion intended to increase the level of health of the population, not merely prevent diseases. Health promotion is targeted at the entire population and its environment, unlike preventive procedures that are mainly targeted at the highest-risk population groups. Through health education, health awareness and mass media campaigns, recommendations for healthy life style should be provided in Croatia. To simultaneously reduce the risk of development of many chronic diseases (e.g. myocardial infarction, cerebral insult, individual cancer sites, diabetes, osteoporosis etc.) one should also promote the healthy life style. This approach favours integrated programmes of disease prevention and health promotion where, in addition to promoting health, efforts are made to reduce simultaneously the prevalence of individual risk factors and to act preventively against several diseases or disease groups. It should be emphasized that, organizationally, a network is being established for promoting health within the network of PHIs.

The Institutes of Public Health at county levels are responsible for the majority of health promoting activities. Croatia has been involved in European Network of Health Promoting Schools since the early nineties, and with the support of UNICEF the Croatian comprehensive health promoting project was very vivid and recognized till 2001. Then the local activities remained for some time, the health promoting idea gradually shifting from project to more sustainable programme. Health promotion has been established as cross-curricular subject in the Plan and programme in primary schools in 2000. Following the basic principle of health promotion, primary schools have been implementing the schools prevention programme for more than ten years, tackling the most important issues regarding health of school children and youth (drug abuse, tobacco, alcohol and other risk behaviour). The programme is implemented together with other sectors as School Health Services (within PHI), social welfare services, police, etc.

School Health Services operates as preventive services for school children, youth and university students, providing an annual programme which includes health education and health promotion. Some specific topics are strictly defined within the annual programme, but there is also the possibility of amendments according to the local situation and population needs. The majority of activities embrace risk behaviour, bullying and healthy nutrition.

For the adult population, health promotion activities are more project oriented, supported by the local authorities and provided either by services from the system or by NGOs. At the central level some health promotion programme in the area of drug abuse and risk behaviour prevention are financed by Ministry of Health and Social Welfare and by Ministry of Family, Defenders and Intergeneration Solidarity through the annual contest.

In 1996, within the framework of the first WB Project, subproject Health promotion was implemented, consisting of a comprehensive Health Examination Survey, education of professionals and mass-media campaign aiming at prevention of cardiovascular diseases. The reports and evaluation of every programme or activity ensure the process rather than outcome evaluation, but the routine data collection and specialized surveys in population enable to follow the indirect impact of health promoting activities.

Health promotion provided by schools is part of regular school activities, therefore equally implemented across the country. Health promotion provided by School health Services is provided according to the basic annual programme described in Plan and Programme of Health Care Measures, enacted as biannual programme by the Ministry of Health and Social Welfare, therefore equally implemented at the national level.

Health promotion activities provided and supported by local government depend on the programme, local authorities susceptibility and county financial resources. Programmes provided by NGOs and financed through contest have equal opportunity to be selected and financed, regardless of geographical area.

Nevertheless, despite many individual activities, health promotion is an emerging and so far underdeveloped area in the SEE region, with a significant lack of resources and focus on the solutions to many health challenges including chronic disease and lifestyle

risk factors. In particular there is a universal lack of development of health inequalities policies outside of the poverty reduction strategies of the region, and more general health promotion activities in the area of health inequalities are largely absent.

Issues that have been highlighted include the insufficient role of GPs in this area. A general lack of focus on health promotion means that this important lever in the health of individuals accessing health services for other reasons does not operate as efficiently as it might do. One aspect of the weakness in this area is the evaluation of health promotion activities.

Fiscal measures to support health promotion are not widespread in the region, and this is an area that could be developed further in all countries. In pursuing the implementation of the Framework Convention on Tobacco Control, Bulgaria will devote 1% of resources received in the national budget from excise duties on tobacco and alcoholic beverages to national programmes for limiting the consumption of tobacco, alcohol and illicit drugs (see Case Study 11: Nutrition, physical activity promotion and tackling obesity in Bulgaria).

It should be remembered in this regard that the SEE countries are not alone in needing to further develop health promotion activities to deal with the growing problems of cardiovascular diseases, cancers, diabetes and lifestyle-related conditions. Indeed this remains an area in need of greater investment, resources and political will across most of Europe.

Case study 11: Nutrition, physical activity promotion and tackling obesity in Bulgaria

The Food and Nutrition Action Plan 2005–2010 in Bulgaria aims to achieve changes in the national diet to reduce both the risk of nutrient deficiencies and diet-related chronic diseases, with a special emphasis on counteracting obesity. This is being implemented through an intersectoral approach, through the National Coordination Council, set up for that purpose. This includes ministries of Agriculture, Education, Economic, Labour and Social Policy, the Agency for Youth and Sport, representative associations of food producers and the municipalities. There is a particular attention to women of fertile age and in pregnancy, as well as lower income groups. The activities of the plan include the training of medical specialists, improvement in awareness among particular groups about healthy nutrition and support for low-income families.

Nutrition

Measures to improve nutrition of infants and small children cover Breastfeeding support and promotion and complementary feeding of infants through upgrading the knowledge of medical specialists and raising awareness among the population.

Since 2005 the Government provides free milk and breakfast for all schoolchildren in primary school, which has also had a positive effect on the inclusion of children from ethnic minorities in the education process. There are now legal requirements for schoolchildren's healthy nutrition in school canteens and regulations for nutrition in kindergartens and crèches, social institutions and specialized schools is under way. Training courses on nutrition have been conducted for medical specialists, and for administrative, teaching, medical and kitchen staff at kindergartens it is ongoing. Activities are also organized to raise parents' awareness about healthy nutrition.

The programme aims to reduce health problems associated with unhealthy nutrition, including obesity. There are training modules on healthy nutrition for students from 1st to 12th grade and development and introduction of a module on healthy nutrition in the programmes of kindergartens is forthcoming.

National Food Based Dietary Guidelines have been developed and published and they are currently widely promoted among the population and food producers.

Training of food producers on principles of healthy nutrition is conducted and production of healthy foods is supported. Regulations for restriction of commercial advertising of high-energy foods and beverages especially directed to children are envisaged, as are fiscal measures on foods with high fat, sugar and salt content.

Physical activity

The State Agency for Youth and Sports and the Ministry of Education and Science adopted in 2004 a National Programme "Education through Sport" in compliance with the goals of the "European Year of Education through Sport". A National programme "Sport at School" began in 2006, implemented by the joint efforts of the two institutions. The Ministry of Education and Science has approved a "National Sport Calendar" for schoolchildren from 1st to 12th grade for each school year and organizes "Challenge Days" with various sports events.

Increased construction of sports facilities and establishment of bicycle and health paths is foreseen. This will enhance the possibilities for physical activity of individuals with low income.

The introduction of mechanisms for support and stimulation of enterprises, companies and institutions for implementation of workers' health promotion with provision of healthy nutrition and conditions for physical activity and sports will benefit the effectiveness of the interventions.

Improvement of the training of medical specialists on prevention and treatment of obesity is forthcoming.

SWOT analysis

Strengths

Stewardship in public health underpins the public health system as a whole and creates a solid basis for service delivery. This is the case regarding strategies and legal frameworks, as well as the presence of established institutes of public health (see previous section). Service delivery is organized in many areas according to vertical structures, such as in the area of communicable disease surveillance, with well defined surveillance systems, identification of threats and organized institutional networks for the control of infectious disease. Moreover, crisis management arrangements are generally robust.

The region has good, effective and comprehensive vaccination programmes and systems. There are some problems with coverage of marginalized groups but these, while important to overcome, are relatively minor.

In many countries, the food safety control system is one of the better parts of public health services delivery. In addition, environmental protection is an area that has received significant recent attention in the region, with several countries developing comprehensive national environmental health action plans.

The situation on access to services is mixed and not completely clear. Attention is being paid to enhancing access of all people to health services but with structural reforms that have taken place and continue to do so, this will remain an ongoing issue for the foreseeable future.

Health promotion services are also receiving attention and the basic groundwork on recognizing problems and forming strategies has progressed well in many countries.

Weaknesses

Many of the weaknesses in service delivery in public health are connected to resources constraints, in particular in area of information technology and information systems (see Resources section). Investing in integrated HIS is a priority throughout much of the region (see Stewardship and Resources sections).

Some areas of health assessment are in need of significant capacity building. In one country, for example, there is no occupational health assessment or surveillance at all. Preventive services are also in need of capacity building and better resourcing. There is a lack of participation (and analysis of participation) in preventive services and in many countries of the region and screening programmes in the area of NCD are poor and not comprehensive. This is an area requiring further investment to achieve efficient and adequate levels of service delivery.

Health promotion activities, including around health behaviour advice and counselling, are mostly underdeveloped across the region. While in several countries health promotion has become firmly established on the political agenda and strategies have been or are being developed in many areas, services are largely not yet developed and operational. GP services in health promotion are very limited. Similarly, the SDH have been recognized in the region as important in underpinning long term disease

prevention, securing adequate health promotion and addressing health inequalities but real services on the ground that adequately address this area have yet to be implemented, including in health information. In the main, services are not evaluated.

Health services suffer from inconsistent provision across countries and many countries of the region have problems with access to services in rural areas and in particular linked with rural poverty.

Opportunities

In the short to medium term, there are significant opportunities in the region through continued cooperation with international organizations, and the use of European and international standards, within the context of the EU accession process as a general driver, to improve PHS standards and delivery.

Given the potential cost-effectiveness benefits of preventive services, there are opportunities within the more challenging fiscal environment to develop health information and health promotion services, including in non-health settings, improving public awareness of the determinants of health.

The evaluation of services can be improved but if attention is paid to this area, there are opportunities for intelligence-led, evidence-based improvements.

Threats

The international environment presents potential threats to PHS delivery. Any disengagement with the process of EU accession may undermine the development of some services, either for reasons of policy and strategy (stewardship) or because of any knock-on effect on economic performance and funding for services.

Any severance of support for services given by international organizations might threaten some services. Any lack of coherence between actors also represents a possible threat, as duplication of activities and lack of general communication is possible. With many individually defined programmes under way, it is important to ensure they are coordinated and complimentary.

An unstructured shift to private sector provision of services presents a significant potential threat to the sector. It will be important to ensure that processes of privatization do not affect access, coverage or quality of services.

A failure to address health behaviour and the wider determinants of health, and to improve population awareness of health, could strain services in coming years, not least with the challenge of an ageing society. Services might become overwhelmed by worsening chronic diseases and an ageing population.

The delivery of public health services: SWOT analysis	
Strengths	Weaknesses
<ul style="list-style-type: none"> • Developed network of PHIs. • Well defined surveillance systems and organized institutional networks for control of infectious diseases. • Robust crisis management arrangements. • Effective and comprehensive vaccination programmes and coverage. • Effective food safety control systems throughout most of the region. • Established procedures for air, water, sanitation. • Significant attention to environmental protection. 	<ul style="list-style-type: none"> • Capacity building needed in health assessment. • Preventive services: <ul style="list-style-type: none"> • Lack of analysis of participation in preventive services. • Screening programmes for NCDs are underdeveloped in some countries. • Health promotion services: <ul style="list-style-type: none"> • Underdeveloped, with few services targeted at health behaviour. • Insufficient role for GPs; lack of GP consultation time. • No evaluation of health promotion. • Social determinant of health not reflected or incorporated into services. • Rural access to services, lack of provision outside main cities, linked to rural poverty.
Opportunities	Threats
<ul style="list-style-type: none"> • The European context presents significant opportunities for improvements in services including through raised standards. • Continued and extended support of international community and organizations for supporting service provision in some vital areas. • Develop health promotion and intensifying campaigns for increasing the public's awareness of determinants of health. 	<ul style="list-style-type: none"> • Any disengagement from EU accession process, affecting strategy or other factors such as economic growth, and therefore funding. • Any disengagement by international organizations. • Lack of coherence between the activities of international organizations. • Unstructured private sector provision of services. • Failure to address health behaviour and the challenge of chronic diseases could strain services severely. • Demographic challenge to services.

5. The provision of resources for public health services

There is a varied picture across the region in the development of resources for public health. Most countries have significant gaps in their resources, whether in human resources, information technology capacities or appropriate and sufficient laboratory resources. In some of these areas, such as laboratory resources, there are important questions raised about regional capacities and cooperation, and the extent to which some resources are or can be shared.

Human resources planning, development and education

As has been discussed above in the stewardship section, the political and administrative frameworks in the region for the planning and development of human resources generally involve all the major stakeholders, including ministries of health and relevant departments within them, finance ministries in some cases, regional and local health sector authorities and local municipalities, medical faculties, medical schools, professional associations, institutes of public health, insurance funds. Across the region, the established institutes of public health and public health schools provide a solid basis for human resources in the sector. In one country only, the planning functions are undertaken solely by the MoH with no other institutionalized or regularized input.

In some countries of the region there are more formalized and more strategic systems for planning human resources in public health than in others, with varying emphasis on the short and long term and with various factors taken into account. In Bulgaria, for example, issues related to geographic distribution are formally taken into account in human resource (HR) planning, as are socioeconomic factors, demographic developments and changing models of health services delivery, such as shifting from secondary to primary care in some areas of health care service. The former Yugoslav Republic of Macedonia has also introduced some incentives for the doctors working in the remote areas. Croatia takes into account retirement dates of current doctors. Planning is also longer term, taking into account demographic developments. In Montenegro, all representatives of health system institutions participated in the development of an HR strategy, a draft version of which is now prepared. In Serbia, a model for planning has been prepared by external experts. Planning is also focused on both short and long term, taking into account demographic factors. In Albania and Bosnia and Herzegovina, the process is less strategic. In Bosnia and Herzegovina there is no formal HR planning methodology, although the needs for certain specializations are defined and requests sent from the Canton level to the MoH and Health Insurance Fund (HIF).

Most countries in the region have more or less decentralized processes of HR planning, with input from regional and local levels, though depending in part on the size of the country. However in most parts of the region there is a significant problem with the geographical distribution of human resources in the health sector. Most countries note a lack of adequate resources in rural and remote areas, or at least a significantly lower amount of resources in rural areas. Albania notes a marked regional imbalance but has implemented incentives for GPs to practice in less resourced areas and in this area there is less of an imbalance, demonstrating the relatively simple fiscal and contractual solutions that could be directed at this particular problem throughout the region. Across

the region, Bosnia and Herzegovina, Bulgaria, the former Yugoslav Republic of Macedonia and Serbia also have some level of misdistribution between urban and rural locations.

The problems of HR in the region are not simply a matter of the planning process or distribution. A simple lack of financial resources in the sector is also a problem. For example, in the former Yugoslav Republic of Macedonia, there are unemployed doctors and nurses even though the ratio of these to population remains quite low by European standards. In Serbia there is a significant surplus across many areas of the health sector, while in Bulgaria there are shortages in areas including epidemiology and communicable diseases, infectious diseases, GPs, occupational medicine, sanitary inspectors, and specialists in mathematical modelling of communicable diseases.

The modernization of public health education and training is an important factor for all countries attempting to meet the challenges of threats to public health and disease prevention and health promotion. The inclusion of multiple determinants of health in competencies has attention paid to it in only a few countries. Evidence and know-how about the SDH are largely not incorporated into leadership training and development programmes. Intersectoral cooperation is an important dimension of modern public health practice and implementation and several countries have yet to develop functional multisectoral teams, although there are examples of such teams in some areas, such as in HIV/AIDS in the former Yugoslav Republic of Macedonia, and children rights, gender equity issues, tobacco control and socioeconomic issues in Serbia. The broad base of socioeconomic issues and intersectoral actions that underpin health, public health problems and solutions to them is an area that requires significant attention in the region.

The development and maintenance of laboratory resources

Most countries in the region have public health laboratory systems capable of conducting rapid screening and high volume testing for routine diagnostic and surveillance needs to some degree or in specified areas. There is a significant variation in the comprehensiveness of such laboratory capacity, as well as some important caveats regarding their capabilities. In one country such screening and testing is sufficiently rapid and cannot perform a sufficiently high volume of such tasks, and often does so with little competence. In another, some parts of viral analysis, related to viral culture, as well as diagnostics of some pathogens of high risk, require biological protection of a higher level than the one currently available in the national laboratory. In another country, there are national laboratories for Influenza, Measles/Rubella and Polio but capabilities in other areas are not specified. In another country no such laboratory capacity exists at all. Some countries (the former Yugoslav Republic of Macedonia) give details of more comprehensive laboratory structures and capabilities, including for Human Bacteriology; Virology; Hygiene and Environment Health Protection, with units for food, water, eco-toxicological radioecology, ionizing radiation; Sector for testing and control of drugs quality with special departments with units for Chemical-pharmaceutical, Microbiology, Biochemical testing, Biological testing cosmetology. Three countries in the SEE region do *not* report some form of weakness or need for improvement in laboratory capacity.

Again, most countries report the ability to produce timely and accurate laboratory results for diagnostic and investigative public health concerns, with some caveats and some exceptions. In one country no such ability or capability exists, and in another it is noted that results can fail to be either timely or accurate; funding problems are cited as a barrier to performance in another; and in another timeliness and accuracy are mentioned in only a small number of relevant disease areas. The capacity and capability of the regions laboratories raise questions not only regarding the need for capacity building in this area for that country but also about appropriate forms of regional cooperation in this area.

Compliance with regulations and standards is comprehensive for the laboratories across the region. These vary by country and laboratory but include some forms of accreditation by WHO, including WHO reference centres which conduct external control laboratory work. European standards also apply to several laboratories or laboratory systems, and in one country the PHARE programme of the EU is assisting in an accreditation process. Several countries have national accreditation certification. Accreditation is in progress for some laboratories in the region. One country has no such accreditation of laboratories.

In the area of the handling of laboratory samples, including procedures for storing, collecting, labelling, transporting, and delivering laboratory samples, and reporting of the results, several countries adhere to protocols, guidelines and recommendations of WHO, with mandatory application; relevant EU directives have also been adopted in some countries as have ISO standards. Procedures for collecting, labelling, transporting and delivering laboratory samples and for determining the chain of custody regarding the handling of these samples have been elaborated as part of the PHARE programme in Romania. Bulgaria has documented procedures in compliance with the quality management systems as well as a handbook on quality, basic procedures on quality; working procedures on quality; forms and lists on quality, working instructions, appendices such as methods for testing by sampling, technical equipment, staff. In one country a process is under way to develop a set of guidelines to address the handling of laboratory samples.

The production and purchasing of public health supplies

Most countries in the region either do not produce their own vaccines or produce some but not others. All countries purchase vaccines according to the specificities of their vaccination programmes. Financing from the state budget is the norm across the region for vaccines. There are very limited capacities for the production of chemo-prophylactic agents within the region, and these are generally imported. In some cases such drugs and other agents can be purchased in pharmacies and are not included in lists of essential drugs, while in others, they may be included in the obligatory service package of the health insurance. Vaccine reserves are held in most countries of the region, with between a 10% reserve specified for Bulgaria, to 25% in Albania, 20–30% in the former Yugoslav Republic of Macedonia (as spillage rather than official reserve), a 1 to 3 month stock in Montenegro and a 1 month stock in Bosnia and Herzegovina (Federation). Iron, vitamins and food supplements are not produced in the region and are imported as required. The iodization of salt is the only specified food fortification capacity. No country in the region states a capacity for the production and purchasing of screening tests for early detection of diseases and these are imported as required.

While national production of essential health supplies is not necessary for their supply to national health systems, there is a notable lack of production capacity across a wide range of types of products within the region. This may be one area where strategic regional cooperation could have an impact, though the incentives, both economic and strategic, for doing so are not by any means clear cut.

Applying information technology resources

Resources in state-of-the-art technology and communication systems to collect, manage, integrate, and display health profile and surveillance data are in a state of augmentation and improvement in many countries. There are communications systems in place in some countries for collection, management and communication of data both in health profiles and surveillance data.

Improvements in information technology systems are under way in Croatia in the area of PHC, including the development of an online connection between the HIF and the National Institute for Public Health, aimed at exchanging data on health sector personnel and insured persons using health care. Also, defined and formatted messages following each patient's visit to a PHC unit are to be sent to HIF and the National Institute for Public Health.

In Bulgaria, in the area of patients' health profiles, a new e-Health department has been established within the MoH, charged with the organization, coordination and control over the functioning of the communication-information public health system. The development of an integrated e-information system, which will cover the whole health system, has been started. Part of the data collected on monitoring of air, water, soil and noise are published on relevant web sites.

Notwithstanding examples of progress in the area of IT communication systems, there are serious challenges and a significant lack of capacity to overcome in this field in the SEE region and in all countries. Several countries of the region report that there is no integrated HIS to speak of, although one is envisaged and being planned. One country states that, "Utilization of health data is insufficient, especially at the places of their creation, and most of it – being scarcely used for operational, management and planning purposes – becomes practically worthless." In one country the application of Information Communication Technology (ICT) in the health sector is significantly behind the European trends.

In all countries, the transition from paper based to electronic information and documentation systems is at an early stage in most areas, aside from examples already noted. There are some plans and some pilots as well as geographical differences within countries but by and large the majority of data is still collected and communicated on paper. There is some use of e-mail and aggregated data and health insurance funds use electronic formats on some cases.

Geo-coded data is used for some purposes in most countries. A Geographic Information System (GIS), including in some cases the WHO Health Mapper.² However this is not universal and is in the formative stages of use in some countries (e.g. there have been training programmes etc.) or it is used for a very limited number of activities, such as physical planning, radiation or environmental health. The potential of geo-coded data is far broader and the region lacks capacity in this area and certainly does not make full use of this potential.

There is also a lack of capacity in the region in accessible databases and data analysis capabilities to assess and investigate health threats and health hazards. Countries note a range of resources and capability problems, including lack of regional-level capacity, institutions having their own databases that are not integrated and with selective accessibility of data, a lack of harmonization of legislation with international trends, lack of established information flows, and a general lack of financial, human and other resources.

There is a reasonable level of reporting of data to international databases, such as the WHO HFA database and Eurostat and in some cases there are significant developments taking place (see Case Study 12: Databases and data analysis capabilities to assess and investigate health threats and health hazards in Bulgaria).

² The WHO HealthMapper is a surveillance and mapping application, developed by WHO, that aims to address critical surveillance information needs across infectious disease programmes at national and global levels. It is a user-friendly data management and mapping system customised specifically for public health users. The system facilitates data standardisation, collection and updating of data on epidemiology and on interventions and provides immediate visualisation of data in the form of maps, tables and charts.

Case study 12: Databases and data analysis capabilities to assess and investigate health threats and health hazards in Bulgaria

At international level

Data about Bulgaria are included in all WHO databases, like HFA database, Eurostat, Tobacco Control Database and other databases, containing demographic, socio-demographic and health indicators, reported by the National Statistics Institute, MoH and other relevant institutions in compliance with their respective engagement to currently report such data.

As a national reference centre of the European Environment Agency (EEA), respectively Ministry of Environment, send annual reports on the environmental monitoring by components and indicators to the respective thematic centres. Data are published on the EEA site <http://local.bg.eea.europa.eu/>.

At national level

Within the MoH structure: With the WHO project funding a web based information system 'environment and health' has been developed with the aim:

- To rationalize collection, storage, treatment, analysis and usage of information about the quality and state of drinking-water, ambient air, food safety, communicable diseases;
- To provide opportunities for investigating relationships between the environmental state, by the respective modules' indicators mentioned above, and the population health.

Comprehensive and updated information is guaranteed at local and national level by the system, providing opportunities for searching information on the population health with health risk evaluation. The system was developed for the needs of Inspectorate for Protection and Control of Public Health (RIPCPH) and to serve as a basis for decision-making at MoH level. It includes the following modules: water, air, foods, and communicable diseases. The design of entry data of each module are in conformity with the specificity of investigations carried out within each module in the regional structures of the MoH. Data on the laboratory control, sampling, samples' testing, testing results, nomenclatures and others are included in it. Searching can be performed by years, regions and monitoring sites, health indicators, dealing with the prophylactics and health promotion (morbidity, mortality by causes). The information will be made available to other national and international institution (by the decision of the MoH). The system is a part of the National Action Plan on the environment and health of the MoH and is accessible at: <http://zarazi.mh.government.bg/>

National Statistics Institute, MoH, Ministry of Environment and Waters and others currently made available to the public summarized administrative statistical data (at national and regional level) by demographic, socio-demographic and health indicators as well as environmental data. The access to detailed data (about settlements, municipalities, and regions) by the above indicators is authorized under specific conditions.

There is recognition of a lack of development of commonly shared datasets to reduce duplication, with similar data collected at different levels, wasting resources and adding additional burdens to the health system. Progress is generally slow in this area, although there are examples of integration, including in Croatia where the National Institute of Public health shares manpower data with the health insurance institute. In Serbia, the development of data sets is in progress under the EU project "Development of health information system for basic health and pharmaceutical services" which is ongoing to 2008.

The use of information technology to assure quality of personal health services and connections among providers is extremely underdeveloped in the region. Among countries, this function of IT systems largely does not yet exist, or has only been piloted, or is not comprehensive. There is no ability to assure quality of personal health services using available technology. In one country equipping health care institutions

with computers has been disorganized and based entirely around local financial resources, and therefore haphazard.

There is nevertheless activity in this area to improve the situation. In Albania a project funded by the United States Agency for International Development (USAID) and implemented by the University Research Council, aims at establishing a countrywide information system in PHC. Information on NCDs, infectious diseases, family planning and use of health services will be collected through simple case-based forms. The pilot phase in some districts proved successful and the project is being expanded to other districts. The system allows the production of performance indicators at the Health Centre level as well as at the individual health worker level.

In Serbia a network of PHIs collects data for monitoring quality of personal health services according to the National Continuous Quality Improvement Programme. They are also responsible as resource centres for the annual National Patient Satisfaction. Reports are available on line from their web sites. This project is supported financially by the WB project Health in Serbia through extensive education of all health professionals, but principally public health professionals. A bylaw on the regulation of quality improvement indicators (obliged and recommended) is under preparation.

There is and has been significant progress in the harmonization of datasets and indicators with EU and international standards across the region, and most countries are active in assimilating to a variety of standards, not least with a view to the EU accession process.

There are generally legal provisions for the regulation of the movement and protection of patient data, in some cases in accordance with EU regulations in this area. In some cases such regulation is currently being formed. The development of regulation in this area sits within the broader articulation of patients' rights (see Case Study 13: Patients' rights in Serbia).

Case study 13: Patients' rights in Serbia

In the new Health Care Law, a separate charter is devoted to right to health and patient's rights. One article is dealing with protection of privacy of patient's data and the way to provide data to courts or other official requests.

Patient rights that are regulated by the Health Care Law are:

- right to accessibility of health care services,
- right on health information regarding available health services, technologies and mechanisms how to use them,
- right on information regarding the actual health status of the patient,
- right to exercise individual free choice of providers and plans
- right to privacy and confidentiality
- right to have independent decision-making process and consent
- right to have access into the own medical documentation
- right on security of the patient data
- right to participate in medical experiments under condition that informed consent is provided and the mechanism to be compensated in case of related health damage are in place.
- right to complain, and
- right to compensation.

The assurance and compliance with mentioned regulations are monitored through different mechanisms for patient empowerment and guidance that are available in the health care system: patient information desk at every service, written information of range of services covered within every department of PHC, leaflets, health insurance of patients and providers, education of the health care workers, set of national indicators for quality in health annually monitored and reported, ombudsman job position, different control and inspection authorities, complaining e-mail contacts and boxes, officers for bylaw jurisdiction procedure and verdict, and media coverage of services.

SWOT analysis

Strengths

In the area of resources for public health, there are some notable strengths in the SEE region. The situation differs from country to country but there are clear patterns and similarities as well. Many of the strengths in human resources are due to robust stewardship, including legislative frameworks and strategies for human resources development. Aside from this, the region has a tradition of PHIs and public health schools, with education and professional development providing a solid basis for the sector. There is also accreditation and licensing for some profiles of personnel.

The production of vaccines is quite low in the region but where there is no local production purchasing arrangements are institutionalized and provision, including surpluses, is well defined.

By and large, there is a well organized and functional laboratory network (with some gaps in some cases).

Weaknesses

There are more weaknesses in the area of public health resources than there are strengths. Again, the stewardship of human resources is important here and in some countries there is no regularized planning process. At the level of overall governance, there is also a lack of intersectoral cooperation. These factors of stewardship are reflected in the provision of resources.

There is a significant difficulty with distribution of human resources across most of the region. Concentrations of personnel in urban areas raise many questions about the adequacy of PHS provision and access to services in rural areas, where capacity building is clearly needed. Shortages and surpluses of personnel are mixed across the region, but in some countries there are shortages in some specialties. A further analysis of the provision of specialists is something that could be useful at a regional level.

Although education and training is generally a strength in the region, there remain gaps. In some cases there is a rigid approach to training that is not suitable for modern public health challenges, including a need for training in teamwork and communications; linked to the lack of planning in some countries, there is a failure to identify community needs as a basis for defining education and training. There is also a weakness in the ongoing training and development of personnel in the public health field, which warrants attention.

Perhaps the greatest weakness in the provision of resources for public health is the absence of adequate information technology and information systems. Indeed, information systems form the weak link in the ability of the region to conduct health related research, while countries are far stronger and better resourced in expert and professional personnel in this area. This is real challenge for the region. Many areas are dominated by paper-based reporting between different components of the public health system. There is a significant absence of integrated HIS and a lack of capacity in databases and of capabilities in data analysis. (The strategic level is also underdeveloped here, with plans for IT systems still not having been drawn up in many countries). A low level of technological development, which is significantly behind European trends, should be one of the priority areas for examination in analysing the needs for capacity building, recognizing that progress in this area will inevitably affect organizational and working practices to some degree.

Despite the generally positive picture regarding laboratory resources, some countries have a lack of capacity in this area. While laboratory networks exist and are well-established, lack of funding is a problem and many are under-resourced. It is problem that can be dealt with at a regional level. The provision of laboratory resources is one area where regional collaboration can underpin efficiency and effectiveness.

Opportunities

The need and ambition to achieve harmonization with EU standards is an important driver in the area of resources provision in public health. Similarly, coordination of public health curricula with EU norms can provide direction and guidance in the area of public health education. The involvement and financial support of international partners and agencies in education is also an important driver of his process.

Shortages in highly qualified staff can be solved in part by improvements in the efficiency of their use and through appropriate training. Ongoing training, which can update expertise and knowledge throughout the career, can assist in this improvement. Organization and management are issues that need to be looked at in this regard. The effective geographical distribution of personnel also provides a clear opportunity to improve access and provision in areas that are underprovided for, and the example of incentive payments for GPs to relocate in Albania provides a useful example of this. Broader political reforms towards decentralization in some countries can provide an opportunity to re-evaluate human resources distribution, in part through increasing local accountability. Generally, the relationship between central and local government can provide an important opportunity for improvements. In addition, decentralization of the HR planning process, which forms part of some strategic objectives in the region, could also help with this problem.

There are significant opportunities for the wider application of IT and the integration of IT systems, which will improve efficiency and effectiveness of health services provision and could improve the quality of services, and operational efficiency. The continual accreditation of laboratories will also enable gaps in these essential resources to be closed. Significant opportunities arise here from regional cooperation.

Threats

There are several threats in the provision of resources for public health. These include a failure to make progress on harmonizing standards and norms with those of the EU. This process will require the necessary political will from central governments to be successfully implemented. Also, developments in the region raise the possibility that the privatization process will undermine services or the planning of services, as the provision of resources is left, in some areas, to market forces. Without proper regulation and control, this process could have a negative influence on areas of essential service provision in particular.

A failure to keep up to date and upgrade public health workforce standards also presents a possible threat to the sector, and if the issue of geographic distribution is not dealt with in a timely way, this is a situation that could in fact worsen, as some the current incentives against practising or working in rural areas become stronger.

The general relative unattractiveness of public health sector training and jobs, within the health system and beyond, may become a significant issue if it is not dealt with. Low wages, long periods of training and lack of general recognition and esteem for some professional areas could lead to shortages in recruitment to education and training. This is particularly important in those areas where the average age of current professionals is quite old. Poorly planned personnel training, if unsolved could produce a similar problem, with some areas over supplied and others experiencing a shortage.

The provision of resources for public health: SWOT analysis	
Strengths	Weaknesses
<ul style="list-style-type: none"> • Solid basis for professional development in PHIs and schools of public health. • Accreditation and licensing for some profiles of personnel. • Comprehensive public health education system. • Sufficient and/or surplus of Public Health personnel in some countries. • Organized and sufficient provision of vaccines. • Relatively well organized public health laboratory networks. 	<ul style="list-style-type: none"> • General under-resourcing of personnel. • Distribution of personnel, especially urban vs. rural; territorial distribution of specialists is not appropriate. • Lack of specialists in some specialties in some countries. • Training of professionals needs reform and capacity building: <ul style="list-style-type: none"> - Training is rigid and needs modernization; - Teamwork and communications training are lacking; - Ongoing training and development needs capacity building; - Community needs should form basis of professional training. • Lack of adequate information technology systems: <ul style="list-style-type: none"> - Low level of technology development, behind European trends; - Migration from paper-based reporting at an early stage; - Lack of integration of information systems; - Lack of capacity in data bases; - Lack of capabilities in data analysis. • Under-resourcing of laboratories and gaps in laboratory provision.
Opportunities	Threats
<ul style="list-style-type: none"> • Harmonization with EU standards and coordination of public health curricula with EU norms. • The EU can be a driver of positive change and the accession process a significant opportunity. • Organization and management can help address HR weaknesses. • Decentralization and local accountability, including in the HR planning process, can help to address geographical distribution of human resources. • Opportunities for wider application of IT and integration of IT systems can improve the quality of services, and operational efficiency – opportunity for regional cooperation. • Accreditation of laboratory resources to identify and close gaps – opportunity for regional cooperation. 	<ul style="list-style-type: none"> • Failure to harmonize with the EU standards and legislation. • Privatization process without a strategic approach could worsen problems in the distribution of resources. • Insufficient mechanism for maintaining public health workforce standards. • Worsening of the unbalanced territorial distribution of human resources. • Low salaries in the public health professions might undermine recruitment and lead to potentially severe shortages of personnel in some areas.

6. Financing public health services

SWOT analysis

Strengths

The financing of health in the SEE countries has undergone a great deal of reform since the period of transition. Principles of equity and solidarity play their part in the health insurance systems in the region. Funding for public health services, traditionally separately organized and financed through Sanepid, varies but for core areas such as vaccination, direct state funding is the norm.

Weaknesses

Nevertheless, there are some clear weaknesses present that stem from the financing system, or which could be ameliorated by it. In many countries there remain marginalised groups with little real access to the health system. While in some cases this is a complex issue that requires a strategic response, some groups are still denied access due to lack of eligibility for insurance. Indeed the number of uninsured people is large in some countries, including Albania, Bosnia Herzegovina and Bulgaria.

For disease prevention and especially health promotion services, a basic weakness is the lack of stable financing. Funding mechanisms are often ad hoc and in some cases based largely on international funding. The financing mechanisms are not linked to the health financing system as a whole (e.g. funded through the main insurers). Ill-defined and ad hoc funding mechanisms are closely connected with haphazard planning and a lack of strategy.

Opportunities

Many of the weaknesses in public health service delivery could be addressed by the reform of financing mechanisms and a better understanding of the incentives produced by some areas of reform, such as privatisation.

Threats

Equally, a failure to address weaknesses in funding mechanisms presents a threat to future service delivery and to the development of comprehensive preventive and promotion services. The approach to some reforms, such as privatisation of some areas of the health system (e.g. primary care practices), pose a threat where they have been haphazard and not strategic.

For public health, some specific threats have been identified, such as the privatisation of laboratories. While not in itself a threat, in practice this is seen as having meant the marginalisation of public health priorities in some cases. Again, a strategic approach to financing is needed.

The financing of public health: SWOT analysis	
Strengths	Weaknesses
<ul style="list-style-type: none"> • Most of the funding for core public health services, including health protection services, is direct from the state. This includes areas such as vaccination. • A system of mandatory health insurance is in operation in many countries, with defined packages of services. In general terms, access for all to the health system is a principle of financing systems. 	<ul style="list-style-type: none"> • Despite social insurance mechanism, in some countries there remains a real issue with exclusion from the health system for particular groups, whether on socioeconomic or other grounds. This remains a central weakness. • The structure of financing is instrumental in some weaknesses identified across countries. For example, in more than one country health promotion campaigns were identified as being weak due to lack of stable financing; international financing is important for such programmes in the region. In one country, the supply of IT resources is seen as a weakness, with local funding being required and no national funding mechanisms put in place. In Croatia, the failure to implement assessment and monitoring in the area of environmental health is in part due to the absence of financial instruments. • In general areas where services are seen as weak have ill-defined funding mechanisms and lack of strategy is closely connected with lack of suitable financial mechanisms.
Opportunities	Threats
<ul style="list-style-type: none"> • There are in general great opportunities in the area of public health to achieve more consistent and higher quality services by reform of financial mechanisms. 	<ul style="list-style-type: none"> • The re-structuring of laboratories and their need to source funding from private sector work is seen as a threat if this commercialisation undermines the primacy of public health work and the ability of laboratories to remain at the disposal of public authorities as needed.
<ul style="list-style-type: none"> • The privatisation of some services has been a feature of health sector reform in many countries, including of GP practices, clinics and laboratories. The process of privatization presents both an opportunity and a threat to service delivery. A key factor has been the extent to which this process has been haphazard rather than strategic, and to what extent thought has been given to the differing incentives for actors across the system as a whole. 	

7. Conclusions and recommendations

The SEE region is diverse and the countries of the region have different recent experiences of reform as well as differing histories. Between the nine, there are also stark differences in the size of the countries and the structures most relevant to government and administration. Recently, a significant distinction between them is that two of the nine are now member states of the EU and another two have become candidate countries. Nevertheless, the SEE countries do constitute a coherent region defined by history, geography, economy and culture, and all are on the path to membership of the EU at some point.

The evaluation of public health services in the nine countries also shows a number of common problems and challenges. A key challenge in all countries is a shift from the narrow idea of public health as reflected in the institutions that focused on hygiene and sanitation, towards a 'new' public health that focuses on the main population health scourges of the time, including noncommunicable diseases, mental health and injuries. The need for efficient and effective health protection services has not gone away but public health as a discipline is conceived more broadly and includes a wider range of disease prevention and health promotion services and activities. This needs to be reflected in service delivery, where disease prevention and health promotion are relatively weak.

Getting public health in general and the agenda of the 'new' public health in particular high up the list of priorities for government is a central challenge. Part of this challenge is to demonstrate the economic case for public health – through savings that can be made within the health system from preventing disease and promoting health, through increases in productivity from a healthier population, and because health itself is highly valued by people and societies. Demonstrating that health is wealth is a primary concern of all those who advocate for public health. Evaluation of services is important in doing this, as well as in assuring quality. Quality assurance and evaluation of PHS are both relatively weak among the SEE countries.

Underpinning all the weaknesses in public health services delivery in the SEE countries is a need for better strategy and strategic planning, with a long term focus and with integrated thinking that sets public health services within the context of the health system as a whole. Connected to this is the need for financing mechanisms that enable longer term planning, particularly in areas such as health promotion where funding is often haphazard, ad hoc and in some cases from international sources. The financing systems at present do not in every country ensure equity of access and universal access to services.

Human resources planning is identified as a challenge in the region. A particular problem has been the distribution of human resources, with many rural areas underserved with services. Achieving the right balance between specialisations has also been a challenge and the sector faces the problems of an ageing workforce profile and a view that public health professions have little or low recognition within the health system. In some cases, regional planning might be effective at addressing some of these issues. Despite the considerable challenges of human resources in public health, the region has a tradition of strong public health education and expertise on which to build.

The particular history of public health institutions in the region has meant that building partnerships for public health action has been fairly slow. Strengthening community participation, cooperation with NGOs, with other sectors for intersectoral action, with international actors and at the regional level all pose a significant challenge but also present an opportunity, particularly in addressing new dimensions of public health such as the social determinants of health.

As well as addressing strategy, planning and financing mechanisms, reorienting services towards new public health priorities has implications for institutional arrangements. There are historically well-developed public health institutions across all the countries but they are in need of greater support in shifting to new challenges. Alongside the institutes of public health, there has traditionally been a comprehensive and high quality network of public health laboratories. Some of these are now much weaker than they were, having suffered from under-investment but they have also had to adjust to new public health threats which they have succeeded in doing to varying degrees. This is an area where regional cooperation can underpin efficiency and effectiveness.

Another key area of investment and resources is IT. The health information and communication systems do not serve modern public health needs, in particular there is a lack of integrated health information systems, with data collection and surveys producing relevant health and health related indicators. Capacity building in health information, particularly information technology, is a priority for the region.

Summary of conclusions and recommendations

	Conclusion	Recommendation
1	Insufficient recognition, especially among policy-makers, of the economic arguments for greater investment in public health.	To ensure the economic case for public health, including long term cost–benefit analysis, is communicated to policy-makers.
2	Insufficient political focus on Public Health.	To put public health high on the Governmental agenda (policy, strategy, laws).
3	While there are many positive developments in public health in SEE countries, there is a lack of updated strategy and strategic planning.	To support further development of public health legislation and regulation, policy frameworks, and strategic planning and priority setting.
4	Insufficient financing of public health (services and activities).	To ensure stable and sufficient financing of public health and mechanisms of control and monitoring, and ensure equity and access.
5	Gaps in human resources for health in terms of number, distribution, training, motivation, incentives.	To strengthen the processes for human resources planning and development (including number, profile, specialization, education, curricula, core competencies, professional satisfaction, incentives and migration) A further analysis of the provision of specialists is something that could be useful at a regional level.
6	Collaboration, cooperation and partnership in public health are still weak.	Strengthening of cooperation and partnership (intersectoral, community involvement and NGOs, international, regional), in particular with a focus on the broader determinants of health.
7	Historically well developed network of PHI but still fractioned PHS, not sufficiently oriented towards new public health challenges.	To strengthen and adapt the PHS to enable them to address new public health threats and areas (paying attention to access, equity, accountability and sustainability).
8	Inadequate focus and provision of services in the areas of disease prevention and health promotion.	To improve health promotion and disease prevention (in the surveillance system; and in services in all areas of public health, delivered at both the population and individual level).
9	Great variety in public health laboratory services provision, technology development and personnel skills, with weaknesses in some areas.	To strengthen public health laboratory services to enable them to address new public health threats and to maintain safe living and occupational environments (air, water, food, commodities, safety). The provision of laboratory resources is one area where regional collaboration can underpin efficiency and effectiveness.
10	Insufficient quality assessment of PHS and activities.	Introducing continuous quality improvement culture in public health and accreditation process of PHI.
11	Lack of integrated information and communication system with variation in quality of data and insufficient indicators for monitoring and evaluation.	To improve health information and communication system, in particular the integration of HIS (IT, data collection/surveys, producing health and health related indicators). A low level of technological development should be one of the priority areas for examination in analysing the needs for capacity building.

Albania

1. Demographic profile

The population of Albania is now just over 3 million. Between 1990 and 2004, it shrank on average by -0.4% each year, a period when some 600 000 to 800 000 Albanians emigrated, mainly to Greece and Italy. The fertility rate declined from 6.8% in 1960 to 2.2% in 2005, while the birth rate declined from 27 per 1000 people (crude birth rate) in 1980 to 17 in 2004.

The population is relatively young, with an average age of 31.4. One third are under 15 and 40% are under 18. However, the number of under-15s is decreasing and the number of over-65s is growing. Average life expectancy is 71.4 (men 69.3; women 75.1) and half of all women are of reproductive age (15–49).

Most people (58%) still live in rural areas, although the cities have grown rapidly since the early 1990s, particularly the capital Tirana. Migration within the country is one directional: from the mountainous rural areas to the central-coastal urban and periurban areas.

2. Socioeconomic status

GDP rose to 822 billion leke (about €6.6 billion) in 2006 from 315 billion in 1996. GDP per capita rose from about 120 000 leke in 1996 to about 250 000 in 2005. GDP growth in 2005 was 5.6%. Official figures for 2005 and 2006 showed that 29.6% of the population lived in poverty and 3.5% in extreme poverty; the unemployment rate was 13.4%.

All Albanians have access to primary and secondary education, but only about half have health insurance.

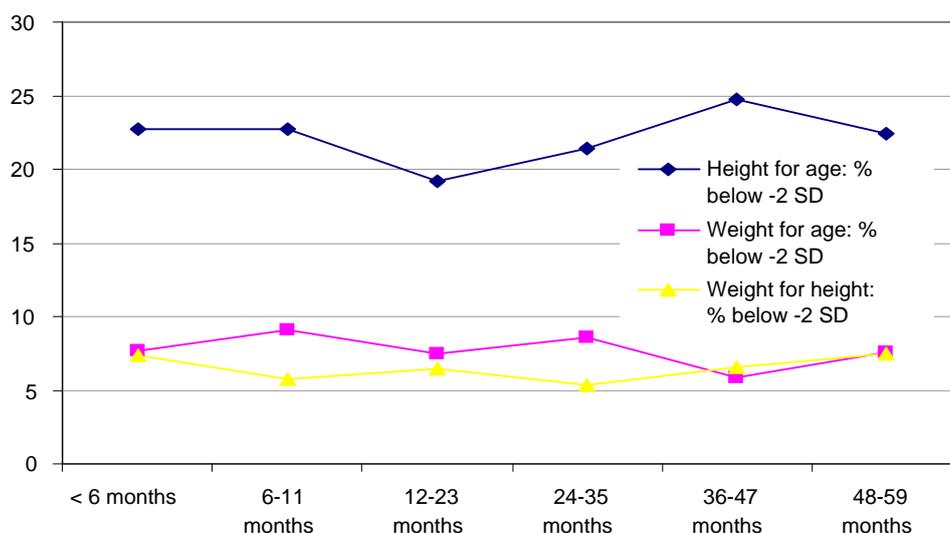
3. Health status

In 2002, WHO estimated healthy life expectancy at birth in Albania at 61.4 years (men 59.5; women 63.3).

Two of the main health indicators in Albania have improved in the last 15 years. The infant mortality rate declined from 28.3 per 1000 births in 1990 to 15.1 in 2004, while maternal mortality declined from 37.7 per 100 000 in 1990 to 17.7 in 2003. However, despite these improvements, figures suggest that up to 25% of all Albanian under-fives suffer from a degree of undernourishment.

The standardized death rate (SDR) from infectious and parasitic diseases declined across all age groups from 7.7 per 100 000 in 1992 to 4.15 in 2004. Prevalence of HIV/AIDS is low, although the incidence of HIV is increasing.

Fig. 10: Percentage of children aged 0-59 months are undernourished



Source: Institute of Public Health, Albania

Smoking has become a major health risk factor in Albania. WHO HFA data shows that 60% of adult males, and 39% of all adults, are regular/daily smokers. This is one of the highest ratios in the European Region, just below the Russian Federation and Armenia.

4. Recent developments in the Stewardship of Public Health

Albania has a range of strategies to increase the capability of its MoH to develop policy, strategy, and national health sector planning. These include:

- to restructure the MoH to provide more effective support in areas such as health insurance, mental health, health management, quality control, accreditation, licensing, monitoring, continuing professional development, standardization and maintenance of equipment;
- to strengthen the Unit of Monitoring and Evaluation to provide closer scrutiny of the health system and more effective planning. The MoH will work with foreign partners to develop the Unit;
- to reinforce capacity for creating national three-year national plans, such as the one developed for 2005–2008. These are based on detailed analyses of the health situation and indicators, the level of health services and the general environment. The plans will be reviewed every year so new elements can be added if necessary. The three-year plans will:
 - guide the compiling of health plans at local and regional level;
 - allocate investments in the health sector according to the determined priorities;
 - monitor and assess the development and implementation of programmes inside the health system;
 - provide measurable and visible developments within the health sector;

- reinforce the systems of health information at central and local level. This includes creating the conditions for the coordination of different networks and flows of information, including those outside the health system;
- A national plan for the hospital sector has now been completed. This clearly establishes which services the district and regional hospitals must deliver to meet the needs of the populations they serve. The hospital plan will also list the capital investments required to improve certain secondary services.

The following actions will take priority:

- establishing an information system for PHC to facilitate financing procedures for the HIF;
- establishing a new national information system to monitor the performance of hospitals. This will help the MoH to evaluate the hospital sector and create the right policies for it. It will also speed up the introduction of health insurance funding in hospitals;
- reinforcing the capacity to collect, evaluate and publish accurate and timely health information at a national level;
- establishing a mechanism to coordinate all information systems that serve the health system in Albania. The Unit of Monitoring and Evaluation would make an important contribution;
- creating a national accreditation system for health services and facilities in Albania.

5. Human resources training and planning in public health

In Albania, regional imbalances in the availability of medical care are greatest for specialists and pharmacists, and least, though still considerable, for primary care physicians. The relatively greater availability of the latter may partly be the result of the government's use of higher payments to motivate GPs to work in rural areas. However, Albania still has only 0.5 family doctors per 1000 inhabitants (compared to over 0.9 in the EU, for example, according to 'Health for All' data).

The unequal distribution of medical staff is one of the acute problems currently facing the MoH, because many communities have no health services. Physicians have left remote rural areas, which makes planning to meet health service needs very difficult. The MoH does not have a national strategy for human resources in the health sector. Such a plan would help to improve the geographical distribution of GPs and specialists, and to plan for the replacement of those retiring from the professions.

The health sector is faced with the continual loss of its professional elite for a variety of reasons including the movement of specialists internally and abroad as well as retirement. Albania has historically lacked experts in specific sectors of public health, health management, economy, promotion, policies and planning. This continues to impede the ability of the country's health sector to meet the highest standards of health care, and limits the career opportunities open to health professionals.

The School of Public Health was established in October 2007. Its aim is to establish a functional training system in the important sectors of public health, health management and related areas. A wide range of medical institutions and professionals contribute to

the School of Public Health, including the Faculty of Medicine, the PHI and freelance specialists.

6. Infrastructure and operation of public health

The government's mission is to improve quality of life in Albania by:

- preventing infectious diseases
- improving water and sanitation
- improving food safety
- preventing chronic diseases
- promoting healthy lifestyles.

The structure of the system for the detection of outbreaks of communicable disease through infectious disease surveillance is:

- major disease-based surveillance, which is mainly hospital-based and mandatory. Diseases are notified monthly through a specified form (14Sh). This is divided within three groups: notification within 24 hours, notification within one month (with special emphasis for outbreaks and clusters within 24–48 hours) and monthly mandatory reporting;
- 'ALERT', a syndrome-based surveillance system, which is based in GP and emergency units and involves mandatory weekly notification of nine specific infectious syndromes;
- case-based AFP (Acute Flaccid Paralysis) surveillance for polio;
- case-based measles/rubella surveillance;
- case-based, hospital-based surveillance system of congenital rubella syndrome (CRS);
- case-based, hospital-based HiB (Haemophilus influenzae type b) (severe paediatric diseases: meningitis, sepsis and severe pneumonia) surveillance;
- case-based, hospital-based surveillance of viral hepatitis (A, B and C);
- hospital-based surveillance of paediatric gastroenteritis for rotavirus-associated diarrhoea, with laboratory confirmation;
- case-based surveillance of aseptic meningitis and encephalitis;
- case-based surveillance of haemorrhagic fevers. Yearly biological surveillance of infectious agents that are transmitted through blood transfusion for patients receiving multiple transfusions;
- case-based surveillance of HIV and AIDS;
- syndromic surveillance of STI;
- case-based surveillance of syphilis;
- Sentinel Seasonal influenza surveillance;
- case-based surveillance of severe respiratory syndrome and unexpected deaths, which is hospital-based (related with case definition of avian influenza in humans);
- second-generation surveillance for HIV/AIDS.

Infectious disease surveillance

Surveillance of infectious vector-borne diseases is integral to the Albanian Integrated Surveillance System of Infectious Diseases (AISSID). All infectious vector-borne diseases that might realistically occur in Albania are included in the surveillance system, which is proving a success. The human and veterinary health structures in Albania cooperate closely to guard against animals diseases that might be communicable to humans. The two areas are covered respectively by the Institute of Public Health (human surveillance system) and the Research Veterinary Institute (veterinary surveillance centre).

The International Health Regulations are already translated and edited into Albanian, and under the responsibility of the respective technical health personnel throughout the country. National immunization programmes are provided only for children up to age 14.

Environment and health

Constitutional laws and regulations are available for the assessment of the health impact of various environmental factors – including the laws covering Protection of the Environment from Pollution; Sanitary Inspectorate; Occupational Protection – as well as certain regulations regarding the implementation of these laws.

In Albania, laws that regulate air quality are based on EU standards. Air quality monitoring is implemented in some districts of the country, and the results are forwarded to the Ministry of the Environment. Air quality standards are regularly updated.

Food safety

A legal framework is in place for food-safety risk assessment. It encompasses consumer protection, sanitary inspection, veterinary services and inspection, plant protection, animals and livestock, and fishing and aquaculture.

The basic legislation is supplemented by regulations based on the decisions of the Council of Ministers and on other ministerial acts. The main food-control structures, established by legislation, are:

- Food Inspectorate
- State Sanitary Inspectorate
- Veterinary Inspectorate
- Phytosanitary Inspectorate
- Emergency response.

Disaster Planning and Response

The MoH is developing its emergency structures with technical support from WHO (through the Biennial Collaborative Agreement between the MoH and the Regional Office for Europe of WHO, 2006–2007). The MoH has nominated technical staff responsible for Disaster Planning and Response (DPR), and will also set up a DPR commission. It has prepared the Terms of Reference for the DPR position in the MoH and for the DPR commission.

Health promotion

The PHI is directly accountable to the Minister of Health, and is the national surveillance, research and training centre for public Health. Among other tasks, the PHI monitors risk factors for health, carries out health surveys, offers advice on public health policy, and initiates and organizes health education and health promotion programmes.

The Department of Health Promotion and Education within the PHI is in charge of designing, organizing, supervising and monitoring health promotion and education programmes in Albania. It receives substantial support from United Nations Agencies (WHO, UNICEF, UNDP, UNFPA (United Nations Population Fund)) and works with reference to the Strategy of Health Promotion and Education (2003).

Health Promotion and Education Units in 36 districts of the country are responsible for providing the general public with information on health risks, health status and health needs. They also provide information on policies and programmes that can improve community health.

There are different mechanisms related to programmes and activities.

- Health behaviour related to prevention of infectious diseases, such as HIV/AIDS and avian influenza.
- People who are considered especially vulnerable to HIV/AIDS, such as commercial sex workers, homosexual men, Roma people, migrant workers and uniformed service officers.
- People in 12 districts who are considered especially vulnerable to avian Influenza, such as those living near lagoons, lakes, ponds.
- The main activities are: training (health care workers, teachers, veterinaries and community and local government leaders), distribution of promotional materials, and delivery of messages through the media.

Since the Signature of the European Charter for Counteracting Obesity by Albania in 2006, the Department of Health Promotion and Education has been in charge of preparing the National Strategy. The first step has been to use the media to increase public awareness of obesity-related issues.

Injury prevention

Messages based on sound evidence, such as the database on road accidents (2000–2006), are distributed to the public. A good collaboration has been set up between State Police and the University Hospital Center ‘Mother Teresa’.

Sexual Health

Based on studies performed by the PHI, educational activities have been carried out throughout the country. These include training (health care workers, teachers, youth NGOs, and volunteers), distribution of promotional materials, and media publicity. Thanks to collaboration with UNICEF, Youth Friendly Services have been set up in the main districts.

Primary health care (PHC)

PHC is delivered in urban areas through primary health centres and maternal and child health centres. In rural areas it is delivered through health centres and ambulances (health posts) staffed by up to three primary care doctors/family doctors and by nursing staff.

GPs and paediatricians typically staff PHC centres. Nurses and midwives typically staff ambulances which provide maternity care, child health services and immunizations. Rural health services have ceased to function in some areas, due to a shortage of equipment and loss of staff, and some doctors have not been adequately trained in family medicine.

Family physicians and the nurse/midwife at health centres provide information about health risks. This encompasses pregnancy, newborn and child health care, vaccination, family planning, prevention of HIV, prevention and control of chronic diseases, such as diabetes, high blood pressure, coronary heart diseases, asthma, allergies.

Large-scale programmes for upgrading the skills of health care workers in providing the public with information on behavioural and medical health risks have been designed and carried out in the field of family planning, vaccination, infant health care, and prevention of HIV, STIs, and avian influenza.

The following approaches have been adopted for patients.

- Direct consultations with health care staff (family physicians, nurses, midwives) at health centres, in people's homes and in schools.
- Distribution of messages through the media: newspapers (mainly by specialized physicians or public-health specialists).

Social determinants of health

These are considered in some national strategies such as:

- national strategy for socioeconomic development (Growth and Poverty Reduction Strategy, (GPRS));
- long-term strategy for health system development;
- public and health promotion strategy;
- national strategy for the prevention of HIV/AIDS;
- national drug demand reduction strategy.

Health is a priority sector for the government, not least because it can play an important role in reducing poverty. The health objectives of the poverty reduction strategy are:

- increased effectiveness and efficiency in the use of resources
- increased and equal access to improved health services throughout the country
- improvement of health indicators through specific interventions in specific areas.

Improvement of the health indicators will be achieved through measures such as better health promotion, the prevention of infectious diseases, and the improvement of care for mothers and children. To this end, 90 to 100% of the population will be covered by vaccination. Control over potable water and foodstuffs will be introduced, and the

existing programmes in this field will be continued and further expanded. Special attention will be paid to specific categories of patients, such as the mentally ill, people with chronic diseases and those in the terminal stages of disease. Efforts will be made to improve conditions in psychiatric hospitals, and to expand services, with the main aim of preventing psychiatric problems and providing early treatment when they do occur.

Bosnia and Herzegovina (Federation)

1. Demographic profile

Bosnia and Herzegovina (BIH) became an independent country in 1992 at the beginning of the 'Bosnian War'. The war ended with the Dayton Agreement in 1995, which organized the country into two largely self-governing entities: the Federation of Bosnia and Herzegovina (FBiH) and Republika Srpska and District Brčko (RSDB). This report contains official data for the FBiH.

According to official estimates, the population of the FBiH was about 2.3 million in 2006 and is now static or falling. The relatively high number of over-65s (14%) is considered a consequence of a reduction in the number of young people and of forced migrations.

The falling birth rate is now an established trend, and the FBiH belongs to the group of countries with low birth rate (9.2% in 2006). The rate of general mortality was 8%, and has shown a slight increase during the last decade. Consequently, the natural growth rate shows a trend of falling. The fertility rate of 1.3 (the average number of children per woman of child-bearing age) is relatively stable. About 57% of the population lives in urban areas, with 7.7% in the capital, Sarajevo.

2. Socioeconomic status

Socio-political and socioeconomic changes in the FBiH have significant impact at all segments of the society. GDP in the FBiH (2006) was US\$ 2738 per capita and the average salary was 603 marka (approximately US\$ 463). Although salaries, pensions and employment have risen since 2000, the level of poverty has remained the same and inequality has grown. Out of a total number of employees, 37% were female. A total of 355 102 people (44% of the population) were registered as unemployed.

The Living Standards Measurements Survey (2001) showed that 16% of the population was living in poverty, mostly in rural areas, although more than half of poor people are employed. The proportion of people without health insurance is 17%.

For Bosnia and Herzegovina, the overall Corruption Perceptions Index (CPI score) is 2.9.

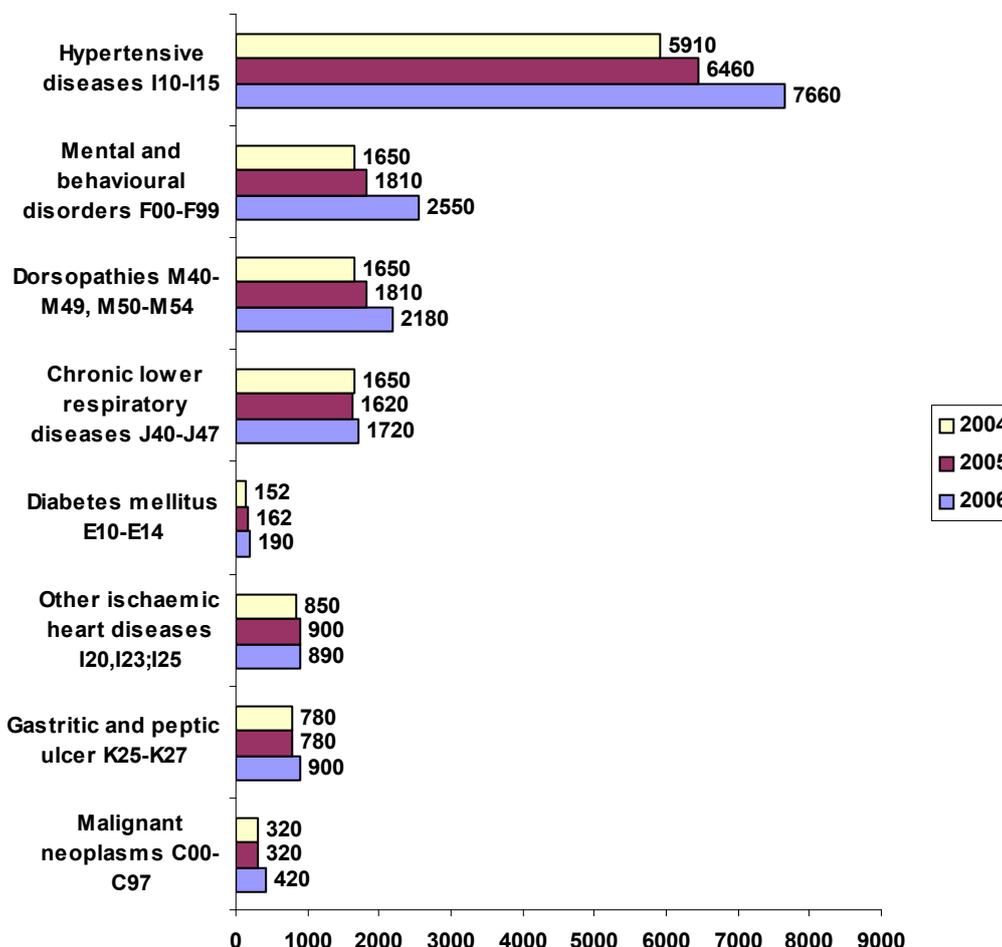
3. Health status of the population

The main causes of deaths in 2006 were diseases of circulatory system (54%), followed by neoplasm at 19%. The rate of mortality was 22/100 000 population.

Unhealthy lifestyles, insufficient physical activity, smoking and psychosocial stress are considered to be the main risk factors for development of NCDs. Recent studies point to a relatively high prevalence of these factors. Almost 41% of the adult population is overweight, and 21% is obese. Only 15% of adults are physically active in their leisure time. In addition, 38% of the adult population are smokers, 50% of men and 30% of women. Among school-aged children (13–15 years) 14% are current smokers; 10% of boys and 17% of girls.

After the recent conflict and other negative factors have been taken into account, mental disorders are expected to increase in the future. The main conditions that are registered in PHC among the adult population are neurotic, somatic and stress-related disorders (43%), and affective disorders (24%).

Fig. 11: Leading noncommunicable diseases in the FBIH 2004–2006, rate per 100 000 population (non standardized rate)

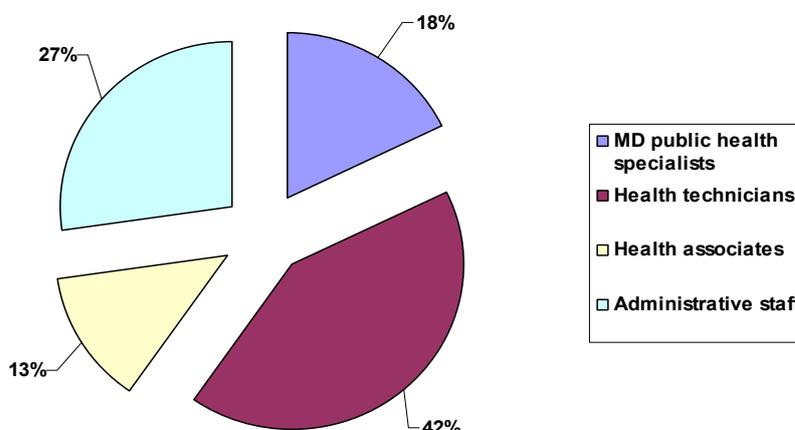


Source: Federal Public Health Institute of Bosnia and Herzegovina, Sarajevo

There is no proper system for human resources planning in the health sector, so it is impossible to predict personnel surpluses and shortages in some specialties. Public health personnel receive training through numerous seminars, workshops and specialized courses, but there is no central plan, and activities often overlap.

A detailed, standardized curriculum for public health professionals at various levels needs to be created. Protocols and procedures for public health also need to be defined, especially in PHIs. This would establish mechanisms of certification and licensing for public health personnel.

Fig. 12: Health and other personnel employed in public health institutes in the FBIH, 2006.



Source: Federal Public Health Institute of Bosnia and Herzegovina, Sarajevo

Table 5. Specialists in public health disciplines in the FBIH, 2006.

Specialization	Number	Per 100 000 population
Social medicine	25	1.0
Epidemiology	54	2.3
Hygiene and medical ecology	15	0.6
Microbiology	51	2.2

Source: Federal Public Health Institute of Bosnia and Herzegovina, Sarajevo

The founding a School of Public Health has been suggested, with experts from medical faculties in the FBIH and experts from the PHIs acting as teachers. The School of Public Health would help increase public understanding of the importance of public health, increase the influence of the PHIs and encourage knowledge sharing and collaboration within the health sector.

6. Infrastructure and operation of public health

At municipal level, public health is mainly the responsibility of the hygienic-epidemiologic services. At the cantonal level, 10 PHIs were established to deal with monitoring of the epidemiological situation, to offer expert advice and to tackle epidemics. The Federal Public Health Institute (FPHI) coordinates the work of the cantonal public health institutes. The activity of the FPHI is governed by the Law on Health Care (Articles 80, 81 and 82).

The PHIs are involved in health promotion and disease prevention, communicable disease control, health and environment, planning and programming, public health research and other areas. Coordination of public health activities with PHC – particularly family medicine teams – social services and other agencies working in the community is considered very important, especially to tackle the key health determinants in the FBIH.

A system of health inspection already exists, but a more comprehensive federal administration for inspection affairs is planned. This would enable all independent inspection agencies to cooperate more closely in areas such as health, sanitation, veterinary, phytosanitary and trade inspections.

Compulsory measures of health care are prescribed by the Federal Law on Health Care from 1998 (Article 16), as follows:

- health education to promote mental and physical health;
- environmental protection to safeguard the health and hygiene of people at home and at work;
- action to reduce smoking, alcoholism and drug addiction;
- discovering and eliminating the causes of diseases and injuries, and working to lessen their impact on health;
- measures and activities for the prevention, early detection and elimination of communicable, chronic, and mass noncommunicable and malignant diseases;
- effective quarantine measures to combat communicable diseases;
- targeted health care for the military disabled and civil victims of war, and for families of soldiers who have been killed;
- medical treatment and rehabilitation for people who are physically or mentally ill or injured;
- special health care measure for people over 65;
- comprehensive health care for children, young people and women in the areas of family planning, pregnancy, birth and maternity;
- ensuring the supply of medicines and medical supplies for health care;
- an effective system for post mortem examinations.

Identifying health problems and health hazards

Under federal law, the FPHI provides a system for monitoring public health, analysing health trends and combating disease. However, the system is chronically under-resourced, particularly in the area of identifying infectious agents.

New laws covering water and air quality were adopted in 2003. However, they have yet to be fully implemented due to organizational obstacles and lack of resources. The problems associated with managing dangerous waste and medical waste are particularly critical and represent the most serious threat to health.

Public health emergencies: preparedness and planning

A priority is to improve capabilities for detecting and responding to sudden public emergencies, such as epidemics, floods, earthquakes, environmental hazards, nuclear disasters and bio-terrorism. The need to protect and rescue people and property in the event of natural disasters is now a requirement in law (2003) and is the responsibility of the federal administration for civil protection. The federal programme for protection and rescue includes some provision for public health.

Control of infectious diseases

An annual schedule for immunization and prophylaxis is announced by the MoH based on proposals made by the FPHI. In accordance with the law, vaccination is mandatory against children's diseases and rabies. People must also be vaccinated if they plan to visit countries where they may come into contact with diseases such as yellow fever, meningococcal meningitis and typhoid.

The recent laws on water and air protection and the management of non-radioactive waste are in line with EU policy and are intended to contribute to the control of infectious diseases. The law on air protection calls for the development and implementation of action plans for use when air quality standards are breached. The law on water calls for the adoption of a 10-year water-protection strategy for the FBIH, to include the establishment of consent and inspection systems.

There is a National Environmental Action Plan (NEAP) and a National Environmental Health Action Plan (NEHAP). Their main goals are to provide sufficient quantities of high-quality drinking-water, to protect water resources, to preserve surface and groundwater quality, and to implement air quality standards.

Food safety procedures, inspection and enforcement

A Food Safety Agency (FSA) was established in 2005 to provide scientific advice and scientific and technical support in the areas of food and healthy eating. It has also taken responsibility for reviving the State Food Safety Strategy. Responsibility for regulating the food chain is shared by the ministries of Health; Agriculture, Water Supply and Forestry; Environment; and Trade. They closely collaborate with expert institutions involved in different areas of food safety and quality control, such as PHIs, inspection services, and academic faculties.

Occupational health and injury prevention

This is a rather marginalized area, given that industrial capacity in the FBIH has remained at a very low ebb during the post-war period. Although health legislation provides for the establishment at canton level of institutes for occupational health and medicine, it has not been fully implemented, so there is considerable scope for improvement.

Cooperation between sectors

Public health interventions are not the exclusive responsibility of the ministries and the health institutions. They should be part of a comprehensive social response that applies multidisciplinary and multisectoral approaches to defining a strategy for tackling public health problems. However, this coordinated response has yet to be achieved.

Health promotion and disease prevention strategies and services

Over the last 10 years, some strategic documents relating to the promotion of health and health education have been prepared with assistance from international agencies (WHO, UNICEF, Canadian International Development Agency/Canadian Public Health Association (CIDA/CPHA)). Multisectoral and participatory approaches have been implemented, including:

- **Tobacco control strategy** – Accepted in 2003, although the proposal for an intersectoral expert committee has not yet been implemented. In 2005, implementation began of the WHO Tobacco Control Project for south-eastern Europe. It aimed to develop national tobacco control capacity, while working towards ratification and implementation of the Framework Convention for Tobacco Control.
- **Federal programme for alcohol, tobacco and drug abuse** – Drafted with WHO support and adopted in 2002 to pursue health promotion and preventive activities. Unfortunately, due to fragmentation of the social system and divisions into cantons, there has been no significant progress in implementing an integrated programme.
- **South-eastern Europe health network project on mental health** – FBIH is the lead country for the project. Mental health services in the FBIH are provided through a network of 38 community-based mental health centres. A significant element of their activity is preventive. A policy paper on mental health has been developed for both FBIH and RSDB.
- **Policy paper for food and nutrition** – Developed in the FBIH in 2003 and supported by WHO, but not yet adopted by the federal government.

Preventive activities linked to communicable diseases are a mandatory component of professional medicine. Contemporary health care approaches are implemented in line with updated strategies for diseases such as HIV/AIDS and tuberculosis.

Health promotion and prevention of disease are mainly implemented through PHC, where activities to combat the main risk factors for NCDs can be implemented simultaneously. However, there is no permanent and stable mechanism for financing health-promotion campaigns, which are conducted sporadically and depend directly of foreign donations.

Prevention and control of health hazards in the workplace are neglected areas. There are a few initiatives and sporadic campaigns in some cantons (mainly linked to prevention of traffic incidents), but no central strategy or action plan. This lack of planning is leading to a large number of problems related to health and the working environment.

Evaluation of services

Monitoring and evaluation of services, including quality, are areas that need development in FBIH. The PHIs are obliged by law to prepare an annual report on the health status of the population for the government and parliament. Similar local reports are produced by the cantonal PHIs. A complete report for the federal level is prepared by the FPHI, and this contains sets of health data and indicators, time series data and descriptions of the health system based on international recommendations. Data analysis highlights the most important findings and provides recommendations for public health priorities

However, it is necessary to develop and define a widely accepted set of indicators that can be easily analysed. This will provide findings against which to establish priorities, assess needs and evaluate the effectiveness of PHS, and will support future research into health status. It will also enable more meaningful comparisons with standards of service in other countries.

The indicators should be developed in consultation with all stakeholders and should be available for health status evaluation. Regular operational and scientific research would produce the sets of basic data and indicators required for planning and establishing health promotion activities and measures, in order to achieve the defined health policy objectives.

Bosnia and Herzegovina (Republic of Srpska)

1. Demographic profile

The population of the Republic of Srpska, according to official 2006 estimates, is 1 487 785. The population under 19 years is 457 757, between 19–64 years is 908 723 and over 64 years is 151 093. The population living in urban areas is 38.75% (in Banja Luka the number is 227 046 or 15.26%) compared to 61.25% in rural areas.

The natural growth rate of the population in 2003–2005 shows a decreasing trend, reaching – 1.78 in 2005. The mortality rate increased during the last decade from 7.86 in 1996 to 9.65 in 2005, although the natality rate has decreased from 10.01 in 1999 to 7.87 in 2005. The vital indicators, as in the neighbouring countries, have had a tendency to decrease, with a decrease in the younger population and a growing number of older people over 65 years. The current mortality rate remains approximately the same as per the pre-war period. The age structure of the census population in 1991 was nearly stationary and regressive with 6% of the population aged above 65 years. Based on current estimates, this age group has now increased to 11% of the population.

2. Socioeconomic status

The Republic of Srpska has its own legislative and executive branches. The legislative branch is the Unicameral Republic of Srpska National Assembly (National Assembly), comprised of 83 members.

The GDP per capita has increased from 2149 marka (2000) to 3549 marka (2005) although the percentage of health care funding has decreased from 4.7% (2000) to 4.0% (2005) (13). According to a labour force survey released in 2006, the activity rate is 43.3% (male-54.8%; female 32.4%) with an employment rate of 30.9% (male 39.6%; female 22.7%) and an unemployment rate of 28.5% (male 27.6%; female 30.0%) (13). According to analysis of general collective contracts, the minimum salary is 205.0 marka monthly (€102.5).

During the period 2001–2001 the poverty rate has decreased by 4% and the total number of the population living in poverty is 16.1% with zero population living in extreme poverty(14). The Gini coefficient of income inequalities is RS=0.26 (14) and the average number of persons per room in occupied housing units is 1.82 (15). Access to primary and secondary education is universal. The percentage of the population without health insurance cover is approximately 30%. For Bosnia and Herzegovina, the overall CPI score is 2.9.

3. Health status of the population

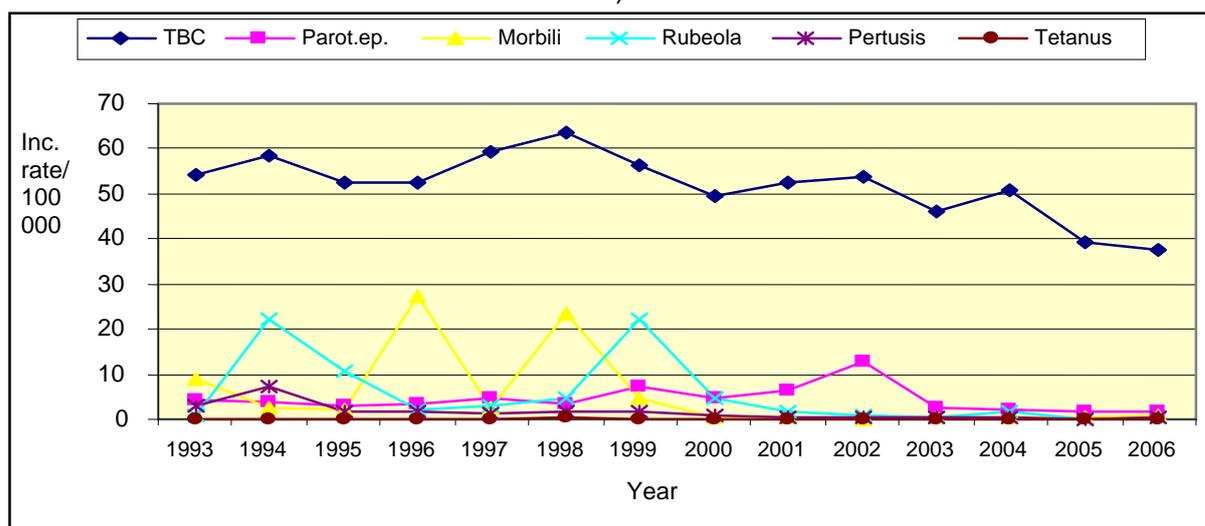
The ranking of main causes of death is in line with the trends of European countries including an increasing number of chronic diseases, neoplasm (lung cancer for men and breast cancer for women), and diseases of the circulatory system. The leading causes of death for men and women between the ages of 20 and 64 are myocardial infarction and cerebral vascular diseases. The life expectancy for males is 71 years and for female is 73 years.

The disease burden attributable to unhealthy lifestyles is suspected to be increasing post war due to the worsening of socioeconomic conditions. Smoking is a substantial problem. The number of daily smokers is 33.6% with more daily smokers among males (44%) than females (24.2%) and more among youths. (16). Current prevalence of youths smoking is 13.9% (males 14.0% and female 12.2%) (17).

The mean BMI (Body Mass Index) is 26.5 (26.2% in males and 26.8% in females). The prevalence of the population which is overweight (grade I, 25–29.9) is 37.6% (43.5% in males and 32.2% in females). The prevalence of obesity (grade II, >30) is 17.8% (13.1% in males and 22.1% in females) (16).

The incidence rates of leading vaccine preventable infectious diseases have been decreasing for the last 13 years. The hepatitis B vaccine was introduced in 2001 but diphtheria and poliomyelitis were not registered during this period. Of the population, 97.3% have access to sanitation and water sources (in urban area 98.7%, 96.6% in other places) (15)

Fig.13: Incidence of vaccine preventable infectious diseases (1993–2006) (per 100 000)



Source: Public Health Institute of the Republic of Srpska, Bosnia and Herzegovina.

The average concentration of soot varied from 8–22 $\mu\text{g}/\text{m}^3$, with a monthly concentration between 37–90 $\mu\text{g}/\text{m}^3$ in Banja Luka. The average annual concentration of SO₂ in Banja Luka varied from 14–17 $\mu\text{g}/\text{m}^3$, and the monthly concentration was between 23–52 $\mu\text{g}/\text{m}^3$.

Work related diseases and accidents at the workplace are subjects of current research, as well as risk factors in the work environment. Between 1998 and 2005, 26 people died from work related accidents in the Republic of Srpska.

4. Recent developments in the Stewardship of Public Health

The Government's mission on public health is defined in the framework: *Health Policy and Strategy for Health in the Republic of Srpska by the year 2010* and *Strategy of Primary Health Care in the Republic of Srpska*. The main goals of the health policy are,

by 2010: to reduce differences in health status and assure access to health care according to geographical area and social economic groups; to improve health and access to health care services for vulnerable groups; reorientation of health care to health promotion and diseases prevention; and increasing the efficiency and quality of health care.

The responsibility for public health is defined in the *Health Care Law* with centralized organization provided by the Public Health Institute for the Republic of Srpska. Health care reform, with a focus on PHC, is the main orientation of the health system with support from the public health functions in monitoring and evaluation of health services, based on health promotion and health prevention. Health care reform in the Republic of Srpska aims to: introduce the family medicine model; establish an efficient entry point into the health system; rehabilitate the PHC infrastructure; allow a free choice of doctor; establish new mechanisms for health care resource allocation; introduce a new provider payment mechanism; enhance the organization, planning and management of health institutions; and develop and implement national health policies, strategies and programmes.

Quality of health care is the mission of the government and many of the health care institutions have been reorganized to improve the quality of services together with introduction of accredited procedures. The PHI has monitored the effectiveness of health care and provided indicators for evaluating health care and quality performance of the health system.

Public health experts participate in the creation of legislation and strategies in the area of public health issues (for example, prevention of drug abuse, smoking cessation, food safety, health promotion strategy, strategy for prevention of NCDs). They have also prepared preventive programmes and guidelines for implementation activities defined in the goals of health policies and strategies.

The activities of the Ministry of Health and Social Welfare, together with other ministries and public health organizations, are regulated by Law (18) and important actions are supported (mainly through projects) in the areas of environmental health, education, agriculture, water management, science and technology.

The broader determinants of health (such as poverty, housing, work and unemployment, socioeconomic exclusion of groups or individuals, access to education, nutrition, drug use) are actively incorporated into decision-making on public health through the strategy for reducing differences in health status and access to health care and the strategy for reorganization of health care and health services and increasing efficiency and quality of health centres.

The health and well-being of the population is the basic aim of health policy and of community development. The main measure of well-being is quality of life and health is a basic component of quality of life. The key national targets for PHS development are disease prevention and health promotion, monitoring and evaluation of PHS provided by the PHI.

5. Human resources training and planning in public health

The development of Human Resources for Health are based on the document *Health Policy and Strategy for Health in the Republic of Srpska by the year 2010*, which says that the supply of health care workers and other professionals in health care will be harmonized with needs. The system of education and further professional education will be adjusted to ensure it meets today's needs and demands. Special emphasis will be placed on training of health care workers for work with individuals, families and in local communities, as well as on increasing knowledge in areas of health promotion and diseases prevention.

Adequate profiles of health workers need to be developed through the Human Resources Strategy, to strongly demonstrate support for the family medicine model in the organization the health system. The main strategic objectives of the public health HR policy are:

- by 2010 the long-term plans on human health resources development, in all areas of health care and for all profiles of health care and other workers in health care will be brought;
- by 2010 there will be curricula developed for medical doctors and other health care workers and a system of their education will be adjusted to modern health care, team work with individual, family and community, with emphasis on better knowledge in areas of health promotion and diseases prevention;
- by 2010 there will be curricula developed for professional advancement and postgraduate education/specialization of health care workers and health care associates. These curricula will be adjusted to the needs of health care workers.
- by 2010 the system of continuing medical education will be introduced, including issuing of professional licenses for work and regular knowledge assessment; and
- the university enrolment policy will be harmonized with a long-term programme for human health resources development.

Main stakeholders in public health human resources planning and managements are the Ministry of Health and Social Welfare, Public Health Institute, Ministry of Education, Republic Institute for Education, Ministry of Science and Technology and Medical Faculty.

Annual planning of specialization in public health and all other areas of health is under the responsibility of the PHI. The planning process is short term. The prediction of future health care needs and demographic changes are not taken into account. Therefore, projects, supported by WB and other international organizations based on "Planning of human resources in Health Care" conduct improvement of structural aspects of planning in Health care. Sub-laws define the distribution of resources across localities, according to obligations created by the Health laws and insurance (19).

Coordination of PHS in the local community is based on public health departments at PHC level, supported by city administrations. In the Institute for Public Health of Republic of Srpska and in regional PHIs (which are an integral part of the Republic of Srpska PHI) the number of public health staff conforms to existing legislation (the Bylaw on Basic Standards and Norms in health care and the Bylaw on internal

organization of work and systematization of working posts). There is a shortage of public health specializations, mainly in regional units.

The structure of training in public health management

Public health management education is carried out through short courses in areas of health management. Such courses are part of different projects which engage foreign consultants (trainers) who are experts on the respective topics. Private universities have organized this form of education and training since the school year 2005/2006, in a form of block courses, with engagement of educators from neighbouring countries. Education of public health personnel is to a great extent carried out through various projects (for example, the SITAP (“Social Insurance Technical Assistance Project”) and its subcomponent, “Planning of human resources supervision, management and governance” and the CIDA/Balkans Primary Health Care Project). Education, certification and licensing of public health workers are regulated by the Law on Medical Chambers (20) and by the Bylaw on Continuing Medical Education.

6. Infrastructure and operation of public health

The National Public Health Institute of the Republic of Srpska is a professional and scientific institution that monitors the health status of population, conducts measures to protect diseases and to improve health, monitor and evaluate quality of health care, monitor and evaluate hygienic propriety of potable water, water supplies in the field, hygienic propriety of food and articles of general use; to work on public health microbial activities; to follow up, analyse and evaluate the impact of environmental hazards (soil, water, air, noise, etc.) on the health status of the population.

There are six Regional PHIs in Republic of Srpska (Banja Luka, Doboje, Srpsko Sarajevo, Trebinje, Srbinje and Zvornik) which function as organizational units in National PHI of Republic of Srpska.

At municipal level, the responsibility for public health lies with hygienic-epidemiologic services. The system of inspection includes sanitary, veterinary, agricultural and market inspection as a part of the national surveillance system. Surveillance on the local level is done through inspection activities within the city governments of relevant municipalities, of which there are 63 in Republic of Srpska.

Identifying health problems and health hazards

The present system of surveillance for communicable diseases is primarily based on individual notification/reporting of communicable diseases, done by medical doctors who work in the institutions on the primary, secondary or tertiary health care level (21).

The PHI is in charge of the communicable diseases surveillance for the entire territory of Republic of Srpska. It receives emergency notification for any communicable diseases that require an urgent public health intervention (hemorrhagic fever, anthrax) as well as regular (weekly/monthly) reports from the regional PHIs. Nevertheless, the Republic of Srpska PHI, together with regional PHIs, carries out the mandatory health inspection among defined categories of workers, carriers of agents of communicable diseases, international travellers and other persons.

In area of environmental health, the PHI monitors the adequacy of water, food, goods of general use, and ionizing and non ionizing radiation.

Food safety

Before the war in 1992, Bosnia and Herzegovina had a long history in environment and food safety monitoring. Some of these activities are still performed in accordance with the Law on records in the health sector, which has taken over from the health legislation of former Yugoslavia. Two out of twelve adopted records, are related to the environment issues – register on safety of food and consumer’s goods, and register on conditions and measures for environment improvement. Records contain data about each tested sample of food, water, air, and soil. The data includes pollution source, and type, quantity and level of contamination from particular contamination sources.

The potential for regular monitoring of essential microbiological analyses of food and water are inadequate. In addition, difficulties in identifying some types of pathogens are growing. Monitoring of chemicals is underdeveloped.

Table 6. Food analyses samples 1998-2006

Year	Number	Physico-chemical analyses	% unsatisfactory	Micobiological analyses	% unsatisfactory
1998	5.960	2.033	11.07	3.927	13.67
1999	5.373	2.148	11.17	3.225	16.96
2000	7.921	2.249	15.04	5.243	10.07
2001	8.876	2.558	14.85	5.872	11.26
2002	11.840	4.712	13.01	7.128	12.51
2003	12.901	5.600	11.50	7.301	10.70
2004	13.237	6.730	12.24	9.352	11.97
2005	14.598	5.062	14.35	8.822	18.81
2006	16.176	4.585	5.43	11.591	5.33

Source: Public Health Institute of the Republic of Srpska. Annual report 2002/2006.

Data on mortality and morbidity are regularly collected, but they are not linked to data related to exposure to the environmental risk factors. To link data in such a way is important for the identification of unanticipated health problems and of risk groups, particularly given the Republic of Srpska’s particular circumstances.

Public health emergencies: Preparedness and planning

According to the Law on civil protection (22), the Government of the Republic of Srpska has defined a plan for dealing with natural and other disasters in its territory. For natural disasters, a rapid response team is confirmed at national level and also at community level according to the rights and responsibilities of municipalities in the law on civil protection. In the case of chemical and radiological hazards, it is a mandatory plan according to IAEA standards, and for epidemiological case investigation protocols for: communicable disease outbreaks, foodborne disease outbreaks, environmental health hazards, potential chemical and biological threats, and radiological threats.

Health protection

In the area of health protection, PHI cooperates with other authorities to investigate air quality, monitoring and enforcement of water quality and sanitation standards,

inspection of food production and supply, control of occupational health hazards and compliance with control of infectious diseases.

Disease prevention

Immunization, as a specific protection measure is carried out following the mandatory immunization calendar for children of certain age groups and per epidemiologic indications (23). The programme of mandatory immunization for the population is carried out according to the bylaw on mandatory immunization against communicable diseases, which comprises nine communicable diseases: tuberculosis, diphtheria, tetanus, poliomyelitis, measles, rubella, parotitis and viral hepatitis B. Immunization is done following the epidemiological indications for certain vulnerable groups of the population against the following diseases: typhus, tetanus in adults, influenza, cholera, rabies, hepatitis B.

Individual and group counselling at the PHC level are providing by family medicine teams according to health promotion and preventive measures in Programme of prevention and control of non communicable diseases.

Secondary prevention for children is provided through systematic medical check-ups of pre-school and school children including mandatory immunization, and for women and in maternal health care through family planning counselling including examinations for women of reproductive age (15–49 years), medical check-ups during pregnancy and in the post-delivery period, and preventive check ups aiming at an early detection of cervical cancer and breast cancer as part of the programme of prevention for women aged between 20 and 65.

Through the programme of prevention and control of NCDs, examinations are carried out to detect and reduce NCD risks (blood pressure measurement, anthropometric measurements and identification of tobacco status) and examinations related to an early detection of malignant diseases (analysis of papa test for women aged between 25 and 60, breast palpation for women above 40, mammography for women aged between 50 and 70, digit-rectal examination for men aged between 50 and 70 for the prevention of prostate cancer and colon cancer and stool examination for occult bleeding for population above 50 years.

Health promotion and health education

General and specific measures of health promotion according to the Strategy for Health Promotion in the Republic of Srpska (24) are being undertaken by health institutions and health workers, and a wide range of educational, cultural and social institutions, social experts and humanitarian and other organizations whose activities are linked with the health.

The Programme for Health Improvement (25) defines measures for health improvement of individuals and particular population groups (women, children, school children and youth, elderly), measures for health improvement at the workplace, health improvement and prevention in the areas of communicable diseases and NCDs.

Specific goals and measures of Health Policy and Strategy for Health in the Republic of Srpska by the year 2010 are healthy early life, healthy youth, healthy ageing,

improvement of mental health, prevention and control of communicable diseases, prevention and control of NCDs, reduction of harmful effects of smoking, alcohol and drug abuse, health resources development, financing of health care and allocation of resources, improvement of scientific work in health care and medicines policies.

Evaluation of quality and effectiveness of health services

The PHI is responsible for monitoring and evaluation of health status of the population, health needs and utilization of health care services based on routine statistics and surveys. In the area of preventive and curative health care services by PHC centres, PHI monitors and evaluates programmes and advocate measures for improving the health of the population of the Republic of Srpska.

The PHI also monitors qualitative and quantitative indicators to assess community health services in terms of needs/outcomes based on a sub-law on monitoring quality in health care institutions at primary, secondary and tertiary levels.

The structure of human resources and the financial support of the community health services system related to the basic or extended health needs of the population are evaluated during the projects as well as the Balkans PHC projects, Project of technical assistance in social care and others.

Bulgaria

1. Demographic profile

The population of Bulgaria declined from 8669 million in 1990 to 7719 million in 2005. In the three years to 1992, 252 000 emigrants left Bulgaria, and a further 221 000 left in the seven years to 2000.

The total fertility rate has increased slowly from 1.24 in 2001 to 1.38 in 2006 and the birth rate climbed to 9.2 per 1000 in 2005 from 7.7 in 1997. The mortality rate increased from 12.5 per 1000 in 1990 to 14.6 per 1000 in 2005.

The population is made up of the following ethnic groups: Bulgarians 83.9%; Turks 9.4%; Roma 4.7%. The proportion of people living in urban areas increased from 69.4% in 2001 to 70.17% in 2005, and almost 16% of the population lives in the capital, Sofia.

2. Socioeconomic status

GDP declined to US\$ 10 199 million in the two years to 1997, and then climbed steadily to US\$ 26 389 million in 2005. Simultaneously, GDP per capita increased to US\$ 3 396 in 2005. Unemployment reached a peak rate of 18.14% in 2000, declining to 9.12% in 2006.

In 2002, 13.43% of Bulgarian households were living below the relative poverty line. The poorest people have a deficient diet, which negatively affects their capacity to work, their physical and psychological health and their life expectancy. Just over 13% of the population has no health insurance. Every child in Bulgaria has the right to education, which is compulsory until the age of 16.

3. Health status of the population

Life expectancy at birth declined from 1989 to 1998. Since then it has increased slightly from 68.02 to 69.0 years for men and from 74.66 to 76.3 for women. Healthy life expectancy at birth increased for the period 2000 to 2002 from 61 years to 63 years for men, and from 65.8 to 67 years for women (26).

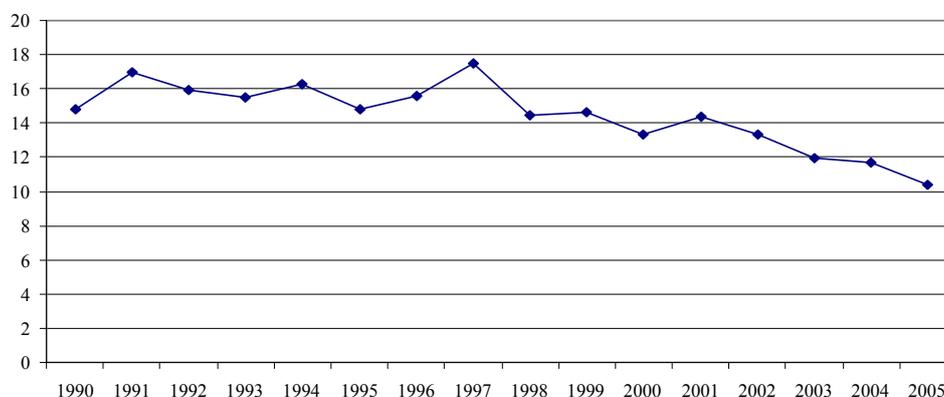
Infant mortality reached its highest level in 1997, at 17.5 per 1000. It then declined steadily until 2005, when it was 10.4 per 1000.

Other health indicators include:

- maternal mortality reached its lowest point in 2003, at 5.77 per 100 000 live births. Standardized death rates from infectious and parasitic diseases fluctuate in the range of 5–9 per 100 000;
- the incidence of tuberculosis increased steadily from 25.9 per 100 000 in 1990 to 49.8 in 1998. It then decreased to 40.1 in 2005;
- AIDS/HIV incidence increased slightly from 1990–2005, reaching 0.2459 and 1.07 per 100 000 respectively;
- in 2004, 0.6% of children under five were under weight and height for their age; 1.3% were under-nourished, and 1.2% from 12–59 months were stunted;

- in 2004, 38.5% of men and 32.4% of women were overweight, and 13.9% of men and 19.3% of women were obese. Thus, more than half of the Bulgarian population (52.4% men, and 51.7% women) were overweight or obese;
- the number of work-related injuries per 100 000 declined from 94.9 in 1999 to 51.03 in 2006. However, the number of deaths due to work-related injuries per 100 000 increased from 1.42 in 1999 to 1.81 in 2006;
- according to the Human Development Report (2006), the human development index of Bulgaria is 0.808, which ranks Bulgaria at 55 among 177 countries. (27); and
- in 2000, 100% of the population in cities and 84% in villages had sustainable access to sanitation and water sources.

Fig. 14: Infant mortality per 1000 live births in Bulgaria



Source: National Centre of Public Health Protection, Bulgaria

4. Recent developments in the Stewardship of Public Health

The main elements of health care reform in Bulgaria in recent years include:

The health insurance system. This was introduced by the Health Insurance Act (1998), introducing both compulsory and voluntary health insurance in the country. The Act established the National Health Insurance Fund (NHIF) and defined its relationship with health care consumers and providers. The Act also regulates the signing each year of the National Framework Contract between the NHIF and doctors and dentists. In 1998, the parliament adopted the Professional Organizations Act defining the legal status and the rights of organizations representing physicians and dentists. Employers and employees began to pay health insurance contributions in 1999, but the amount of revenue collected was initially limited by the low tax base due to low incomes and high unemployment. The compulsory health insurance system created the basis for a series of health-reform Acts.

The Pharmaceuticals and Human Medicine Pharmacies Act (1995). This outlined the terms and procedures for the licensing and control of manufacturing, clinical trial testing, import, export, wholesale and retailing of drugs intended for use in human medicine in Bulgaria. Changes are reflected in later versions.

The Health Care Establishments Act (1999). This regulates the organization of medical care for inpatients and outpatients and of dental care. The existing public and private health care establishments were reorganized by this Act. It also included procedures for privatization of both state and municipal medical establishments. Implementation started first in outpatient services, where GPs were introduced, and then in hospital services. For some time the financing of hospital services came from two sources: NHIF through clinical routes and the MoH. However, since 2006 the NHIF alone provides the financing through clinical pathways. The MoH now finances only emergency services, psychiatric services, haemodialysis and national programmes.

5. Human resources training and planning in public health

A human resources system covers the various specialties and professions of public health, including a wide range of specialists with non-medical educational backgrounds. There is a good teaching system for specialists in the various areas of higher, post-graduate and continuous education, in line with compulsory accreditation systems.

National planning is performed by the MoH, involving especially the Health Policy Department, the Medical Activities Department, the Health Protection Department and the Financial Department. Local planning is performed by municipal services to meet local needs. Health care or health establishments (for example Inspectorate for Protection and Control of Public Health (RIPCPh)) are the subject of detailed HR planning, which encompasses specific provision for specialties.

Table 7. Public health occupations

Public health occupation	Number of staff
1. Total number within the MoH (from p.2 to p.7), including	3995
2. Higher medical education officers, including officers working in the following specialties:	894
• Environmental health	50
• Nutrition and dietetics	90
• Hygiene	18
• Microbiology	73
• Epidemiology	176
• Parasitology	29
• Child and adolescent hygiene	38
• Occupational medicine	228
• Toxicology	14
• Virology	26
• Social medicine and health management	52
• Radiation hygiene	12
• Radiobiology	9
• Clinical specialties	67
• Others	12
2.1. including the number of physicians with two and more recognized specialties	96
3. Employees with higher non-medical education, including:	540
• Chemists	192
• Engineers	105
• Biologists	91
• Physicists	47
• Psychologists	24
• Ecologists	5
• Pedagogues	17
• Sociologists	14
• Microbiologists	2
• Architects	6
• Others	37
4. Laboratory assistants	498
5. Sanitary inspectors	906
6. Technicians	46
7. Others	1111
8. GP	5330
9. Specialists in outpatient facilities	7161
10. Ministry of Agriculture and Forestry, including the National veterinary-medical office, the National office for plant protection, quarantine and agro chemistry	4127
10.1. Including veterinarians	1638
Total	20 613

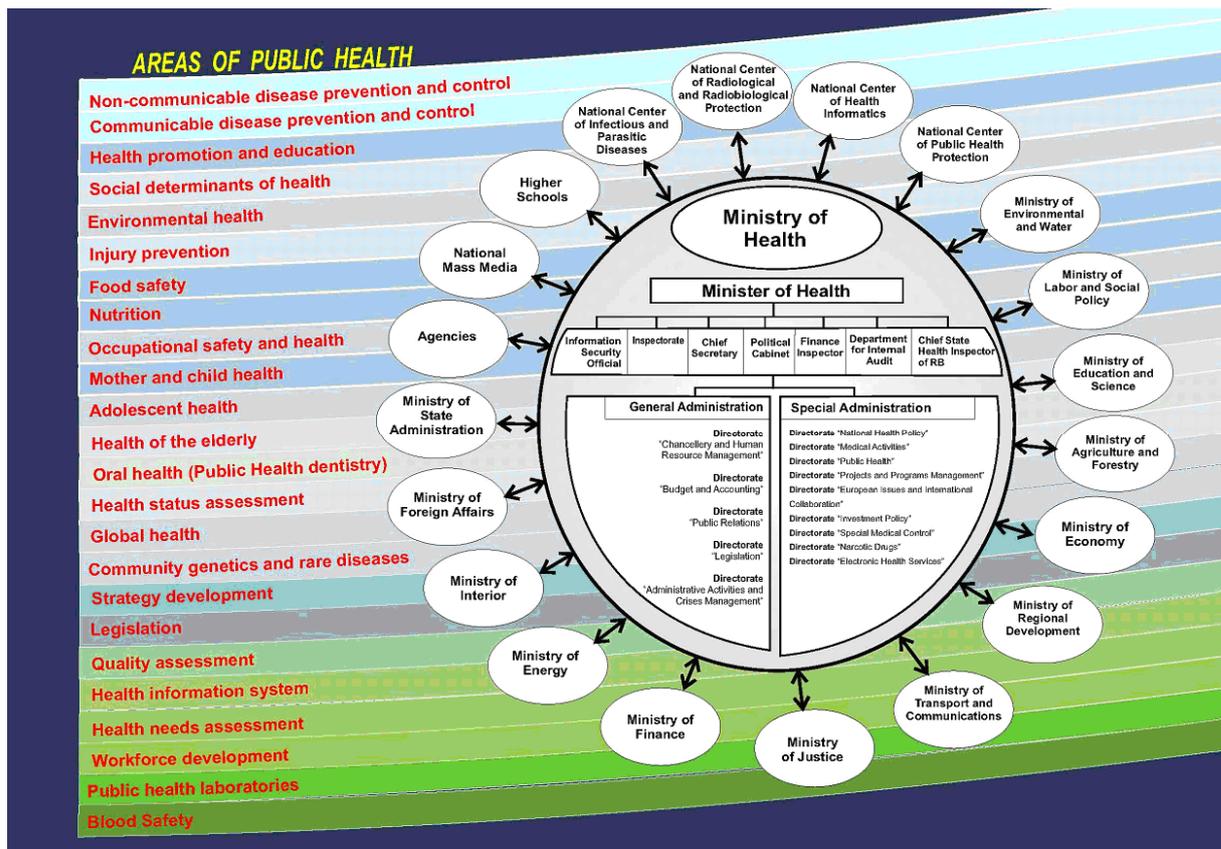
6. Infrastructure and operation of public health

Under law, the state health policy is managed and implemented by the Council of Ministers, which also approves the National Health Strategy for adoption by the National Assembly.

The Minister of Health manages the national health system. This includes: health protection and control; emergency medical care (including blood transfusions and transplants); hospital psychiatric care; medical social care for children up to three; health information; developing health activities in the medical and health establishments; and ensuring adequate levels of medical expertise.

The organigram shows areas of implementation for respective activities, and how they link with other ministries and institutions. The links show the important role of intersectoral cooperation in all fields of public health.

Fig. 15 Areas of public health



Most health care programmes have clear parameters and are subject to monitoring and auditing to assess their effectiveness, and the results are published e.g. for the activities of the RIPCPH. The National Council for Medical Standards monitors professional behaviour, working conditions and quality of medical services, and a national programme of medical standards has been adopted under law. Internal or external audits and customer evaluation are used to measure and assure quality standards.

The national public health policy covers most areas of public health, including mental health, e-Health, the disabled, environmental health, food safety, ethnic minorities and occupational health. Monitoring and assessment take place at various levels. In health care establishments, the manager and other nominated individuals are responsible for performance. At local level, the relevant local authorities are responsible for monitoring. At regional level, the relevant regional and national institutions monitor activities in accordance with established indicators and criteria.

The main institutional actors

The following governmental public health entities are responsible for supervising communities to ensure that essential PHS are provided:

- MoH through the Directorates of: ‘Public Health Protection’, ‘Medical Activities’ etc.(www.mh.government.bg)
- RIPCPH – Regional Inspectorates for Protection and Control of Public health and their structures.(www.sriokozcom; www.riokoz.pd.com; www.riokoz-_pleven.com; www.riokoz-varna.com etc)
- RHC – Regional Health Care Centre (www.rcz-starazagora.org; www.rcz-varna.com; www.rczsofia.org; www.rcz-gbr.com etc.)
- NHIF and its divisions (www.nhif.bg).
- Ministry of Environment and Waters and its divisions, as well as councils established at them.(www.moew.government.bg)
- Ministry of Agriculture and Food and its divisions (www.mzgar.government.bg).
- Commission for customers’ protection (www.kzp.bg)
- National agencies for youth and sport (www.youthdep.bg, for protection of children’s rights etc.
- Accreditation institutions(.www.nab-bas.bg)
- Other institutions with control functions: Bulgarian National Audit Office(www.bulnao.government.bg, Financial Supervision commission(www.fsc.bg), National Social Security Institute (www.nssi.bg) etc.

Identifying health problems and health hazards

A medical specialist who first detects an epidemic is required by law to report it to RIPCPH, which will communicate the information to MoH and the National Centre of Infections and Parasitic Diseases (NCIPD) immediately by telephone, fax, or e-mail and in writing up to 48 hours after detection. GPs, school-based medical specialists, child establishments, specialized health institutions and RIPCPH register diagnosed communicable diseases in a special log.

Public health emergencies: preparedness and planning

There is a national plan for crisis management, which includes organization of medical care for victims. This includes sorting, evacuation, treatment, interaction between medical and non-medical personnel and optimum use of resources. Each medical institution has a detailed plan of action for use in emergencies, which includes dealing with bio-contamination.

Control of infectious diseases

The system for detection of outbreaks of communicable diseases includes regulations for the registration and control of nosocomial (hospital-acquired) infections. Antibiotic resistance to nosocomial infections is monitored nationally.

Environment and health

Air quality: This is regulated by legislation, and rules exist for monitoring air quality and communicating the findings. Information is shared between the relevant national and local stakeholders, and sanctions exist to punish violations. There are clear

procedures for predicting the impact on air quality of proposed industrial facilities, or the extension of existing ones, and for controlling emission from existing sources.

Water quality and sanitation: EU requirements for water are implemented in Bulgarian legislation through a series of ordinances. These govern the quality of surface water and water for drinking, bathing and domestic use.

RIPCPH oversees compliance with water standards. Water sampling sites have been set up, and indicators established. Quality is evaluated through analysis for nitrates and manganese in drinking-water and the findings are published. Action plans exist for dealing with water-related crises.

Soils: Mechanisms and procedures exist in law for testing to identify contamination of soils by humans and contamination with heavy metals. They also cover analysis of the state of soils to ensure sanitary protective zones around water sources.

Noise: The harmful effects of noise are covered by law, and a standard approach to the avoidance, prevention and mitigation of their impact on health has been introduced. There is a national system for monitoring of environmental noise, and strategic 'noise maps' have been created as the basis of priority action plans. The data are submitted to the municipalities and measures for mitigation are provided by RIPCPH.

A national system for the monitoring of the environment has two main elements:

- control of ambient air quality by regional bodies of the MoH, RIPCPH and the Ministry of Environment and Waters;
- control of harmful emissions in the ambient air by regional bodies of the Ministry of Environment and Waters.

Food safety procedures, inspection and enforcement

Structures have been developed within the Ministry of Agriculture and Forestry and the MoH to implement laws on food. Food samples are analysed at dedicated laboratories authorized by the Minister of Health and the Minister of Agriculture and Food. Controls are applied to all stages of the production and trading of foods.

Occupational health and injury prevention

The state and its social partners implement an active policy to raise public awareness of issues relating to health and safety.

Intersectoral cooperation in health protection

Mechanisms have been established to ensure intersectoral cooperation and interaction. These include national councils, standing interdepartmental councils, advisory councils, standing expert groups and working groups.

Health promotion and disease prevention strategies and services

International standards for health promotion have been adopted and are incorporated in national strategic documents, and reflected in action plans and numerous other documents. There are some national programmes covering health promotion activities and some are mandatory, such as those covered by legislation for sport in schools. There

is a system for training health promotion trainers, especially in schools, in areas such as promotion of physical activity, tobacco control, and the environment and children's health. The relevant RIPCPH resources have been allocated with the aim of developing and implementing these activities.

The MoH and the Ministry of Education and Science (MES) traditionally cooperate on health education. Representatives of both are involved with consultative councils for specialization in the professional fields of medicine, dentistry, pharmacy and health care. Education institutions, professional organizations and national consultants of MoH are also involved. The councils submit proposals for problem management and improving health education.

Vaccinations in Bulgaria are conducted according to a national schedule and 95–96% of the population is covered. Preventive measures exist to contact people who may be exposed to communicable diseases, but there is no special general programme for screening.

The role of primary care

A coordinated system of PHC has been established to provide preventive services, curative services and rehabilitation services. However, there are sometimes failures within the system, such as inadequate interaction between GPs and hospitals.

Primary prevention

Some secondary prevention initiatives are relevant. For example, Bulgaria has implemented a strategy for universal iodization of the salt.

Evaluation of services

Evaluation shows that surveillance of communicable disease and preparedness for disasters and accidents have been particularly successful. The assessment and control of risks from environmental factors have also proved effective, providing the basis for further development in this field. A well-equipped and structured laboratory system underpins the control of environmental factors, food safety, and control of communicable diseases.

There is a good range of specialists (medical and non-medical) and of educational and training systems. However, there is a shortage of experienced specialists in some specialties, and uneven geographical distribution of key personnel.

Bulgaria has a tradition of scientific research in the field of public health on which to build, but there is a requirement for further investigation of the health needs of the population. The financial resources for delivering PHS focused on the protection of population health are consolidated. However, NHIF has envisaged separate funds to pay for medical and dental activities in the areas of disease prevention and early detection and for medical care in pregnancy, delivery and maternity.

The mission of MoH to provide health services to the population is fully documented and enshrined in law, as are its relationships with other institutions in the field of public health. However, there are still areas of provision where improvements are required, including health promotion, disease prevention, assessment of user satisfaction with

services, and the involvement of the population in decisions about public health. These systemic failings in health promotion and disease prevention mean that control of chronic diseases is not yet at the required level. They also impact on the failure to eradicate unhealthy lifestyles and other risk factors, which lead to the deterioration of public health.

It has been established that the well-defined national goals and priorities for public health are not supported by sufficient indicators and criteria for assessment. In some fields, very slow progress is being made, particularly in relation to the technology of health assessment. Shortcomings have also been revealed in how health data is presented to the relevant decision-makers. Usually the information is descriptive, containing activities data. However, there are no assessments of risk factors and of the effectiveness of the actions implemented.

Croatia

1. Demographic trends

Croatia had a population of 4 437 460 in 2001. The population is ageing, due to greater life expectancy and a stable or decreasing mortality rate, which has led to declining birth and fertility rates. The proportion of people over 65 had risen to 16.8% by 2005, and the proportion of under-14s declined to 15.9%.

These changes are caused by a combination of improved living standards and better health care. Croatia's population has been declining by about 2% per year. This is partly due to migration, but also to the fact that recent years have seen more deaths than births, and increased mortality among younger age groups.

The unfavourable demographic trends are also illustrated by a low total fertility rate (1.35). The average age of a woman at first childbirth has increased to just over 26, in proportion to the decrease in fertility. In comparison with Croatia, the EU25³ has a fertility rate of 1.5, and EU15 of 1.52.

In 2004, life expectancy at birth in Croatia was 78.92 for women and 71.9 for men. Women accounted for 52% of the population in 2001. Croats formed 89.6% of the total population, and 87.8% said they belonged to the Catholic religion.

2. Political and socioeconomic situation

Croatia is a parliamentary democracy, established by the constitution of 22 December 1990. Regional and local government operates through the 20 counties, plus the City of Zagreb, and 426 municipalities.

In the 1990s, GDP and industrial production dropped sharply, primarily due to the war. The total GDP in 1999 was only 78% of the GDP in 1989. The radical decline in the living standard was evident from GDP per capita, which in 1993 was below €1950. The rate of growth of total GDP in 2002 was 5.6%.

In recent years, growth has been driven largely by domestic demand. In 2005, the basic inflation index was 2.1%, which is low compared to other countries of CEE.

Average wages in Croatia are higher than in almost all other transitional countries of CEE, and have been maintained despite a policy of restricting labour costs. The average monthly net salary per employee at the end of 2004 was about €600.

3. Health status of the population

Healthy life expectancy at birth has been estimated as 64 for men and 69 for women. The infant mortality rate has been improving, reaching a low of 5.7 per 1000 births in 2005. Maternal mortality is still low, at 7.1 in 2005. Only three deaths have been

³ EU10 refers to the countries joining the EU in May 2004, EU15 to those countries belonging to the EU before May 2004, EU25 to those countries of EU10 and EU15 and EU27 to all current members of the EU (i.e. EU25 plus Bulgaria and Romania)

reported since 1990 from infectious diseases that are preventable by vaccination. Death from tuberculosis still occurs, but incidence of the disease is decreasing, so a decrease in deaths is anticipated.

Experimentation with cigarettes begins early (44% boys and 39% girls have tried a cigarette before the age of 13). Regular smoking among 15-year-olds is also high, at 37% of girls and 36% of boys (European School Survey Project on Alcohol and Other Drugs, ESPAD, 2003). According to the Croatian Health Interview Survey 2003, 33.8% of men and 21.7% of women over 18 smoke.

Croatia is on the verge of an obesity epidemic. The data from 2003 revealed that 35.5% of adult women and 46.7% of adult men are overweight, and 22.7% of women and 21.6% of men are obese. Systematic check-ups among school-aged children and youths have revealed that 70% of school children are within the normal range, 13% are thin, 0.9% are underweight, 11% are overweight and 5% are obese.

The number of deaths due to work-related accidents has varied in the last two decades reaching 4.3 per 100 000 population in 2005. Injuries have been stable since 1992 at about 1500 per 100 000.

Table 8. Causes of death, 2005

Cause	No	%
Cardiovascular diseases	26 029	50
Malignant neoplasms	12 783	25
Injuries	2878	6
Respiratory diseases	3180	6
Gastrointestinal diseases	2368	5
Other	4560	9
Total	49 756	100

Source: Croatian National Institute of Public Health

Table 9. Years of Life Lost, 2005

Cause	Total	Male	Female
Cardiovascular diseases	88 577	61 921	26 655
Malignant neoplasms	100 782	63 886	36 896
Injuries	55 255	44 636	10 619
Gastrointestinal diseases	21 932	16 539	10 619
Respiratory diseases	11 972	8724	8724

Source: Croatian National Institute of Public Health

Cardiovascular diseases and malignant neoplasms cause the majority of deaths and account for the majority of years of life lost. Injuries, especially from traffic-related accidents, contribute substantially to both indicators. Among respiratory diseases, pneumonia and COPD among the elderly are a rising problem.

4. Recent development in the Stewardship of Public Health

Croatia's public health strategy and legislation in the last decade has aimed to maintain standards within the country's well-established health system, while preparing it to meet the changing needs of the population. They have also taken account of European developments in public health and health promotion. The country's network of PHIs, which together with other services deliver comprehensive health care, are a strong foundation on which to build – despite the diminished role of community health centres.

PHIs now embrace some services previously delivered by the community health centres, or outside the health sector. The network covers most essential public health issues, such as:

- communicable disease prevention and surveillance (including organization of the vaccination and control of outbreaks);
- NCD control (including national screening programmes);
- preventive health programmes for children and young people;
- preventive programmes for drug abusers (including coordination of treatment for drug addicts provided by GPs);
- control of environmental health factors and surveillance (including risk assessment);
- public microbiology laboratories (including reference laboratories for specific agents).

Work is needed to define standards, responsibilities and working practices for public health personnel. This will require input from stakeholders such as the Ministry of Health and Social Welfare and the Health Insurance Institute (HII), and more financial resources to support the work.

5. Human resources training and planning in public health

The document *Public Health Human Resources Network* was produced as a result of consultations within PHIs and the Croatian National Institute of Public Health (CNPHI). It defined the status of human resources within the public health sector, and proposed a strategy for meeting future needs. The document was discussed by the Croatian Medical Chamber, the HII, and relevant medical societies. The MoH creates an annual plan for human resources in line with the latest data and forecasts.

Public health human resources are planned by the MoH, taking into account demographic changes, the long-term needs of the population and other data such as the prospective retirement dates for doctors. An annual programme of specialization is established by the MoH in accordance with the CNPHI, based on the declared requirements of County Public Health Institutes (CPHIs) and health care institutions. CPHIs conduct their human resources planning in consultation with the MoH and the CNPHI. The distribution of human resources is geographically balanced.

In 2006, of the 466 specializations approved by the MoH, three were in public health, nine in epidemiology, two in health ecology, 10 in occupational medicine and sport, six in school medicine and eight in medical microbiology with parasitology.

The current medical specialization (for medical doctors) in public health will expire in the next three years. A new proposal has been developed in line with EU practice and submitted to the MoH. Postgraduate training courses in public health and in health management are available for medical and non-medical professionals. Courses are offered by the School of Public Health and the Medical School at the University of Zagreb. Postgraduate training in public health is an obligatory part of the medical specialization in public health, but is also available to other medical and non-medical professionals.

The main national stakeholders in planning, production, management and regulation of human resources for public health are the MoHSW, medical schools, the HII, the Ministry of Finance and the CNPHI.

6. Infrastructure and operation of public health

Croatia has adopted a National Health care Development Strategy as well as a Health care Plan and Programme. These form its Public Health Framework for maintaining and promoting the health of its population and environment in accordance with modern principles and practice.

PHC has historically been organized within health centres, which serve local people. During the 1990s, privatization of services began (GPs, paediatrics, gynaecologists, stomatologists, laboratories). School health and epidemiological services still operate at the primary level, but are now part of the PHIs within counties. There are some completely private clinics, which have no contract with HII and are paid directly by patients. They mostly provide stomatological or gynaecological services.

Croatia has only two private hospitals – the rest are owned by the state or counties. They are subdivided as general and clinical hospitals or clinical centres. Health professionals in Croatia consist of medical doctors, stomatologists, pharmacists, other staff with university degrees, and professionals educated at junior colleges or high schools. All health professionals must be registered in the Croatian health manpower register held by the National Institute of Public Health. The majority of employees work in state- or county-owned facilities, with the exception of stomatologists, who are mainly privately employed, and junior college nurses who work at home care facilities.

Croatia has an established health care infrastructure at central, county and local level. The main actors are the Ministry of Health and Social Welfare and the subordinate CNPHI, with PHIs in each of the 20 Counties. At central level there are also the Croatian institutes of Occupational Health, Transfusion Medicine, Toxicology (CNIT), Radiation Protection (SIRP) and Mental Health, as well as of Health Insurance. The CNPHI is responsible, with the relevant health services, for all aspects of communicable and non-communicable diseases, social medicine and health statistics, school medicine, health promotion, drug addiction prevention, environmental health and microbiology. It is also responsible for risk assessments in all of these areas.

Health protection

The network of PHIs is responsible in law for the provision and surveillance of public health care measures, programmes and activities. This includes the creation and implementation of evidence-based health promotion programmes through the network.

Public health is governed by several laws and by-laws, and the right to health care is guaranteed for every Croatian citizen under the constitution. The Health Care Act includes the principles of comprehensiveness, continuity and accessibility, and describes the individual procedures and public health protection to which each citizen is entitled.

The principle of solidarity is regulated by the Health Insurance Act. The whole population has access to a package of public health and health care services. This is described in the Plan and Programme of Health Care Measures, which are funded by obligatory health insurance.

The three-tier system for surveillance and detection of communicable diseases is coordinated centrally and involves 21 PHIs and 113 first-level epidemiology units. Notification of infection diseases is mandatory through a 24/7 early warning system. Daily, weekly and monthly monitoring and analysis of communicable disease reports occurs at all three levels.

GPs, nurses, physicians and other health professionals immediately report unusual clusters or presentations of communicable diseases to the early warning system. The same system and procedures are in place to identify outbreaks, investigate causes and control vector-borne diseases. The first response is provided by the local epidemiology unit. It is mandatory for medical and veterinary services to share information, in both directions. Surveillance of nosocomial diseases (and antibiotic resistance to them) is undertaken. Emergency response plans are in place for public health disasters and emergencies, including outbreaks of communicable diseases (e.g. influenza) and bioterrorism.

The task of ensuring a healthy environment is recognized in the constitution as a precondition for maintaining human health and quality of life. The Health Care Act identifies 'assessment and monitoring of environmental influences on the health of the population' as a key public health activity. However, these provisions are not supported by either regulations or corresponding financial instruments, or by sufficient human resources. Therefore the monitoring of complex environmental data, and cross referencing with health data, is unsystematic or takes place only through individual studies and projects.

In connection with environmental pollution and its influence on health, Croatia monitors:

- safety of food on the market;
- safety of drinking-water from public water supplies;
- cases of infectious disease;
- food-borne disease epidemics;
- waterborne disease epidemics (within the Infectious Disease Monitoring and Control Programme);

- air quality.

Under the Environmental Protection Act, planned new facilities must be supported by studies of their impact on the environment. Monitoring of sources of environmental contamination, and their influence on the environment and health, is also compulsory.

Epidemiological and statistical systems are in place to ensure that disease clusters are identified and investigated as soon as possible. Similar measures exist for food, water and air to identify pollution or contamination that could threaten public health.

Occupational health assessment and control is implemented through local occupational health units (mostly privatized), which send data to PHIs and the national PHI and the Croatian Institute of Occupational Health (CIOH). Air quality tests are conducted by the laboratories of some PHIs, the Croatian Weather Bureau, and the Institute for Medical Research and Occupational Health (IMROH). The latter also gathers data and puts together an annual report for the entire country. Croatia follows EU legislation for assessment of water quality and establishment of clean water standards.

Public water supplies are available to slightly more than 70% of the population, but there are significant regional variations. Water supplies often run short in rural areas, where settlements are dispersed or on difficult terrain, and on islands. To ensure water is safe to drink, public health laboratories annually test more than 20 000 samples from public sources. Outbreaks of water-borne disease are rare, and mainly occur in smaller water systems that are not constantly monitored by the public health service.

The Food Agency was established in 2005 and is in charge of food safety risk assessment. Its organization is similar to that of the European Food Standards Authority (EFSA), with a scientific committee and panels. The National Institute of Public Health (NPHI) continuously monitors infectious diseases and food-borne diseases.

For risk assessment of consumer goods, cosmetics and toys, Croatia follows EU legislation.

Public health laboratories

The NPHI and county PHIs support a network of microbiology laboratories. These investigate health threats in Croatia and analyse and monitor drinking-water, food safety, air quality, objects of common use and other factors.

The network comprises:

- a microbiology laboratory in the CNPHI;
- a microbiology laboratory in each of the 20 county PHIs (they analyse samples from out-patients, and hospital patients in smaller towns);
- microbiology laboratories in city hospitals;
- private laboratories.

Every microbiology laboratory in Croatia follows detailed and up-to-date written instructions for all methods, apparatus and reagents used. These also cover occupational safety in the field of microbiology diagnostics. CNPHI includes four national WHO centres that, in compliance with WHO rules, control external laboratory work.

Vaccination and post-exposure prophylaxis (the Immunization Programme) are mandatory in law. Vaccines for children and adolescents are administered by primary care paediatricians (public and private), family physicians or GPs (private and public) and school health physicians. Chemoprophylaxis and some special vaccinations (e.g. rabies post-exposure immunization) are performed by epidemiologists.

Every communicable disease of concern is covered by guidelines and recommendations for vaccinating people at risk, or applying post-exposure prophylaxis to people exposed to disease. The immunization programme also specifies vaccines recommended for selected groups of children or for special circumstances (pneumococcal conjugate vaccine, influenza, chickenpox etc.). Influenza vaccination is recommended, and covered by the insurance fund, for children and adults with listed clinical conditions, health care workers and all people over 65. The vaccine schedule is set at national level and applies to the whole country. Local health authorities have no power to modify it.

The screening programme is defined in the Plan and Programme of Health care Measures. It comprises obligatory check-ups and screening for children, school and university students, women and the elderly. In 2006, the MoHSW used the state budget to support the National Programme for the Early Detection of Breast Cancer, and in 2007 for colorectal cancer.

Health promotion

Since the mid-90s, Croatia has adopted the modern concept of health promotion, which is to improve the health of the whole population rather than simply to prevent disease. Health promotion is targeted at the entire population and its environment – unlike preventive procedures that are mainly targeted at the highest-risk population groups. This approach favours integrated programmes for preventing disease and promoting health. These aim to reduce the prevalence of individual risk factors, while simultaneously preventing specific diseases or disease groups. A network is being established to support health promotion within the network of PHIs.

School health services provide annual health education and promotion programmes for school children, young people and university students. Essential topics are strictly defined, but others may be added according to the local context and needs of the population. The majority of activities embrace risk behaviour, bullying and healthy nutrition. Health promotion is part of regular school activities, and therefore is implemented equally across the country as part of the Plan and Programme of Health Care Measures. Drug abuse prevention services operate within the network of the PHIs, as multidisciplinary services providing measures for prevention and treatment. According to the National drug Abuse Combat Strategy, PHC is involved actively in the daily provision of drug replacement therapy (methadone, buprenorphine).

Evaluation of quality and effectiveness of personal and community health services

At individual level, prevention of ill health is the responsibility of paediatricians or GPs for pre-school children, of school health services for school children and young people, and of GPs for other specified target groups. These activities are recorded and reported to the PHIs and CNPHI through a national statistical information system. A national PHC information programme is now gradually being implemented.

At population level, epidemiological services provide preventive measures such as vaccination, control of communicable diseases and outbreaks, and analysis of coverage. Ecological services within the PHIs provide food and water safety measures. However, surveillance and control need to be improved.

At the primary level, curative services are provided by the same structure as preventive services, following the principle of comprehensive health care. Out-patient facilities and hospitals services are paid by health insurance and are either provided independently or within hospitals. Rehabilitation facilities are only available in some areas. As technology develops, there are growing demands for new diagnostic resources and treatments.

For individuals, all services at local level are available and accessible. However, if a local service is unable to deal with a disease or condition, the patient will be directed to another hospital or clinical centre that can.

Data is routinely collected about factors such as service utility and morbidity and mortality. Qualitative assessment is done using an anonymous questionnaire every 3–4 years, which assesses patients' satisfaction with health services. The latest assessment took place in 2006. It revealed encouraging results for hospitals and for PHC. The majority of patients were satisfied with factors such as service delivery, the way they were treated, the personnel and information provided.

Although coverage of personal health services is 100%, the Croatian Health Development Strategy includes chapters about the need for further development of public health and the community health services system. The coverage of community health services is generally very high, and only in very remote areas may the coverage be somewhat lower. The population is ageing, so special attention is paid to elderly people. Elderly people pay more for PHC per capita payment, but they are not obliged to pay more for some diagnostic and therapeutic procedures.

Montenegro

1. Demographic profile

According to the 2003 census the population of Montenegro was 620 145 (28). Apart from this number, 55 000 citizens live and work abroad. According to the Commissariat for displaced persons, there are also 31 217 refugees and displaced persons (2004). The changes are also expected in the number of refugees as a result of the permanent solution of their status. Sixty-two per cent of the population in Montenegro live in urban areas and 38% in rural ones (29).

The ethnic make up of Montenegro's population is: Montenegrins 43.1%; Serbs 32%; Bosniaks and Muslims 11.7%; and Albanians 5%. Around 10% is made up of another 10 ethnic groups and the remainder are not declared (30).

The percentage of the population in age range of 0–14 years is 20.7%, 15–65 years is 67.2% and over 65 years is 12.1% (31). Because of lower birth rate this ratio has been changing recently so that the young population is decreasing and the older population is increasing. For the last ten years the young population (0–19 years) decreased for 4.8% and the oldest population (over 65) has increased for 3.8%. The general mortality rate increased from 6.80 in 1991 to 9.6 in 2006. Changes in the birth rate and mortality had an important influence to natural increase. The rate of natural increase decreased from 9.7 to 2.5 in 2006 (32).

2. Socioeconomic status

Montenegro has been an independent and sovereign country since 2006. Economic recession in the 1990s, together with the transition from a planned economy and the inefficient businesses that needed to restructure, significantly influenced current condition of the economy. GDP per capita in 2006 was 3.443 euros per year. In the past decade, the real GDP annual growth rate was ranged from 1.1% to 8.6%.

Table 10. Gross domestic product of Montenegro and unemployment rate, 2001–2006

	2001	2002	2003	2004	2005	2006
GDP at current prices (in mil €)	1295.1	1360.1	1510.1	1669.8	1815	2148.9
GDP per capita	2113	2208	2435	2684	2912	3443
GDP growth (in%)	1.1	1.9	2.5	4.4	4.2	8.6
Unemployment rate – ILO definition	31.5	30.45	25.82	22.6	21.6	20.6

Source: Statistical Office of Montenegro, Gross domestic product, 2001–2006, www.monstat.cg.yu

Unemployment is still high, at over 20%, and is distributed unevenly across regions. At 5%, the inflation rate has been quite low in recent years. Foreign direct investment has increased since 2006 (over €600m) (33). A strategic document for economic and political reforms (34) defines the main pillars of the new economy system: open market economy, the predominance of private property, and protection of property rights and contracts. The poverty reduction strategy paper (PRSP) is another strategic document which defines the aims of society and connects the aims of poverty reduction and development with the MDGs.

According to the PRSP, the poverty rate was 12.2% in 2003 (35). Poverty affects a relatively small percentage of the population (between 8.8 and 13.8 per cent in 2006), with the poor concentrated in the centre and north of the country and in rural areas. There are some groups that are extremely poor and socially excluded. For these groups such as Roma, IDPs and rural poor, poverty is severe and multi-dimensional, including housing, access to and quality of education, and health. Economic vulnerability, i.e. an increased risk of poverty, is a far more difficult social problem and comprises one fifth of the population.

Table 11. Key poverty indicators in Montenegro, 2002–2006

Poverty Rates in Montenegro 2002 data – (rounds 5 and 6 of : Institute for Strategic Studies and Prognosis (ISSP) survey)
Poverty rate: Head Count 9.4: (7.5–11.3); Poverty gap 1.3; Severity of Poverty 0.3
2003 ISSP household survey
Poverty rate: Head Count 12.2* (6.8–17.6)
2004 ISSP household survey
Poverty rate: Head Count 10.9 (8.4–13.6); Poverty gap 2.1; Severity of Poverty 0.7
2005 ISSP household survey
Poverty rate: Head Count 11.3 (8.5–14.1); Poverty gap 2.1; Severity of Poverty 0.7
2006 ISSP household survey
Poverty rate: Head Count 11.3 (8.8–13.8); Poverty gap 1.9; Severity of Poverty 0.6

Source: Institute for strategic studies and prognosis/ISSP

3. Health status of the population

Since 1953 when the infant mortality rate was 79.9 infant deaths per 1000 live births, it has decreased about sevenfold, to 11 in 2006. Infant mortality has declined but only slowly during the period 2000–2006 (32), due to events in the region, including the refugee crisis and problems of economic transition. At the same time, it is related to some weaknesses in the operation of health services, especially regarding reproductive health and infants. However, this important indicator of health is improving and is on a decreasing trend, so that post neonatal mortality is close to the average for countries of the WHO European Region.

Life expectancy at birth decreased in the second half of the 1990s, due to the various factors that the population has been exposed to in the recent past. Since then there has been an increasing trend but it is minimal.

Circulatory diseases and tumours cause most premature deaths (2006 figures). Diseases of the circulatory system account for 56.79% of total mortality and tumours for 16.32%. A matter for concern is the relatively high percentage (9.35%) of the causes of death are where only symptoms, i.e. abnormal clinical findings, were recorded, compared with up to 3% for European countries on average.

Table 12. Infant mortality rate and life expectancy at birth, 2000–2006

	2000	2001	2002	2003	2004	2005	2006
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Infant mortality Rate/1000	11.1	14.6	10.8	11.0	7.8	9.5	11.0
Life expectancy at birth, total	75.23	75.32	74	73.79	74.23	74.15	73.77
Males	72.33	72.83	71.46	71.53	71.56	71.39	71.22
Females	78.08	77.85	76.52	76.03	76.9	76.9	76.06

Source: Statistical Office of Montenegro, 2006 (available from website: www.monstat.cg.yu)

For planning health care and setting priorities, the indicator of Potential Years Life Lost (PYLL) is used. This indicates the number of years the population has lost because of premature deaths. According to data from health institutions, 10.5 years of life were lost on average across the population, the largest part of which, 30%, being caused by circulatory diseases, followed by tumours at 21.4%, and symptoms and abnormal findings at 9%.

Communicable and parasitic diseases are not major causes of health problems which reflects the very high level of vaccination of more than 90%. Although this is a satisfactory situation in the field of health care of communicable diseases it is necessary to take precaution in future too because of modern tourism, open borders and new communicable diseases, and high risk behaviour among some groups.

Circulatory diseases are a principal reason for hospitalization, accounting for 16.68% of all hospitalizations in 2006, followed by diseases of the digestive system, respiratory diseases, tumours (approx. 9%), muscular-skeletal diseases and injuries (36). A significant issue for health services planning is that among those admitted to hospital one third are over 65. This is partly a consequence of poor health but also because there is no organized system of long-term care or specialist geriatric hospitals or centres that would take the pressure of the hospital sector.

4. Recent developments in the Stewardship of Public Health

Health policy in Montenegro has been developed to support longer and healthier lives for the population, and to achieve equality in health and accessibility of adequate and high quality health services (37). The objective of this document is to completely direct further development of health protection for the suggested period during which it is necessary, along with achieving the mentioned strategies and documents of WHO, to expand existing health legislation and join programmes in the field of health services. Health Policy in Montenegro by 2020 and Health System Development Strategy have been adopted in 2003 (38).

According to these documents, the main goals of health policy that support development of public health are:

- prolongation of life
- improvement of quality of life in relation to health
- decrease of differences in health, and
- financial risk insurance.

The government, through the Ministry of Health, Labour and Social Welfare, will give support to compliance of development plans in Montenegro with the EU Strategy for

developing health care. In line with that it will prepare and implement the programmes for:

- better health information provision for citizens
- treatment for the most serious chronic degenerative diseases
- introducing an efficient health information system
- higher quality of health services, i.e. health services performance
- financial stability of the health system
- making concrete and speeding up implementation of the activities from strategic documents of the Government in relation to health.

There is a defined package of public health and health care services to which the whole population has access. The health system development strategy has set national priorities in public health, and defines the special position of the Institute for Public Health, as an important partner of the MoH in the implementation of monitoring and reform.

Broader determinants of health, such as poverty, housing, work and unemployment, and socioeconomic exclusion are actively incorporated into the decision-making process. Adopted Strategy documents in the health system take into consideration broader determinants of health and especially vulnerable groups of the population, which are reflected in detailed action plans.

Documents and recommendations from WHO are taken into account in defining strategies and actions for the period up to 2020. These aim to strengthen personal responsibility for health, ensure rights to a healthy and safe living environment, promote multi-sector responsibility for health, decrease disparities in health care among different population groups, improve the quality of health protection, and evaluate health needs as a basis for actions. International conventions, charters, declarations, and agreements that Montenegro is committed to are the Framework Convention on Tobacco Control (together with Serbia), the Dublin Declaration, the Budapest declaration, and the Dubrovnik Pledge and Skopje Pledge of the SEEHN.

HIA of other sectoral or regional policies and developmental plans is being applied in specific areas, such as noise, tobacco, radiation, food, water and air. Law on Protection of Population from Communicable Diseases (adopted in 2005), and Law on Health Records that was currently undergoing adoption procedure set the rules, ethical norms, standards, and other specifications for the content and processes related to health information. In order to modernize the health protection system, the MoH, in cooperation with the HIF, the PHI and other public health institutions, has made the introduction of HIA a priority.

5. Human resources training and planning in public health

The main stakeholders in public health are: MoH, the Institute of Public Health (IPH), the HIF, the Primary Health Care Centre, the Clinical Centre and Medical faculty.

Regarding planning for public health human resources, the process of developing a human resources strategy was initiated in 2006, and although a draft version of the Strategy has been produced, it has not yet been adopted. A process of decentralization

of human resources planning is currently being implemented in public health. The government is the principal decision-maker for programmes and projects in public health area considered to be of high importance and the MoH is in charge of implementation. Activities are coordinated by IPH, and conducted by competent institutions and organizations in cooperation with NGOs. There are variations across areas but there is generally a lack of public health staff, especially educated specialists.

There is no specialized continuous training for health and non-health employees in public health management but many public health employees have undertaken different types of training in the management. All medical employees in public health have special education in different areas of public health, such as social medicine, hygiene, epidemiology, biostatistics and others.

Montenegro is member of all regional and international networks for follow-up and treatment of health determinants, and our public health includes all segments.

6. Infrastructure and operation of public health

The Ministry of Health, Labour and Social Welfare of Montenegro is in charge of the establishment, organization and operation of the health system, foundation and organization of institutions in the health sector and authorization of conditions for space, equipment and resources of health institutions, setting policy for monitoring of health institutions, according to the Law, sanitation of food and goods of general use, protection of the population from communicable diseases, managing control in areas for which the Ministry is founded, as well as other affairs for which this Ministry is competent.

The most important institution of public health is the Institute of Public Health (IPH) as a highly specialized health institution on the tertiary health care level and its activity shall be oriented towards preservation and improvement of health of all citizens (38). In carrying out the public health activities, the IPH shall: monitor and assess health status of the population and create a database for planning, monitoring, and evaluation of all public health activities and health care activities in the Republic; identify risk factors to health from contagious and chronic mass non-contagious diseases, including biological, ecological, and socioeconomic factors and lifestyles and undertake measures for diminishing their impact or for eliminating them; prevent and control contagious diseases; propose and undertake measures for protection and promotion of health, especially in regard to food safety, items of general purpose, drinking-water, solid and waste materials, noise, and air pollution and other matters for which the IPH is competent under the law on health care (39).

The Primary Health care Centre is a referral centre of PHC that provides support to the selected team or selected medical doctor referred to in Art. 19 of the health care law in the following areas: 1) Immunization against contagious diseases; 2) Detection and amelioration of factors that have an impact on the incidence and spread of contagious and non-contagious diseases; 3) Health care of women and family planning; 4) Home care.

PHC can also provide support to the selected team or selected medical doctor in the following areas: 1) the implementation of health training and education on common

health problems and methods for their identification, prevention, and control; 2) hygienic-epidemiological protection; 3) mental health care; 4) treatment of lung diseases and tuberculosis; and 5) lab, x-ray and other types of diagnostics; and other areas that the Ministry shall define.

The selected team or selected medical doctor may be organized individually or within the PHC.

Identifying health problems and health hazards

Communicable diseases are under the surveillance of the IPH, according the Law, international documents and WHO programmes (although not all necessary programmes in this area have been enacted into law yet).

Surveillance of communicable diseases is undertaken by local Health Centres for the area it covers, through its units, in particular epidemiology units. Surveillance is conducted through compulsory reporting of diagnosed communicable diseases and deaths caused by communicable diseases, as regulated by law (for 75 diseases). Aside from that, reporting for epidemiological surveillance is compulsory for the following:

- laboratory results for the causes of communicable diseases;
- death caused by other communicable diseases;
- suspected cases of cholera, quarantine diseases, poliomyelitis, diphtheria, measles, and botulism;
- epidemics of communicable disease with known or unknown cause;
- hospital infection;
- emission of cause of enteric, paratuberculosis, other salmonella, shigellosis, typhoid, campylobacteriosis, as well as carrying antigen of virus hepatitis B, antibodies of virus hepatitis C and HIV and carrying parasites that cause malaria;
- every bite or contact with lyssa or animal suspected of lyssa;
- acute flaccid paralysis;
- suspected use of biological agents;
- Nus-appearance after vaccination;
- antimicrobial vaccination.

With regard to the mechanisms and procedures that are in place for assessing the health impact of environmental factors, this area is regulated by laws on health protection, environmental protection, protection from noise, protection from ionizing radiation and radiation safety. There are also national and international declarations, conventions and strategic documents.

Public Health emergencies: preparedness and planning

The government (Ministry of Interior) has adopted a strategy for emergency situations and response. Public health disasters in all above mentioned areas are described, including for natural disasters, chemical and radiological hazards, communicable diseases outbreaks, bioterrorism. However, an action plan for implementation of the Strategy has not been developed yet. The only such plans that have been formally adopted are the national plan for avian influenza and pandemic influenza (adopted

2005) and the operational plan for implementation of measures on recognizing and preventing the spread of severe acute respiratory syndrome (SARS) (2003).

Montenegro does *not* have an emergency plan that defines organizational responsibilities, establishes communication and information networks, and clearly outlines alert and evacuation protocols. The Institute of Public Health does *not* have roster of personnel with the technical expertise to respond to potential biological, chemical, or radiological public health emergencies.

Health protection and disease prevention

The main responsibilities in the health system are defined for the most important public health activities. A national system of reporting for communicable diseases includes designated primary care doctors, hospital specialists, and doctors from tertiary health care (clinical centres), as well as doctors from microbiological laboratories.

According to the Programme for Compulsory Immunizations of Population against Communicable Diseases, there is compulsory immunization of persons of certain age for the communicable diseases and Immunization of persons according to epidemiological and clinical indications.

Standards for water quality are set by law, and are monitored by the IPH and a few responsible laboratories in PHC.

Food safety risk assessment is implemented by the MoH and the Ministry of Agriculture. Inspection services are responsible for surveillance of imported food products, food production and food trading. Food samples are collected and may be sent for analysis to the laboratories of the IPH, but sanitary inspectors of the MoH decide on safety.

Health Promotion and health education

Within the MoH several committees are organized for health promotion and the prevention of diseases: Committee for Tobacco Control, Committee for HIV/AIDS, Committee for Chronic Noncommunicable Diseases, Committee for Diabetes, Committee for Communicable diseases, Committee for prevention of iodine deficiency, Committee for Food Safety, Committee for Blood Safety, Committee for tuberculosis (www.mzdravlja.vlada.cg.yu). NGOs and other sectors are also involved in these committees.

Numerous activities have been undertaken for health promotion activities for the community-at-large or for populations at increased risk of negative health outcomes: health education campaigns, health education lectures, implementation of strategies through action plans, printed materials, information through media.

Measures in place specifically directed at tackling health inequalities are defined by action plans from strategies for: communicable diseases, HIV/AIDS, tuberculosis, drug addiction, violence prevention, and food safety, national action plan for children, reproductive health, and mental health.

Cooperation with other authorities

Regarding mechanisms and procedures that are in place for cooperating with other responsible authorities for law enforcement in relation to public health, there are intersectoral working groups formed in almost all areas of interest (agriculture, labour, environment, education, science, interior, defence, justice, and others). They are working on implementation of laws, sub-laws, programmes and activities that affect the health of the overall population and specific groups, but they also give expert opinion, educate, advise on health regulations and provisions that affect health. Some practical examples for this cooperation are: Law on food safety was prepared by Ministry of agriculture, forestry and water resources, in cooperation with the MoH; the Law on protection of the environment from noise was prepared by the Ministry of Tourism and Environment in partnership with the MoH. The programme of prevention of iodine deficiency was prepared by MoH in cooperation with the Ministry of Education.

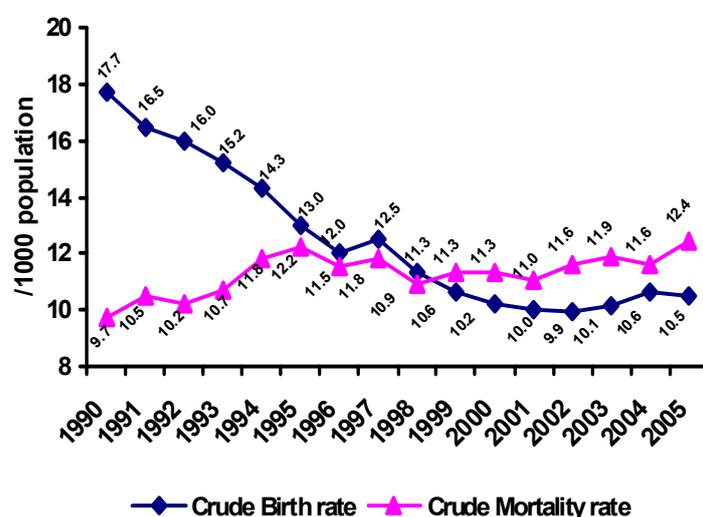
Republic of Moldova

1. Demographic profile

In 2004, the population of the Republic of Moldova (excluding the region of Transnistria) was 3.4 million – a decline of 274 000 from 1989 census estimates. This results from the greater number of deaths than live births and the effects of emigration, particularly by the young.

The population is ageing. Since 1989, the proportion of people under 15 has decreased, while the proportion of working-age and elderly people over 60 has increased. The average life expectancy at birth in 2004 was 64.5 for men and 72.2 for women.

Fig. 16: Birth and mortality rates 1990–2006



Source: Ministry of Health, Republic of Moldova

About 58% of the population lives in rural areas. It is made up of the following ethnic groups: ethnic Moldovan 76%; Ukrainian 8%; Russian 6%; Gagauz 4%; Romanian 2%; Bulgarian 2%. Most Moldovans are affiliated to the Orthodox religion.

Almost all people have had at least some secondary or higher education, but 79% of women and 83% of men have only a secondary or secondary special education.

Large-scale labour emigration of both young men and women has contributed to worsening living conditions for children. Only about two-thirds of children under 15 live with both parents.

2. Socioeconomic status

The Republic of Moldova is a small, landlocked country in eastern Europe. After proclaiming independence from the Soviet Union on 27 August 1991, it confronted complex political, economic, social, and cultural challenges on its transition from a

totalitarian centralized administration to a liberal democratic society, embarking on an ambitious programme of economic reform. In 1992, a short but bloody conflict occurred in the territory to the east of the Dniester River (Transnistria), which remains unresolved today.

Agriculture and food processing dominate the economy and the country is dependent on imports for its energy needs. The private sector currently contributes over 60% to GDP and the market is functioning with commercial banks, stock exchanges, free economic zones, etc.

Poverty increased sharply in the 1990s, with over 70% of the population classified as poor and GDP falling to only 34% of the 1990 level. In 2003, UNDP's human development indicators ranked the Republic of Moldova only 117th out of a total of 177 countries.

From 2000, the economy started to experience sustainable growth, and real GDP grew on average by 5.9% per year from 2000 to 2006, with cumulative growth of 49.5% since 1999. Money sent home by expatriate workers accounted for up to 27% of GDP in 2004, making the country among the most dependent in the world on money transfers.

3. Health status of the population

Following independence, there was a sharp fall in all health indicators in the Republic of Moldova, and average life expectancy fell from 69.0 in 1989 to 65.9 in 1995. However, the situation has since improved and life expectancy in 2006 reached 68.5, although women account for most of the improvement.

The infant mortality rate rose in the early 1990s, from a low of 18.3 per 1000 live births in 1992 to 22.9 in 1994. The trend has since been reversed, and in 2006 it reached 11.8. Similarly, the maternal mortality rate fell from 52.9 deaths per 100 000 live births in 1993 to 16.0 in 2006.

The Republic of Moldova has had a double epidemiological burden since independence, caused by increases in tuberculosis (responsible for 18% of deaths) and of noncommunicable illnesses such as cardiovascular diseases and cancers. Poverty, alcohol and tobacco are the key health determinants for most Moldovans and mortality and morbidity from these factors are a sizeable burden on society. The main causes of death in the Republic of Moldova are diseases of the circulatory system followed by cancer, diseases of the digestive system and injury and poisoning (table 13).

Table 13. Main causes of death, all ages per 100 000

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

Source: Ministry of Health, Republic of Moldova.

Child immunization levels have recovered since 1995, with vaccination coverage now at over 95%, and expanded to new antigens such as hepatitis B and rubella. The Republic of Moldova is free of polio and neonatal tetanus, and has eliminated indigenous malaria, brucellosis and epidemic typhus. Diphtheria and measles outbreaks have been controlled successfully by supplementary immunization. Cases of death by acute diarrhoea have been reduced since 1995 by more than 80%. However, STIs increased sharply after independence, with syphilis showing one of the biggest increases.

Tuberculosis and HIV/AIDS represent the key challenges for control of communicable disease in the Republic of Moldova. The increase in tuberculosis since 1990 has been accompanied by a tenfold increase in the prevalence of multidrug resistant forms of the disease. Between 2001 and 2004, the proportion of new HIV/AIDS cases acquired through sexual contact increased from 20% to 68.7%. In 2004, incidence reached 22.54 cases per 100 000 inhabitants. Without an effective control programme, HIV/AIDS is projected to affect 1.9% of the population by 2011 (WB 2002a).

According to MDHS 2005, 8% of children under five are stunted, about 4% are wasted, and 4% are underweight. Iron deficient anaemia is present in 28% of women and 40% of pregnant women. About one-third of children from 6–59 months have mild or moderate anaemia.

Disorders induced by dietary iodine deficiency constitute a major nutritional problem, because only 60% of households currently use adequately iodized salt. Ninety per cent of households have access to safe drinking-water and 77% have adequate means of sanitary disposal of excreta, although this varies significantly between urban and rural areas.

4. Recent developments in the Stewardship of Public Health

At independence, the Republic of Moldova had one of the most extensive networks of health facilities in the region, but was faced with limited resources to sustain them. Since the 1995 Health Protection Law and the 1997–2003 Health Sector Strategy, the government has put in place a series of reforms.

The first phase of reform was driven by a financial crisis in the sector, which forced local governments to close small district hospitals and reduce the number of health care personnel. The primary care sector has seen significant reform since 1996 and is now based on a general practice model with family doctors.

The second phase has been largely driven by the introduction of mandatory social health insurance and the commensurate increases in health financing. Since its introduction in 2004, providers of emergency, primary, secondary and tertiary services all contract directly with the National Health Insurance Company (NHIC) for funding. By contrast, the preventive medicine network, which is mainly oriented towards public health activities, is subordinated to and directly financed through the MoH. Other ministries provide a significant number of other health services, which are financed from the state budget.

The next phase of reforms will aim to improve efficiency and quality, and may introduce public-private partnerships in the health sector, particularly to increase the autonomy of PHC providers.

All future reform efforts will be underpinned by the new National Health Policy for 2007–2021, which has prioritized reducing health inequalities between socioeconomic groups and geographical regions in the country. The core target areas in the Policy are:

- health promotion and disease prevention through community and individual empowerment;
- ensuring mother and child health through access to services and support;
- strengthening the health of young people through education, access to services and psychosocial support;
- supporting a healthy and active elderly population through independent living and community integration;
- control of noncommunicable chronic diseases through prevention activities and promoting healthy lifestyles;
- improving environmental health and protection;
- rational nutrition and increased physical activity;
- the prevention and control of smoking, alcohol abuse and the consumption of illegal drugs through reductions in both supply of, and demand for, all three;
- violence and trauma prevention as a part of social and education policy;
- improving the quality of mental health services through the reorientation of services away from inpatient care;
- control of infectious diseases, particularly HIV/AIDS and tuberculosis, through improved prevention, detection and treatment.

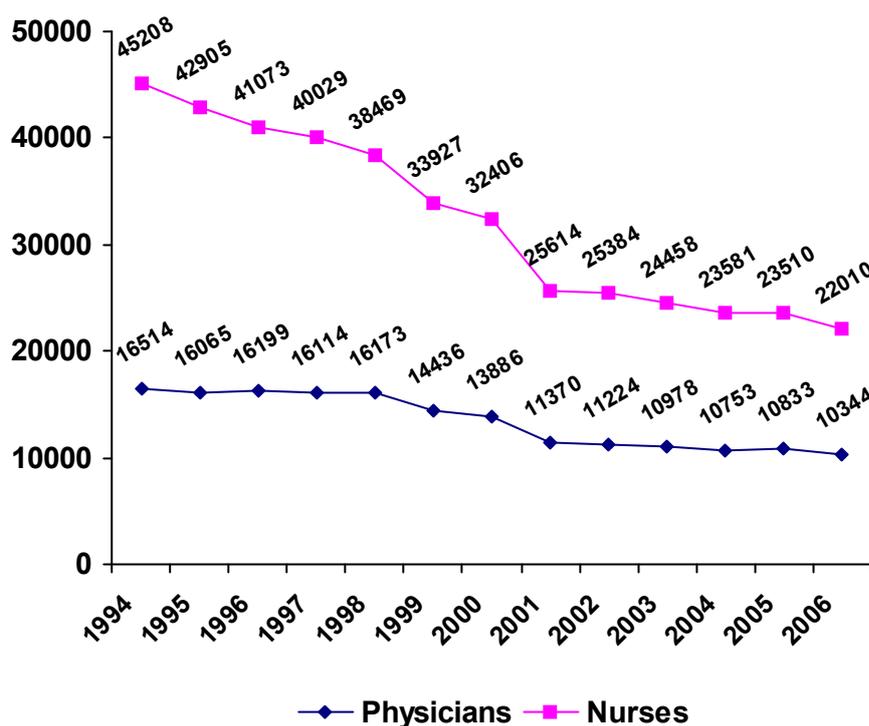
The Republic of Moldova plans to strengthen the stewardship of public health through a series of measures, including:

- developing and implementing health policies and strategic planning
- strengthening the capacity of health authorities in monitoring and evaluation
- improving communication and intersectoral collaboration
- involving patients, civil society and professionals in the decision-making process.

5. Human resources training and planning in public health

The number of physicians and nurses working in public medical institutions dropped by 38% and 51% respectively from 1994 to 2006, which poses a major challenge for the health system. There are too many health professionals in certain disciplines and in urban areas, while there are too few epidemiologists, public health laboratory staff and family doctors in rural communities. Although higher salaries have been offered to attract health workers to rural areas, wages are still relatively low.

Fig. 17: Number of employed health staff by public medical institutions, Republic of Moldova



Source: Ministry of Health, Republic of Moldova.

Health workers are trained at one of five state-certified medical colleges and at the State Medical University (SMU). The training and accreditation of doctors is strictly regulated and they must undertake continuing professional development at five-year intervals. All doctors must pass state medical exams before undertaking residency and further training. Despite recent concerns about standards in basic medical and public

health training, improvements have been made in postgraduate training in health management and family practice.

Following recent reforms, training programmes for family doctors and health care managers have developed considerably. The Faculty of Family Medicine was established at the SMU in 1998 and the first Chair in Management Training and Public Health was created in 2000.

Overall, the health system is still led by a fairly small group of specialists, and public health disciplines have low status in the system. There is an increasing need for training in public health, health system administration and management to increase capacity in these areas. The training of health care managers began in 2003 in the School of Public Health at the SMU. In addition, since 2005, a Master's Programme and short courses for health professionals have been provided.

Postgraduate education programmes for doctors and managers are delivered and managed by the Public Health and Management Department, Department of Hygiene and Epidemiology and the Department of Microbiology of the SMU. Additional training opportunities are provided through national and regional seminars, workshops, conferences and international workshops. In the national public health laboratories, on-the-job training is widely available for district-level personnel.

The main barriers to improving the training of public health personnel include the inadequate quality and quantity of training centres, trainers and programmes. There is also need for more evidence-based teaching materials to facilitate access to modern technologies, and for medical protocols focused on public health.

6. Infrastructure and operation of public health

The MoH is responsible for PHS and is monitored by a parliamentary committee on Health and Welfare, which develops the national health policy framework. Public health research is coordinated by the Medical Section of the National Academy of Science. The MoH coordinates programmes and strategies for priority public health issues, such as health promotion, immunization, blood transfusion, mental health, cancer and prevention and control of communicable diseases. The main public health facilities are accountable directly to the MoH.

The National Centre of Health Management (NCHM) collects national health data and analyses it for use in strategic health planning. The National Scientific Practical Centre of Preventive Medicine (NSPCPM) and a network of 36 territorial branches is responsible for developing norms and guidelines, conducting research on health-related issues, providing training and quality control, and for enforcing the implementation of a range of other key public health controls. The State University of Medicine and Pharmacy (SUMP) – and some national research institutes and national centres based in tertiary hospitals – provide expertise and guidance on specific health issues.

PHC initiatives that target individuals are usually covered by the health insurance package. Benchmarks and incentives are established for high performance in priority areas such as the diagnosis and treatment of tuberculosis, vaccination coverage, and antenatal examinations.

A key challenge for the Republic of Moldova is to rationalize the diverse management of its PHS, to improve accountability, establish clear priorities, provide adequate support and ensure efficient measurement of outcomes.

The main legal frameworks and standards

The government's commitment to maintaining the physical and mental health of the whole population, and ensuring a safe environment, is defined in the constitution and in legislation. Specific laws cover key areas of public health such as prevention and control of communicable diseases, health promotion, occupational health, drug control, alcohol consumption and smoking. The rights and obligations of patients and of the health workers are also covered by statute.

Annually, a basic package of health services is defined by the Law on Health Insurance, and 18 national programmes have been approved by the government to address specific public health issues.

The National Health Policy (2007–2021) and the National Health Strategy (2007–2017) represent important steps towards streamlining the health system to reach specific public health objectives. These include the further development of specific monitoring and evaluation tools and systems, such as the commencement in 2002 of socio-hygienic monitoring.

Specific standards, regulations and norms are developed by the national authorities to ensure that the decision-making process in relation to the public health risks is based on sound evidence. The government has established a range of intersectoral commissions and boards to monitor and coordinate public health activity such as immunization, health promotion, and prevention of epidemics. Some commissions cover specific national programmes, such as for eradicating iodine deficiency disorders and ensuring transfusion safety.

The main institutional actors

The MoH develops national health policy and monitors implementation and quality. It has overall stewardship of the health system and programme of health reform. It is responsible for, and funds, the national preventive medicine network. It also directly finances some national programmes related to 'socially important' diseases such as tuberculosis and HIV/AIDS.

The MoH controls specialist medical institutes, hospitals and clinics, although they contract directly with the NHIC to fund service provision – as does the national emergency medicine network.

The Ministry of Finance consults with the MoH to set the annual budget for the health sector, in line with agreed priorities. **The National Health Insurance Company** (NHIC) is responsible for collecting and managing the HIF. It contracts with the health institutions responsible for providing health services, including public health activities. It also collects data on the coverage of the population with insurance and on access to health insurance rights. **The Ministry of Education and Youth** is responsible for the implementation of health education programmes, as well as for human resources

development for public health. **The Ministry of Ecology and Natural Resources** and its Ecologic Inspectorate is responsible for monitoring and protection of the environment. This includes the protection of air, soil and water from pollution, and monitoring of solid and liquid waste treatment. **The Ministry of Agriculture and Food Industry** is responsible for the monitoring of foods and their impact on public health. In 2007, it established the Sanitary-Veterinary Agency for Safety of Animal Products. The ministry also works with veterinary services to monitor animal (zoonotic) diseases that may affect humans. **The Ministry of Economy and Commerce** enforces occupational health legislation and monitors work-based injuries and accidents. **The Ministry of Internal Affairs** plays an important public health role, through its Service for Civil Protection and Extraordinary Situations, as the national coordinating body in case of disasters. **Other institutions with public health functions** complementing the work of the MoH, some public health functions are carried out, and financed, by a range of other government bodies with responsibility for areas such as transport, defence, families and children, justice and public administration. **NGOs** contribute to health promotion by participating in programmes and thematic projects to create awareness of health issues within communities.

Public health emergencies, preparation and planning

Preparedness for health and other emergencies is covered by legislation, and the Service for Civil Protection and Extraordinary Situations provides overall crisis management. Special provision is made for the identification and control of public health threats from factors such as pollution, radioactivity, toxins and biological agents. Emergency response is also the responsibility of the Governmental National Emergency Commission and territorial commissions.

The mandatory surveillance and reporting system for infectious diseases operates at national, regional and community level. The MoH maintains 24/7 communications channels to issue alerts about epidemics of infectious diseases, and local commissions exist to coordinate an intersectoral response. Emergency response teams include epidemiologists and experts on food, air and water safety, toxicology and radiology. Clinicians and laboratory support are provided by the National Scientific and Practical Centre for Preventive Medicine and other relevant institutions.

However, there is currently no crisis management unit within the MoH, and no defined budget for preparedness. There are also requirements for more centrally coordinated technical-level cooperation between health agencies, for more comprehensive training in crisis management, and for greater emphasis on emergency medical services (EMS) and emergency response.

Air, water and environmental health

The Sanitary-Epidemiological Service is responsible in law for monitoring air quality and evaluating its impact on public health. Water providers are responsible for the quality of drinking-water, which is monitored by the laboratories of the network of preventive medicine services.

An environmental action plan was drawn up for 2001–2010, but has now been revised to reflect the Children's Environmental Action Plan for Europe and to address four health-prevention priorities for the regions:

- prevention of intestinal diseases by ensuring access to safe water and sanitation;
- prevention of injuries and organization of healthy physical activity in communities;
- prevention of respiratory diseases and ensuring clear air;
- prevention of chemical, physical and biological risks in the environment.

The revised plan will address issues related to transport and the challenges presented by climate change. It will also encourage cooperation by other agencies with the Ministry of Ecology and Natural Resources to consider factors that could affect public health, such as surveillance of organisms and genetically changed products, and the quality of air, water and soil.

Other areas of environmental health

The MoH and the State Sanitary Veterinary Inspection (MAFA, The Sanitary-Veterinary Agency for Safety of Animal Products) combine to enforce legislation for monitoring and controlling the use of fertilizers, and ensuring the cleanliness of plants used in food production. The State Sanitary Veterinary Inspection maintains a register of approved phytosanitary (clean plant) products.

Food safety procedures, inspection and enforcement

A legal framework has been established to support a state system for ensuring food safety. This clearly sets out the tasks and responsibilities of the State Sanitary-Epidemiological Service, the State Sanitary Veterinary Inspection and the Service of Standardization and Metrology. They regulate testing and monitor manufacturing, import, transportation, storage, marketing and safe use of food. They also oversee surveillance and control activities, and define the rights and obligations of enterprises, institutions, organizations and citizens.

Occupational health and injury prevention

The MoH's preventive-medicine service and the Ministry of Economy and Trade's labour-inspection service cooperate to implement measures to reduce accidents and other risks to health in the workplace.

At national level, the government, trade unions and employers meet to discuss public health issues in the workplace. These include accidents, occupational disease and disability payments for injured workers, and the improvement of working conditions. Minimum requirements for safe and healthy working conditions are stipulated by national collective working agreements.

Safety of Goods

The safety of non-food goods, including cosmetics, games and toys, is covered in law by manufacturing standards, and by a national system of investigation, testing and certification. The preventive medicine services help to guide the safe development and production of goods by advising on technical norms for manufacturing.

Disease prevention: vaccination

The MoH coordinates the National Immunization Programme (NIP). It works to ensure intersectoral cooperation, and that the programme is compatible with national health policy and other sector-wide policy initiatives, including health insurance.

The NIP for 2006–2010 provides for immunization against 10 infections: hepatitis B, tuberculosis, diphtheria, tetanus, pertussis, poliomyelitis, measles, mumps, rubella and haemophilus influenza type b. Vaccinations against influenza, rabies and other diseases are provided to at-risk population groups defined by the MoH.

The NSPCPM works with local centres of preventive medicine to manage implementation of the NIP, and with PHC services and other relevant agencies in the sector. District primary health administrations, PHC centres and family doctors are responsible for delivering immunization services to their local populations.

Health promotion

This is an important component of national health legislation, and is highlighted as a priority within the National Health Policy. Delivery of the National Programme for Health Promotion for 2007–2015 is underpinned by an intersectoral approach, and its implementation is monitored by the MoH and the National Centre of Preventive Medicine (NCPM).

Health promotion activities that address specific public health issues are included in the 18 national public health programmes, with specific provisions for reaching vulnerable groups. A strong emphasis is placed on the involvement of civil society organizations, communities, NGOs and the media in health promotion.

Evaluation of services

The recently approved National Health Policy calls for improvements in the quality of the services provided by the health system. However, measuring and evaluating quality to establish baselines and monitor progress are key challenges for the public health system.

They will be addressed by establishing national protocols, standard operating procedures, and standard definitions for public health events and activities, and by seeking external assistance in creating effective methods of measurement and evaluation.

Romania

1. Demographic profile

After a period of growth in the 1980s, the population of Romania has been steadily decreasing in recent years, declining from about 22.4 million in 2001 to 21.6 million in 2005. The percentage of people aged 0–18 declined from 24.52% in 2003 to 20.36% in 2005. In the same period, the percentage aged 18–65 increased from 61.17% to 65.92%, while the over-65s declined from 14.29% to 13.72%. The crude birth rate decreased from 13.6 per 1000 in 1990 to 10.2 per 1000 in 2005.

About 55% of the population lives in urban areas. The ethnic composition is: Romanians 89.5%; Hungarians 6.6%; and Roma 2.5%. The rest of the populations is made up of Germans 0.3%; Ukrainians 0.3%; Russians 0.2%; Turks 0.2%; Tartars 0.1%; Serbians 0.1%; Slovaks 0.1%; and Bulgarians 0.1%.

2. Socioeconomic status

Romania is a middle-income country with a gross national income (Atlas method) per capita of US\$ 3830 in 2005, which has risen from US\$ 1700 in 2000.

The country has reformed and restructured its economy and administration, and joined the EU in 2007. However, over 15% of the population remain below the poverty line. Unemployment is high, but has decreased over the last six years due to economic growth and the high rate of emigration, especially to western Europe. The majority of the population has completed secondary school.

Table 14. Romanian GDP indicators

	2002	2003	2004	2005
GDP growth (annual%)	5	5	8	4
GNI per capita (Atlas method, current US\$)	1930	2290	2950	3830
Inflation, GDP deflator (annual%)	23	24	15	12

Source: Institute of Public Health, Iasi

Corruption is one of the most important challenges for Romania. Over recent years, it has begun to develop the foundation for an effective fight against corruption, targeting the development of a legal framework and institutional structure, while stressing enforcement approaches.

Some NGOs, many with assistance from other countries or international donor organizations, provide medical and social care in Romania. The work of the Romanian NGOs, alongside that of the international NGO community, is guided by the principles of partnership and transparency, the primacy of human rights, and the need for a patient-centred health system.

Five priority areas have already been identified:

- universal access to care and community care
- elderly care
- palliative and cancer care
- maternal and child health
- HIV/AIDS.

3. Health status of the population

Life expectancy in 2002 was 71 years on average (75 years for women and 67 years for men). The greatest burden of disease is caused by cardiovascular diseases, accidental injuries malignant neoplasms and digestive diseases.

Table 15. Burden of diseases (2002), as percentages of total DALYs (Disability Adjusted Life Years)

Condition	Male Total DALYs%	Condition	Female Total DALYs%
CVD	26.0	CVD	27.2
unintentional injuries	12.2	malignant neoplasm	11.8
malignant neoplasm	11.6	digestive diseases	7.0

Source: Institute of Public Health, Iasi

In 2002, about 90% of deaths were caused by the main NCDs. External causes accounted for another 6% of deaths, and communicable diseases for about 1%. In total, 61% of all deaths were caused by diseases of the circulatory system. Tumours accounted 16.38%, digestive illnesses for 5.83%, accidents for 5.30% and respiratory illnesses for 5.30%.

Table 16. SDR (Standardized Death Rate), infectious and parasitic diseases, 1990 to latest available year.

Years	Total (%000)		Infectious and parasitic diseases (%000)		Tuberculosis (%000)	
	Male	Female	Male	Female	Male	Female
1990	1151.4	980.3	19.2	7.1	12.0	1.9
2005	1313.2	1115.9	18.3	6.0	13.8	3.0

Source: Institute of Public Health, Iasi

Of communicable diseases, there have been significant rises in tuberculosis and HIV/AIDS since 1990, and these have presented a major challenge.

Table 17. Incidence of Tuberculosis and HIV/AIDS

Tuberculosis incidence			HIV/AIDS incidence, current and trend 1990 to present		
Year	Number	per 100 000	Year	Number	per 100 000
1990	14997	64.6	1990	1499	6.5
2005	22860	105.7	2004	9555	44.1
			2005	9825	45.4

Source: Institute of Public Health, Iasi

According to a report on the health of the population of Romania, published in 2000 by the National Institute of Statistics, 47.5% of smokers began to smoke between 15 and 19, and 33.8% began between 20 and 24. In the 15–24 age group, 18.8% of boys and 8.8% of girls smoked. 10.4% began to smoke earlier than 15, and 71.4% began between 15 and 19.

4. Recent developments in the Stewardship of Public Health

In 2007, Romania began to implement a new strategy to decentralize some of the responsibilities previously held by the Ministry of Public Health (MPH). The strategy is intended to:

- transfer capacities, functions and responsibilities from the Ministry of Public Health to local administrations. This is to ensure more efficient administration of the health system and to eliminate unnecessary bureaucracy;
- increase the role of the local and district public administrations in developing and implementing health programmes to meet the specific health needs of the population;
- decentralize the management of medical care in hospitals and strengthen the accountability of local public administration to citizens;
- ensure the transparency of decision-making and financing within the health system.

The main policy objectives and strategic aims are to:

- provide overall regulation of public health;
- create new regulations to cover health promotion, disease prevention, and improving the population's quality of life;
- define the roles of the Ministry of Public Health and the institutions it controls, as well as those of other public health stakeholders;
- define areas of public health where intervention is necessary;
- define how public health principles will be implemented through the national health programmes;
- define the main areas in which the central public health authority must establish norms and regulations:
 - a) monitoring of the health status of the population
 - b) quality of main environmental factors
 - c) health promotion
 - d) food quality
 - e) occupational health quality

- f) evaluation of environmental factors on health
- g) assurance of optimal hygiene within medical units
- h) laboratory services
- i) family planning
- j) blood transfusion
- k) norms with regard to other domains of public health
- l) illicit drugs.

5. Human resources training and planning in public health

The main objective of the HR policy is to ensure availability of an adequate number of suitably trained, doctors, nurses, other graduate personnel, and administrative support staff for Romania's health system. The main national stakeholders in planning, production, management and regulation of HR for public health are:

- the Ministry of Public Health
- the Public Health Authority and the Directorate of Human Resources
- district public health authorities
- medical schools
- departments of public health and health management
- PHIs
- centre for postgraduate training for medical doctors
- the National School of Public Health and Health Management.

Training in public health management is provided by the following programmes:

- residency (post-graduate medical training) in public health for physicians;
- postgraduate course of one year in health services management (certification, credited by College of Physicians with 60 credits);
- master courses in public health management organized by the medical schools in collaboration with other institutions;
- continuous education courses on various public health themes organized by public health stakeholders.

The mechanisms in place for maintaining standards within the public health workforce (education, certifications, and licenses) are:

- publication of research work results
- participation in training in specialist areas
- participation in conferences, symposia, etc.

Credits are awarded for all these activities. To attain the minimum standard set by the College of Physicians, individuals must gain at least 200 credits in five years.

Since 2007, the hygiene specialty has been included within the specialty of public health, but the epidemiology specialty has been offered separately. EU Directives that cover the training of personnel for blood transfusion services are now reflected in national legislation

6. Infrastructure and operation of public health

The public health institutional structure in Romania is headed by the Ministry of Public Health, which determines public health activities at the national, regional and local levels. The Ministry of Public Health controls 42 district health authorities (DHAs), the national institutes of research and development and the National Centre for Information and Informatics.

As the central authority, the responsibilities of the Ministry of Public Health are to:

- elaborate and implement national public health policy;
- create public health regulations to cover the environment, food, the workplace, homes, and health promotion;
- regulate the organization and operation of medical and PHS;
- through the DHAs, authorize and control the functioning of health providers;
- establish national priorities for public health and develop the national programmes for public health;
- authorize public pharmacies and maintain a list of approved medicines and biological substances for human use;
- ensure systematic and efficient operation of the PHIs;
- ensure quality control of medical services through the local public health authorities;
- periodically evaluate the health status of the population against national health programme indicators and report the findings;
- organize and coordinate the national surveillance system for communicable diseases;
- organize and coordinate the national health promotion network;
- control the surveillance system for occupational health.

The main function of DHAs is to implement national policy and national programmes at local level, to identify local priorities for public health and elaborate local initiatives for intervention.

Public health strategy is implemented at local level by PHIs. Their principal responsibilities are to:

- advise and support the DHAs;
- elaborate public health strategies, policies and methodologies locally;
- provide public health expertise and technical assistance to support the legal system;
- monitor the health status of the population, including communicable and noncommunicable diseases, and provide a rapid alert and response mechanism;
- exchange information within the European epidemiological survey network in the domain of NCDs;
- participate in epidemiological investigation, either on their own initiative or under instructions from the Ministry of Public Health or the DHAs;
- develop programmes for public health promotion and education;

- take part in medical training in specific domains of public health;
- perform research and development activities in the domain of public health and health management;
- gather, analyse and disseminate statistical data with regard to public health;
- input best practice for an integrated information and informatics system for the management of public health.

Control of communicable disease

The surveillance system for detecting outbreaks of communicable disease is the responsibility of:

- the MoH Public Health Authority;
- the Centre for Communicable Disease Prevention and Control (CCDPC);
- the National Institute of Research and Development for Microbiology and Immunology 'Cantacuzino' (NIRDMI-C);
- the epidemiological departments of the four regional institutes of Bucharest, Cluj, Iasi and Timisoara;
- DHAs;
- specialist hospitals, GPs and other physicians.

The CCDPC was established in 2004 to coordinate the national network for communicable disease, which includes epidemiological surveillance and control and the operation of an early warning system. The CCDPC also exchanges information with the European network for communicable disease epidemiological surveillance and control, and collaborates with the European Centre for Disease Prevention and Control (ECDC).

The surveillance system monitors for 63 priority communicable diseases. Immediate reporting through the early warning and response system is required for diseases such as small pox, plague, viral and hemorrhagic fever and SARS and for any unusual and unexpected event. For these priority diseases, a case-based surveillance system is in place, but for others data are aggregated prior to notification.

Doctors must promptly notify their DHA by phone of any case of a suspected serious infectious disease. The DHA will refer the case to a specialist hospital unit, which will confirm or discard the case after clinical and/or laboratory tests. The DHA will record all notified cases and, if an outbreak is confirmed, will instigate control measures and an investigation of the cause. It will also immediately notify the regional PHIs.

The regional PHIs will provide technical coordination for the DHAs. Within 24 hours, they will notify the CCDPC of any outbreak and of the control measures taken, and the CCDPC will notify the Public Health Authority and international bodies. If requested by the MoH or the CCDPC, the PHIs will send a team to investigate the outbreak. If the outbreak affects more than one region, the CCDPC may take over technical coordination. The final decision on control measures rests with the Public Health Authority.

Parallel surveillance and control systems have been established for HIV/AIDS, tuberculosis and STIs (included within skin diseases). For each of these diseases, case definitions have been developed and separate forms and data flows established.

Vector-borne diseases are investigated by local teams designated by DHAs, with support from the regional/national reference laboratory and the Reference Centre for Vector-Borne Disease at the NIRDMI-C. Work is being done within the NIRDMI-C, by the National Centre for Expertise in Medical Microbiology (NCEMM)/National Laboratory for Vector-borne Diseases, to enhance laboratory testing of samples for vector-borne diseases. Currently, there is little routine collaboration with veterinary services, but an ongoing research project is developing collaboration between the NIRDMI-C and the Institute for Animal Health and Diagnosis.

The national laboratory is participating in the national surveillance programme for neuro-invasive West-Nile infections. All suspect cases are tested, and from May to October the weekly results are reported electronically to the CCDPC, and in paper format to the DHAs. If a positive case occurs, results are reported immediately by phone and fax.

On request, the national reference laboratory will provide laboratory services for identification of haemorrhagic fevers (e.g. haemorrhagic fever with renal syndrome) and for diagnosis of tick-borne encephalitis. There is also laboratory capacity for confirming other vector-borne diseases, such as Lyme disease, *Rickettsia conorii* and *Coxiella burnetii* infections.

The National Laboratory for Parasitic Diseases at the NIRDMI-C offers reference activities for the diagnosis of malaria, which is a mandatory reported disease in Romania. The routine diagnosis of malaria is performed by hospitals and/or the CPHA and is confirmed by the NIRDMI-C.

The Entomology National Reference Laboratory at the NIRDMI-C participates in the European Commission's EDEN (Emerging Diseases in a Changing European Environment) research project. At the national level it is involved in developing surveillance methodologies for vector- and animal-borne diseases. It also performs tests of the susceptibility of vector-borne diseases to different insecticide preparations, and monitors the circulation of vector-borne disease pathogens (in vectors and/or animals).

Environmental health

The Ministry of Public Health works through the regional PHIs and the 42 DHAs to assess the potential health impact of environmental factors, and to implement relevant legislation. This applies to air, water and soil, radiation, and environmental aspects of occupational health.

A system of sanitary regulation, administered by the DHAs, is in place to assess potential environmental risks to public health – either from existing or proposed activities. After assessment, the DHA may either award or withhold a certificate of compliance with public health regulations. In the latter case, the applicant may request a HIA, which will be conducted by specialists from the PHIs.

Radiation safety is the responsibility of the Ministry of Public Health and the National Commission for Nuclear Activities Control (CNCAN). Safety regulations cover nuclear and radiological activities, in line with EU rules. Each licensed operation is responsible for environmental radiological monitoring programmes to ensure the continued safety of nuclear facilities.

Air and water quality

The quality of air and water is assessed and assured by the National Environmental Agency and the regional Environmental Agencies within the Ministry of Environment. The ministry has responsibility for water sources (surface waters, ground waters etc.). The Ministry of Public Health has responsibility, through the PHIs and DHAs, for water suppliers, the water distribution network, and the quality of tap water (consumers).

Occupational health

The national programmes for health contain provision for the monitoring and control of occupational health. This includes periodic evaluation of occupational risk, health surveillance for pregnant women and young employees, and supply of information to employees.

Food safety and Consumer protection

Many directorates and services inside the National Sanitary Veterinary and Food Safety Authority (NSVFSA) have responsibilities for food safety. These include the Food Safety General Directorate, the Hygiene and Veterinary Public Health Directorate, and the Inspections, Controls and Coordination of BIPs (Border Inspection Posts) Directorate. There are two consultative bodies: the Scientific Council and the Consultative Council. Other major actors in food safety are: the National Authority for Consumers' Protection (NACP), the Ministry of Agriculture, Forests and Rural Development (particularly through the Phytosanitary office, for herbicides and fertilization) and the Ministry of Public Health.

The NACP is responsible for coordinating and implementing the government's consumer-protection strategy for food. The NACP works through 42 regional offices and has 280 inspectors on its specialist staff of 750.

Within the Ministry of Public Health, the Public Health Authority and the State Sanitary Inspection (SSI) are both involved in food safety. Their main tasks are to coordinate surveillance and control activity and to ensure cooperation with other ministries and state authorities.

At regional level, the DHAs lead on surveillance and sanitary inspection. Their inspection teams include doctors with at least three years specialization in food hygiene or epidemiology. They are supported by university-trained chemists, microbiologists and food technologists and by hygiene assistants. Each DHA each has its own health laboratory. Some are affiliated to other laboratories, such as the three laboratories of the regional PHIs and the 14 national reference laboratories of the NIRDMI-C.

Serbia

1. Demographic profile

Serbia is a landlocked country in central south-eastern Europe with a population of about 10 million, which includes approximate figures for the province of Kosovo and Metohija. Most (82.86%) of the population are Serbs, but another 37 nationalities are represented (40).

After the outbreak of war in the former Socialist Federal Republic of Yugoslavia in the early 1990s, Serbia faced a serious refugee problem for the first time since the Second World War. Most refugees came from Croatia and Bosnia and Herzegovina, but many non-Albanians from Kosovo-Metohija also left the province in large numbers. Estimates of the number of refugees and internally displaced persons (IDPs) have varied from 350 000 to 800 000.

The country's population (including refugees) is ageing, and is characterized overall by smaller families and declining numbers in rural and remote areas, particularly in the south-east and west. However, some minority ethnic groups, such as Albanians and Roma, are relatively younger with larger families. Decreasing crude birth rates and increasing crude death rates have caused the population to contract and age. Serbia now has one of the oldest populations in the world, with 17.2% aged 65 and above (41).

Table 18. Vital statistics – population changes in the Republic of Serbia¹, 1998 to 2005

Year	Mid-year population	Live births	Deaths	Natural increase	Live birth	Deaths	Natural increase
					per 1000 inhabitants		
1998	7 800 055	76 330	99 376	-23 046	9.8	12.7	-2.9
1999	7 772 711	72 222	101 444	-29 222	9.3	13.1	-3.8
2000	7 661 365	73 764	104 042	-30 278	9.6	13.6	-4.0
2001	7 736 362	78 435	99 008	-20 573	10.1	12.8	-2.7
2002	7 500 031	78 101	102 785	-24 684	10.4	13.7	-3.3
2003	7 480 591	79 025	103 946	-24 921	10.6	13.9	-3.3
2004	7 463 157	78 186	104 320	-26 134	10.5	14.0	-3.5
2005	7 440 769	72 180	106 771	-34 591	9.7	14.3	-4.6
2006	7 411 596	70 997	102 884	-31 887	9.6	13.9	-4.3

Source: Statistical Yearbook of Serbia 2006, Statistical Office of the Republic of Serbia, Belgrade, 2006; 67.

¹ Republic of Serbia without data from Kosovo and Metohija.

2. Socioeconomic status

The new Serbian government formed in January 2001 inherited a country still feeling the severe effects of conflict in the 1990s. By 2000, recorded per capita GDP had fallen to about half its 1989 level, and large domestic and external debts had been accumulated.

Poor economic performance adversely affected the living standards of the vast majority of the population. The sharp increase in poverty has seriously restricted citizens' access to health care, adequate food and housing, education and work (42). Poverty is made worse by the large number of refugees, IDPs and socially excluded groups.

Table 19. Key poverty indicators in Serbia¹, 2002–2007

Key poverty indicators	2002	2007
Absolute poverty line per adult equivalent, in dinars	5234	8883
Percentage of the poor	14.0	6.6
Dept of poverty, percentage	3.0	1.3
Severity of poverty, percentage	1.0	0.4

Source: Statistical Office of the Republic of Serbia, WB and UK Department for International Development (DFID). Living Standards Measurement Study, Serbia 2002–2007, Belgrade, 2008.

¹ Republic of Serbia without data from Kosovo and Metohija.

To tackle these problems, the government initiated reforms encompassing the financial sector, the tax regime, liberalization of foreign trade policy and privatization of state and socially owned enterprises. These have combined to stimulate near-term growth and creating the basis for sustainable development. Legal and judicial reforms, as well as those in public expenditure management, taxes and customs, are backed by an anti-corruption strategy for improving governance and institutions.

Table 20. Gross domestic product of the Republic of Serbia¹ 1999–2005

	1999	2000	2001	2002	2003	2004	2005	2006
GDP total, US\$ million*	19 118	24 248	11 812	15 840	20 344	24 516	26 193	30 412
GDP per capita US\$*	2 535	3 226	1 574	2 112	2 719	3 285	3 520	4 103
Growth rate (%)	...	4.5	4.8	4.2	2.5	8.4	6.2	5.7

Source: Statistical Office of the Republic of Serbia

¹ Republic of Serbia without data from Kosovo and Metohija.

* Conversion according to the World bank method based on three year floating average on the market exchange rate and the data on inflation in the Republic of Serbia and in the USA.

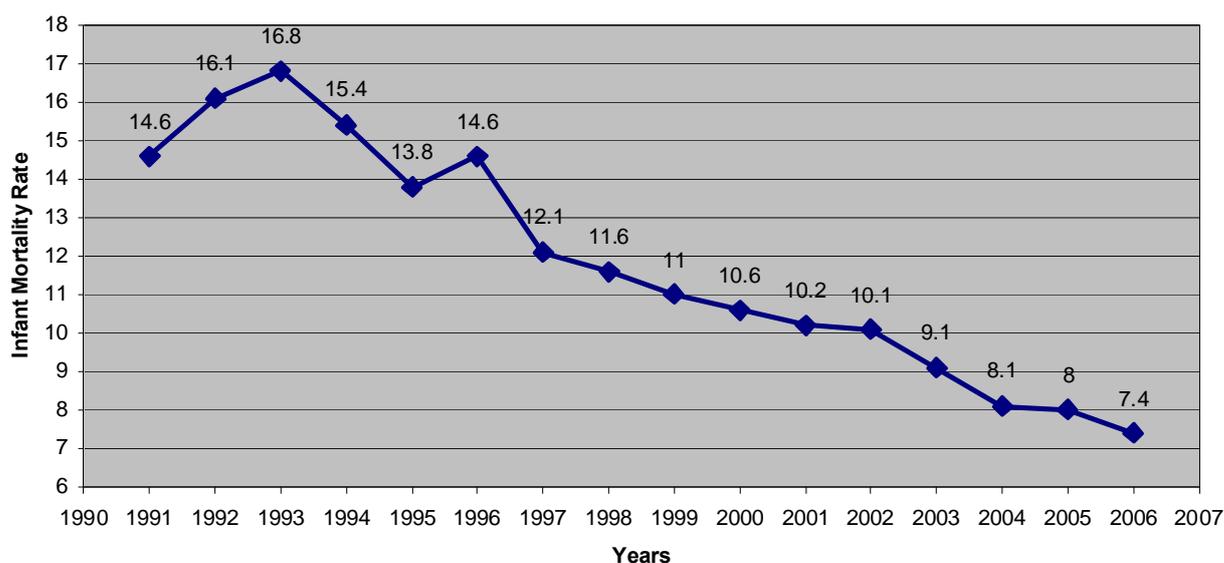
3. Health status of the population

Infant mortality and mortality from communicable diseases have been declining for several decades as a result of free and universal access of health services. Although the rate of decline slowed during the 1990s, it has improved since 2000.

Life expectancy at birth increased by about one year between 1996 and 2005, to 70 for men and 75.4 for women. The infant mortality rate (IMR) in 2006 was 7.4 per 1000 live births (excluding Kosovo and Metohija). Improvements in child survival have been made possible by reducing deaths due to easily preventable diseases (acute respiratory infections, diarrhoeal disease and vaccine-preventable diseases). The low IMR also reflects prior investments in health and maternal education, together with a generally good level of antenatal, delivery and postnatal health services (see Fig18). The maternal mortality ratio is low, and declined between 1990 and 2006 from 15.5 to 5.6 per 100 000 live births.

The most frequent causes of death in 2006 were diseases of the circulatory system (57.3%); cancer (20%); symptoms, signs and abnormal findings (4.8%); respiratory diseases (3.7%) and digestive diseases (3.2%). This pattern is similar to 1991.

Fig. 18: Infant Mortality Rate in Serbia (without data for Kosovo and Metohija)



Source: Statistical Yearbook of Serbia 2006, Statistical Office of the Republic of Serbia, Belgrade, 2006.

The total burden of selected diseases and injuries in 2000 (excluding Kosovo) was estimated at 621 993 Disability Adjusted Life Years (DALYs), or 82 DALYs lost per 1000 population (43). Ischaemic heart disease, cerebrovascular diseases, lung cancer, unipolar depressive disorders and diabetes mellitus were responsible for 70% of the total burden. According to the 2006 National Health Survey for Serbia (excluding Kosovo and Metohija), almost 50% adults had at least one of these chronic diseases. Since the baseline survey in 2000, the proportion of adults with high blood pressure has increased. The prevalence of smoking has reduced, but there has been no change in obesity levels. Half of adults had a GP, and about half of children and adolescents had access to a paediatrician and a dentist. The percentage of people accessing private medicine had reduced. Almost half of adults obtained their medication mainly through prescription. A higher percentage was at risk from traffic accidents.

4. Recent developments in the stewardship of public health

A series of reports have highlighted the decline of public health capacity across Serbia and the need for comprehensive action. The government recognizes that public health systems are now far too complex to be managed only centrally, as is the currently the case in Serbia. It also recognizes the importance of an ongoing public debate and a responsive political process that is grounded on evidence-based information and training.

However, as financial and intellectual resources are limited everywhere, it is essential to set strategic priorities and give direction to this process. This is the task of strategy formulation and consensus building among all stakeholders. The main vehicles for this permanent process – the PHIs and the and Schools of Public Health – and their rights and duties, have to be formalized and confirmed through appropriate and specific legislation in terms of a public health law.

Serbia has assembled all necessary elements, but has yet to connect them in a Framework for Public Health Development. The regional collaboration is supported by The Dubrovnik Pledge of 2001. Many of the transitional changes in the country have the potential to facilitate the harmonization with EU standards and other international public health policies.

Serbia's draft strategy for public health reform was first set out in 2002 in the document Health Policy of Serbia, and in a subsequent paper (46). These strongly advocated health promotion, partnerships for health, preventive activities and health education. However, due to political instability, the adoption of a public health strategy has been delayed, although a new draft of the strategy has been produced in line with recognized international best practice.

A Health Care Law has already been passed, but there is currently no separate law on public health. The constitution does recognize citizens' rights to good health, and many other laws and regulations are applicable to public health, such as legislation for employment, education and the environment. However, enforcement is inconsistent, so there are many violations and few prosecutions.

The process of drafting a new strategy for public health reform made it clear that the existing public health service and institutions would need to reorganize to manage new responsibilities. A priority would be reform the lead national role of the Republic Public Health Institute 'Milan Jovanovic-Batut' (RPHI), and the roles of the 22 regional PHIs. To meet this requirement, new public health legislation is being drafted, and plans drawn up for a programme of change management.

5. Human resources training and planning in public health

The education of public health professionals is founded on the five long-standing core components of: epidemiology, biostatistics, environmental health, health services administration, and social and behavioural sciences. To these have been added eight critical new areas: informatics, genomics, communication, cultural competence, community-based participatory research, policy and law, global health, and ethics.

In response to these priorities, the Serbian School of Public Health was founded with EU support in 2004 within the School of Medicine, and under the umbrella of the University of Belgrade. The School of Public Health supports postgraduate and continuing education in public health, health policy and the management of health services. It provides a base for the provision of postgraduate masters degrees in public health.

Although PHIs should employ at least 32 staff per 100 000 residents in the regions, and 22 per 100 000 in Belgrade, the actual numbers employed range from 20.5 to 86.5. However, educational standards are relatively high (48). Of total staff in PHIs, 16% are physicians, of whom 90% are specialists. Secondary degrees are held by 38.6% of all staff. Health associates make up 7.5% and health associates with specializations 3.4%. One quarter of the staff in PHIs comprises administrative, technical and other staff.

Support for radical change within the PHIs is very low among senior staff, despite generally high levels of personnel motivation and commitment to their work. This may

result from their historical experience of lack of support and acknowledgement by the state, especially in comparison to other medical services. The motivation of general staff is much lower, due to low pay and lack of opportunities and incentives. Efforts are being made to make services more market competitive, although these are limited by outdated equipment and premises, and the lack of resources to maintain them.

6. Infrastructure and operation of public health

The most important institutions of public health are the 23 PHIs, which have a long tradition in Serbia. Their task is to coordinate public health at all levels and to participate directly in health promotion, disease prevention and protection of the environment (45). This includes monitoring and investigating the health status of the population and the incidence and prevalence of serious diseases. The PHIs also monitor and investigate the quality of the environment and potential environmental impacts on health.

PHC centres cover the area of one or more of the 158 (excluding Kosovo and Metohija). They cooperate directly with district PHIs to plan and implement health programmes, and to gather data and keep proper records. Inspectorate services exist to monitor all aspects of public health (including animal health, food production and water supply) and to ensure that health laws are observed.

The social services sector organizes activities to support families and to help disabled people and people with special needs to live independently. The state social welfare institutions (the social work centre, the institution of social benefits and the institution for housing support), are located within the municipalities.

Although the PHIs are not yet subject to separate legislation, they are regulated by the Health Care and the Health Insurance laws and by variety of other laws. The PHIs are funded by taxation and by fees paid to the HIF, although there is often uncertainty about how much each will contribute.

Structural and financial reform is required to improve the performance of the PHIs and to provide further training for public health professionals. Recent analysis (45) has shown that the current roles and tasks of the institutes are unclear and that the current organizational structure of the PHIs is not suitable for fulfilling the new public health functions. It has also shown that human resources are not properly distributed and require more training.

The draft Public Health Strategy would require the public health authorities to be more actively involved in promoting public health, analysing risk factors, and developing policy, with less emphasis on providing services for individual citizens. This would require reorganization of the PHIs and retraining of staff. The PHIs would present what they are proposing to provide, how it will impact on the health of the population, how this will be organized and how much it will cost. The PHI of Serbia would have an umbrella role to decide what legal requirement should apply to regional PHIs in future, and what public health data to collect and analyse.

The core function of public health agencies is to prevent epidemics, protect against environmental hazards, establish emergency action plans, respond to disasters and assist

communities in recovery, while ensuring the quality and accessibility of health services. To support this in future, public health agencies must provide services such as:

- monitoring community health status
- diagnosing and investigating health problems
- informing and educating people about health
- mobilizing community partnerships
- developing and enforcing health and safety protection
- linking people to the personal health services they need
- assuring a competent health workforce
- fostering health-enhancing public policies
- evaluating the quality and effectiveness of services.

The public health authorities should also collaborate with companies to ensure safe working conditions for employees and reduce work-related accidents. Scientific methodologies (e.g. biostatistics and epidemiology) are required to support improvements to public health. Emergency response plans should include an adequate legal framework to allow the authorities to respond appropriately to possible biological, chemical or nuclear acts of terrorism.

The MoH has taken steps to create effective multisectoral programmes to support public health priorities. Principally these are the:

- national programme for communicable diseases
- national Strategy for the fight against HIV/AIDS
- mental health development strategy and action plan
- youth development and health strategy and action plan
- tobacco control strategy and action plan
- strategy for prevention and control of NCDs (draft)
- strategy for the fight against alcohol and drug abuse (draft).

Although the programmes vary in organization and resources, they all aim to improve the overall health of the population through health promotion and disease prevention, and early diagnosis, treatment and rehabilitation. They are targeted at specific health problems or sections of the population, and include quantified goals based on a precise assessment of health status prior to implementation.

The programmes are planned, managed and implemented by the PHIs, with support from expert groups and committees appointed by the MoH. Each PHI is given programme targets, particularly in relation to health promotion and disease prevention. Their activities complement the ongoing national projects 'Healthy schools', 'Healthy cities', 'Health promoting hospitals'.

Improvements are being made to Serbia's public health laboratories, which vary in staffing, equipment and performance. New analytical equipment has been provided over the last five years (part funded by humanitarian aid). Only a few laboratories are operating to internationally accepted quality standards, but this is being addressed.

The greatest problems faced by the laboratories are:

- lack of appropriate space for laboratory procedures;
- lack of high-tech equipment, which would make some procedures quicker and less time consuming. The available equipment is mostly outdated, so modern equipment should help to improve performance;
- inability to work according to the set standards.

New approved standards and procedures are required to improve quality in the PHI laboratories. Very sophisticated methods have already been used with high-technology equipment in the field of sanitary chemistry activities. In future in the microbiological field, some highly complicated procedures could be performed, such as polymerase chain reaction (PCR). However, certain more expensive procedures may be limited to only one or two PHIs to ensure optimum cost–effectiveness.

Under law, health professionals and institutions are subject to both internal and external quality controls. The latter are coordinated by the PHIs in line with a yearly plan adopted by the MoH. The PHIs maintain a roster of professional expert supervisors, who make inspection visits to the relevant institutions and apply agreed standards to staff, equipment and resources. When assessing processes and the results of care, the inspectors apply implicit criteria.

There are several areas in which Serbia recognizes the need for reform of the public health system:

Performance. The current specialist-oriented system is not able to address the growing health problems related to the living environment and life styles of the population. More emphasis is needed on key areas such as health promotion, epidemiology, creating a just and efficient system of health insurance, and ensuring equitable access to high-quality health services. These must be supported by better management and systems for research and data analysis. However, to achieve these aims, many existing attitudes and practices must be changed.

Financing. Current health policy does not fully recognize the importance of public health, and the PHIs have suffered from inadequate and scarce financing over many years. This has been caused, among other factors, by emphasis on the biomedical approach and the excessive development of the laboratories and microbiological services that this has entailed.

Training. Specialist knowledge is located within different specialist branches (epidemiology, hygiene, social medicine, and occupational medicine), with little communication between the disciplines. Public health practice is strongly driven by medical considerations, with very little input from other professions.

In summary, many of today's health problems in Serbia can be classified as public health problems. The challenge for PHS is to cope with the conflicting priorities for improving the health status of the population. Therefore, the network of PHIs in Serbia needs better financing to enable it to improve its performance, and public health practitioners need a broader range of skills and selective depth in specialist knowledge areas.

The former Yugoslav Republic of Macedonia

1. Demographic trends

The population of the former Yugoslav Republic of Macedonia was 2 022 547 in 2002. The ethnic composition was Macedonians 64.2%; Albanians 25.2%; Turks 3.9%; Roma 2.7%; Serbs 1.8%; and Vlachs 0.4% (source: State Statistical Office).

The population is ageing. From 1990 to 2003, the percentage of over-65s increased from 7.9% to 10.6% (4.8% men and 5.8% women), and the percentage 0–14 decreased to 21.1% (10.9% male and 10.2% female). However, the population is still relatively young by comparison with the EU and SEE countries.

The birth rate in 2004 was 11.5 per 1000, and the mortality rate 8.8 per 1000, resulting in a natural increase of 2.7 per 1000. The largest proportion of deaths occurs among the over-75s (43.6%), while mortality is 28% in the 65–74 band, and 13.4% in the 55–64 band. The population is 68.1% urban and 31.9% rural. (12).

2. Socioeconomic status

The former Yugoslav Republic of Macedonia has been an independent and sovereign country since 1991. Citizens are represented in the legislative Assembly, and authority under the Constitution is divided between the legislature, the executive and the judiciary. The former Yugoslav Republic of Macedonia intends to join the EU.

Since 1991, the government has worked to create a market economy. Recent years have seen a small increase in per capita purchasing power, from US\$ 5086 in 2001 to US\$ 6794 in 2003. However, the unemployment rate in 2005 was 36.5%, among the highest in Europe.

There are minimum incomes, or salaries, within different occupations or sectors of the economy. For example, the lowest guaranteed income among health and social workers is 8232 Mden (denar).

The proportion of people living below the poverty line is 29.3%. The groups most likely to live in poverty are the unemployed, retired people and farmers. Large rural households (especially those with family members who are unemployed or have lower educational qualifications) and the urban unemployed are identified as special risk groups. Poverty has a huge influence on the health of the population and on access to health services.

Access to primary and secondary education is universal and attendance is compulsory. Health insurance is compulsory, and 90% of the population is covered.

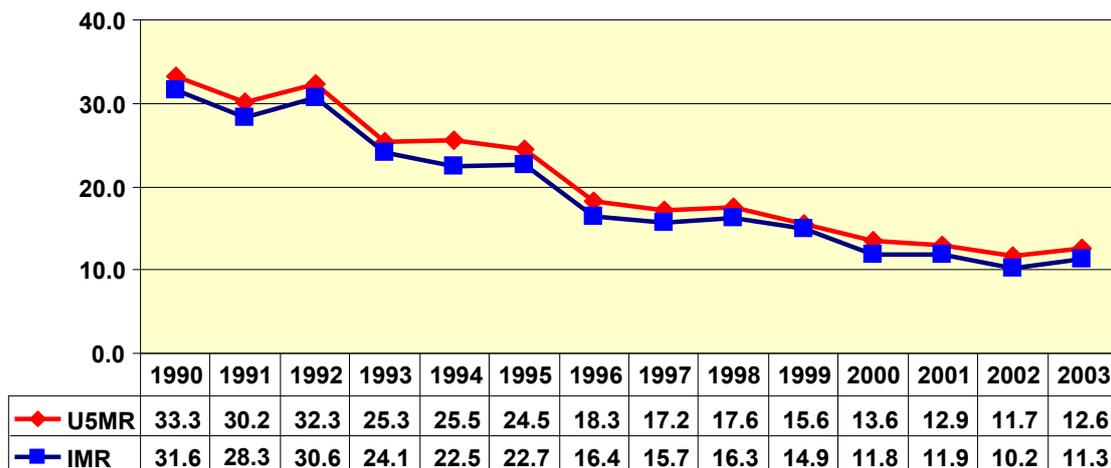
The former Yugoslav Republic of Macedonia belongs to the group of countries with a medium Human Development Index (HDI), with an HDI of 0.796. This compares with high-income countries with an average HDI of 0.910, and low-income countries at 0.593. The world average is 0.741.

3. Health status of the population

Life expectancy is 73.6, which is five years lower than the EU15 average of 79.1. For men it is 71.4, and for women 75.9. Healthy life expectancy is 63.4.

The infant mortality rate has fallen to almost one-third of its level in the early 1990s. In 2005 it was 12.77 per 1000 live births. Maternal mortality was 11.1 per 100 000 in 1990 and 13.3 in 2005. There is no reliable trend in the figures over this period.

Fig. 19: Infant mortality rate and under-5 mortality rate 1991–2003



Source: The former Yugoslav Republic of Macedonia MDG report, 2005.

Fewer deaths are being caused by communicable diseases preventable by vaccination, and deaths are registered in only sporadic cases (hepatitis B, tetanus). Neonatal tetanus has not been registered since 1993. Some communicable diseases have been eradicated (polio), and some have not been recorded for a long time.

The highest number of HIV/AIDS cases was registered in the last two years. However, this was due to the improvement in services for voluntary testing and counselling, and wider access to them. This brought about a change of the ratio between people registered as HIV positive and those registered as having AIDS, where the former are more numerous.

The percentage of under-5s who are underweight and height for their age varies according to factors such as sex, where they live, education and ethnicity. The body mass index for the population as a whole is very high.

Other health indicators:

- smoking is a priority health problem because 42.7% of the population smokes. Rates among women and the young are increasing, despite new legislation;
- tuberculosis incidence is higher than in the EU15 countries and is around 3 per 100 000, with higher rates for men (3.8) compared to women (2.6) in 2005;
- historically, the former Yugoslav Republic of Macedonia has had a problem with iodine deficiency, but this is now being eradicated;

- the number of workplace deaths and injuries has been falling, although this is partly a reflection of high and rising unemployment;
- The average annual concentrations of CO₂ and PM₁₀ (particles measuring 10µm or less) in the air of the capital city are low.

4. Recent developments in the Stewardship of Public Health

Following recent changes in law, an intensive health privatization process has started, especially in the PHC sector. This covers PHC physicians and dentists, as well as state-owned pharmacies, and includes reform of the payment system for service providers, including the introduction of capitation payments in PHC.

The MoH is preparing a 'Medical Map', which will provide the basis for further planning in the health sector according to the estimated needs. It is also revising the basic package of health services to bring it more closely in line with the revenues collected by the HIF.

The National Health Strategy for 2006–2015 covers the main reforms in the whole health sector and has established 21 objectives. The strategy was developed by an international consultancy supported by a national expert team. The team was technically supported and advised by a WHO consultant, and financially supported through the WB project.

The basic principles and values underpinning the strategy are based on:

Fairness. The whole population is to have access to a package of basic health care services, which is both financially and geographically available.

Responsibility. The government, all institutions that provide health care services, enterprises in the public and private sector, and NGOs are all responsible for health.

Health insurance. To ensure mutuality and solidarity among the ill and the healthy, and the young and the old.

5. Human resources training and planning in public health

The principal actors and decision-makers involved in strategic health policy planning are the MoH, the HIF, the Republic Institute for Health Protection (RIHP) and the Ministry of Finance (MOF). Other key organizations are the Medical School, professional associations and Chambers, the Nursing Association, the Ministry of Education and Science (MES), the Ministry of Labour and Social Policy, and multilateral organizations. Bilateral, regional and multilateral activities also influence the decision-making process on the national level.

So far, strategic policy planning has taken place at the central level. However, the Law on Self-Governance has placed greater emphasis on local governments and municipalities, especially in preventive health care. It is expected that they will take a more pro-active role in future, in line with the Law on Mental Health, the Law on Patients' Rights and other relevant legislation. In accordance with the Law on Local Self-Government, the regional PHIs are involved in strategic health planning with the

municipalities, the MoH, and the Association of the Units of the Local Self-Government (ZELS).

The MoH has contracted the Medical Faculty to provide future managers in the health care system with training in international regulations and standards. The postgraduate training in public health provided by the Medical Faculty, the RIHP and PHIs is also in accordance with existing national legislation and international standards.

6. Infrastructure and operation of Public Health

The MoH and the government are responsible for creating and implementing health care policy. This includes proposing policy and legislation to parliament and implementing the legislation enacted. This is also the case for other policy, strategic documents and action plans. The MoH drafts legislation with expert assistance from other institutions, such as the RIHP, the Institute of Occupational Health (IOH) and PHIs.

The basic functions of the MoH are to prepare for and monitor the implementation of health policy, to set priorities and to supervise the functioning of the health care system. The MoH also monitors and evaluates the impact on intersectoral activities relevant to the health sector.

The MoH evaluates the organizational arrangements of health institutions, and determines where restructuring is necessary or new institutions and activities are required. The MoH established a special unit to monitor management of the HIF. The MoH rotates the presidency of the HIF steering committee of the HIF with the Ministry of Finance (MOF). The HIF is responsible for collecting payments to fund the health institutions contracted to provide health care. It also monitors and evaluates the implementation of contracts.

PHC is provided in dedicated PHC units, while specialist and consultancy health care units and hospital wards provide secondary care. The university clinics and institutes provide for tertiary level health care, and carry out research and education activities in parallel with the Ministry of Education.

Specialized preventive health care is organized by the RIHP in Skopje and by 10 regional PHIs. They are supported by 21 sanitary, hygiene and epidemiological services, and to a degree by the Ministry of Local Self-government. The RIHP prepares public health guidelines in particular for social medicine and hygiene, and collaborates with the IOH. Both institutions support the curriculum of the Faculty of Medicine.

The services in charge of coordinating donor activities are:

- the government and its Secretariat for European Affairs, the Ministry of Finance and the Ministry of Foreign Affairs;
- every ministry has a department for European Integration and International Cooperation for implementing activities deriving from donated funds.

The general public has had little involvement in defining health policy, despite the fact that public representatives participate in the HIF steering committee. Recently, the MoH has attempted to encourage public debate by listing all proposed health legislation on its web site.

Identifying health problems and health hazards

Doctors are required by law to report immediately any suspected cases, or carriers, of communicable diseases for listing in the Communicable Diseases List.

The following are subject to mandatory reporting:

- every epidemic occurrence of communicable disease
- cases of intra-hospital infection
- cases of post-vaccination complication
- every bite or injury by an animal infected with or suspected of having rabies.

The annual Preventive Health Protection Programme provides for continuous monitoring by the RIHP and the regional PHIs to assess the potential impact of environmental risks on public health. Monitoring of air, water and soil quality for contamination is conducted in line with existing legislation and the recommendations of WHO. The findings of expert investigators may be used to support enforcement of environmental orders.

Public Health emergencies: preparedness and planning

The Law on Crisis Management has established a system to anticipate and manage crises caused by disasters and epidemics, or other non-military events that imperil public health and property. The Centre for Crisis Management analyses all data relating to potential crises, such as:

Outbreaks of communicable diseases. The MoH monitors infectious diseases nationally through the Commission for Protection against Communicable Diseases. This comprises epidemiologists, infection experts, microbiologists, paediatricians, and veterinary experts.

Bio terrorism. If a bio-terrorism threat such as anthrax is suspected, a sample will be taken on site by an expert team from the RIHP in full protective equipment. It will be taken to the RIHP laboratory for analysis.

Chemical and radiological hazards.

Natural disasters e.g. earthquakes, floods and storms.

Health Protection

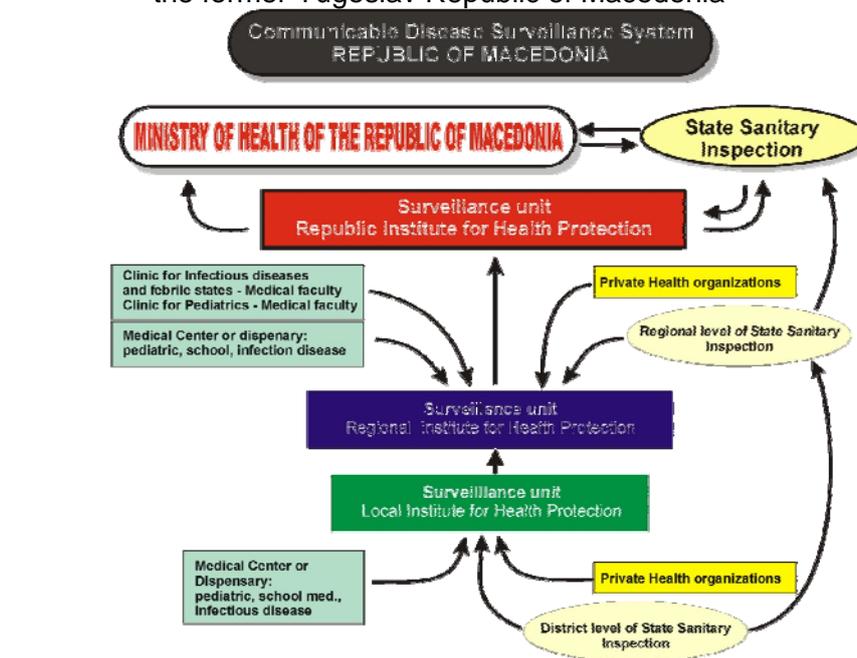
A network has been created to support epidemiological surveillance and control within the national system of reporting for communicable diseases. It includes designated PHC doctors, hospital consultants and specialists, and doctors from tertiary health care (clinical centres).

Annual plans and programmes are actively implemented by all the preventive health care institutions. These allow for on-the-spot inspections by the RIHP's Sector for Epidemiology and Microbiology, and for targeted monitoring, prevention and eradication of diseases. The Programme for Preventive Health Protection provides a legal framework for these and related activities.

Health laws have made reporting obligatory for 48 important communicable diseases. At local level, reports are gathered by the 21 regional units of the institutes for health care and are passed to the RIHP. The RIHP processes and analyses the data and submits weekly monthly and annual epidemiological reports to the MoH.

The Project for Notification and Warning ('ALERT') – Early Warning and Response System (EWARNs) – was started in 2003 with the support of WHO. This established the reporting of syndromes of communicable diseases. The ALERT project, supported by WHO, continues to be implemented across the whole country.

Fig. 20: Communicable diseases surveillance system in the former Yugoslav Republic of Macedonia



Source: Republic Institute for Health Protection

Standards for air and water quality are set by law, and are monitored by the RIHP and the 10 institutes for health protection. Special attention is paid to data that indicate whether air and water quality is improving or getting worse. Deaths from unspecified respiratory diseases are monitored closely among children up to the age of 14 in both urban and rural areas. The environment ministry has a network of monitoring stations that automatically measure air quality at 15 locations. The data gathered are compared with the agreed targets for air quality. Deaths from intestinal diseases caused by water-borne infections are monitored among both children and adults.

An early-warning system is in place for the monitoring and detection of chemical pollutants. It is mandatory to notify the environment ministry of any potential public health risks in connection with increased pollutants in the air, while the MoH Food Directorate must be informed about polluted water. In the event of radioactive contamination, the Directorate for Radiation Safety in the environment ministry must be informed.

Food safety risk assessment is implemented by the environment ministry and the Ministry of Agriculture, Forestry and Water Supply (MAFWS). They are supported by the Food Directorate of the Ministry of Environment, the Veterinary Inspection Service, the Phytosanitary Administration, the Agricultural Inspection Service of the MAFWS, and the food-testing laboratories.

Inspection services are responsible for surveillance of imported food products, food production and food trading. Food samples are collected and may be sent for analysis to the laboratories of the RIHP, the regional institutes for health protection, or the Faculty of Veterinary Medicine at the Food Institute. If the food is found to be unsafe, it will be banned from sale. Analysis of food available in shops and markets, which may be contaminated with chemicals such as heavy metals and pesticides, is performed in the RIHP laboratories. School dinners are tested (often daily) to determine children's daily intake of contaminants.

The Food Directorate and the risk-analysis unit of the Development Department analyse data from food samples collected by inspection agencies. All food samples are analysed to determine the nature and level of risk they present to people who have consumed the product or come into contact with it, taking into account the length and nature of exposure. If a risk is identified, it will initially be managed by the inspectors on site. If the risk relates to food of animal origin, the Veterinary Administration for Risk will be informed.

To ensure rapid exchange of information, the Food Directorate is included in the European Rapid Alert System for Food and Feed (RASFF). This aims at effective exchange of information about any measures required to ensure food safety for consumers.

Assessment and control of occupational health is performed by the Institute for Occupational Medicine and the Occupational Medicine Services. This includes:

- assessing risk for specific jobs;
- performing environmental monitoring – analysing environmental determinants in the workplace;
- performing medical check-ups for workers.

Risk assessment for consumer goods, cosmetics and toys is implemented by the MoH and the Ministry of Economy, in cooperation with the RIHP. The State Sanitary and Health Inspectorate (SSHI) within the MoH is responsible for taking samples and delivering them to the RIHP laboratories for analysis. If a health risk is established, the goods are barred from sale.

A new law on the safety of cosmetics came into effect in May 2007, in line with standards in the EU. Further risk assessment will be performed on the basis of this law, although manufacturers and traders will be given time to adapt their work to its requirements.

Cooperation with other authorities

Agriculture: This sector is required to cooperate with the MoH to ensure that protective zones around artificial lakes are respected in cases where they are used for water

supplies. Influenza is another important area of cooperation. Representatives from the Ministry of Agriculture, Forestry and Water Supply and Veterinary Administration actively participate in the Commission of Pandemic Influenza. They work together in the drafting of national legislation on food safety and the exchange of information about risks. A Memorandum of Cooperation has been signed between the Food Directorate and the Veterinary Administration.

Employment: PHS cooperate in areas such as violence prevention, drug addiction programmes (including harm reduction and drug substitution), the inclusion of Roma people in the workplace, smoking protection, and health and safety at work.

Environment: Working groups from various ministries cooperate over the harmonization of legislation with EU Environmental Directives (chemicals, air, water, waste, road safety, industrial pollution, genetically modified plants, and noise).

Education: The Ministry of Education operates with the MoH by providing graduate and postgraduate studies in the field of public health. Courses include health promotion and education (e.g. healthy lifestyles, diet, protection against infectious diseases, and especially sexually transmitted diseases). There is also cooperation on joint projects for diseases such as HIV/AIDS and tuberculosis.

Science: There is cooperation over scientific projects in the area of public health.

Interior: There is cooperation to combat illegal trade in goods such as drugs, medicines and food, and to ensure integrated cross-border management for international passenger travel and the trading of goods.

Defence: The MoH participates with the Ministry of Defence on the managing committee of the Centre for Crisis Management. Representatives from the Centre for Crisis Management participate in the crisis bodies established by the MoH, such as the Monitoring Commission of Pandemic Influenza. The MoD exchanges information with the RIHP about the quality of drinking-water.

Justice: The programmes on HIV/AIDS and tuberculosis are supported by a grant from the Global Fund against AIDS. The Programme on Prevention of Drug Addictions covers the prison populations. Representatives from the Ministry of Justice participate in the MoH committees for HIV/AIDS, drugs, violence and health. There is close cooperation in the area of protection of human rights for children, women, patients, and other groups.

Others: There is also cooperation with the ministries of Economy, Foreign Affairs and Finance, and the Agency of Sports and Young People, the Directorate of Ionized Radiation, the HIF and other governmental bodies. The SSHI cooperates with the responsible inspectorate within the Ministry of Economy to supervise the marketing of commonly sold goods. There is cooperation with the Ministry of Foreign affairs over the transport of corpses, organs, tissues and cells, as well as in humanitarian consignments. The SSHI, the Food Directorate and the Directorate for Radiation Safety cooperate with the Customs Administration in the supervision of the international movement of passengers and goods. The Bureau of Drugs cooperates with the Office of

Stock Reserves to maintain up-to-date lists of required medicines, and to ensure sufficient stocks are held in reserve.

Multisector and multidisciplinary commissions for public health require cooperation between the relevant authorities to ensure that legislation is applied. This is the case in areas such as road safety, violence and health, and emergency preparedness and response. Commissions also exist for specific diseases and conditions, such as tuberculosis, HIV/AIDS, brucellosis, pandemic influenza, and iodine deficiency.

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