

**28 Annex - Consumer and health protection**

**223. MASTER PLAN DEVELOPMENT OF HEALTH CARE SYSTEM IN MONTENEGRO FOR THE PERIOD 2005- 2010**

**THE GOVERNMENT OF THE REPUBLIC OF MONTENEGRO  
MINISTRY OF HEALTH**

**MASTER PLAN  
Development of Health Care System in Montenegro  
for the period 2005 – 2010**

**Podgorica, 2005**

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## 1. Introduction

The plan is a professional and political document on the basis of which the development of health care system is directed in line with the overall development of the country and it is the basic instrument of health care policy. The Master Plan provides conditions for efficient, rational and sustainable development of health care.

The function of the plan for health care development is to coordinate activities that contribute for the most part to the improvement of health status of the population. According to the definition of the WHO health is not only the absence of an illness, but a set of the utmost physical, mental and social well-being. As such, it depends on a number of factors from the environment, over which the individual has no impact. Due to those factors the health status of the population is directly or indirectly linked with all endeavours and activities of the people in a society, and oftentimes with activities and events in other countries. There are hardly any areas that do not exert a certain impact on health status of the population. Every law or regulation contains certain elements that can contribute to improvement or deterioration of the health of the population.

The plan has a political character because political agreement is necessary regarding resources and decision-making methods on the status of the health care system. Namely, the development of health care can lead to conscious orientation to allocate more or less funds from GDP, or to otherwise set priority objectives and tasks, time limits for their implementation, to otherwise define solidarity and social relations, or to change the manner of organizing and financing health care activities. Because of that, any health care plan has to a certain extent its political dimension. This is due to the fact that the health care system is an integral part of the social system and that it can function only within its framework and is interdependent upon other economic and social fluctuations and developmental trends. Health care sector is not expenditure, but an investment in achieving social, economic development and overall development of the society.

The purpose of the plan is to achieve better health, and it is based on:

- Analysis of the present state of health care and insurance, achieved strengths and weaknesses;
- Data on health status of the population and their needs,
- Professional and scientific knowledge about methods and possibilities of improving health, early detection, treatment and rehabilitation of diseased or injured persons;
- Data on size and population structure and its projected fluctuations in the future;
- Recognition of social, ecological, cultural and other social attributes and characteristics of the society;
- Economic potentials for financing health care;
- Health care facilities engaged in endeavours for the improvement of health and other necessary resources;
- Results of utilization of available resources of health care services,
- The objectives of health care policy and
- Strategy for the development of the health care system

Basic principles of the development of the health care in Montenegro are formulated in the following national and international documents:

- The Constitution of the Republic of Montenegro
- Health Policy in Montenegro by 2020 (2000),
- Strategy for development of the health care system in Montenegro (2003),
- Law on Health Care and Law on Health Insurance (2004),

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- International Conference on Primary Health Care, Alma Ata (1978),
- Declaration on Health Promotion- Ottawa (1986),
- Health Reform in Europe, WHO (1996),
- The Ljubljana Charter on Reforming Health Care, WHO (1996),
- The Fourth International Conference on Health Promotion, Jakarta (1997)
- European strategy of WHO "Regional Health – 21 Targets for the 21<sup>st</sup> Century" (1999)
- WHO Declaration on Health status of World Population (1999),
- UN Millennium Development Goals (2000),
- Bologna Declaration on Higher Education (2000),
- The Fifth Global Conference on Health Promotion, Mexico (2000),
- Dubrovnik Pledge on 'Meeting Health Needs of Vulnerable Populations in South East Europe' (2001),
- Agenda for Economic Development of Montenegro (2002 – 2007).

The general objectives of health care systems development in Montenegro are:

- Development of health care policy to raise citizens' awareness that health outcomes depend on their personal decisions and responsibility for their health,
- Improvement of health care in the most acceptable and equal way,
- Development of health care system harmonized with developmental trends of European health care,
- Increase in efficiency of the health care system through rational and available resources,
- Improvement of the quality of services,
- Use of modern health care technologies,
- Financial stability of the system.

Strategy for health care development defines the activities within the health care system that focus on implementation of health policy objectives by 2020. Montenegro has achieved certain results in the development of health care system but at the same time has come up against increasingly more demands for its improvement. Due to that, the health care system reform was initiated, which primarily relates to changes in organization of health activities and restructuring of levels in the health care system, particularly of primary health care, as well as the financing method, in order to ensure the stability of the system.

Reform of the overall health care system and its operation in the framework of social and economic development and potentials of the country that has set its aim of joining Euro-Atlantic associations, requires a number of changes in the old system and development of the new one in line with recommendations and guidelines of the WHO documents and EU strategy for health care development. The main objective is that of adding years to life and, even more importantly, adding life to years. Therefore, further development of the health care system must rely on financial potentials of Montenegrin economy which will inevitably lead to selection and setting new priority objectives and tasks.

### 1.1. Planning health care activities

In socially-oriented societies, health care and health services are of public interest for the country. Therefore, its development cannot be left to chance, ambition and ability of certain groups of service providers or to the market but should meet the needs of the society. The law of supply and demand is not completely acceptable and it does not operate fully within the health care system,

which is characteristic of market relations in economic activities. If the development of health care is left over to service providers, i.e. to supply, it would lead to misbalance, where the supply of certain types of services would be too high and of some other services too low. It might happen that service providers (health institutions) are not interested in certain service programmes (because of financial or other reasons). It might also happen that prevention services, house calls, transfusion, pathology, social medicine and some other services could not be provided at all, and the supply of some services, which health professionals are very interested in could be very high. A great number of needs could not be ever met or would be met under unacceptable conditions. Consequently, they could not achieve the objectives of health improvement, citizens' satisfaction and effectiveness of the health care system.

A good health care system has to meet the needs in all specialized areas of medicine, which are the results of health status of the population. In a public health care system the provision of development and supply of all health care services is the task and the obligation of the government. It is obliged to take care of resources (human resources, facilities, equipment) that are required for making the services accessible to the citizens. Such services are needs that are identified and professionally and uniformly defined, on the overall territory of the country, for the entire population. Therefore, it is necessary to take into account the needs, which are the consequence of the health status of the population, and the possibilities of their financial coverage. There is no society, i.e. country that can meet all the needs, because there they do not have the necessary resources. Therefore, when planning health activities, the method of setting priorities is used. With such a principle all the fields have the possibility to meet the needs, with those where better results in improving health might be expected are granted higher possibilities for development. Thus the plan is the document and instrument for regulating complex mutual relations between the needs, interests and possibilities of development as well as the functioning of health services and health insurance in regulating the relations in health care. Planning should not be taken as a negation of particular economic legality in health care but as a request that the management, organization and functioning of health services and health insurance have to be under social control.

The purpose of health care planning is to:

- provide conditions for better health and satisfactory functioning of the health care system,
- set priorities in health care programmes focused on prevention, early detection and treatment of diseases in vulnerable groups,
- develop primary health care,
- define resources for achieving complete health care
  - human resources
  - material resources
  - financial recourses.

In public health care systems the principles of comprehensiveness, solidarity, equality, non-discrimination and non-profitability and democratic decision-making regarding most important issues in health care are applied. On the basis of those principles public (state) health care system is obliged to cover treatment expenses to all citizens, i.e. enable them to exercise their rights to health care regardless of their income, age, sex, nationality, religion, health status or other differences. The equality of citizens, which are included in the system (non-discrimination) applies to rights of health insurance, equal accessibility to health services and their quality and equality of treatment, of health services and insurance. All this has to be based on solidarity relations between the rich and the poor, the young and the old, those suffering from a disease and those in good health, where the solidarity means the equal rights and obligations of health insurance, in line with income possibilities of an individual or his family and equal rights.

On the basis of those principles which are incorporated in the Laws on health care and health insurance, health care has become a public and common welfare and the care of the overall society.

Health insurance and providers of health services operate in order to meet the needs of the citizens, and not to make profit because in social systems it is not acceptable for the public health insurance or health institutions to make profit or gain other financial benefits on the diseased and injured. Application of stated principles of health insurance and relation between the entities is regulated by the law and other regulations and by health care planning.

Since health care is provided to the population, when establishing the needs for health services, facilities, and funds, it is necessary to take into account the number of inhabitants, age and sex structure of population, expected trends, population density, health status and estimated current and future needs, and the economic power of the society and its potential to fund health care. The role and development of health care facilities, their organization, equipment level, qualified staff, payment method and other factors are also very important.

On the basis of above-mentioned indicators and parameters the **Plan envisages the framework, priorities and possibilities for future development of the health care system and exercise of citizens' rights to health care.**

The objectives of the health care systems are greater accessibility of health service and a high level and quality of health services. In economically most developed countries, due to of aging of the population, fast development and introduction of new technologies, new medicines and methods for prevention and treatment, better information and greater needs of the population, the needs for the health services are growing faster than achieved GDP. Although in some countries the financial resources for health care account for more than 10% of GDP, health care needs are, nevertheless, not met. The most developed countries allocate to health care more than USD 2300 per inhabitant (e.g. Australia USD 2350, Germany USD 2780, Switzerland USD 3160, USA USD 4887)<sup>1</sup>. Less developed countries and developing countries, due to their weaker economic power do not have the necessary funds to meet the basic health needs. The amount of available funds for health care is less than USD 100 per inhabitant (e.g. Kyrgyzstan USD 63, Moldova USD 62, Albania USD 67, and Uzbekistan USD 73).

Care for health i.e. treatment, in all countries also has its economic dimension and goes beyond the narrow area of the health care system. It is becoming increasingly clearer that the health care system depends very much on economic potential of a society that sets its developmental framework and certain limitations. Instead of increasing investments in health care, health economists and politicians, who make decisions on economic and social development of the society, demand that health care and its coordinators use available resources in the best possible manner and achieve better efficiency and effectiveness in its operation. This conflict of interests, which is always apparent when allocating GDP, can be resolved successfully through planning approach.

Planning and implementation of the plan will establish dependence of funds and development possibilities of health care on the growth of GDP, with development of other sectors. Planning of health care is a method of harmonizing the needs and requirements for funding potential that can be provided by the society. In so doing, it is necessary to accept the reality that no society in the world can meet all the needs and pay all the services that can be provided by the health service.

## 1.2. Objectives of the plan

The basic objectives of the Master plan are:

1. plan and organize development of capacities in order to provide equal access to health care,
2. defining priority areas of development,

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<sup>1</sup> Data on investments in health care are taken from file OECD Health data 2003 (Credes, Paris) and from HFA database 2004 (European Office of World Health Organisation, Copenhagen).The values are calculated on the basis of purchasing power of the population (PPP method)

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3. bringing the health care system in a state of optimal operation and in line with socio-economic development,
4. increase efficiency and quality of health care through changes in organization and functioning,
5. improvement in management of health care system

Through planning, and in line with adopted principles for conducting health care, better use of available resources and greater satisfaction of needs is ensured, which results in better health status of the population. This is achieved by defining the following activities:

- tasks of the government and its authorities for creating conditions for better health and satisfactory functioning of the health care system for the population,
- priorities in health services programmes with greater focus on strengthening health, prevention, early detection of chronic diseases and primary health care tasks for the most vulnerable groups;
- framework for providing resources (financial, human and material) for health care provision;
- solidarity relations in health insurance and related rights and obligations of the citizens,
- roles and tasks of health services at primary, secondary and tertiary level and the ways of their functional integration as an inseparable whole;
- required facilities of public health institutions that will be financed by public funds and possibilities for including private facilities in the public health services network;
- status of public health institutions, the role and responsibilities of their founder and management for carrying out planned tasks and operation in the framework of available resources;
- health information system for health care institutions and health insurance in line with new needs for planning and making necessary and timely decisions at all levels of the system.



### **1.3 Tasks of non-health care departments of the Government regarding healthcare**

Better health of the population will not be achieved if it is cared for only by the health care service. Therefore it is necessary to plan required measures outside the health care system. Health is not created in hospitals, health clinics and pharmacies, but are places where diseases are prevented and treated. Such diseases occur in a social and natural environment where an individual lives and works. Health service has almost no impact on the environmental factors that affect the health, and such factors can exert a positive but more often a negative effect. Health services cannot solve the issues of environmental protection and its pollution, traffic safety, occupational safety, housing conditions, employment, education, social problems and poverty, alcoholism and other addictions.

All stated factors have a significant role and impact on health. Therefore, better health and higher life quality is not the responsibility only of the Ministry of Health but also of other departments, i.e. the Government and the Parliament. The implementation of the tasks and responsibility for the health status of the population will depend on the adopted approach for resolving these issues. The following principles are taken into account when adopting the plan:

- certain commitments and orientations related to development of those fields that have a more significant role in changing the health status of the population,
- plans for health improvement will be taken into account when passing laws and other regulations and ensure their implementation in practice;
- activities for promotion of better health aimed at raising public awareness about the sense and purposes of such laws and planned measures;
- activities of the Government for creating positive atmosphere and conditions for achieving better health of the population and provision of equity in all areas in social and health care for the whole population.

WHO and EU documents shall serve a guidelines for necessary changes and activities for achieving better health in Montenegro. A number of issues from different areas of non-health services, where changes should be made, is linked with investments i.e. economic potentials, which will have a direct impact on health. Therefore, planned necessary changes are not acceptable and cannot be implemented in a short period. It is a known fact that better health whenever and wherever in the world is related to financial situation. Nevertheless, there are a number of activities that can have an important role in improving health, and do not require new or greater investments. For some other areas, where this is necessary, greater investments should not be regarded as an expenditure, but as an investment in human resources that will result in better productivity and higher revenue, and that will contribute to better health, economic development and better possibilities for development of other sectors.

In line with the adopted development policy, the Government will pursue the active policy towards better health, aware of effects of environmental factors on health and responsibility for health of the population that will be implemented through laws and other measures in all life sectors.

Acting jointly with other competent authorities, the Ministry of Health will initiate preparation and implementation of appropriate regulations in the following areas:

- Education for introducing health education in primary and secondary schools as a school subject or/and as a part of some other school subject. The children and the youth (and indirectly their parents) should acquire basic knowledge and habits of healthy lifestyle, personal hygiene, healthy nutrition, necessary physical activities, prevention of diseases and injuries, sexual education, addictions (alcohol, medicines, smoking) and their harmful effects, etc. The second task of the education sector is to raise general education levels and enable acquisition of general knowledge to the greatest possible number of inhabitants and eradicate illiteracy as it is known that the health status is the worst with illiterate people and those with low education level.
- Traffic safety for adopting regulations on mandatory use of safety helmets for cyclists and motorists (and their co-drivers, especially children), on mandatory use of special seats for small children in cars, on mandatory use of seatbelts for all passengers in cars and line

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buses, limitation of carbon dioxide in exhaust fumes of cars, limitation of alcohol in blood for all traffic participants, prohibition to drive under the influence of drugs, etc. Furthermore, the Ministry of Health will sustain consistent control and impose fines for violations of traffic regulations, as that can reduce the number of tragic accidents and health insurance expenses and also contribute to health improvement. It will also propose insurance companies not to cover expenses of persons involved in traffic accidents who fail to obey traffic safety regulations. It will insist on strict adherence to the Law on Health Insurance and recourse procedure for treatment expenses. On the basis of this, Strategy of Traffic Safety will be developed by adopting a concrete objective of reducing the number of fatal traffic accidents, i.e. the number of injuries by 30% by the year 2007 as compared to figures from 2003.

- Ecology, where it will support the adoption and consistent adherence to regulations related to environmental protection and prevention of activities that are most detrimental to health of the population. Acting jointly with other competent authorities in charge of ecology, utilities and agricultural services, the Ministry of Health will support safe waste disposal, especially rubbish and wastewaters, prevention of pollution of water springs and for more rigorous supervision of pesticide and herbicide use in agriculture, high quality and safety of foodstuffs and exhaust fumes from all sources. It will especially strengthen the work of inspection services that will control and, if necessary, fine those who fail to obey regulations. Similarly to the practice of many European countries, competent authorities of the Government will support and assist activities of existing recycling companies and establishment of new ones that will be engaged in recycling industrial and household waste (glass, paper, plastic, organic waste for bioenergy), etc. Thus, environmental protection will partly become an economic activity. Montenegro will pursue the practices of EU countries, in terms of legally prescribed obligation on the part of manufacturers and sellers to provide for safe decomposition, dumping or recycling of their products and that those expenses are included in the price of the product. The Ministry of health will especially insist on consistent adherence to the Law on Restricted Use of Tobacco Products in Public Places in preschool institutions, schools, hospitals, sports and other halls, public services and offices, public transport and any place where a greater number of people gather.
- Social policy that will focus on active employment policy, finding possibilities for creating new jobs and support development of small enterprises, special care for “marginal population groups”, for elderly and disabled persons who live alone, who are weak and bed-ridden and who need help of other people in performing their everyday activities, for socially disadvantaged persons, pensioners with lowest pensions and implementation of the Strategy for Poverty Reduction. All this is necessary because poor economic position and poverty of individuals and families is the most frequent cause of diseases and poor health status. The measures will be carried out in line with possibilities for economic development.
- Taxation policy that will stimulate companies, employers and citizens with lower taxes and other exemptions into performing activities (services), production, processing and consumption of products that are beneficial to health, or at least are not harmful. Certain services and activities that are necessary for health protection will be exempted from tax. Higher tax rates will be imposed on products that are detrimental to health such as cigarettes, alcohol, foods containing a high percentage of animal fat and sugar, production and products that pollute the environment such as pesticides, herbicides, diesel fuels, etc. By means of adequate instruments of taxation policy, the Government will support social policy and give its contribution to reduction of poverty and resolving major social problems that lead to poor health.
- Lifestyle and habits with activities for raising public awareness and its involvement in efforts to quit bad habits, which are external risk factors and are linked to ‘epidemics’ of chronic degenerative diseases. Measures will be taken to reinforce personal responsibility of the citizens for their own health and the health of others. Special emphasis is devoted to reduce the number of smokers, consumption of alcoholic beverages, prevention of drug

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abuse, need for more physical activities and recreation, changes in nutrition habits, weight control. Montenegro is the second country in Europe to have legally restricted smoking in public places. By the year 2006, the Ministry of Health will propose activities to restrict alcohol consumption among young people, in the vicinity of schools, and other locations. Moreover, efforts will be made to introduce 'Healthy City' programme in Podgorica and some other towns in Montenegro by 2006. All activities for strengthening health, mostly related to changing lifestyles and habits will be conceptually coordinated by the Institute of Public Health. Health promotion units of health centres, NGOs, humanitarian and other associations of the disabled, the diseased and other citizens and local communities will be involved in implementation of the programme.

### **1.4 Tasks of the Government in providing health care facilities and exercising citizens' rights**

Apart from tasks from Article 13 of the Law on Health Care (Official Gazette of the Republic of Montenegro, No. 39/2004) the Government will provide funds for capital investments and procurement of equipment for health institutions founded by the Government.

The investment plan will be developed for each year and shall include health institutions.

- In line with criteria for their incorporation into the public health service network;
- In line with priority tasks of health care and approval of the Ministry of health;
- In line with specific needs of health institutions when their capacities are fully used and on the basis of analyses and needs with evidence of justification for investments.

Budgetary funds and funds obtained from sale of health facilities will be used for capital investment in public health institutions, which shall be determined as unnecessary for implementation of public health service programme. Health institutions will participate in payment for new equipment with revenues obtained from renting their premises and equipment and partly from the revenue obtained through depreciation, which is included in the price of health services.

Requests for investments in new and more sophisticated medical equipment i.e. its modernization, will be submitted to the Ministry of Health by health institutions. The request for the new equipment shall be accompanied by analysis of medical and economic justification for investment on the basis of anticipated needed scope of services, i.e. patients treated with such equipment as well as the needs of population, advantages in comparison with current methods of treatment, the prices of services and impact on the value of their programmes to be financed from public funds i.e. funds of the Health Insurance Fund. On the basis of such analysis the decision will be made about justification of proposed investment by the Ministry of Health. Before reaching the decision the Ministry will request the opinion of the Republic Health Insurance Fund about the possibilities of financing the extended service program.

Acting jointly with the Ministry of Education and Science, the Ministry of Health will prepare the programme to provide medical and other personnel for health care to meet the needs on the basis of Public Health Service Network, estimation of such needs, on the basis of age structure of health care workers, their anticipated retirement, migration and needs in relation to development of new services, i.e. programmes included in the Master Plan of Human Resources. Pursuant to this, the Government will decide on the number of students to be enrolled in medical schools, i.e. faculties for each school year. This shall be financed from public funds.

The Ministry of Health, as well as other Government departments will pursue the policy and guide the development of health care and health insurance, so that the health sector at a certain point may be prepared to meet the requirements and standards for joining the EU. The changes in health care and health insurance will be oriented towards:

- Adopting and implementing EU Strategy for development of health systems;
- Further democratisation through involvement of a greater number of citizens i.e. their representatives in the decision-making process about issues related to health and compulsory health insurance;
- Better adherence to the principle of patients' rights in exercising their rights in health institutions and health insurance;
- Ensuring greater stability of health care and compulsory health insurance;
- Creating conditions for introduction of mixed public-private health care;
- Creating conditions for gradual adoption and introduction of the requirements from Maastricht agreement in relation to the health care system.

## **2. Development of new public health**

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Within the WHO Strategy for Europe 'Health for 21<sup>st</sup> century' almost all 21 regional targets are directly or indirectly linked to public health, and EU programme (2003 – 2008) puts special emphasis on integrated health strategies through the following main objectives:

- promotion of information and knowledge in the field of public health,
- strengthening capacities of public service and the health care system for quick response to health threats. and
- promotion of health and prevention of diseases by acting on health determinants, through all policies and social activities.

Bearing in mind the above mentioned documents and approach to new public health, strategic orientation relies on multisectoral and participatory strategies for creating sustainable health of the Montenegrin population in the 21<sup>st</sup> century. These strategies regard public health as a science and art of diseases prevention, prolongation of life and promotion of mental and physical health through organized efforts of the community. Public health strategies also represent the support for fulfilling the social interests in providing conditions for people to be healthy. For implementation of these strategies, the efforts in prevention of diseases and promotion of health have to be based on scientific and technological knowledge and public health activities have to reflect the values of the community and be based on consensus within the community.

Public health includes programmes and activities that are oriented towards community level where they are either beneficial for all (e.g. clean air and water) or benefit those individuals who are currently not covered (various screening programmes, counselling centres for sexually transmitted diseases, counselling centres for nutrition, and so on.) At the same time the responsibility for carrying out public health activities rests with the Government at all administrative levels. Modern concept of public health, new public health includes such strategies through efforts to mobilise hundreds of communities, through public health planners and political leaders, working around the health promotion project.

Health promotion, as a practical implementation of new public health, is a process of enabling individuals and the community to increase control over health determinants and thus improve their health. Activities for health promotion strengthen physical and emotional well-being and prolong life and quality of living, acknowledging the fact that most diseases are not linked to unknown factors but to lifestyles that can be changed. It is believed that change of lifestyles (such as bad nutritional habits, physical inactivity, unprotected sex, failure to use prenatal care, failure to use safety belts when driving, smoking, alcohol and drug abuse) can reduce one third of all causes of acute disabilities, two thirds of all causes of chronic disabilities and almost half of all premature deaths.

The Institute of Public Health, which was founded in pursuance of the Law, will be developed as an institution that promotes and encourages continuous education in public health, offers expert consultancy to the Ministry of Health and carries out priority research in public health of the Republic of Montenegro. Promotion of health is one of the leading guidelines in the strategic plan of the Institute of Public Health of Montenegro.

**The Government, i.e. the Ministry of Health will sustain compliance with the EU Health Care Strategy within and its incorporation in development plans of Montenegro.** To that end, it will develop and implement programmes for:

- Providing better and more extensive information to citizens about issues related to health and diseases, their prevention, early detection and treatment in order to strengthen their awareness, responsibility and positive attitude towards their own health, the health of their families and of the whole population. Mass media will be involved in such efforts and special attention will be paid to organize public campaigns and other activities so that most citizens place the value of the health above all other values;
- Treatment of the gravest chronic degenerative diseases such as cardiovascular diseases, diabetes, cancer, obstructive bronchitis and others. These programmes will include all activities from elimination of risk factors related to these diseases, their prevention, early detection, and treatment that is based on scientifically proved procedures (evidence-based medicine) at all levels of health care;

- Introducing efficient information system which will provide updated information about the occurrence of any communicable diseases which may suddenly break out in Montenegro or in the region due to tourism and open borders, and about new diseases which occur in the world (AIDS, SARS, BSE, bird flu) that can jeopardize the health of a major part of the population. That task also implies the need and obligation for quick exchange of data with other EU countries and countries of the European region of the World Health Organization that will ensure the undertaking of quick and efficient measures for their dissemination;
- Higher quality of health care services i.e. operation of health care institutions;
- Financial stability of the health care system;
- Specification and acceleration of the activities from strategic documents of the Government relates to health;
- Functional links and cooperation of service providers and social care when meeting specific needs of elderly and disabled persons, in long-term care and in defining financial obligations between these two areas.

### **2.1 Tasks of employers for improvement and protection of health**

According to the statement of the International Labour Organisation and Commission for Working and Living Conditions of the EU, an employer bears the greatest responsibility for health of employees and indirectly for other citizens who, for instance, live near the manufacturing site or use the products manufactured by the employer. That principle is notionally accepted in theory rather than in practice. Generally speaking, the employers neglect health care of employees and safety measures and health at workplace are regarded as unnecessary expense because of surplus of workforce. Consequently, occupational injuries and professional diseases are constantly increasing, which results in increase of expenses for health care and insurance, and a great economic damage for employers which has a significant impact on the decrease of country's GDP.

In order to improve the health of the active population and conditions for its attainment, the Ministry of Health will support consistent implementation of workplace safety regulations and measures for specific health care. In cooperation with the Ministry of Labour and Social Welfare it will insist on implementation of the new Law on Occupational Safety and work jointly to elaborate bylaws related to occupational safety and health, thus ensuring full enforcement of the Law on Occupational Safety, in line with EU principles. Preparation of these regulations will see the involvement of both the trade unions and employers' associations. The objective of measures to be adopted shall ensure:

- Gradual adaptation and adoption of European standards regarding occupational safety and health in Montenegro;
- Assuming responsibility and obligations of employers for consistent implementation of measures for occupational safety and health as well as consequences for neglecting them;
- Reduction and financial incentives for employers for protection of the work environment, establishing healthy work environment and elimination of factors which pollute the work and natural environment; and threaten the health of the population;
- A situation in which each employer is obliged to have his own programme of measures for occupational safety and health, which will be based on risk analysis of individual workplaces and which shall be used as the basis for assessing the performance the company's management;
- Transfer of all obligations related to health prevention, early detection, treatment and rehabilitation of occupational injuries and professional diseases to employers according to newly adopted Laws on Health Care and Occupational Safety. Because of financial limitations of the Health Insurance Fund, it is necessary to introduce a special contribution

rate for occupational injuries and professional diseases for employers for this type of health insurance. In that way, such expenses will become an integral part of the cost of workforce.

- Extension of obligations and rights related to occupational safety and health, in addition to occupational injuries and professional diseases to include other diseases related to work, i.e. medical effects of long-term exposure to the working environment upon the health of an individual;
- Programme and safety measures for health shall become an integral part of development plans of all employers and the task of their management;

Changes in the field of occupational safety and health will be implemented gradually, and the introduction of a special contribution rate for insurance related to occupational injuries and professional diseases will be made according to the Agenda for Economic Development of the Government of the Republic of Montenegro.

Republic Health Insurance Fund will establish the system of registration and keeping records of occupational injuries and expenses for their treatment per employer.

### **3. Analysis of the current situation**

#### **3.1 Population, vital statistical data**

According to the 2003 Census, the population of Montenegro was 620,145<sup>2</sup>. In addition, 55,000 inhabitants live and work abroad. There are also approximately 31,217 refugees and displaced persons<sup>3</sup> and the Health Insurance Fund has to provide for their health care. It is expected that part of the population working abroad, especially in the EU countries, will gradually start to return to Montenegro, because of more restrictive requirements for employment of foreigners, especially for those originating from non-member countries. The changes are also expected in the number of refugees as a result of permanent solution of their status. A part of them will probably return to their countries of origin and larger number will probably stay in Montenegro and take permanent residence in Montenegro. During elaboration of plans, these data were taken into account, in order to provide financial and other resources for health care.

Out of the overall population residing in the territory of Montenegro 57% live in urban areas and 43% in rural ones. Like in many other countries there is a downward trend in the number of rural population and population in small towns, and an increase and concentration of population in Podgorica and some other towns. This phenomenon has an impact on health service organization. In some areas, where the number of inhabitants is small, certain health capacities have to be planned for such small numbers, although that may be not in line with norms and principles of rationality. This is, of course, true mainly for primary health care, emergency services and partly for pharmaceutical services.

Out of the total number of inhabitants 50.2% are women and 49.8% are men. The portion of the population aged between 0-14 is 20.7%, those aged between 15-65 account for 67.2% and over 65 years of age account for 12.10%. Due to lower birth rate, this is gradually changing in recent years, thus the youngest population is decreasing and the oldest population is increasing.

In the last ten years the share of the youngest population decreased by 4.8% and the oldest population (over 65 years of age) increased by 3.8%. This trend is highly important when making plans, since demographic changes, i.e. age structure affect the health service needs.

The oldest population (over 65) has 3.5 to 4.5 times greater needs than the population aged between 0-65. In other words, with the aging of the population, there is an evident increase in needs for all types of health services<sup>4</sup>. Women also have greater needs for health services,

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<sup>2</sup> Monstat data

<sup>3</sup> Commissariat for Displaced Persons, 2004

<sup>4</sup> In EU countries it is anticipated that because of aging populations, costs of health care will increase from 0.3% up to 2.3% annually.

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whereas they are the smallest for men aged between 7- 44. On the other hand, when planning health care needs, it is important to know the ratio between active population (workers, employees, self-employed, farmers) and dependent population (children, the unemployed, pensioners, people with no income, social care beneficiaries, refugees, etc.). In other words, if there are less people to be supported by employees, there is a higher possibility for providing a high level of social security, and consequently a higher standard of health care.

**Table 1 Age structure of population in Europe compared to Montenegro in 2001<sup>5</sup>**

Country	Share of elderly population		
	0 - 14	15 – 64	over 65
Europe *	19.01	67.12	13.87
European Union **	16.92	66.92	16.16
Montenegro	20.7	67.2	12.1

In comparison to the population of the European region of WHO and EU, Montenegro still has younger population, thus the percentage of population over 65 is lower than in those countries. Recent trends, however, show gradual aging of the population what will result in increased needs for health and social programmes for care for the elderly who will become lonely, bed-ridden, ill or disabled, i.e. unfit to provide for their everyday life functions.

**Table 2 Population structure in Montenegro, and the ratio between the active and dependent population in 1991 and 2002**

	1991		2003	
	Number	%	Number	%
Population aged 0 – 14	155,458	25.5	127,461	20.7
Population aged 15 – 64	402,754	66.2	412,982	67.2
Population aged 65 and over	50,603	8.3	74,160	12.1
Women aged 13 - 75	224,121	36.4	242,881	39.2
Population aged 0 - 18	196,830	32.0	168,348	27.1
Potentially active population (population aged 15 – 65, excluding older pupils, students, pensioners)	370,399	60.2	372,973	60.1
Truly active population (the employed, self-employed, farmers, persons with income)	.....	.....	164,881*	26.81
Dependent population	279,458	45.4	450,119	73.19
Number of dependent persons per potentially active person	0.75	xxxxxxx	0,69	xxxxxxx
Number of dependent persons per real active person	0.90	xxxxxxx	1,72	xxxxxx

The population of Montenegro shows a gradual aging trend. From 1953 to the 2003 Census the population increased from 422,037 to 620,145 inhabitants, or by 46.9%. During that period there was a significant decrease in the number of newborn babies, from 13,880 to 8,345 or 32.9% in comparison to 1953. Birth rate dropped from almost 28 in 1950 to 12.8 in 2002.<sup>6</sup>

Average mortality rate in that period decreased from 11.3% in 1953 to 9.2% in 2003. The changes in birth rate and mortality rate have had a significant influence on the natural population growth. The natural population growth rate slumped from 21.6% in 1953 to only 4.3% in 2003, i.e. 5.2 times in pro mill.

<sup>5</sup> Source: European Region of the WHO, Health for all Database, 2004. Copenhagen

<sup>6</sup> Source: Statistical Yearbook of the Institute of Public Health, 2003



If we analyse parameters of vital statistics, we can estimate that the population will increase in the next five years by about 2900 to 3000 inhabitants per year in Montenegro. The increase of the population over 65 can also be expected. These changes will cause certain changes in health status. Thus we can expect an increase in the number of chronic degenerative diseases, which would lead to increased demand for health services.

The percentage of potentially active persons, who under certain conditions might work and earn an income, is approximately over 60%, but the share of truly active population, i.e. the part that actually works according to statistical data is substantially lower. According to Health Insurance Fund data (2003), the number of truly active persons was above 26% of the population. It should be pointed out that truly active persons support other 1.72 persons for whom they provide not only living conditions and social security, but also they also provide assets for health care and pensions and other social contributions. This fact sets the framework for possible development of the health care system.

That ratio will be improved by higher employment rated of potentially active population, which is the integral part of the active employment policy and creating conditions for development of small enterprises, envisaged by the Agenda for Economic Development.

### 3.2 Health status of the population

Montenegro has relatively good indicators of health status. According to those indicators:

- General mortality rate is 9.2
- Life expectancy is 73.37 (71.37 men, 76.45 women)
- Infant mortality rate is 11.00<sup>7</sup>.

Average age of the deceased in 2003 was 68.44 years (men 65.61 and woman 71.36). Most of the deceased in 2003 were aged between 65 -74 years of age, 1641 of them, followed by 755 people aged between 55-64, and 92 in the age group of infants and children up to one year of age. Infant mortality rate is a very important indicator of the health status of the population and development of health service, but it is also an indicator of development of the whole socioeconomic, educational, cultural development of the society. Since 1953, when infant mortality rate was 79.9, stillborn babies per 1000 newborns decreased 14.8 times and in 2003 it was 11.00 stillborn babies per 1000 newborns.

After comparing the indicators of health status of the population in Montenegro with some other less developed countries of EU and countries in the region (Table 3) it can be concluded that Montenegro seriously lags behind only in terms of infant mortality rate, whereas other two indicators show relatively good health status. Indicators of the health status at par with or close to the average for countries of the European region of WHO. One of the reasons for such health status of the population is the preserved environment and the Mediterranean climate as well as particular lifestyle of the population. It is well-known that all Mediterranean countries (Malta, Cyprus, France, Spain, and Greece) enjoy a rather good health status of the population.

Relatively good health status of the population should not be something to boast of, since some causes of premature death include a lot of diseases i.e. conditions that can be treated and thus prolong human life. There is even less to boast of when indicators of health status in Montenegro are compared to the situation in EU countries (excluding 10 new members that joined the EU in 2004), where the situation is far better. It should be pointed out that average life expectancy in Montenegro, due to different influences the population was exposed to in recent past, decreased in the second half of the 1990s. Since then, there has been an upward trend, but such trend is minimal.

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<sup>7</sup> Source: Statistical Yearbook of the Institute of Public Health, 2003

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Life expectancy of persons over 40 years of age and older, when compared to the situation in 1950 has even decreased, which indicates poor living conditions and possibilities for achieving better health for that population.

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Table 3. Health status indicators in selected countries of the European region of the World Health Organisation, 1999<sup>8</sup>

Country	General mortality rate	Infant mortality rate	Life Expectancy
Albania	8.1	11.3	76.5
Czech Republic	8.7	4.6	74.8
Greece	6.4	6.2	78.1
Croatia	11.2	7.8	72.8
Hungary	11.2	8.4	70.8
Poland	9.4	8.9	72.7
Romania	11.6	18.6	70.6
Slovakia	9.5	8.3	73.1
Slovenia	8.3	4.6	75.8
Montenegro (2001)	8.2	14.6	75.2
		11.0*	73.3*
Europe	9.7	10.4	73.7
European Union	6.8	4.9	78.4

\*Data from 2003

Infant mortality rate for the period given in the table was very high as a consequence of events in the region, refugee crisis, sanctions and economic problems of the country in transition. At the same time, this indicator is also related to some weaknesses in the operation of health services, especially the part in charge of reproductive health and infants. This can be supported by the fact that most infant deaths occur in perinatal period (during the first week of life).

Mortality rate in perinatal and neonatal period in Montenegro is 2.5 (perinatal) and 3 (neonatal) times higher than in EU countries and is above the European average. These data are an indication where to direct planning activities of health care and undertake take certain measures in other sectors.

It is encouraging that this important indicator of health status in Montenegro is improving and it has a downward trend, so that post neonatal mortality rate is drawing close to the average of countries of the European region of WHO.

Table 4. Perinatal, neonatal and post-neonatal mortality rates of infants in Europe in 1999 and Montenegro in 2001 and 2002<sup>9</sup>

	Infant mortality rates		
	Perinatal	Neonatal	Post-neonatal
Europe	5.42	3.88	2.29
European Union	3.10	3.06	1.64
Montenegro (2001)	13.51	11.2	4.52
Montenegro (2002)	10.2	8.2	2.8

<sup>8</sup> Source: OECD Health Data 2003, Credes Paris and Health for all Database, WHO, Copenhagen

<sup>9</sup> Source: Health for all Database, WHO, Copenhagen and Institute of Public Health, Republic of Montenegro (data for Montenegro)

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Average mortality rate, as one of the indicators of the health status in Montenegro is relatively low and below the average in the countries of the European region of WHO, but a lot above average in EU countries (15 countries). Major causes of premature death are blood circulatory diseases and tumours. **Blood circulatory diseases account for 50.37% of total mortality rate and tumours account for 16.95%.**

In terms of causes of death, the situation of health status in Montenegro is very similar to that of other European countries. The incidence of blood circulatory diseases, tumours and respiratory diseases as causes of death in Montenegro is lower than the average in the European region of WHO and partly lower than the average in EU (Table 5). What raises concern is that a very high proportion (14%) of the causes of death was only recorded as symptoms i.e. abnormal clinical findings. Such data in European countries accounts for only 3%. Various conclusions can be drawn out of this. There is very poor compliance with the Law on Keeping Records in Health Care (reporting, collecting, analysing and interpreting data on causes of death that are submitted to the Institute of Public Health), which results in unreliable and incorrect statistical data. This data shows inadequate diagnostics of the deceased. Thus the real causes of death are not determined, which can pinpoint the problems with the quality of work in health institutions. On the basis of incomplete and incorrect data it is not possible to monitor the health status of the population, operation of health services, and to plan health care i.e. take measures to resolve health problems. On the scale of causes of death, the fourth cause of mortality are respiratory diseases and injuries, poisoning and consequences of external factors are the fifth cause.

Table 5. Mortality rates per cause of death in Europe in 1999 and in Montenegro in 2001<sup>10</sup>

REGION	Average mortality rate per cause			
	Blood circulatory diseases	Tumours	Respiratory diseases	Symptoms, abnormal findings
Europe	4.76	1.82	0.63	0.32
European Union	2.56	1.85	0.60	0.15
Montenegro (2002)	4.1	1.5	0.37	1.2

In planning health care and setting priorities of **PYLL** index (Potential Years of Life Lost) is used to indicate the number of years the population has lost because of premature deaths i.e. before average life expectancy is reached. This index can be calculated for all mortality causes jointly or for a group of diseases (and injuries) individually.

According to the data of the Institute of Public Health in 2002, **10.5 years were lost due to premature death, the largest proportion of 30% accounts for blood circulatory diseases, followed by tumours accounting for 21.4%, symptoms and abnormal findings accounting for 9%, and all other causes accounting for 40%.** The use of this index is very important for planning measures for more efficient treatment of blood circulatory diseases, primarily for programmes for health promotion, change in lifestyles and habits (smoking, inadequate and high-calorie nutrition, insufficient physical inactivity, stress, etc.) for early detection of risk factors in the population (triglyceride, cholesterol, hypertension, blood sugar, obesity) and for timely treatment of patients. The same applies to tumours, where it is necessary to increase the scope of services for prevention and early detection and adequate and timely treatment. It is well-known from various studies that these diseases as causes of premature death can be reduced with conscious measures.

Among the reasons for visiting a doctor i.e. using a health service, the first cause are respiratory disease which account for almost one half of the total number of diseases in outpatient morbidity:

<sup>10</sup> Source: Health for all Database, WHO, Copenhagen and Institute of Public Health, Republic of Montenegro (data for Montenegro)

in paediatric services – 68%, in general medicine - 34.14%<sup>11</sup>. The second cause are visits to resolve factors that have an impact on the health status: blood circulatory system and digestive system factors.

Owing to a very high level of vaccination of 89.6%, communicable and parasite diseases are not a major cause of health problems. There are occur with individuals, or occasionally as epidemics (most frequently influenza). In 2003, 7621 persons were recorded as having communicable diseases which they are obliged to report (excluding influenza and AIDS).

Mortality caused by communicable diseases is 0.14 per 100 000 inhabitants, and morbidity is 1080 per 100,000 inhabitants. Among registered communicable diseases (excluding influenza), the most frequent disease is chickenpox (36.43%). It should be pointed out that in Montenegro there is a number of persons suffering from tuberculosis – morbidity is 14.1 per 100 000 inhabitants, i.e. in 2003, 92 persons were reported as having active tuberculosis. Among the population there is a certain number of people with HIV and AIDS. In 2003, 4 cases of HIV infection and 1 case of AIDS were reported, thus the incidence of newly infected is 0.56 per 100,000 inhabitants and those with AIDS - 0.14 per 100,000 inhabitants. In 2003 the number of newly detected cases with adult population was 5 and there were no infected children.

Although the situation is satisfactory in the area of health care of communicable diseases, it is also necessary to take precaution measures in the future because of modern tourism, open borders and new communicable diseases (SARS, bird flu, Ebola), risky behaviour of certain groups of population. These diseases can occur in greater numbers and also threaten or deteriorate the health status of the population in Montenegro.

Among the reasons for hospital treatment (hospitalization), the first cause are blood circulatory diseases. Out of all hospitalized patients, 16% were admitted to hospitals because of these diseases. Second cause are respiratory diseases, digestive system diseases, muscular and bone system diseases and connective tissue diseases, and each of these groups accounts for 10-11% of the total number of hospitalized patients. The fifth cause are tumours which account for almost 9% of all cases of hospital treatment and it is constantly increasing. A very important fact for planning health care is that among patients admitted to hospitals, one third of is over 65 years of age because this population group is the most frequent one in hospital treatment. It is partly a consequence of their poor health and partly because there is no organised long-term care provided in adequate specialized institutions, or in their houses or flats. Both these factors are very important for planning health and other capacities for meeting specific needs of the elderly that will have a sensitive impact on all needs for health services in Montenegro.

### **3.3 Health capacities in Montenegro**

Health centres, hospitals, clinics, pharmacies, other institutions and capacities for providing health services with their equipment, personnel and knowledge play a very important role in health promotion of the population. It is believed that health institutions and health workers are the most responsible for health status of the population. The roles and tasks of health workers focus on prevention of diseases and undertaking specific measures and implementation of specific programmes for prevention, early detection, treatment, and rehabilitation of the ill and the injured.

In implementation of its functions health workers use their specific professional knowledge, equipment and technology as means for performing their tasks and they also have specific organization. Successful implementation of these activities can have a significant impact on the health status of an individual and family and the whole population as well.

Health originates in human environment and it is dependent on it to the greatest extent, whereas responsibilities and care of health services is focused on the specific measures for prevention and treatment of the diseases. By performing that role it can significantly contribute to better health,

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<sup>11</sup> Source: Data from Statistical Yearbook of the Institute of Public Health, 2003

especially if its work is well-organised, efficient, effective, and focused on resolving health problems of the population or particular population groups.

**In order to fulfil its set obligations and meet expectations to the greatest extent possible, health service has to have an appropriate organisation, sufficient personnel, facilities, equipment and other assets, and be provided with sufficient funds for unobstructed work and operation.**

As regards organisation of health infrastructure, there are differences in health care systems that reflect social, economic, cultural, religious and other circumstances, traditions and attitudes towards medical science and health care. The most important fact is that health care and its development is heavily dependent on the country's economy, i.e. its GDP, which affects the number of employees and other health capacities and health service quality.

The existing network of public health institutions comprises eighteen health centres for each municipality, three health stations for smaller municipalities of Plužine and Šavnik that are organisationally linked to health centre in Nikšić. Žabljak health station is linked to Pljevlja health centre. Health centres in Mojkovac, Plav, Plužine, Rožaje and Šavnik and Ulcinj comprise inpatient units.

Hospital health care is provided in seven General Hospitals organised per regional principle, three specialized hospitals for the needs of the Republic and the Clinical Centre as the institution of the tertiary level care. The public health system also comprises the Institute of Public Health as an institution of importance for the Republic.

In addition, citizens are also provided with health care by 153 private health institutions – surgeries without pharmacies, where 34 different medical services are provided. Most of these services belong to the area of dental health care, i.e. there are 70 private dental offices and laboratories. The largest number of registered private institutions is in Podgorica 67, Bar 18, Budva 16, Herceg Novi 18, Nikšić 9, whereas their number in other municipalities is much lower. The above-mentioned institutions provide primary health care or specialist care, in outpatient clinics.

### 3.3.1. Outpatient health capacities

Pursuant to current health infrastructure outpatient health care is provided in health centres which are organised per services, and provide both primary health care and specialist health care. The current organization is not in line with principles of modern and efficient organization of primary health care based on the Declaration on Primary Health Care<sup>12</sup>. Unclear role and tasks of health centres, confusion between primary and secondary health care, disproportion of health centre capacities, different qualification levels, and accessibility were the main reasons for the reform of this very important segment of the health system. Establishing a new organization and contents of work in health centre facilities as bearers of primary health care with teams of chosen doctors is the main target of reform activities for the health system in Montenegro.

*Table 6. Number of organisational units in health centre facilities and health stations in Montenegro in 2003<sup>13</sup>*

Name of the organisational unit	Number of services	Number of doctors	Health workers with advanced vocational training and university training
General medicine	114	180	473
Preschool children protection	26	82	143
School children and youth protection	26	51	81
Protection of women	24	33	47

<sup>12</sup> Source: WHO, Declaration on Primary Health Care, Alma Ata, 1978

<sup>13</sup> Source: Statistical Yearbook of the Institute of Public Health, 2003

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Occupational medicine	27	56	91
Dental protection and treatment	111	264	366
Physical medicine	8	14	70
<b>TOTAL</b>	<b>336</b>	<b>680</b>	<b>1,271</b>

The new Law on Health Care makes a clear distinction between the role and function of primary health care, whose pillars are chosen teams of doctors as gatekeepers of the system and health centres, which house support centres for chosen doctors such as centres for mental health, tuberculosis, reproductive health, diagnostic centres, centres for children with special needs, units for health promotion and day-care centres for elderly. New organization of primary health care started with the pilot project of Primary health care reform in Podgorica. 2006 will see the introduction of new organization and work of chosen doctors in the overall territory of Montenegro.

Acting individually or in cooperation with the centres, chosen doctors will be obliged to provide all preventive and curative services to all persons who have chosen them. This includes a clearly prescribed scope of services, standard of such services, with special emphasis on preventive checkups, immunization, screening services and other methods of health promotion.

### **3.3.2. Hospital capacities**

One of the indicators of health service development is the number of hospital beds and their occupancy i.e. hospitalization rate. Montenegro has inherited the hospital network where the number and structure of hospitals was very significant in the past, when those institutions were viewed as status symbols and when right to accessible health care at his level was a dominant criterion for opening a hospital. The role and method of work today is completely changed, thus an increasing number of patients is treated in day hospitals or in day treatment units. The hospitals are more and more redirected to outpatient care through outpatient activities, and inpatient service is provided only in those cases when outpatient treatment is not possible because of medical reasons. This trend of working methods and organization of hospitals has to be introduced in Montenegro as well, since this type of health care is justified only for medical and humane reasons, so that patients are kept in hospitals as little as possible. At the same time, such organization has its economic justification because in doing so, expenses for health care are reduced by the cost of care, stay and food in hospitals.

**Table 7. Number of hospital beds in Montenegrin hospitals and number of staff per one occupied bed in 2003<sup>14</sup>**

	Number of hospital beds	Number of occupied beds on a daily basis	Number of free beds on a daily basis	Number of staff per occupied bed		
				Doctors	Other health workers	All workers
General Hospitals	1166	760	406	0.28	1.45	1.99
Specialized hospitals	622	418	204	0.14	0.62	0.85
Clinical Centre	740	508	232	0.52	2.53	3.99
<b>TOTAL</b>	<b>2528</b>	<b>1686</b>	<b>842</b>	<b>0.33</b>	<b>1.57</b>	<b>2.50</b>

<sup>14</sup> Source: Analysis of Health Care Activities in Montenegro in 2003, Institute of Public Health, Podgorica, 2004

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Montenegro has 2528 inpatient beds at secondary level and 70 inpatient beds in health centre facilities, i.e. 2598 in total. This amounts to 4.2 beds per 1000 inhabitants. Calculated per population including refugees, it amounts to 4 inpatient beds per 1000 inhabitants.

Out of the total number of hospital capacities, 44.9% is in General Hospitals, 28.8% in specialized hospitals, and 25.5% in the Clinical Centre in Podgorica. Health centre facilities account for 2.7% of inpatient beds.

The structure of hospital beds per medical speciality is:

- Internal wards - 504 beds (0.82 per 1000 inhabitants);
- Surgical wards (with urology) - 495 beds (0.80 per 1000 inhabitants);
- Paediatric wards - 248 beds (0.40 per 1000 inhabitants);
- Gynaecological-obstetrical wards - 363 beds (0.59 per 1000) inhabitants);
- Infective wards - 20 beds (0.03 beds per 1000 inhabitants);
- Psychiatric wards - 343 beds (0.55 per 1000 inhabitants);
- Neurological wards 21 beds (0.03 per 1000 inhabitants);
- Dermatovenerological wards - 20 beds (0.03 per 1000 inhabitants)
- Oncological wards - 21 beds (0.03 per 1000 inhabitants)
- Orthopaedic wards - 74 beds (0.12 per 1000 inhabitants)
- Ophthalmologic wards - 30 beds (0.05 per 1000 inhabitants)
- Otorhinolaryngological wards with maxillofacial surgery 37 beds (0.006 per 1000 inhabitants)
- Pulmonary wards 154 beds (0.25 per inhabitants)
- Neurosurgical and neurological wards 178 beds (0.29 per 1000 inhabitants)
- General needs (at health centre facilities and health stations and units for intensive therapy) 90 beds (0.14 per 1000 inhabitants)

The number of hospital beds in comparison to other European countries is relatively low, so can be concluded that Montenegro falls behind the European average. But if comparison is made to particular countries, it is ahead of Spain, Ireland, Italy, Holland, Norway, Portugal, and so on.

In the last decade the number of hospital beds in Europe is changing and there has been a sharp downward trend because reforms and changes brought significant reduction in secondary health care sector. Inpatient capacities have been significantly reduced and redirected to outpatient services, with consequent strengthening of the role of primary health care and house calls. Comparing other parameters related to hospital beds it can be concluded that there is a surplus of hospital capacities.

In addition to low hospitalization rate of the population (about 40% below the European average), the average treatment duration is by 14% longer than the European average. Beds occupancy in acute hospitals is only 65% what means that one third of bed capacities is not used, i.e. there is no need for them if all data regarding hospital capacities are taken into account.

**Table 8. Hospital beds per 1000 inhabitants in Europe and in Montenegro<sup>15</sup>**

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<sup>15</sup> Source: Health for all Database. European Office of WHO, Copenhagen 2004



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	Number of beds per 1000 inhabitants	Bed occupancy in acute hospitals *	Average treatment duration in acute hospitals*
Europe	7.29	80.2	9,23
European Union	6.19	77.1	6,99
Montenegro	4.0	58.5	7,97
Comparison 64.6		65.1	114.0

The least occupancy of hospital beds are in health centre and health stations (56%), Berane and Cetinje General Hospitals (below 60%) Dobrota – Kotor Specialized hospital (48%) and some wards at the Clinical Centre (infective clinic 5.5%, pulmonology 31.9%, endocrinology 34.2%, rheumatology 42.5% and gynaecology unit (sterility, pathology of pregnancy, gynaecology) Occupancy of paediatric wards of General Hospitals is on average 50%, with the exception of wards in Bijelo Polje and Kotor. Low level of occupancy of bed capacities is evident at gynaecological wards of General Hospitals and it is over 54% with the exception of Nikšić and Pljevlja General Hospitals. Internal wards in Bijelo Polje (59%) and Berane (65%) and internal wards in Berane (57%), and Cetinje (62%) have very low bed occupancy.

**Data on hospital bed occupancy indicate that it is necessary to rationalize the organization, operation and finances of hospitals in order to provide greater efficiency of this segment of health care.** The transition from extensive employment and increase in capacity utilization with the aim of improving the current situation and higher rationalization, caused by insufficient funding, is the obligation of decision makers in health sector at all levels. From the viewpoint of health economics the current situation is untenable. The problems are not only related to unoccupied beds since they do not incur expenses, but to personnel employed for to cover those beds, because they are have insufficient workload and they represent the largest expenditure of hospital services.

In economic circumstances of Montenegro, like in more developed countries, rationalization of hospital service is among major issues in finding the causes of financial instability. This is especially significant for Montenegro because secondary health care, where hospital treatment is prevalent, account for more than 41% of total expenses of the health care in Montenegro. Sudden increase in hospital capacities and expenses in general and specialized hospitals was very evident from 2000 to 2003 when the number of beds increased by 6.7 percent but their occupancy dropped from 81.41% to 75.72%. An objective overview of situation in hospitals, especially utilization of their capacities, requires analysis of their outfitting with medical equipment. Detailed analyses pinpoint outdated equipment, especially in the area of radiology, where the equipment is more than 20 years old on average.

### 3.3.3. Catchment areas of hospital wards

The provision of hospital beds and personnel for particular regions can be calculated by comparing the capacities and size of catchment areas of particular hospitals, i.e. their specific wards. The size of catchment area is defined by a number of (total) population who gravitates towards a specific hospital. Since the capacities, expertise and outfitting of wards (e.g. paediatric, internal and their specialties are very different, each ward has its own catchment area, which is a more objective parameter catchment area of a hospital as a whole.

Calculation of the catchment area is done on the basis of admitted i.e. discharged patients in a particular service. At the same time the number of admitted patients from all municipalities for inpatient treatment is recorded and the percentage of population who uses that hospital services is taken .The total number of all inhabitants of all municipalities who gravitate toward particular hospital ward shows the size of catchment area of a particular ward of all hospitals.

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Catchment areas can be calculated only for those wards that are not defined as tertiary i.e. specialized services whose beneficiaries are all inhabitants of Montenegro. A less complicated method for calculating catchment areas is to calculate the share of a particular hospital as opposed to the total number of treated patients per medical specialty. On the basis of that, and the share of all population the catchment area is determined for a hospital ward. When calculating the catchment area for Montenegro there are certain problems related to data quality on the one hand and the absence of division between services that the Clinical Centre performs at secondary level for 'its own' catchments area (Podgorica, Danilovgrad, Kolašin) and tertiary level services to supply the needs of the Republic. The same problem appears with Specialized Hospital in Risan regarding clear distinction between neurological, neurosurgical and orthopaedic services and with General Hospitals in Nikšić and Cetinje which have orthopaedic, otorhinoaryngological and ophthalmological wards as part of their surgical wards, but the number of discharged patients is not recorded for those services.

Calculation of catchment areas also requires clear distinction between specialist and inpatient services<sup>16</sup>. Currently available data indicate that some wards have very small catchment areas and consequently a very small number of potential patients, so the question is raised about the provision of quality care. At the same time, the costs of maintaining such care are unacceptable.

Table 9a: Catchment areas of internal wards in 2003

Hospital	Number of discharged patients	% of patients treated in wards	Catchment area
General Hospital Bar	2119	16.22	100,587
GH Berane	1577	12.07	74,851
GH Bijelo Polje	1225	9.38	58,169
GH Kotor	1871	14.32	88,805
GH Nikšić	2594	19.86	123,160
GH Pljevlja	1096	8.39	52,030
GH Cetinje	648	4.96	30,759
Clinical Centre	1930	14.78	91,657

Table 9b: Catchment areas of surgical wards in 2003

Hospital	Number of discharged patients	% of treated patients	Catchment area
GH Bar	1652	11.61	71,999
GH Berane	1513	10.63	65,921
GH Bijelo Polje	1301	9.14	56,681
GH Kotor	1399	9.83	60,960
GH Nikšić	3005	21.12	130,975
GH Pljevlja	785	5.52	34,232
GH Cetinje	1530	10.75	66,665
Clinical Centre	3045	21.40	132,711

Table 9c: Catchment area of paediatric wards in 2003

<sup>16</sup> NB: In calculating catchment areas, the refugees were not included. By doing so, the number would increase by about 5%.

Data on the number of discharged patients are from the Institute of Public Health. Data on the number of treated patients are from the Clinical Centre, Report on the Work and Operation of Health Institutions in Montenegro, 2003 – Republic Health Insurance Fund.

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<b>Hospital</b>	<b>Number of discharged patients</b>	<b>% of treated patients</b>	<b>Catchment area</b>
GH Bar	625	7.88	48,867
GH Berane	512	6.45	39,999
GH Bijelo Polje	726	9.15	56,743
GH Kotor	690	8.70	53,953
GH Nikšić	520	6.56	40,681
GH Pljevlja	355	4.48	25,103
GH Cetinje	308	3.88	24,062
Clinical Centre	4195	52.89	327,995

Table 9d: Catchment areas of gynaecological and obstetrical wards in 2003

<b>Hospital</b>	<b>Discharged patients</b>	<b>% of treated patients</b>	<b>Catchment area</b>
GH Bar	1297	10.31	63,937
GH Berane	1597	12.69	78,696
GH Bijelo Polje	1079	8.58	53,208
GH Kotor	802	6.37	39,503
GH Nikšić	1727	13.73	85,145
GH Plevlja	637	5.06	31,379
GH Cetinje	758	6.03	37,394
Clinical Centre	4683	38.66	239,748

Table 9e: Catchment areas of psychiatric ward in 2003

<b>Hospital</b>	<b>Number of discharged patients</b>	<b>% of treated patients</b>	<b>Catchment area</b>
Specialized Hospital Dobrota-Kotor	694	56.15	347,374
Clinical Centre	542	43.85	271,933

Knowing catchment areas is very important for planning and funding inpatient services. With uniform norms and standards for hospital care, the differences in provision of hospital capacities for the population should be reduced and some of them could remain only to supply specific conditions. This could serve as basis to determine the number of doctors and other health workers per 1000 inhabitants, for inpatient treatment or per each bed and thus draw up a realistic work plan for each hospital. That would of course have the impact on the number of personnel needed for inpatient treatment.

Analyses show that there the problem is not only the surplus of hospital beds and their inadequate occupancy, but that Montenegro has too many hospitals such small catchment areas. This highly significant issue for planning the public capacities network will be reconsidered after special analysis of inpatient capacities has been carried out. The analysis should indicate which capacities could be redirected to supply the needs outside the health sector or to serve as old people's homes.

**Defining catchment areas of hospital wards is very significant for planning health capacities.** Therefore, it is necessary to:

- Introduce special records on the work and personnel in specialist outpatient service of hospitals, by applying FTE (Full-Time Equivalent) method, in order to provide specialist outpatient and inpatient facilities for the population;

- Define tertiary service of the Clinical Centre and separate it from its secondary service;
- Introduce records and statistics of discharged patients and inpatient treatments in hospitals per ward, after the treatment;
- Introduce uniform methodology of hospital reporting about their services and definition of activities.

Implementation of stated tasks is planned as an activity of the Ministry of Health, in cooperation with the Institute of Public Health, through the Health Care System Improvement Project and engaging consultancy services.

### 3.4 Organization of health care activities

In European countries health care activities are organized around three levels. **Good organization of health care activities is based on developed and qualified primary health care, which should provide for 85% of all population needs.** The first contact of a citizen with the health services occurs at primary health care level which is obliged to meet the greatest number of population needs for health services. Primary health care is the most accessible to the population, it monitors their health status, studies the factors that can affect their health and provides preventive and curative services which do not require very complex technology or highly specialist knowledge and experience. Primary health care at the same time is the basis of the 'health pyramid' that specialist services at secondary and tertiary level build on and complement their tasks in resolving the most complex health needs. Primary health care also has the role of a 'gatekeeper' when citizens enter the health care system and it refers to higher levels only those who really need more complex diagnostics and treatment which is significantly more expensive than primary health care services.

**Well-organized health service is the one that gives priority to primary health care and that contributes to rationalization and better efficiency of the whole health care system.** The content of its work can be different, but it is important that the first level comprises those services which meet the most comprehensive and the most numerous needs of the population. Primary health care includes activities related to general and family medicine, services dealing with specific needs of the most vulnerable population groups, e.g. children, school youth, women of reproductive age, active population, the elderly and services for treatment of most common diseases such as mental illnesses, caries, etc. In addition to this, this level also embraces diagnostic services (laboratories, radiology, and ultrasound). All these services are organized in public health stations i.e. health centres and in many countries in private facilities (outpatient offices, clinics and different types of group practice).

In well-organized health care systems, all other specialist services that do not operate at primary level are organized as specialist outpatient offices or inpatient activities at secondary and tertiary level.

The task of secondary level services is the treatment of more complex health conditions that require specialist knowledge, team work of several specialists and other health workers, and sophisticated technology. Provision of services at this level is possible only when patients stay in hospitals for a certain period of time. The secondary level of health care treats a smaller number of patients, who have been referred to this level by primary care institutions because of treatment complexity.

In well-ordered health care systems access to the secondary level is possible only with referral by primary health care doctor. The exceptions are only emergency cases. Because of the characteristics of their tasks, the secondary health service capacities have very expensive and complex equipment and specialists, which have to be used rationally, i.e. organized where there are enough reasons for their work in three shifts per day. Secondary health care in most countries uses 60% of all funds for health care, i.e. the country's insurance, but only 15-20% of the patients are treated there. This orientation also has its professional and medical rationale. It is well-known that medical specialists can provide and maintain the quality of their work only with sufficient

number of patients and interventions, which enable them to acquire and maintain necessary routine and experience.

Tertiary health care deals with the most complex problems. It provides services which can be only done by utilizing the most sophisticated technology and devices, and multidisciplinary work of teams of medical experts. This service comprises subspecialties for treatment of such patients and conditions that primary and secondary levels are unqualified to perform, or they would be uneconomical, if performed at those levels. In addition, some countries incorporate within the tertiary level those services which deal with narrow fields of diagnostics, treatment or rehabilitation and are of small size and consequently they are concentrated in one location. It is presumed that, in addition to providing the most complex health services, tertiary service carries conduct training of medical staff, and scientific research in the field of medicine and health care. In most countries tertiary health care is obliged to develop professional, medical doctrine, prevention, diagnostics and treatment of particular conditions at all levels of health care.

Tertiary health care operates according to the same organizational principles as secondary health care, through outpatient and inpatient services. Access to this health care is only possible with referrals of chosen doctors (family doctors) and very often after treatment at the secondary level.

Good organization of health care activities is based on the stated distribution of work among three levels. In that organisational pyramid primary health care has the most important role because functioning of the other two levels of health service depends on how successful the performance of its tasks is. Although there is a distribution of work among these levels of health care, all three levels make an inseparable functional whole without barriers and obstacles for cooperation and unhindered flow of patients and exchange of experiences among medical professionals.

**Efficient and high-quality health care system can be attained only by adequate organization on all levels of the system, through cooperation and complementing capacities among the levels, adoption and application of standardized medical doctrine and information exchange between all three levels.**

### 3.5 Health personnel in Montenegro

According to the data of the Institute of Public Health, the number of employees in public health institutions in Montenegro in 2003 was 7521, 5465 of which were health workers and 1787 non-health workers. The number of employees for the same period according to the data of the Health Insurance Fund was 8420, 6156 health workers and 2264 non-health workers. These figures do not include employees in private health institutions, which obstructs analytical monitoring of health sector operation and its comparison with other countries.

Namely, staffing potentials of a country which are used to meet the needs and requests of the population for health services, are the main resource of the health care system and non-inclusion of the private sector in records is only important regarding the source of their funding. Furthermore, records of health personnel in Montenegro are quite non-transparent, mostly because the employees are divided into those working full-time and those who working part-time. Thus, it occurs that there are two (or even three) employees covering the same post, which makes it difficult to obtain the precise number of physical persons (PP), i.e. number of employees on the basis of performed working hours (men/year) or to recalculate working hours into a full time equivalent (FTE) of working teams. More precise data on the number of personnel can be provided by using these parameters. This would help to avoid certain ambiguities regarding the exact number of employees, caused by the presence of part-time workers or those working overtime.

When analysing personnel data, the most important parameter is personnel qualification i.e. adequate distribution per territory, per level and per specialty. Personnel analyses usually give an

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overview of personnel qualification levels, which best reflect the differences between health care systems, organization of health care and method of funding health services and programs. Comparisons to other countries provide evaluations of health personnel and possibilities of funding it. Former socialist countries extensively developed their health care systems and used quantitative parameters to create a picture of high standard in health care. It was made possible by low wage rates (salaries) of work force in health care and other public social institutions. At the same time, other countries based the development of health care and facilities on realistic economic possibilities, and the objective was the quality of work and high salaries of employees that ensured adequate standard of health care professionals. In some countries development of personnel capacities was an instrument to demonstrate a high level of social and health care safety of the population and the proof of correct ideological orientation, while other development paths in building up health care potentials were based on economic possibilities of the society i.e. service payers.

By analysing the data from the last decade in Montenegro, it can be concluded that there was an uncontrolled development of staffing capacities that disregarded financial possibilities for covering the cost of their work. The result was an uneven development of health care capacities and employment, which led to disproportion in development of primary and other health services and disrupted relations between certain health care levels.

**Table 10: Employees of the health sector in Montenegro in 1991 and 2003<sup>17</sup>**

<b>Profile</b>	<b>Number of staff</b>		<b>Index 2003/1991</b>	<b>Number of inhabitants per one employee</b>		<b>Index 2003/1991</b>
	<b>1991</b>	<b>2003</b>		<b>1991</b>	<b>2003</b>	
<b>Doctors and specialists</b>	917	1139	124.2	670	544	81.2
<b>Dentists</b>	275	265	96.3	2236	2340	104.6
<b>Pharmacists</b>	120	103	85.8	5125	6021	117.5
<b>All health workers and associates</b>	3485	5464	156.8	176	113	64.2
<b>Administrative and technical staff</b>	1961	1787	91.1	313	347	110.8
<b>All employees of the health sector</b>	6815	7251	106.4	90,2	85,5	94.7

In the last 12 years the number of doctors in public institutions in Montenegro increased by 24% whereas the number of dentists and pharmacists dropped by 3.7%, i.e. 14.2%. The drop in the number of dentists is misleading, because statistics only covers those working in public health services, but private practitioners. Assessment indicates, that there is no drop of personnel in dentistry services, but a privatization of services with large number of dentists leaving the public service. The total number of all health workers and associates has increased by 56.8% and the number all employees of the health sector by 6%. The number of health workers per population has increased i.e. the number of inhabitants per doctor has dropped from 593 to 544. Data also indicate the large proportion of administrative and technical staff in health institutions. In outpatient

<sup>17</sup> Source: Analysis of capacities and human resources in primary and secondary health care in the Republic of Montenegro in 2002. Analysis of health care activities in Montenegro in 2003, Institute of Public Health, Podgorica 2004

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services the proportion of non-medical staff is 27.5%, and in hospital as high as 38.2%. Data show that there are no unemployed doctors, the extensive employment in health institutions from the past has continued, and the system is unable to financially support such load.

The data on the number of employees in health institutions and the number of inhabitants per one employee in the health care sector do not provide sufficient information on whether health care is adequate or not. The answer to that question depends on demographic structure of the population, its health status, the scope of benefits package, organization of the health care service and available funds for financing the health care system. In stable health care systems the number of medical personnel, i.e. employees in the health sector depends on the economic power of a country, i.e. the population and the level of investments in the health care system. Countries with a higher GDP, as a rule, provide the population with better health care personnel and vice versa. There are exceptions to this rule related to political and social decisions. In many countries of Central and Eastern Europe the practice of full employment of medical workers continues, resulting in low salaries, poor motivation, dissatisfied personnel and fluctuation of medical workers to economically more developed countries. Interdependence between the number of employees in health sector, the economic situation in a country and salaries and working conditions is even more evident when position of employees is compared to the amount of funds allocated to health care per inhabitant in some European countries. In terms of investments from public and private funds in health care are taken into account (USD per inhabitant calculated, according to PPP), the discrepancy is 1:10 and higher and the discrepancy in terms of the number of employees is only 1:2. This situation is only possible by maintaining low prices (salaries) of health services, and labour rates.

**Table 11: Number of inhabitants per health worker i.e. an employee in the health care sector in particular European countries in 1999**<sup>18</sup>

Country	Number of inhabitants per health care worker				GDP per inhabitant in USD*	USD for health care per inhabitant (PPP method)
	Doctor	Dentist	Pharmacist	Health care worker		
<b>Austria</b>	327	2126	1823	64	25582	2061
<b>Bosnia and Herzegovina</b>	695	5097	10438	.....	.....	.....
<b>Czech Republic</b>	324	1600	2148	.....	13595	972
<b>Denmark</b>	315	1034	2012	.....	27690	2358
<b>Greece</b>	228	867	.....	105	15772	1375
<b>Croatia</b>	436	1560	2192	....	7371	.....
<b>Hungary</b>	281	1758	2149	95	11501	787
<b>Portugal</b>	314	2650	1281	.....	16776	1402
<b>Romania</b>	522	4268	14045	.....	6041	271

<sup>18</sup> Source: OECD Health Data 2003, Paris and HFA database, WHO Regional Office for Europe.

\*Notes: Data on personnel in Montenegro refer to 2003 and GDP data refer to 2001. The overview of GDP figures per inhabitant is based on PPP calculation method. As for Montenegro, absolute figures were given since the coefficient for calculating purchasing power is unknown. According to unofficial estimates the coefficient could amount to 1:2.1 If this is accepted for a fact, GDP per inhabitant in Montenegro would amount to USD 5670, and the funds for health care would amount to USD 411.

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<b>Slovenia</b>	<b>464</b>	<b>1655</b>	<b>2860</b>	<b>.....</b>	<b>15900</b>	<b>1230</b>
<b>Europe</b>	<b>288</b>	<b>1989</b>	<b>2088</b>	<b>....</b>	<b>14939</b>	<b>1183</b>
<b>EU</b>	<b>261</b>	<b>1427</b>	<b>1363</b>	<b>.....</b>	<b>23269</b>	<b>2014</b>
<b>Montenegro</b> **	<b>543</b>	<b>2331</b>	<b>5997</b>	<b>85</b>	<b>2700*</b>	<b>196*</b>

**International comparisons of health personnel and economic power of the country and especially the funds allocated for health care suggest that Montenegro has sufficient or even superfluous personnel. The number of administrative and technical staff is particularly high in comparison to European countries** (in Slovenia it accounts for only 14% of all employees).

When deciding upon strategic orientations on whether to keep the existing personnel capacities or gradually adjust them to envisaged development objectives of health care and economic circumstances of the system, the objectives set in Strategy for Health Care System Development were acknowledged. Keeping too many employees would imply conservation of the existing uneconomical operation and employment of health institutions and accepting the situation that the health care workers still have low salaries and inadequate working conditions (equipment, facilities, training). The chosen option can lead to increase in salaries of health care workers, and simultaneously create dissatisfaction of those who cannot be employed or are unable to keep their post in a health institution. At any rate certain changes will have to be undertaken in all cases of irrationality or cases of employment of staff that does not have a sufficient workload.

### 3.5.1. Employees of primary health care

Efficiency of health service depends very much on the distribution of medical personnel according to services i.e. levels of health care. It is highly important to have sufficient personnel at the primary level of health care. Sufficient number of doctors, nurses and other health workers in primary health care means better accessibility of health services and smaller number of those referred to secondary level, and consequent reduction of health care costs. This is particularly important for public funds. Because of this, countries take special care about development of primary health care, which implies employment in this service.

According to the Institute (2003), primary level<sup>19</sup> employed 3260 persons in public health institutions, out of which 2591 were medical workers and associates (79.4%), and 669 (20.6%) non-medical workers

- 575 doctors, 398 of them specialists
- 236 dentists (including specialists)
- 2 pharmacists
- 86 persons with advanced vocational school training
- 1616 with vocational school training

Taking into account the domicile population at primary level employs:

- 1 doctor (general medicine or specialist) per 1069 inhabitants;
- 1 dentist (including specialists) per 2539 inhabitants;

<sup>19</sup> Source: Statistical Yearbook 2003. Institute of Public Health

All data are only for personnel of health centres and health stations as primary health services in its narrowest sense. Personnel of the Institute of Public Health and pharmacies is not included.



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- 1 health worker and associate per 245 inhabitants;
- 1 employed per 195 inhabitants.

Analysis of the primary level personnel per specific services shows that this level employs a number of specialists who, as a rule, do not belong to primary health care (specialists in internal medicine, physical medicine, ophthalmology, otolaryngology etc. which account for 21% in total).

**The number of doctors who should take over the role of chosen doctors (general medicine, paediatricians, internal medicine, and occupational medicine) does not meet set standards for chosen doctors, particularly in some municipalities.** The situation could be better if we presume that a part of the above-mentioned specialists decide to become chosen doctors.

Table 12. Profiles of the health care staff in health centres and health stations in Montenegro in 2002

Area	Doctors (including specialists and dentists)	Staff with advanced vocational school training	Staff with vocational school training	Doctor/other staff ratio
General medicine	182	13	445	1: 2.52
Paediatrics (children and school youth protection)	132	9	201	1:1.52
Gynaecology-health care of women	32	0	47	1:1.47
Occupational medicine	61	2	92	1:1.54
Dentistry <sup>20</sup>	268	0	266	1:1.05
Laboratory	.....	15	159	1: 0.30
Pulmonology, pneumophthisiology	17			
Psychiatry	18			
Radiology	13			
Other specialties	122	16	231	1:2.02
Non-medical activities (administrative and technical staff)				
Administrative staff – university training	44	12	215	1:0.47
Technical staff – Total			379	1: 1.01

There is no possibility to directly compare the number of doctors in Montenegro to other European countries because of differences in organization of the health care and training. Namely, all countries do not have chosen doctors but family doctors or general practitioners, whereas paediatricians and occupational medicine are not included. When making comparisons, data on the number of general practitioners are taken into account, i.e. number of inhabitants per general practitioner, because in most countries they carry out the tasks of chosen doctors. On the basis of these comparisons it can only be concluded that the number of general practitioners or prospective chosen doctors among European countries is very different.

Montenegro falls behind the WHO European region in terms of the number of available chosen doctors, but on the whole, it can be comparable to countries that were the first to introduce the concept of chosen doctors as a gatekeeper in the health care system, e.g. England, Holland and some other countries.

<sup>20</sup> The dentists working in hospitals are included because the dental service with the exception of maxillofacial surgery belong only to primary health care

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Table 13. Number of inhabitants per general practitioner in Europe in 2000<sup>21</sup>

Country	Number of doctors per 100.000 inhabitants	Number of inhabitants per doctor
Netherlands	48.75	2051
England	60.62	1650
Finland	166.80	596
Europe	64.81	1543
EU	101.51	985
Montenegro*	56.85	1759

The number of dentists for the whole population of Montenegro is optimal because the European average is 1 dentist per 2480 inhabitants, so there is enough personnel for this kind of health care compared to European countries. However, owing to amendments to the law which stipulate that only the insured population under 15 and over 65 years of age are entitled to dental care, the population for which norms of dental care are calculated is thus reduced by one third (approximately 221,000). As a result, there are 820 inhabitants per one dental team. A significant problem in dental care is a surplus of specialists. Out of all dentists in public institutions, 44% are specialists. Distribution of work is also inevitable in this area, thus dentists will provide all services to patients in the future or refer to specialists only the most complex cases in the area of maxillofacial surgery and orthodontics, and only exceptionally in other cases.

A particularly problematic characteristic of the personnel at the primary level is the ratio between medical and non-medical workers per doctor. That ratio is very unfavourable because one doctor in institutions of the primary care " supports" other 3.18 medical and non-medical workers and 1.5 of them are administrative and technical staff. In other countries the number of administrative and technical staff is only 13 -15 % of all employees. Disproportion in team structure is most evident in general medicine because of the surplus of laboratory technicians and other medical technicians i.e. nurses per one doctor. On the other hand, there is a lack of certain profiles of medical workers such as psychiatrists, psychologists, physiotherapists and partly radiology technicians.

Apart from disproportion in team structure for particular services, there are great discrepancies in the number of personnel per municipality or on different health centres. The number of inhabitants per one potential chosen doctor range from 1123 (Tivat) to 4270 (Plužine), per one gynaecologist from 1283 (Mojkovac) to 9643 (Nikšić). There is an evident discrepancy from average values ranging from 66 to 252% in terms of the number of inhabitants per potential chosen doctor and between 30 and 225% discrepancy from average values for chosen gynaecologists. Consequently, in some regions the doctors do not have a sufficient workload, whereas in other regions they cannot meet all the needs of the population.

The stated problems do not facilitate the development of efficient health care system where the accessibility is one of the basic organizational principles. This situation, inherited from the past, is a result of uncontrolled employment of doctors and other staff because the needs of the population were not taken into account, and even less care was devoted to the need for rational employment and utilization of health resources.

The problem of inadequate number of the personnel becomes even more evident when looking into the number of doctors per municipalities and services. In some municipalities there are no general practitioners or specialists in general medicine (Plužine). In two municipalities there are no paediatricians and gynaecologists. At the same time, there are 24 doctors of urgent care medicine and 16 specialists of internal medicine who cannot obtain full-time employment because they carry out the tasks that do not belong to their line or activity or residency.

<sup>21</sup> Source: Health for all Database. 2003, European region of WHO, Copenhagen

Note: The data for Montenegro refers to 2003 and includes all potential chosen doctors

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The above-mentioned situation can serve to evaluate for necessary measures for reorganization of primary health care and employment policy, and funding of primary health care in order to provide a uniform number of chosen doctors on the territory of Montenegro. It can also be concluded that:

- the total number of personnel and its number in relation to population is satisfactory, according to existing needs and possibilities;
- there is an unfavourable ratio of potential chosen doctors and other specialists at the primary health care level because there are more than 21% specialists who do not belong to primary level or to health centres. Since primary health care does not provide them with all necessary working conditions for performing specialists services, they have an inadequate workload and provide non-specialist services,
- because of a large number of specialists, the number of potential chosen doctors is relatively small, which should include legally stipulated professional profiles for working in primary health care;
- there is a large disproportion between medical and non-medical workers in health centres where the number of administrative and technical staff is almost two times higher than in EU countries;
- taking into account the rights of insured persons from health insurance, there is an excessive number of employed dental teams in health centres, at least by one third;
- the number of other health workers per one doctor is too high;
- doctors and their teams are unevenly distributed in Montenegro, and there are great and unacceptable discrepancies in this respect.

### 3.5.2 Primary health care services

For work analysis it is important to have the data on utilization of the capacities per individual services, which are based on the number of visits to a doctor. Those data indicate among other things the "load" i.e. standard for providing health care population and its social groups per municipality. The greatest number of daily visits are made in the area of general medicine: 28 visits i.e. slightly more than 4.5 per hour. Similar workload is present in occupational medicine, which provides mainly curative services, like general medicine. In both cases there is an evident increase in the number of visits in the last ten years whereas the number of visits in gynaecology decreased probably because of a smaller number of pregnancies. The decrease in the number of visits in dentistry is also present in all its subfields with the exception of orthodontics. In all services in health centre facilities the number of repeated visits as opposed to first visits is very high. That ratio in general medicine is 1: 2.2, in occupational medicine 1: 1.82, health care of women 1:2, health care of children 1: 0.62. The ratio between first and repeated visits in paediatrics is favourable, because of the large number of visits to counselling centres, whereas in other areas the high number of repeated visits is probably the consequence of poor organization, equipment, lack of diagnostics, low quality of work, lack of knowledge in diagnostics and treatment, etc.

Table 14. Number of visits to a doctor in Montenegro in 1993 and 2002<sup>22</sup>

Area	Total number of visits to a doctor (in 000)		Index 2002/1993	Average number of visits to a doctor daily*		Index 2002/1993
	1993	2002		1993	2002	
General medicine	902	1306.1	142	21.8	28.0	128.4
Health care of children	487	443.8	91.1	21.9	21.4	97.7
Health care of school youth	147	179.4	122.1	10.4	13.7	131.7
Health care of women	144	124.7	66.9	26.8	15.2	56.7
Occupational medicine	314	390.9	124.4	19.6	25.0	127.5
Specialist services	542	882.4	162.8	24.9	28.2	113.3

These data indicate that there is an increase in number of visits in all health centre services, except in health care facilities for children because of the drop in the proportion of young population in the total population and the use of private paediatric services.

Workload of services that are to be reorganized is very important for elaborating the network of public health service in Montenegro at the primary level. That will have an impact on determination of main tasks that will have to be carried by every health centre and those units in health centres that will be organized to serve as two or more health centres, as regional centres.

**The size of the population, norms and principles of good organization and rationalization shall serve as criteria for elaborating the content of a particular health centre and other stakeholders of primary health care, in accordance with the law.**

<sup>22</sup> Note: The average of 256 working days is used for calculating the number of visits per day. The data shows only visits to doctors in surgeries, excluding the visits to other health workers, house calls, visits to schools, etc.

### 3.5.3 Pharmaceutical personnel

The network of public pharmaceutical services is composed of the personnel of 'Montefarm' Pharmaceutical Institution, which has pharmacies in all municipalities in Montenegro as part of its organization. The number of employees in that institution was 343 in 2002, 232 (67.6%) of which were health workers and 111 (32.3%) non-health workers. There is an evidently excessive number of non-health workers Personnel, which naturally affects the price of medicines used by insured persons, and funded by the Health Insurance Fund. It also has an impact on the price of drugs used by other health institutions. Among health workers in the pharmaceutical sector the proportion of employees with vocational school training (135) is predominant, and there are 97 pharmacists (no specialists). The ratio of pharmacists and pharmaceutical technicians is 1: 1.4. In four municipalities: Andrijevica, Žabljak, Plužine and Šavnik, only pharmaceutical technicians work in pharmacies.

According to 2002 data<sup>23</sup>, the pharmaceutical sector in Montenegro employed:

- one pharmacist per 6855 inhabitants;
- one pharmacist per 11.06 doctors in public health institutions;
- one pharmaceutical technician per 4925 inhabitants;
- one employed health worker per 2866 inhabitants;
- one employed in pharmacies per 1938 inhabitants;

The total number of processed prescriptions in public pharmacies in 2003 was 3,500,000<sup>24</sup>, i.e.:

- 15,217 prescriptions per pharmacist or pharmaceutical technician (annually);
- 59.44 prescriptions per pharmacist, or pharmaceutical technician daily (working day);
- 9.65 prescription per pharmacist or pharmaceutical technician per effective working hour.

According to statistical data the pharmaceutical services in Montenegro are less developed than the average in European countries, especially if we take look into the number of inhabitants per number of employees and their profile. That indicator of development is quite relative. The needs for pharmacists do not depend only on the size of the population, but also on how health services are developed and the number of doctors in them. They also depend on the method of regulating the right to medicines on the part of insured persons. The important role also belongs to the method of funding the pharmaceutical sector (margin system, services system), the issue of ownership (public or private pharmacy), status, and regulations allowing or prohibiting hospital pharmacies to provide non-hospitalized persons with drugs and medical devices.

**In planning the needs of pharmaceutical service the best indicator is the ratio between doctors who prescribe the drugs and the pharmacists, i.e. the number of prescriptions per pharmacist.** The EU countries have one pharmacist per 6 – 8 active doctors who treat patients (excluding doctors in health institutes, doctors engaged in management, pathologists, radiologists, etc.). According to this indicator, the Montenegrin pharmaceutical sector shows a slight deficit, which is covered with pharmaceutical technicians who are not allowed to work on their own. According to another approach for planning pharmaceutical capacities and personnel, the number of processed prescriptions per pharmacy is taken into account. With the assumption that one pharmacist realizes 9 – 10 prescription per hour (effective working hours) we can plan to employ one pharmacist per each 13,800 to 15,360 prescriptions annually. In planning the capacities of the pharmaceutical sector it is necessary to clearly differentiate the roles and tasks of pharmacists and teams. Within the project carried out jointly with the World Bank, hired consultants will prepare the Study of Organization of the Pharmaceutical Service and regulations for implementing the law in this area.

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<sup>23</sup> Data from public health system

<sup>24</sup> Data from the Health Insurance Fund

#### **3.5.4. Personnel in specialist services – outpatient and inpatient**

The role of a hospital is to provide outpatient and inpatient specialist services. Both of these services can be provided by the same personnel, with the same equipment, but they are usually separate because of their specific technology. Owing to poor record keeping, there are no separate data on the operation of specialist services. There are only data on hospital personnel without records of the scope of services and the number of patients treated in hospital wards. Since such data is lacking, it is difficult to set up a methodology for developing a strategy for hospital development. One of the most important activities in the framework of improving health care records will be the introduction of records of hospital operation in the area of specialist outpatient services and defining standards for health statistical research related to the work of outpatient services. A particular characteristic of the health care system in Montenegro is the fact that there are hospital beds in some health centres which is unheard of in EU countries. This situation was inherited from the earlier system. The number of those beds is not high, but a certain number of health personnel is attached to them, which should instead provide primary health care services. The professional question of services quality in such non-standard conditions is very controversial, as well as the funding of those capacities. According to the new Law, health centres shall not include inpatient services, only day care and treatment units for patients who need special care.

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Table 15. Number of hospital employees in Montenegro in 2002<sup>25</sup>

	Number of health workers and associates:					
	Doctors	With university degree	With advanced vocational school training	With vocational school training	Administrative and technical staff	Total
General Hospitals	240	8	32	820	416	1516
Specialized hospitals	59	6	17	177	117	377
Clinical Centre	265	50	71	901	479	1766
TOTAL	564	64	120	1898	1012	3659

According to the data in Montenegro related to general and specialized hospitals and the Clinical Centre, there were 564 doctors, 2082 other health workers and associates and 1012 administrative and technical personnel employed. The ratio between doctors and other health workers and associates was 1:3.6, whereas the ratio between doctors and administrative-technical personnel was 1:1.83. The ratio between employed health workers and associates and administrative-technical staff was 72.3%:27.7%. The proportion of administrative-technical staff is higher in specialized hospitals (33%). The data on hospital health institutions, similar to primary health care show extensive and uncontrolled employment of staff that does not provide health service. Out of all doctors employed hospitals the greatest number of specialists are those in internal medicine – 67. There are 73 surgeons, including specialists in neurosurgery, urology and children surgery, 50 paediatricians, 43 gynaecologists, 40 anaesthesiologists, 31 radiologists, 28 orthopaedists, etc. The number of doctors per specialty in total is sufficient, but like in primary health care, their distribution is uneven and there are differences in workload when the work and utilization of hospital services is analysed.

### 3.5.5 Hospital health care services

Analysis of the personnel in secondary and tertiary health care should be based on the number of hospital beds, their occupancy and the number of hospitalised patients in order to have objective overview of utilization of these capacities.

Table 16: Number of doctors, medical and non-medical workers and number of discharged patients, hospital days per doctor in Montenegro in 2003<sup>26</sup>

Hospital	Number of employees			No. of medical and non-medical workers per doctor	No. of discharged patients	No. of hospital days	No. of discharged patients per doctor	No. of hospital days per doctor
	Doctors	Other medical workers	Non-medical workers					
GH Bar	38	176	64	6.31	5693	40776	149.8	1073.0
GH Berane	38	217	84	7.92	5199	37752	136.8	993.5
GH Bijelo Polje	33	142	47	5.72	4331	34677	131.2	1050.8
GH Kotor	32	118	50	5.25	4762	33516	148.8	1047.4
GH Nikšić	50	199	80	5.58	7846	75952	156.9	1519.0
GH Pljevlja	22	119	59	8.09	2873	29037	130.6	1319.9

<sup>25</sup> Source: Analysis of health care services in Montenegro in 2003, Institute of Public Health, Podgorica 2004

<sup>26</sup> Source: Analysis of the health care services in Montenegro for 2003, Institute of Public Health, Podgorica 2004

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GH Cetinje	27	129	32	5.96	3244	25848	120.1	957.3
SH Brezovik	17	76	30	6.23	2230	64016	131.2	3765.6
SH Dobrota	16	93	37	8.12	694	52713	43.4	3294.6
SH Risan	26	91	50	5.42	2355	35788	90.6	1376.5
Clinical Centre	265	1287	479	6.66	25404	185510	95.9	700.0
<b>TOTAL</b>	<b>564</b>	<b>2647</b>	<b>1012</b>	<b>6.49</b>	<b>67218</b>	<b>629935</b>	<b>119.2</b>	<b>1116.9</b>

Analysis of the utilization of health personnel, i.e. their workload and work efficiency per individual hospital indicate that:

- workload of health workers in hospitals in Montenegro is very low;
- there are 4.69 other health workers and associates and 1.79 non-health workers per doctor, which is significantly higher than EU average;
- on average there are 119.2 discharged patients per doctor or less than half of patient per day,
- average ratio between doctors employed in hospitals and hospital days is 1:4.36, which means that he treats that number of patients daily;
- a great number of hospital doctors spend a certain amount of time working in specialist outpatient surgeries in hospitals, and thus spend part of their working hours devoted to patients in outpatient surgeries (the extent of that work is not known, but in Slovenia it accounts for 12%);
- data shows poor utilization of personnel capacities in hospitals and possibilities for rationalization of work and reduction in personnel capacities;
- in developed European countries one doctor in a hospital treats about 10 -12 patients per day, on average.

Average length of treatment per ward and the possibility to treat as many patients as possible with as intensive treatment as possible in the shortest possible time has an impact on the number of hospital days per doctor, in order to reduce treatment costs. Analyses of the work of hospitals show great discrepancies. Thus, average length of treatment ranges between:

- 9.88 days on average in **internal wards** (the shortest amounting to 6.89 days in Kotor General Hospital and the longest of 12.57 days in Cetinje General Hospital);
- 8.08 days on average in **surgical wards** of General Hospitals (the shortest amounting to 6.79 days in Bar General Hospital, and the longest of 11.62 days in Pljevlja General Hospital);
- 6.61 days on average in **gynaecological-obstetric wards** (the shortest in Bar General Hospital of 4.79 days, and the longest in Pljevlja General Hospital of 10.25 days);
- 6.69 days on average **paediatric wards** (the shortest in Berane General Hospital of 4.99 days, and the longest in Pljevlja General Hospital of 8.63 days).

The average length of treatment is the indicator that shows the efficiency of work so as to achieve better results with less investment and thus define the demand for personnel capacities in hospitals. By reducing the length of treatment in hospitals, the demand for health services is reduced and particularly for health care and non-medical services, which reduces overall demand for personnel. An average length of treatment in hospitals in Europe in acute wards (excluding psychiatry, rehabilitation and gerontology) is: 6.3 days in Austria, 3.8 days in Denmark, 4.4 days in Finland, 6.4 days in Ireland, 5.0 days in Sweden, etc.



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Reduction in average treatment length is a global trend that Montenegro has to follow, which will be incorporated in health care plans of each institution. Reduction in the average treatment length will affect rationalization of the secondary level of health care by intensifying the process of diagnosis and treatment, which in turn will increase the demand for doctors in outpatient services in radiology, functional diagnostic services, anaesthesiology, nuclear medicine and laboratory units. On the other hand, there will be a drop in demand for other doctors in inpatient services, especially for personnel providing care.

The hospitalization rate in Montenegro amounts to 108.9 persons per 1000 inhabitants. This is very low in comparison to other European countries. Reduction in hospitalization rate will depend on the mode of resolving care for the elderly and quality of operating primary health care, which will result in higher number of detected diseases to be treated in hospitals. Low hospitalization rate of population in Montenegro affects the level of hospital 'expenditure'. Because of that it is necessary to introduce rationalization measures and reduce the length of hospital treatment, in order to resolve the problem of augmented demand and pressures weighing upon specialist and hospital care.

Table 17. Hospitalization rate in Europe and Montenegro in 2000<sup>27</sup>

Region	Number of hospital treatments per 1000 inhabitants
Europe	187.1
EU	184.0
Montenegro	108.9

The upward trend in hospitalization can be expected in the next 5 to 7 years so as to reach the level of 120-125 treated persons per 1000 inhabitants, which would imply an 10 to 15% increase. This increase should not be mirrored by the increase in personnel capacities of hospitals but their better organization and rational operation. Data on utilization of existing capacities indicate that there are objective possibilities for improving internal organization of work in hospitals, work productivity and higher efficiency.

#### 4. Financial resources of health care

The health care system is based on the principles of Bismarck social health insurance which is funded by the contributions of employers, insured persons and other categories. The contribution rate is 7.5% of employees' income and 6% of employers' income. The Law on Health Insurance lays down bases and contribution rates for other categories of insured persons. Contrary to the practice in countries with similar health insurance the law does not provide for special contribution rate for occupational injuries and professional diseases. In Western and Central European countries employers pay special rate for their employees. These contributions serve to fund health services and salaries for those who are injured or suffer from professional diseases. Such contribution rates vary and depend on the amount of risk expenses. In some countries there are 'bonuses' for employers who have low expenses for that insurance or 'penalties' for those with high expenses. In that way the obligation and responsibility for occupational safety and health required by the International Labour Organisation and in line with EU directives rests with employers. Special contributions for occupational injuries and professional diseases at the same time imply the exclusion of such risks from general comprehensive solidarity in health insurance and transfer of expenses for treatment of such conditions to the cost of workforce and indirectly to the cost of products and services.

Contributions provided for by the Law on Health Insurance are paid to the Health Insurance Fund and they serve to fund the benefits of insured persons and public health institutions that provide health care. The only institution responsible for compulsory health insurance is the Republic Health

<sup>27</sup> Source: HFA Database, European Region, WHO, Copenhagen 2004 and the Institute of Public Health

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Insurance Fund with the seat in Podgorica and branches all over Montenegro. Founding of the Health Insurance Fund as the only one in charge of health insurance was the most rational solution due to the small number of insured persons in Montenegro. Law on Health Insurance stipulates that voluntary insurance shall also be the responsibility of the Health Insurance Fund, which shall provide professional support for all types of health insurance. Therefore, it is necessary to develop and train existing department of the Health Insurance Fund.

According to the Law on Health Insurance, the overall population of Montenegro is entitled to compulsory health insurance and persons are insured according to different categories, as stipulated by the Law in more detail. The greatest number of insured persons are employees and their family members, followed by unemployed persons and pensioners with their family members, which account for 45% of all insured persons. The farmers and other categories are very slight.

**Table 18. Number and structure of the insured at the Health Insurance Fund<sup>28</sup>**

Type of insurance	Insured persons	Family members	Total	%
The employed	155,131	137,573	292,704	50.78
The unemployed	81,805	51,778	133,583	23.18
Farmers	9,750	8,953	18,703	3.25
Pensioners	93,133	31,426	124,559	21.61
Other	5,490	1,344	6,834	1.19
Total	345,309	231,074	576,383	100.0

It is known that obligation and solidarity in health insurance provides the population with certain rights to health services and compensation, but their exercise is also related to their obligation of paying contributions in proportion to their financial capabilities.

For many years the expenditure of the Health Insurance Fund exceeded its revenues, but there is a positive trend of cutting deficit. In 2001 the deficit of the Health Insurance Fund was over EUR 6.2 million, and the level of covering expenditure with revenue was slightly below 92%. Total debt of the Health Insurance Fund by the end of 2003 amounted to EUR 28 million.

The transition process which is followed by certain social and economic problems reflects on the capacities in real economic framework made possible by economy – the real sector, which contributes to funding health care to the highest degree. Data shows that there is a faster growth of demand for health services than coverage of their cost, which is present in almost all European countries. This situation calls for necessary measures of health care rationalization, harmonization of rights and health programmes with real possibilities and finding new sources of financial assets, outside public finances.

There is an evident situation in Montenegro that public health insurance and services are funded almost completely by contributions and partly by budget assets. Private funds are present in balance sheets of health care funding, mainly as co-payments and hardly amount to 1% of all funds. On the other hand, a lot of persons use private health services, i.e. pay for private services that are provided in various ways. On the basis of this, it can be concluded that although the economic standard of majority of the population is low, there is a private market of health services, based on supply and demand. This should be taken into consideration when finding solutions for disadvantageous financial situation of public health insurance and improvement of highly unfavourable financial position of health care institution.

The greatest part of assets for health insurance benefits are contributions of employees and their employers. Their proportion of these assets in total revenues of the Health Insurance Fund was almost 70% in 2003. This is followed by revenues from pensioners' contributions (25%), the unemployed (3%) and farmers (0.1%).

<sup>28</sup> Source: Republic Health Insurance Fund (on October 18, 2004)

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If we look into expenditure, we get a completely different picture. The greatest 'consumer' are the pensioners who exceed average expenditure by 51%. Only the employed and their families cover completely the costs of health insurance benefits with their contributions, whereas contribution revenues of all other categories are smaller than costs of their treatment, which is particularly evident with farmers. According to Health Insurance Fund data, the financial deficit is most evident in health insurance of unemployed persons and farmers, and a particular problem is the uncovered expenditure for funding health care of refugees and displaced persons. In social health insurance, we have to accept the fact that, because of solidarity, not all categories of insured persons can afford to cover their health care costs. Nevertheless, it is evident that contributions for unemployed persons are far below all other categories.

In 2003, the Health Insurance Fund revenue amounted to EUR 88.296 million, EUR 153.16 per insured person registered with the Fund or EUR 145.29 including refugees. The average amount of assets for funding health care benefits cannot ensure both high standard of health care and a wide range of health insurance benefits. **In current economic circumstances, good health care can be provided only by introducing measures for rationalization and strengthening of primary health care, by deliberate development of hospital care and selective introduction of expensive medical technology and top-of-the-art medicine.**

In 2003, the Health Insurance Fund expenditure exceeded revenue by 5.943 million. Negative financial result of the Health Insurance Fund has recurred for several years showing unstable funding and discrepancy between financial resources and needs i.e. demand for health care.

Table18: Revenue and expenditure of the Republic Health Insurance Fund in 2003

Type of insurance	Income from contributions in thousand EUR	Expenditure in thousand EUR	Per insured person in EUR		% of expenditure coverage with income
			Revenue	Expenditure	
The employed	66,033.3	45,192.5	225.6	154.4	146.11
The unemployed	2,804.8	11,400.3	21.0	85.3	24.60
Farmers	87.9	2,687.4	4.7	143.7	3.27
Pensioners	23,901.8	29,987.6	191.9	240.7	79.71
Other	1,579.6	5,300.9	.....	.....	29.80
Refugees and displaced persons	0.00	2,000.7	0.0	64.1	.....
Total	94,407.4	96,569.9	155.4	158.9	97.76

Financial resources of the Health Insurance Fund are the most important source of funds available to health institutions and they amount to 91.1% of their total revenue. Other sources of revenue are co-payments of insured persons, which amount to 0.88%, funds from Health Insurance Funds of Serbia and Republic of Srpska, which amount to 1.0%, and assets for services provided to refugees, which amount to 3.67 %.

Out of its total revenue, the Health Insurance Fund had expenditure for funding health care services in the amount of EUR 67.288 million, as follows:

- health centres EUR 28.188 million;
- General Hospitals EUR 13.445 million;
- specialized hospitals EUR 4.500 million;
- Clinical Centre EUR 20.460 million;
- Institute of Public Health EUR 0.695 million;
- for prescription drugs and operation of pharmaceutical services EUR 11.746 million.

The share of the Health Insurance Fund in funding health institutions has increased since 2000 with proportional reduction of private assets (direct payments, i.e. participation of insured persons in the cost of health care which is contrary to trends in developed countries. This resulted in a situation where the position of health institutions is completely dependent upon public financial resources, i.e. contributions for compulsory health insurance. The Budget of Montenegro, which provides funds for health care of unemployed persons, refugees and for tasks of public health, participates in health care funding to a smaller extent.

Analysis of expenditure per health care levels<sup>29</sup> shows that the amount of funds for primary care is slightly over 40 million and for secondary cares about 31 million. Objective data on health care costs per level are not available because existing health centres, which are responsible for primary health care, also receive funds for specialist health care that belongs to another level. In other words, primary health care comprises services that should be classified at the secondary level and the secondary level should be separated from the tertiary one. Objective picture of allocation of funds per level requires changes in organization and functioning of health care institutions and their financing method, in accordance with reform principles to fund health care, and not capacities.

Of all health institutions in 2003, 6 health centres, 5 General Hospitals and one specialized hospital, Clinical Centre and the Institute of Public Health had a deficit in the amount of EUR 5.397 million whereas other institutions had a surplus in the amount of EUR 2.042 million. These data do not include the surplus of the Montefarm Public Enterprise, which amounted to EUR 0.456 million, according to Health Insurance Fund data. Deficit in operation of health institutions indicates the increase in financial costs such as medicines and medical devices and inadequate method of financing health institutions, which implies paying for capacities, in addition to all uneconomical activities in health institutions. Financial operation and situation in health institutions reflects the role and capability of their management.

New legal solutions stipulate autonomy of health care institutions and responsibility of the management for their running and operation, as one of the general principles of the health care system decentralization. **In public health care that is organized on the principle of non-profitability it is unacceptable that a health institution has a deficit and at the same time constantly employs new staff and expands its capacities, even if the existing ones are not sufficiently used. A solution to this problem is one of the key issues in reform efforts to make health care institutions truly autonomous business entities in public service.**

In the expenditure structure of health care institutions salaries prevail with 47.95%, followed by operating costs with 45.5%, and other expenditure in the amount of 6.55% are legal obligations. This structure varied in different institutions. Gross salaries and legal obligations account for the largest part in expenditure structure of health centres, whereas the total expenditure in hospitals and particularly in Clinical Centre is much higher. This is a logical consequence resulting from differences in technology and complexity of the working process in some types of institutions, because it is known that primary health care operates with the lowest expenses and therefore the part of expenditure for salaries is proportionately higher, whereas in hospitals the situation is quite the opposite. In some health institutions there are great discrepancies between expenditure structures which indicates some developmental trends and a lack of consistent approach in developing particular segments of the of health service from the past such as differences in their services, personnel, organization extensiveness, maintaining capacities, poor management, etc.

According to the Report on work and operation of public health institutions in 2003 in Montenegro, it is evident that the expenditure per patient in General Hospitals ranged between EUR 359.28 in Kotor General Hospital and EUR 692.72, i.e. EUR 914.51 in the Clinical Centre (EUR 705.81 on average) Furthermore, average costs of a hospital day in general hospitals ranged between EUR 45.91 in Kotor General Hospital and EUR 74.03 in Pljevlja General Hospital, or EUR 67.43 on average in all hospitals. Average expenditure do not enable more detailed analysis because there are no data on expenditure structure per ward and basic elements for cost calculation. Estimated

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<sup>29</sup> Financial Plan of Health Care System Sustainability in Montenegro 2005–2007, Government of the Republic of Montenegro

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costs for a chosen doctor team in primary care are approximately EUR 30 500. The team shall provide services for 1500 to 1700 insured persons on average. The same amount is necessary for the treatment 43 to 50 patients in hospitals. These data can be used as justification for allocation of funds and giving priority to primary health care. This also means that there is a need for hospital rationalization and defining professional medical criteria for hospital treatment.

Compared to other countries, the expenditure of health institutions is low, mainly as a result of low salaries of health care workers. The salaries are the reflection of the economic situation in Montenegro and there are no possibilities for their increase from public financial resources (contributions or taxes) or from new financial resources (co-payments, etc.). The possibilities for increasing the employees' salaries lay with the system itself. It is evident that restructuring of health services towards primary care and reduction of personnel who do not have a workload, and rationalization of drug consumption can enable increase of salaries of employees. There are enough possibilities for reduction i.e. rationalization of the personnel, particularly in administrative and technical services and some specialist services in health centres, in hospitals where there are unused capacities, in dentistry and some other services.

**Table 19. Expenditure structure of certain types of health institutions in 2003<sup>30</sup>**

Type of health institution	% expenditures			
	Gross salaries	Legal obligations	Expenditure for medicines, medical, laboratory and dental materials	Other expenditure
Health centre	57.53	7.45	13.03	21.99
General Hospitals	45.82	5.70	15.02	33.46
Specialized Hospitals	45.03	5.50	15.69	33.78
Clinical Centre	38.79	5.90	27.32	27.99

Data on expenditure structure in health institutions indicate in their own right the development problems of health care. If expenditure structure is compared to similar ones in more developed countries, we come to the conclusion is that gross salaries in Montenegro are very low, as in EU countries the proportion of salaries in primary care expenditure amounts between 75% and 80%, and in hospitals between 65% to 70%. Financial costs also have a great impact on the expenditure structure, since the greatest part of supplies used in health service comes from countries with high technology and they consequently have high prices. That is an additional reason for necessary changes and adjustment of the health care system to economic potential of Montenegro.

The Health Insurance Fund is an important factor in development and functioning of the health system because financing of health programmes has a direct influence on the health service operation. Therefore it bears a great deal of responsibility for functioning of the health care system, and even more so for health insurance. Payment method has a great influence on funding health institutions. The system has so far given priority to funding capacities, and because of the social situation the most important things was to provide funds for salaries and only then for other expenses, if possible. This resulted in high liabilities towards suppliers for delivered goods, and consequently to delays in supply of goods, especially medicines.

Unclear role and tasks of the Health Insurance Fund, with the elements of old system, the lack of developmental strategy and shortcomings of the public health services network affected the development of health institutions and the overall system bereft of clear approach. Contracting between the Health Insurance Fund and health institutions, which was their legal obligation, and defining work programmes for particular services and institutions, has not been implemented for more than a decade. That enabled public health institutions to expand their capacities beyond the

<sup>30</sup> Source: Report on work and operation of health institutions in Montenegro in 2003, Health Insurance Fund

limits of their possibilities and contrary to principles of economic justification, which is particularly evident if we analyze expenditure, bereft of any investment in knowledge and training of personnel, equipment, and maintenance of the facilities and the equipment except in the Clinical Centre with some diagnostic services. As a consequence, health institutions nowadays have poor working conditions, the personnel is not motivated for more rational work of higher quality and better work organization.

### **5. Planned development courses**

The basic strategy for further development of the system is related to improvement in health status of the population, improving the quality of health services and stability of the system so as to ensure adequate health safety to insured persons and providers of services. All of these will be implemented gradually and in the framework of the existing financial potentials. Since the increase in financial resources, especially public funds is minimal, the measures for rationalization of work and operation of health institutions will ensure their better efficiency and productivity,

**Health care planning is done according to the principle of priority services which can achieve best results in improvement or safeguarding health of particular groups or the whole population with available resources.**

Priority measures:

- Activities and programmes for health promotion that will be supported by the Ministry of Health and other Government departments, local governments, NGOs. Health centres will implement programmes of health promotion, to be carried out within health promotion units and funded by the Health Insurance Fund;
- Adoption of scope and standards of health care provided to the population, as a services package from compulsory health insurance, will ensure equality and accessibility of health care to all population groups;
- Programmes for health care implementation will include the obligation to carry out preventive measures and, accordingly, will be funded by the Health Insurance Fund;
- Adoption of the public health institutions network will define optimal health infrastructure, which will ensure accessible and high-quality health care;
- Implementation of preventive programmes for certain vulnerable groups of the population, for prevention and early detection of diseases will be an integral part of the work programme of each health centre, i.e. chosen doctors and their contracts with Health Insurance Fund;
- Reform of the primary health care and implementation of the chosen doctor model in Montenegro will ensure conditions for strengthening the system;
- Investment in education and training of primary health care personnel will upgrade the level and the quality of team services in health centres;
- Setting the planned strategic and short-term priorities in work plans of health institutions, development of health capacities, personnel and equipment will determine the priorities in funding health services.

**Serving as the fundamental plan of health care system development in the next mid-term period, the present Master Plan will be used for determining the following planning documents:**

- 1. Plan for development of health care system personnel;**
- 2. Annual residency plans;**
- 3. Health capacities network;**
- 4. Plan for restructuring hospital facilities;**
- 5. Health care investment plans;**

6. **Organization plan for pharmaceutical activities;**
7. **National programmes for health promotion and care;**
8. **Annual health care programmes.**

#### **5.1. Priorities and orientations for health promotion**

##### **Priority 1. Health institutions have compulsory preventive programs.**

Health centres will be responsible for preventive programmes and measures at the municipal level and the Institute of Public Health, will be responsible for the national level.

**National programme of preventive health care measures** on the national level will be prepared by the Institute of Public Health. Preventive programmes for the population at the municipal level will be in line with the national Programme in terms of scope, type of services and groups of insured persons. The compulsory part of preventive measures programme for health care must reach the 100% population coverage in the next 3 years. The Health Insurance Fund will finance health centres according to contracts to cover estimated value of preventive programme.

**Priority 2. Development and expansion of health education and training in health centres,** which will support preventive programmes and efforts for increasing the responsibilities of the citizens for their own health. The content of these activities will be to transmit knowledge about risk factors, avoiding risks for contracting diseases, behaviour in certain situations with certain diseases, and with most vulnerable groups. Health education in health centres will target pregnant women, preschool and school children and youth and other vulnerable groups. It will be implemented by teams of chosen paediatricians, gynaecologists and dentists in health centre units so that each chosen doctor and nurse team provide preventive measures according to the content and the scope. The Institute of Public Health will prepare standardized content and orientations for implementation of the programmes and necessary material for implementation of particular health campaigns.

**Priority 3. Improving women care and reducing infant mortality.** In order to achieve this, it is necessary to attain complete coverage of preventive measures, particularly of pregnant women and infants. The chosen gynaecologists will be responsible for this at the primary level. Gynaecologists of primary and secondary level will establish communication and cooperation to exchange information, experiences and knowledge. Gynaecological clinic of the Clinical Centre will prepare the doctrine for promoting of health condition of pregnant women, better monitoring of their pregnancies, their living conditions and a consequent decrease in perinatal mortality rate. The objective of these measures is to reduce perinatal mortality rate in the next 5 years by at least 50%. The Strategy for Reproductive Health will serve as the basis for establishing national capacities in hospitals and harmonizing total maternity capacities in line with 'Baby Friendly' standards and professional work standards.

**Priority 4. Health care of small children and children with development disorders** will be focused in line with the adopted national action plan for children and measures set up as the compulsory scope and standard of care for this population in all municipalities on the basis of uniform principles. Development of centres for children with special needs organized at regional level will ensure better treatment of children and improve health care as a component of the overall health care of this vulnerable group.

**Priority 5. Measures for treatment of the most common and gravest chronic diseases:** blood circulatory and coronary diseases, diabetes, mental illnesses and cancer. **For treatment of coronary and blood circulatory diseases** the priority will start with preventive programmes in primary health care, with programmes for health promotion and early detection of risk factors: high blood pressure, cholesterol, and diabetes. **Prevention of cancer** will start with early detection of condition in the primary health care and continue with treatment at secondary and tertiary level. The possibility of prevention will be achieved by early detection in early stages of the disease and its timely treatment, particularly of breast cancer, cervix cancer, lung cancer, and upgraded professional outfitting of health institutions, health workers and enhanced accessibility of diagnostic

equipment (mammography, colposcopy) and therapeutic devices for all citizens. Other chronic diseases there will be dealt with in accordance with detailed screening programmes for their early detection and treatment. This will enable health services to identify risk factors as early as possible and treat patients in the most efficient way. The introduction of these programmes will be the responsibility of the Institute of Public Health, and elaboration of standardized doctrine for early detection and treatment of chronic diseases, in line with principles of gradual diagnostics and treatment, will be the responsibility of expert teams acting within the Clinical Centre.

**Priority 6. Compulsory health insurance will direct funds towards health care priorities.**

Restructuring of the health care system and its rationalization, in line with norms and standards, will ensure financial balance. Depending on implementation of priorities, the norms for capacities and expenditure levels of some services will be adjusted, which is one element of reform trends in Montenegro.

**Priority 7. Programmes for health care of the elderly are very significant** to begin with, as well as treatment of chronic diseases, thus special attention and priority will be devoted to home treatment of such patients. The Ministry of Health will propose to the Government the Strategy for Elderly Health Care and programmes for their care and treatment, which will incorporate institutional and non-institutional care. These programmes will be funded by different sources: the funds from insured persons and their families, the Health Insurance Fund, Social Welfare, and the Budget (for social services and social welfare). Establishment of old people's homes for those insured person who cannot obtain long-term care in their homes will be proposed.

**Priority 8. Measures for promotion and protection of mental health and prevention of addictive diseases** will be used to carry out the activates set in the Strategy for Mental Health Promotion. In line with the principle of mental health in the community, seven Centres for Mental Health will be opened in health centres.

**Priority 9. The rights of the citizens to health insurance** will be attained by better accessibility of services, reduction of waiting time for examinations and treatment. The Health Insurance Fund will create conditions for providing medicines included in the Positive List. Financial instruments will be used to gradually uplift the standard of health services and rights to health insurance.

**Priority 10. Improved working conditions and operation of health institutions and workers** will be ensured by rationalization measures in the next 2 to 5 years. It is realistic to expect incremented salaries of the employees in health institutions by about 20% and improvement of working conditions (equipment, professional development) by reducing the number of employees by 5% per year.

## **5.2 Priorities and orientations for health institutions development**

The priority in health care service development is the primary health care. Health centres reformed in 2006 will completely change the content of their work and organization. According to the results of the Project in Podgorica Health Centre, chosen doctors will be introduced with specific tasks and public authorization and the scope of specialist services will be reduced. The chosen doctors will be responsible for preventive programmes and priority planned tasks for improvement of health status. At the same time, health promotion units and children's outpatient clinics will be introduced in health centres. Owing to those changes health centres will become truly responsible for health care of some population groups and the entire population.

The stated changes in health centres will gradually amend development discrepancies existing so far in health care development. Focus on the priority development of primary health care will not lead to increase in capacities of health centre facilities i.e. the number of employed chosen doctors. Employment will be in line with personnel norms for this service, and those health care that fall behind in personnel capacities and development will have the priority.

Health centres will keep the same scope of services at existing locations, in line with fulfilled requirements (norms and standards). Health centre will organize regional centres for catchment areas, in line with WHO recommendations for the following areas: mental health, children with special needs, reproductive health, TB. Consequently, those capacities will be used uniformly by the entire population they cover. Diagnostic centres in health centres will be based on the



principles of rationality and division of work between health centres and hospitals in order to have full occupancy of the existing capacities.

In municipalities with low population density, i.e. Andrijevica, Cetinje, Kolašin, Plav, Pljevlja, Plužine, Šavnik, and Žabljak, staffing and work standards for chosen doctors, paediatricians, gynaecologists and dentists will be more favourable (upper limit) than the average value in other municipalities in order to ensure adequate accessibility of health care services for the population in those municipalities.

The Plan of human resources will be prepared on the basis of this Plan, starting from priorities in development of primary health care. The approval of residencies that do not pertain to primary care will be denied and slowed down, and hiring new personnel in services that are not an integral part of primary care will be stopped. Health centres will no longer provide hospital treatment, which will be transferred to General Hospitals by 2006. Professional medical opinions will be preferred to political ones. Part of the inpatient capacities of health centre will be transformed into day care centres for the elderly and the other part will be devoted for post-operation care for those patients who cannot be accommodated at home after hospital treatment and who need only professional medical observation.

Development of general and specialized hospitals will be focused on the raising the quality of services. In their work, the priorities will be outpatient services and introduction of 'daily' (single day) hospital to be attained by gradual reconstruction of their capacities in accordance with hospitalization standards.

In pursuance of the Law, general hospitals will organize their capacities for 24-hour service in care and treatment based on standards and service protocols. Hospitals will organize anaesthetic and intensive care units, blood transfusion, laboratories, radiology including ultrasound diagnostics. As a rule, patients will be referred to hospital treatment after a diagnosis has been made by a chosen doctor or by an outpatient service specialist.

In accordance with norms and professional doctrine, investments will be made into equipment for better diagnostics (radiology, ultrasound, blood transfusion, diagnostic functional units, cytology and pathoanatomical diagnostics), which will speed up treatment and upgrade treatment standards.

All general hospitals will take over the organization and provision of emergency services for the territory they cover, and will also take over activities of health centres. Emergency services will remain with health centres only in regions where transport of patients to a hospital takes longer than 1 hour. Organization and work of emergency services will be defined in detail by the Study of organization of this service, taking into account future health needs, development of road infrastructure, development of tourism and integration with neighbouring countries.

The number of hospital beds and personnel will be in proportion to norms, that hospitals will gradually adjust to, and not later than 3 years from the date of adoption of this Plan. Hospital capacities are determined on the basis of the size of catchment area of particular hospital wards and norms and standards for hospital work. In case of capacities reduction in some hospitals if hospital beds occupancy falls below 80% of the norm, those wards will be fully reoriented to specialist outpatient and consultative services. Inpatient treatment of patients from that ward will be taken over by another ward in that hospital or by another hospital. New services, i.e. establishment of new wards in hospitals can be introduced only in cases when such a need arises according to catchment area criteria. This will be based on norms for allocating at least 15 hospital beds and providing 5 specialists of relative specialties, and other conditions for successful and rational work.

Planning personnel and residencies in hospitals will be based on the plan of needed capacities in inpatient specialist services and outpatient services, in line with the priorities. Until the residency plan is adopted, the Ministry of Health will not approve residencies for hospital wards where there are sufficient or superfluous doctors, and priority will be given to those residencies which are deficient. Residency plan will be harmonized with the human resources plan for mid-term period.

General hospitals which comprise wards with small capacities compared to standards for the number of doctors and other health workers, and where it is difficult to organize 24-hour operation,

will merge such wards into one organizational unit – ward. In long-term planning of hospital capacities the increase in hospitalization rate should be taken into account, which will be carried out gradually. A single emergency service will be organized in general hospitals, and it will provide non-stop health care for emergency cases through services of surgeons and internal medicine specialists, with the possibility of organizing on-call services.

Standards for hospital beds and personnel will serve as criteria for approval of new residencies and hiring staff. The Ministry of Health will not approve the employment in hospitals which have enough staff or a surplus of it according to norms and standards or if it is possible to provide deficient staff by takeovers from other hospitals.

The future development of health institutions will also have to include the development of health care information system as one of its priority tasks. The development of the system will be based on the same principles, definitions, and databases and other common elements which will enable linking local networks into a single information system and exchanging information among authorized system users. Health care information system will enable better running of the system, better reporting on health status of the population, adequate monitoring of costs and operation of health institutions, exchange of data between various levels of the health care system, financial control and professional supervision. Development of health care information system was initiated with the Health Insurance Fund project on the database of insured persons and will continue with the Health Care Improvement Project, Project of consolidated contribution payments to funds and with investment assets to be allotted to development, in line with financial possibilities and plans. Health institutions will gradually reduce the number of non-medical workers through development of information technology, changes in organization and other measures and thus contribute to rationalization of their operation. Reduction in the number of non-medical workers will be ensured by consistent compliance with adopted regulations and by cessation of employing new staff for vacant posts because of retirement, resignations and other reasons, by rationalization of work of administrative and technical services and organizing non-medical work by contracting other legal entities (out-sourcing).

The proportion of employees in administrative and technical services in Montenegro will be reduced by 2% each year, so that in the next 5 years the number of non-medical workers will not account for more than 18% of all employees in the health care system. Cutting down the number of non-medical workers in specific institutions will have the same pace starting from 2006. Health institutions will aim at improving professional skills of non-medical workers, particularly administrative staff to use information technologies.

Scheduled development of health institutions will be followed by investments. Annual investment plan to adopted by the Ministry of Health upon the proposal of the Institute of Public Health and the Health Insurance Fund will give priority to procurement of equipment which is necessary for achievement of scheduled planned priorities and investments in the information system.

Equipment procurement will be fundamentally based on analysis of its utilization, its contribution to health promotion of the population and cost and benefit analysis. Health institutions will use funds obtained through depreciation, to be calculated into the cost of service, to maintain the facilities and equipment, in line with the funding criteria defined by the Health Insurance Fund. In addition to these assets for procurement of equipment and maintenance of the existing one will also be funded from additional revenues generated on the market.

Changes in health status and its improvement will depend on the knowledge and training of health personnel, primarily doctors and nurses as the ones responsible for health programs. Medical science and technology advance very rapidly. Therefore, professional development of doctors and other health personnel is one of the prerequisites for implementation of planned tasks and objectives.

The first priority in the area of professional development of health workers is focused on chosen doctors. Health Care Improvement Project involves the Faculty of Medicine in the process of education in cooperation with the Doctors' Chamber and other professional organizations. In the course of the project each chosen doctor will complete a programme of training and professional seminars.

The Law on Health Care stipulates the obligation to train doctors as a prerequisite for obtaining and renewing the license. The content and the scope of licensing programmes will be prepared per specialty and in cooperation with Doctors' chamber and they will be organized for all doctors. The plans for professional development will be prepared by health institutions with the support of centre for science of the Clinical Centre and it will be approved by Ministry of Health. Financial resources for professional development of doctors will be included in the amount of capitation i.e. for other doctors and health workers, in the cost of services and determined by contacts with the Health Insurance Fund.

The Ministry of Health will initiate training in health economics and health management in order to improve the management system on all levels of health care. Knowledge in these areas will become one of the prerequisites for appointment of managers of health centres and hospitals, and it will have a special purpose for capacity building in the Ministry of Health and the Health Insurance Fund.

## **6. Organization plan of the health care service**

The current organization of health service is not completely in line with the principles of modern and efficient organization according to World Health Organization's recommendations on primary health care (Declaration on Primary Health Care, Alma Ata, 1978, [www.who.org](http://www.who.org)) Analysis of the current situation indicated the problems in development of health institutions: unclear role of health centres, confusing primary and secondary health care, disproportion, discrepancy and non-utilization of capacities; unequal territorial distribution, excessive employment, high operational costs in health services and (dis)satisfaction of insured persons and health care workers sector with the health care system.

Acting as an instrument for development and changes, the plan lays the foundation for new organization of health care, which is simultaneously the central area of the reform endeavours.

### **6.1 Organization of primary health care**

Changes in the organization of the health service are based on new Law on Health Care and organizational measures as a result of the Health Care Improvement Project in Montenegro. New organization of health centres will be introduced in the overall territory of Montenegro at the beginning of 2006. Chosen doctors in primary health care who will be chosen by insured persons exercising their right to primary health care services will thus become the gatekeepers of the system. In that role they will have public authorization that other doctors of primary and other levels of health care will not have.

Acting by themselves or in cooperation with health centres, chosen doctors will have the task to provide all preventive and curative services to insured persons who have chosen them, including compulsory preventive checkups, immunization, screening services, diagnostic and curative eservices which will be determined in a separate list of services of primary health care. That document will be adopted by the Ministry of Health by the end of 2005 (The scope and standards of primary health care services).

Public authorizations of the chosen doctors are:

- consultations, provision of preventive, curative, diagnostic, and therapeutic services according to The Scope of Services and Standards which will be stipulated for primary health care;
- determining and providing home treatment and care;
- prescribing drugs covered by compulsory health insurance;
- prescribing medical devices;
- determining needs for treatment at the secondary and tertiary level and referral to institutions at those levels;
- referral to medical and disability boards;

- collection and storage of medical documentation related to health status, diseases and treatment of insured persons, regardless of where they were treated.

Other doctors at the primary and secondary level will have public authorization only if chosen doctors transfer the authorization to them but it will have a limited scope, e.g. only for consultations, treatment of certain diseases, prescribing drugs for treatment of a particular disease, referral to other specialists for consultation, etc. These authorizations will be time-limited. Transfer of authorizations will be done by referral. Doctors who do not have the status of chosen doctors, will provide the services covered by the Health Insurance Fund to insured persons only in cases of emergency treatment.

Health centres will still be responsible for primary health care in the future. Private doctors will be entitled to carry out tasks of chosen doctors if they fulfil legal requirements stated in public announcements released by the Health Insurance Fund for entering into contract for providing a determined amount of care under the same conditions as the chosen doctors in health centres.

The scope of services to be provided by health centres with chosen doctors in municipalities will be in line with the Health Care Programme and it will depend on the size of population groups i.e. population who need health care in accordance with norms for particular services. Defining the work of health centres per content and scope of work of chosen doctors, based on norms, will change the existing health centre services envisaged for the primary care so that some centres will be organized for the territory covered by more than one health centre. This will be the case with centres for mental health, day care centres, centres for pulmonary diseases, centres for children with special needs, and units for health improvement as part of hygienic and epidemiological care. The content of primary health care activities stipulated by the law regarding the centres will not be provided by each health centre because of the size of the region, but they will carry out all the tasks related to activities of chosen doctors in primary health care.

The function and tasks of health centres will depend on the size of the territory they cover i.e. the number of persons who chose their doctors, population needs and in some cases geographical and traffic conditions of specific municipalities. The assessment of rationality and utilization of capacities will have a more significant role in determining more specialized services of a particular health centre. Most health centres will mostly employ general practitioners (i.e. specialists in general medicine), paediatricians, visiting nurse services, dental preventive services (for preschool and school children) and laboratory services. Other segments of health centres that are organized into centres such as gynaecology, pneumophtisiology, radiology, mental health etc. will be organized and remain in a particular health centre or health station if it can be justified by the number of patients, i.e. the size of population the services are provided for.

Regional centres will provide services to population of the territory of two or more existing health centres or health stations and some will be organized to meet population needs i.e. population groups living on territory covered by two or more municipalities. For the purpose reason of rationality and better organization of work, health stations will be parts of health centres.

Other existing specialist services of health centres will not remain an integral part of health centres. This especially applies to hospital beds, dialysis units and some specialist services. Above-mentioned capacities will be abolished and attached to secondary health care facilities or they will be offered in a bid to private or other sectors. Some specialist teams will take over the role of chosen doctors if they decide to do so, especially in those areas where shortage of chosen doctors is acute and where such a need arises. There will be no hospital beds in health centres, because there is no professional justification for them, because health centres are not capable of providing hospital health care and there are enough, even excessive capacities of that type in Montenegro.

Doctors in occupational medicine who are not chosen doctors and work in the Centre for Functional Diagnostics in Podgorica will be used to establish an institute or some other organizations in charge of occupational safety, occupational medicine, occupational health. Apart from preventive checkups of employers and citizens (checkups for driving license, doing sports, job applications) this institution will deal with epidemiology and study of mutual relations between factors of the working environment and health status of the active population as well as providing consultative medical and technical assistance to employers for the prevention of occupational

injuries and professional diseases. This institution, provided for by the Law on Occupational Safety in part related to health care will be responsible for defining uniform doctrine of occupational medicine in Montenegro and providing professional assistance to administrative authorities in preparing regulations regarding occupational safety and health. The work of this institution will be funded by assets of employers and citizens who will use its services, and partially from the Budget for the part related to assistance and elaboration of professional basis for laws, various regulations on occupational safety and so on.

## **6.2 Organization of secondary health care**

The reform of primary health care and affirmation of chosen doctors as gatekeepers of the health care system will reduce the number of referrals to the secondary level which will be relieved from previous pressures. This will create conditions for raising the quality of work of the secondary health care level and improving the conditions for carrying out their role in the health care system.

Hospitals will have to discontinue some services, i.e. delivery of services that belong to the domain of primary health care, change their work organization and undertake some new tasks. Working in jointly with consultants, the Ministry of Health will perform analysis of hospital capacities and determine which services and hospital capacities will not remain within the public health care system or will be privatized.

Work distribution enables distinction between secondary and tertiary health care services, thus tertiary health care will be provided exclusively by the Clinical Centre and the Institute of Public health.

At the secondary health care level the priority will be given to outpatient treatment which will perform all pre-hospital treatment procedures before admittance to inpatient treatment. Admittance of patients to hospitals will be approved only after all necessary medical examinations have been completed, i.e. if constant observation of their vital functions is necessary. Specialist outpatient service will be organized only in general and specialized hospitals and the Clinical Centre. Although specialist outpatient services and hospital services will not be organized separately, each ward in a hospital will devote a determined amount of time, i.e. part of working hours, to treatment of patients in outpatient services. Records will be kept separately for outpatient and inpatient services. The number of outpatient clinics and the number of the staff who work there, will be determined on the basis of norms and the size of population from the territory covered by that hospital, i.e. that ward.

Giving priority to the outpatient services implies reorientation of the method of work in secondary and tertiary health care. In this way the planned intervention will be provided, without unnecessary hospitalization and waiting for the operations. Emergency cases will be the exception to this rule.

This approach, which requires only changes in work organization, will enable to change the ratio between outpatient and inpatient treatment in the favour of the first ones and reduce the number of hospitalized patients. Reduction of unnecessary hospitalizations will rationalize the capacities of the secondary level institutions.

Hospitals will introduce 'day hospitals' i.e. "hospitals without beds" where patients will stay for only one day or few hours in a day to be given a certain treatment. Most of the patients in day hospitals will be there because of scheduled operations. For those services 'classical hospital beds' are not needed nor the full scope of care necessary during hospitalization.

In the next five years new wards will not be opened and new inpatient capacities will not be developed. Hospitals will give priority to improving the quality of diagnostics and treatment. In order to improve the quality, new technology i.e. more complex and more expensive equipment will be introduced gradually.

Hospital services at the secondary level will be provided in general and specialized hospitals and in the Clinical Centre. General hospitals will have four basic specialties in the future: internal medicine, surgery, paediatrics, and gynaecology with obstetrics. Their services will be supported by adequate laboratory, radiology, transfusion, functional diagnostic services, anaesthetics services and a pertaining pharmacy.

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General hospitals will provide treatment within:

- **Internal medicine services** for internal medicine patients, patients with neurological, psychiatric, infective, pulmonary, endocrinological (diabetes) problems and dialysis patients. For treatment of the above-mentioned patients the doctors working in those wards will acquire further knowledge and have practical professional development in the Clinical Centre or in other health institutions;
- **Surgical services:** general surgery patients, patients who need certain services of routine vascular and gastrointestinal surgery, patients with less risk, areas of urology and oncology (surgical services) otolaryngology, and maxillofacial surgery;
- **Gynaecology with obstetrics**, for complete obstetric services, diagnostics and treatment of gynaecological cases, except high risk and complicated gynaecological interventions;
- **Paediatrics:** diagnostics and treatment of the children up to 15 years of age for all conditions except those classified for tertiary health care level.

### General Hospitals:

Specialties	Planned authorized services
Infectology	Existing internal ward beds can be used for quarantine hospital treatment, identification of disease, treatment and control, with laboratory testing in all cases except HIV/AIDS, etc.
Psychiatry	10% of internal ward beds can be put used for resolving acute conditions of mental treatment sessions; acute anxiety; support to chronic cases; support to centres for mental health and in case when patients need short-term isolation; monitoring of self-neglecting and self-injuring cases.
Anaesthesia	General anaesthesia for patients, treatment of injuries as a support to surgical conditions; provision of 24-hour service of a specialist anaesthesiologist and basic anaesthetic equipment.
Otolaryngology	Surgical beds will be used to treat patients with minor risk, including children, diagnostic procedures and treatment of patients with relatively high risk, possibility of treatment of injuries, with the presence of an ORL specialist.
Radiology	Basic diagnostic radiology and ultrasound, routine radiology checkups, fluoroscopy, mobile apparatus for operating theatres
Pathology	Histology as a support to surgeons, cytology, mortuary
Transfusion	Blood tests, providing safe blood, diagnostics tests

The hospitals will have certain specialist services from other areas (dermato-venereology, orthopaedics, and otolaryngology) to provide consultative and outpatient services if conditions regarding equipment, necessary number of inhabitants and patients in their catchment area and other conditions are met according to norms. For those services there will not be separate wards with hospital beds.

Subspecialties will be organized at tertiary level in the Clinical Centre and certain specialties in specialized hospitals to supply the needs for the whole Republic. Computerized tomography and other complex procedures will be possible to introduce if analyses indicate that they are needed in a certain hospital and if there is no possibility to provide such services in some other hospital in Montenegro. The criteria for new procuring equipment will be based on estimated scope of services, which can be provided with as team that will utilize such equipment at least in one shift or, as a rule, in two shifts.

General Hospitals will be able to introduce certain subspecialties if that is in accordance with population needs, and if there is professional, organizational and economic justification for doing so, i.e. if that service is not included in the tertiary health care.

The number of hospital beds per ward in general and specialized hospitals is determined according to norms set out by this plan and criteria for defining the network of public health care services. Changes in hospital capacities, introduction of new services and procurement and introduction of new medical equipment will be possible only if they are consistent with standards for network incorporation and with the approval of the Ministry of Health.

The work of the hospital will be defined by annual work plans, particularly regarding the number of beds, personnel, equipment and other conditions. Hospitals will be funded by public assets according to criteria for being incorporated in the network of public health care services, i.e. according to a contract with the Health Insurance Fund.

The public health care network will be the basis for planning investment in hospital capacities and residencies in some medical areas to supply the needs of hospital and specialist outpatient services.

### **6.3 New role of tertiary health care**

Tertiary health care is a part of health care that provides the population with the most complex health services which hospitals and specialist services at the secondary level are not qualified for, or which cannot be organized at other levels for professional or economic reasons. The content and the scope of the tertiary service i.e. health care is not standardized because the criteria for most complex health services depend on the size of the population, the number of complex medical interventions in the population, equipment and organization of health care as a whole. In addition to that, tertiary health care is usually incorporated with scientific research in the field of medicine. The research is funded from the Budget. The synthesis of different roles of tertiary level causes ambiguities in its definition and roles. A tertiary health institution is an institution that provides services belonging to the most complex health services and tasks of training health workers and conducting scientific research, and tertiary health service relates only to providing the most complex health services, i.e. programs. Such services can be provided only by health institutions offering the most complex and specialized health services which are not organized in other health institutions and do not carry out research.

In the health care system of Montenegro, the Clinical Centre has the status of a tertiary health institution. However, tertiary health service in Clinical Centre has not been defined so far. Clinical Centre provides services at the secondary and tertiary level and those two services are not separated. The problem is not in organizational separation of secondary and tertiary service, but in not determining what a tertiary service is, that cannot be organized and provided by general hospitals. This is necessary for many reasons. First of all, because of the quality of medical services, capacities planning, funding the services and because the services at this level require different team composition, more complex technology and consequently produce different operating and material costs.

Tertiary health care of the Clinical Centre is defined on the basis of analysis of the current situation:

- services of the complex cardiology diagnostics, non-operative and operative heart interventions (dilatations, PTCA, stents, pacemakers, bypass);
- neurosurgical services;
- services of thoracoplasty and plastic surgery with specialized hospital wards;
- high-risk patients in vascular surgery;
- transplantations;
- combined oncology therapy – surgical, radiation, chemotherapy;
- spine and peripheral nervous system surgery;
- treatment of polytraumatic conditions where intensive therapy and constant control of vital functions is required;
- diagnostics and treatment of the most complex conditions and complications that cannot be successfully treated in general hospitals or would be uneconomical to treat because of the small number of cases;
- services of maxillofacial surgery including reconstruction of the mandible, reconstructive surgery of various injuries;

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- NMR diagnostics; PET; gamma camera;
- nuclear medicine services;
- immunology, virology services, responsibility for standards;
- intensive therapy for newborns with low birth weight and children with inborn malformations;
- transfusion services, blood processing and preparation of blood derivatives, control of test standards;
- subspecialty services which will not be organized in general and specialized hospitals

The Clinical Centre will remain responsible for the tertiary health service in the future and it will also provide services at the secondary level to insured persons from its catchment area (population of Podgorica, Danilovgrad, Kolašin municipalities) and tertiary services to all population in Montenegro.

Apart from providing tertiary services, the Clinical Centre is in charge for adopting standardized medical doctrine for prevention, early detection, treatment and rehabilitation of particular diseases, injuries and conditions in cooperation with the Doctors' Chamber, Medical Faculty and other professional bodies. Professional doctrine will be basis for professional medical work of medical workers at all levels and will contain scientifically proved procedures and instructions for the use of diagnostics and other methods in order to improve efficiency, quality of services and to link all segments of health care. The doctrine will be transmitted to other health institutions and workers by organizing training courses, professional reunions and seminars. The doctrine, guidelines and protocols will be prepared in cooperation with World Bank consultants.

The Clinical Centre is responsible for preparation of the programme for development of the plan for uniform doctrine, which will be based on priority tasks of health care. To that end, expert bodies will be formed for particular medical areas, i.e. specialties among the most eminent experts and experts from other hospitals and from primary health care. They will be involved in creating proposals, guidelines and recommendations for treatment of certain conditions and diseases from primary to tertiary level. The Ministry of Health – Quality Assurance Commission will approve the plan and concrete proposals.

The Institute of Public Health will also have the status of a tertiary health care institution. The tasks of the Institute are determined by the Strategic development plan so that the function of the Institute will be focused on promotion, prevention and care in the field of public health. The Institute will coordinate plans for health promotion for the whole Republic. It is also responsible for professional tasks in preparation of national programs, development strategies; public health programmes for resolving the most serious health problems and institutions; analysis of health status of the population; health economics; management; and health information systems and development of adequate indicators for those fields, and for determining the quality of health care. The Institute will also be involved in planning health care and providing professional and methodological support for planning and assessment of the plans of all health subjects. In the area of prevention of communicable diseases the Institute will prepare the national immunization programme and supervise its implementation in all health centres. In pursuance of the law, it will ensure monitoring and control of environmental parameters which are important for the health of the population.

The Institute also has a very important role in implementation of Convention on bioterrorism and other methods of protection. In the field of microbiology, parasitology and sanitary chemistry Institute will be a reference laboratory and it will provide standards for other laboratories in the area of microbiology, virology, and food safety control. For that purpose, the Institute will accredit all its laboratories in order to meet the standards in the area of food safety and HASAP principles. This is very important for export of the food produced in Montenegro to the European market, and for meeting all quality standards regarding food safety.

### **6.4. Organization of pharmaceutical activities**



Pharmaceutical activities belong to primary health care, which has a different organization from a health centre. The only task of the pharmaceutical service is to provide the population with medicines and medical devices. At the primary level this is done by pharmacies as independent institutions or private pharmacists, and at secondary level by hospital pharmacies which are usually only intended for patients treated in hospitals. Pharmacies at primary level can only provide prescribed medicines and some medical devices, and in some cases they can prepare some magistral and galenical formulations. Hospital pharmacies do not provide prescribed drugs, they only supply hospital wards with needed medicines.

In the field of production, distribution and supply of drugs for the population there are two different interests. One is the interest of producers in gaining larger profits, whereas the interest of the 'consumers' who are usually health insurance beneficiaries, is to have lower prices and non-profitable operation of pharmacies. Because of these differences in opinion about production, distribution and supply of medicines, the status of pharmacies varies. In some countries pharmacies are public health institutions and are therefore non-profitable institutions, whereas in other countries they have the status of a trading institution. Because of the nature of their work, which is linked to health care and public interest of a country, which is under specific state control and specific regulations, there are differences in their organization and funding. State control in this field is necessary because of the possibility of negative impact on health and because simple principles of completely free market cannot be applied in health care. Those dilemmas are related to issues of privatization of pharmacies or alternative solution as public health institutions. A Study of the organization of this service should be elaborated in cooperation with experts in this area with assessment of all solutions. Final decisions will rest with the Government.

In consistent resolution of this issue, prior to adoption of final decisions, the Ministry of Health will draw up bylaws during 2005 for regulating pharmaceutical activities and establish an Administration for Pharmaceuticals as a regulatory body in this field. At the same time the Ministry will propose the following:

- to separate pharmacies as health institutions in retail trade from wholesalers as a business enterprises, in pursuance of the Law;
- wholesalers who deal in wholesale have to ensure availability of drugs included in the Essential List of medicines for use in health institutions and for prescriptions, in pursuance of the Law;
- all medicines, under the condition that they are registered for sale, except those from OTC list, will be available on prescription, regardless of the pharmacy's status: public or private;
- the Health Insurance Fund will refund only prescriptions for medicines from the Positive List of medicines.

The number of pharmacies will be defined on the basis of staffing and other norms which will determine the number of employed pharmaceutical staff, method of financing from public funds (assets of the Health Insurance Fund), depending on the number of doctors working in public health care network, and final decisions regarding the organization of pharmacies.

In some areas, where the number of insured persons is inferior to norms for operating of pharmacies, in remote areas, i.e. where there is no economic justification for establishing a pharmacy, the chosen doctors will be responsible for the supply of necessary drugs. This will be regulated by the Ministry of Health and will include most necessary drugs for acute needs ('urgent prescriptions') of their patients and for house calls ('doctor's bag medicines').

### **6.5. New medical technology**

It is known that the increase of expenses for health care mostly depends on the new medical technology. According to some data, 'new technology' in developed countries each year increases the expenses in public health systems by about 2%. The application of new medical technology is evident in Montenegro, particularly if we take into account its isolation lasting several decades and needs to follow modern technological and scientific achievements in medical science and health care. In given circumstances in Montenegro, it is not possible to identify that tendency, but we can

expect it to become more evident in the forthcoming period. New medical technology and its impact will reflect more and more on health care, particularly in raising the quality of services, but also their costs.

Because of the significance of new medical technology for the overall development of health system, the evaluation of results of new technology will be introduced, through method of analysis and results, which are based on scientific evidence ('evidence-based medicine') and their benefits and economic effectiveness. This approach is widely present in highly developed countries, so its introduction is even more important in countries with low GDP and modest financial possibilities for funding health care.

In order to evaluate the results of new medical technology, the Ministry of Health will appoint a special commission for evaluation of new technology in health care, and the Institute of Public Health will provide professional assessment of the Commission's work. The tasks and responsibilities of the commission shall be:

- preparation of proposals and amendments to equipment standardization per health care levels and specialties;
- preparation of standardized procedures for pre-operative, operative other procedures in hospitals, and recommendations for efficient and successful pharmacotherapy in health institutions;
- monitoring the development of the new technologies in medicine and in health care, experiences regarding costs and benefits for health improvement and monitoring evidence for justification of its use in practice,
- evaluating proposals of health institutions for purchase of new equipment and introduction of new treatment methods and medical devices in practice, on the basis of evidence about their benefits and economic acceptability. One component of the analysis will be the evidence of epidemiological needs; the expected number of patients to be treated with this new equipment; number of examinations; benefits and possibilities for using this equipment to replace old equipment and previous treatment methods; qualification of staff for using new equipment; service payment method, etc;
- opinions and analysis of the Commission will be used by the Ministry of Health for approving decisions of health institution management on investments in health capacities and by the Health Insurance Fund for evaluating work programmes of health institutions and their funding.

Administration for Pharmaceuticals will register medicines and issue permits for placing them on the market and will be responsible for other activities stipulated by Law. As regards medicine cost management, the Ministry of Health will make the following decisions in 2006, in cooperation with Health Insurance Fund and Doctors' and Pharmaceutical Chamber:

- control of medicine prices which will be based on comparative prices of the same drugs in the countries with similar GDP per inhabitant,
- introduction of reference prices of medicines as a model and method for determining the level of medicine prices which are on the Positive List, to be funded by the Health Insurance Fund, in line with its Financial plan;
- as regards development of clinical guidelines in pharmacotherapy of particular diseases and conditions, special working groups for particular specialties will propose concrete solutions for the most successful and most rational use of drugs in health institutions and drug prescriptions.

## **6.6 Health care quality**

Health care development is not only related to the size of capacities, but also to quality. The issue of health care quality is differently evaluated by health professionals and beneficiaries of its services. According to doctors, quality implies high-quality diagnostics, treatment and technological potential of their work, treatment results, and diagnosis accuracy. According to patients, quality

refers to the relationship between health workers and patients, conditions of hospital stay, duration of waiting for examinations or interventions, respect of their rights, etc.

One of the objectives of the reform is to improve the quality of work in the health sector. Therefore, it is necessary to develop quality indicators for all health care activities, in cooperation with health institutions, the Institute of Public Health and Doctors' Chamber.

The following general quality indicators for overall health care activities are determined:

- Ratio of first and repeated visits for particular services,
- Percentage of non-defined conditions, when discharging patients or conditions with symptoms,
- Percentage of wrong diagnoses,
- Percentage of prescribed antibiotics in particular service or related to particular diagnoses,
- Percentage of preventive visits i.e. services,
- Duration of treatment i.e. sick- leave,
- Number and percentage of hospital infections,
- The number of relapses and repeated operations,
- Percentage of the persons covered by immunization.

Above-mentioned quality indicators will be controlled by the Institute of Public Health through annual analyses of the work of health services by levels and they will also be important when concluding contracts with the Health Insurance Fund.

## **7. Health personnel plan**

Owing to their knowledge, expertise, number, distribution and organization, the employees in the health care sector are a very important segment of the overall health care system. Human resources of have an impact on the health status and results of efforts for promotion of the health status, population satisfaction with the health care system, and health care costs. Human resources are pillars of the health care system in every country, its legal and traditional role in the society, the system of training of health workers and a number of other social relations.

The number of personnel, employed in the health sector is, on the one hand, a reflection of quantitative development of health care activities and its compatibility with real and planned needs of the system i.e. its capability to react to new challenges, on the other hand. The amount of investment in health care, i.e. insurance and costs of workforce also very much depend on the number and the structure of the personnel. It is a known fact that the costs of workforce (salaries) account for 65-80% of total health care expenditure and because of that they greatly affect required funds for maintenance and functioning of system. All of these are reasons for planned employment schemes in health facilities, included in the health services network and it has to be in accordance with planned tasks and objectives and available financial resources.

### **7.1 Primary health care personnel**

On the basis of personnel analysis and the results of the Primary Health Care Project, staffing norms are determined for this area. Staffing norms are defined in relation to the size of the population. It is one of the most important criteria for planning required health capacities and defining the network. The staffing norms ensure well-balanced organization of the health care service, accessibility of all levels of health care, professional, socio-medical and economic justifications for having those services at particular locations. Because of these reasons some services such as radiology, pulmonology, physiotherapy, and psychiatry are not organized in the same municipality or they are organized only at one level. Furthermore, in some cases joint capacities are planned because of economic reasons, especially in radiology, pulmonology, physiotherapy, and psychiatry.

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Along with implementation of new organization of primary health care and estimated changes in the number of population it can be determined that the need for chosen doctors and nurses working as teams responsible for most health care tasks will be on average 488 teams of chosen doctors and individual doctors in support centres. Thus the total number of employees in health centres will amount to 2427. The staffing plan in primary health care will be developed each year, based on norms and in accordance with planning criteria.

**Table 20**                      **Planned number of staff in primary health care**

Health centre	Number of employees
ANDRIJEVICA	21
BAR	156
BERANE	137
BIJELO POLJE	197
BUDVA	62
CETINJE	73
DANILOVGRAD	64
HERCEG NOVI	130
KOLAŠIN	39
KOTOR	89
MOJKOVAC	39
NIKŠIĆ	296
PLAV	54
PLJEVLJA	141
PLUŽINE	16
PODGORICA	664
ROŽAJE	89
ŠAVNIK	11
TIVAT	53
ŽABLJAK	16
ULCINJ	80
UKUPNO	2,427

\*The average number of employees per teams of chosen doctors and profiles is given in the Annex to the Plan

On the basis of personnel standards, defined during Project implementation, some health centres and health stations will not fulfil the requirements for maintaining work in all services they have provided so far. Such services it will call for part-time employment or will be covered by one team working in two health centres. According to the law, which allows health workers to work for other employers, doctors will have the possibility to conclude contracts with a health institution where they have full-time employment for the scope of services determined by norms, and to conclude contracts with other health institutions. This is one way of resolving the issue of providing services to the population in areas where it would be uneconomical to maintain teams.

Work norms for chosen doctors and support centres will be determined by the Ministry of Health on the basis of the scope of rights and services and catalogue of services of particular health care activities, and will be used for planning the work of health institutions and for determining new payment methods based on capitation and the cost of services.

### **7.2 Personnel plan in specialist and hospital care**

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All prerequisites for detailed personnel planning in specialist and hospital health care will be defined during the Health Care Improvement Project, by establishing norms and standards for this service. Moreover, on the basis of health institutions network, the total institutional capacities in this segment of health care will be determined. Due to the need to direct this very important part of the health care system, planned frameworks are prepared regarding the number of employees as a basis for carrying out employment policy in this field.

Planned number of personnel was calculated by using the following parameters:

- Size of the catchment area and the number of discharged (or admitted) patients per year;
- Occupancy norms for existing bed capacities;
- Average planned length of hospital treatment per specialty;
- Average number of inpatient hospital patients per doctor or his team (daily, annually);
- Average number of standardized hospital days per doctor in inpatient hospital service;
- Norms team structure in inpatient and outpatient services.

Work analysis of secondary health care showed that bed occupancy in Montenegro is low and average length of the treatment is too long. Proposed norms on average length of treatment and hospital bed occupancy reflect real needs for hospital bed capacities in Montenegro. Implementation of stated norms for occupancy of hospital beds and average length of treatment, which are below the European average, will not harm health care of the population, but will reduce the number of hospital beds by slightly over 20% or by 441 beds that have not been used for decades.

The proposed norms are based on international experience. The European region of the WHO had an average length of hospital treatment in acute hospitals of 9.4 days and in EU it amounted to 7.1 days (1999). In the same year the average occupancy of hospital beds in Europe was 80.18% and in EU 77.13%<sup>31</sup>.

In the future these two very important indicators of hospital health care in Montenegro will have to be improved and be approximated to European standards because it is known for a fact that unutilized capacities are not used for treatment of the population and therefore they show how uneconomical the system is.

**Table 21: Norms of planned occupancy of hospital bed capacities<sup>32</sup>**

Area – Ward	Situation in Montenegro in 2003	Norm
Internal*	76.70	80.0
Surgery (with urology, maxillofacial surgery, ophthalmology, ORL)	66.53	75.0
Gynaecology	54.40	75.0
Paediatrics	49.60	75.0
Psychiatry **	47.70	90.0
Orthopaedics **	55.1	75.0
Tertiary health care ***	68.68	80.0

<sup>31</sup> Source: Health for all Databases, 2004 Copenhagen

<sup>32</sup> Note: \*Internal medicine with infectology, pulmonology, and neurology in general hospitals.

\*\* Data for situation in psychiatry refers to specialized hospital in Dobrota-Kotor, an orthopaedics refers to specialized hospital in Risan

\*\*\*Tertiary health care covers all services of the Clinical Centre (secondary and tertiary health care).

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**Table 22. Norms of average length of hospital treatment \***

<b>Area – Ward</b>	<b>Situation in Montenegro in 2003</b>	<b>Norm</b>
Internal *	9.88	8.5
Surgery (with urology, maxillofacial surgery, ophthalmology, ORL)	8.08	6.5
Gynaecology	6.61	5.6
Paediatrics	6.69	6.7
Psychiatry **	75.95	49.0
Orthopaedics **	15.20	12.5
Tertiary health care ***	7.30	7.0

**Table 23. Number of existing hospital beds in general hospitals and needs based on norms**

<b>General Hospital</b>	<b>No. of existing beds</b>	<b>Norm of capacity utilization</b>	<b>No. of needed beds based on norms</b>
<b>Internal medicine</b>			
GH Bar	61	80.0	49
GH Berane	67	80.0	54
GH Bijelo Polje	56	80.0	45
GH Kotor	52	80.0	42
GH Nikšić	95	80.0	76
GH Pljevlja	38	80.0	30
GH Cetinje	24	80.0	19
GH – TOTAL	393	80.0	314
<b>Gynaecology</b>			
GH Bar	35	75.0	26
GH Berane	50	75.0	38
GH Bijelo Polje	36	75.0	27
GH Kotor	33	75.0	25
GH Nikšić	52	75.0	39
GH Plevlja	24	75.0	18
GH Cetinje	33	75.0	25
GH TOTAL	263	75.0	197
<b>Surgery</b>			
GH Bar	42	75.0	32
GH Berane	54	75.0	41
GH Bijelo Polje	44	75.0	33
GH Kotor	41	75.0	31
GH Nikšić	115	75.0	86
GH Plevlja	27	75.0	20
GH Cetinje	49	75.0	37
GH TOTAL	372	75.0	279

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<b>Paediatrics</b>			
GH Bar	19	75.0	14
GH Berane	26	75.0	20
GH Bijelo Polje	20	75.0	15
GH Kotor	19	75.0	14
GH Nikšić	24	75.0	18
GH Plevlja	15	75.0	11
GH Cetinje	15	75.0	11
GH TOTAL	138	75.0	104

**Table 24: Number of existing beds in specialized hospitals and Clinical Centre and needs based on norms**

<b>Specialized hospital</b>	<b>Number of existing beds</b>	<b>Norm of capacity utilisation</b>	<b>Number of needed based on norms</b>
SH for Pulmonary Diseases and TB Brezovik Nikšić	141	80.0	113
SH for Psychiatry Dobrota Kotor	303	90.0	273
SH for Orthopaedics and Neurology Risan	178	75.0	134
Clinical Centre	740	80.0	669
TOTAL	1362		1189

Calculated needs for bed capacities per ward will be based on the number of previously hospitalized insured persons per 1000 insured persons, and it there will be a gradual increase from current 108.2 per 1000 to about 120 per 1000 inhabitants in 2007. Planned increase in needs for hospital treatment of insured persons will mean the need for increase in norms of hospital bed capacities in comparison to 2003 by approximately 10%, which will vary for different specialties. Planned estimates at hospital level will deviate in line with the changes in their catchment areas i.e. the changes in population numbers.

The proposed number of hospital beds in Montenegro is 3.4 beds per 1000 inhabitants. The proposal is based on existing data on the scope of hospital treatment and hospitalization rate as well as on economic principles about rational organization and operation of the hospitals. The number of needed hospital beds will be adjusted every year when contracts with Health Insurance Fund are concluded on the basis of data on the number of discharged and admitted patients in previous years. This will become one of the criteria for preparation of work programme of a hospital regarding the scope of work i.e. estimated number of hospital days, needed staff and costs for concluding contracts and determining the cost of services. Instead of determining needed capacities the data on the size of catchment areas of a particular hospital ward i.e. hospital will be used. Calculation and monitoring will be done by the Institute of Public Health. The proposed norms based on the number of hospital days per doctor or team will be taken into account when elaborating plans for hospitals. The norms are proposed using the experiences from European countries, where the 'productivity' of health workers is higher than in hospitals in Montenegro. Increase in 'efficiency, scope and quality' that is proposed by norms in this plan is the average workload of medical teams in European countries. Their implementation in Montenegro will mark

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further efforts to improve efficiency, rationalization of work in hospital service and significant financial savings.



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**Table 25. No. of provided hospital days in 2003 and planned no. of hospital days by medical area<sup>33</sup>**

Area	No. of doctors in 2003	No. of hospital days in 2003	No. of hospital days per doctor in 2003 on a daily basis	Norm of hospital days per doctor	No. of hospital days based on the norms of average length of treatment per doctor	No. of doctors needed for dispensary treatment based on work norm*
General Hospitals						
Internal wards	59	110,019	7.03	8.00	94,652	46
Gynaecology	38	52,224	5.36	8.00	44,244	21
Surgery	92	90,329	3.83	5.50	72,666	52
Paediatrics	25	24,986	3.90	6.00	25,023	16
Specialized hospitals						
SH for Pulmonary Diseases and TB Brezovik Nikšić	15	64,016	16.67	15.0	18,955	5
SH for Psychiatry Dobrota Kotor	15	52,713	13.73	15.0	34,006	9
SH for Orthopaedics and Neurology Risan	27	35,788	5.17	5.5	13,247	10
Clinical Centre	214	18,5510	3.39	5.5	185,449	137

In addition to work norms, the makeup of the doctor's team is important, i.e. how many nurses, technicians and other health workers there are per doctor in inpatient health care. The proposal of the average hospital team is calculated using experiences and practice in other countries. In EU the average number of employed nurses and other health staff per bed is between 0.77 and 1.70. In Montenegro that average amounted 0.52 in 20003, and the number of other health workers amounted to 0.29 or in total 0.81 health workers per one existing bed.

The total number with doctors amounted to 1.00 employee per 1 bed. The average team per bed amounted to:

**1 hospital doctor, 2.70 nurses; 1.52 other health workers**

The proposed norm for hospital treatment is:

**Per planned bed:**

- **0.14 doctors**
- **0.50 nurses**
- **0.30 other health workers**
- **0.20 non-health workers**
- 

**Total for team: 1 hospital doctor, 3.57 nurses, 2.14 other health workers**

<sup>33</sup> Note: The number of 256 working days in a year were used as basis for calculating the needed number of doctors. This norm does not include doctors who do not provide inpatient service (directors, managers, university professors) and those who provide outpatient services. The total number of needed staff is calculated when adding up staff engaged in specialist outpatient services.

Concrete norms for inpatient service are part of reform activities that will be implemented after organizational changes and separation of secondary and tertiary services, inpatient and outpatient services in all general and specialized hospitals and the Clinical Centre. Proposed staffing norms for hospital treatment are approximate values to serve as indicators of global development of health care personnel in the forthcoming mid-term period.

Defining the plan of hospital beds and staff related to hospitalization rate is used for orientation of hospital service for which the basic criteria will be the population needs for hospitalization. The objective of planning hospital capacities, on the basis of this plan is the increase in efficiency and effectiveness of hospital health care.

Hospital health services also include specialist outpatient services. Planned ratio between hospital and outpatient services will be:

- 10% of doctor's team working hours in the area of oncology and infectology;
- 15% of doctor's team working hours in the area of paediatrics and gynaecology;
- 25% of doctor's team working hours in the area of orthopaedics and surgery;
- 40% of doctor's team working hours in the area of internal medicine, psychiatry, and neurology;
- 50% of doctor's team working hours in the area of ophthalmology and otolaryngology.

#### **8. Financial framework for health care development**

Planned changes in health care also include changes in organization and work of the Health Insurance Fund as part of the reform process. This is particularly relevant for planning health care and for establishing partnership relation with health institutions and workers. Experiences from other countries show that the reforms were successful only when they were followed by adequate funding and changes in this area. Bearing in mind the importance and responsibility of the Health Insurance Fund for the success of the health care reform and financial sustainability of the health care system, the Government of the Republic of Montenegro has adopted the Financial plan of sustainability for the period 2005 – 2007.

This document stipulates that the funds for health care in the next period will have decreases in real value of their proportion in GDP from 7.10% in 2003 to 6.60% in 2007.<sup>34</sup> This estimate is based on expected economic growth and GDP growth. It is planned to nominally increment financial resources for health for the period 2003-2007 by 16.4% or on average by about 4.1% per year i.e. from EUR 152.5 to EUR 177.61. Development of contracting criteria and the scope and standards for health care funded by the Health Insurance Fund will be one of the priority tasks in 2006.

Determined financial framework in the next three years does not ensure higher financial possibilities for health care development in Montenegro. Possible approach to sustainability of the health care system is the rationalization of health care and increase in additional funds with proportional reduction of public funds. In addition to measures determined by the Financial plan of sustainability based on defined priorities, the Master plan lays emphasis on the following priority measures:

1. Expansion and increase of co-payments of insured persons for using health care services. The law exempts some categories of insured persons from paying co-payments,
2. Introduction of voluntary insurance which can provide additional rights, i.e. services, which are not included in compulsory insurance (e.g. dental services), higher standard of services than those objectively possible, treatment abroad (not covered by the Health

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<sup>34</sup> The average in EU for health care is 8.66% of GDP

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Insurance Fund), services related to waiting lists (orthopaedics, etc.), services of private practitioners who are not included in the public health care network and have not concluded contracts with the Health Insurance Fund and other. Voluntary insurance can be introduced as a separate activity of the Health Insurance Fund which will be financially and organizationally separate from compulsory insurance and will function according to principles and laws on health and general insurance and their regulations.

3. Introduction of private outpatient services in the public health care network. According to the Law, public health care institutions can lease out unused capacities for which there is no need in public health care system and insurance. Those services could be a component of additional voluntary insurance.
4. Processing of refundable damages caused by legal and natural persons to the Health Insurance Fund, because this is not conducted to a satisfactory extent in practice.
5. Introduction of reporting and keeping records of occupational injuries and professional diseases of active insured persons (the employed, the self-employed, farmers, etc.) and persons who are exposed to risks of contracting diseases of injury.

Proposed measures would enable increase in financial resources for compulsory insurance and financing health care and better control over private resources, which are present in the system, as population expenditure. At the same time, these additional financial resources would improve the financial situation of the insurance sector and consequently the operation of health care institutions. In addition, certain objectives related to privatization of health insurance and care would be achieved, thus putting it under more control.

In order to improve the quality, there will be a possibility of competitiveness in health care. To that end, regulations for including private facilities in the public health care network will be developed, in accordance with the Law. Criteria will be developed to grant concessions to private practitioners who meet the legal requirements and are interested in concluding contracts with the Health Insurance Fund. All concessionaires will be able to apply for a position for providing health care services if they offer better conditions than public health institutions or at least the same conditions in areas where public institutions and their facilities are deficient.

The public health institution network will represent capacities needed for providing the health services programme, which will be financed by public funds. The public health services network will be determined on the basis of:

1. priorities stipulated by this plan;
2. guidelines and attitudes towards development of health care facilities;
3. norms and standards for health care teams, staff, work.

The public health care institutions network will:

- be based on modern organization of health service and set priorities for health care stipulated by this Plan;
- be based on work technology, necessary knowledge of teams of health workers and requests in terms of residencies and advanced vocational school training that is not needed for performing certain tasks,
- contain and include only those capacities that can be funded from public financial resources or additional resources and which will be sustainable and rationally used;
- be based on organization and distribution of health care facilities on the territory of Montenegro for adequate catchment areas, i.e. the adequate number of potential service users;
- take into account specific characteristics of particular municipalities, in order to provide equal accessibility of necessary services to the population.

The Ministry of Health will develop the public health institutions network after completing work in project activities related to norms and standards in secondary and tertiary health care.

The health institutions network is adopted by the Government of the Republic of Montenegro according to Article 12 of the Law on Health Care.

## **9. Conclusion**

By adoption and implementation of this Plan for the period 2005 -2007 the determined objective of health care system development will be achieved through:

- harmonizing development with the population needs and priorities as an integral part of the reform process;
- increasing the efficiency of health care activities;
- reducing the capacities at all levels, which will not reduce the possibility of treatment or accessibility and availability of health services;
- financial stability of the system;
- implementation of the plan which will allocate 15% of required resources to health care. Those funds will be used for improvement of working conditions and operation of the health institutions, which implies better equipment, better possibilities for professional development and increase in salaries of employees. These are the objectives of the health care reform.

The Ministry of Health will monitor the implementation of this plan through annual reports of the Institute of Public Health, the Health Insurance Fund and health institutions.

Evaluation of the Plan will include special reports and analyses regarding implementation of the planned priority tasks. It will also include the measures and those responsible for the implementation of each activity.