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

CONTENTS

Introduction

The plan is a professional and political document on basis of which the development of health care system is directed in accordance with development of the country and it is the basic instrument of the health policy.

The function of the plan for the development of health care is to coordinate the activities that contribute most to the improvement of the health condition of the population. According to the definition by the WHO the health is not only the absence of diseases but the greatest possible physical, mental and social prosperity. As such, it depends on a number of factors in society that cannot be influenced by an individual. Because of those factors the health condition of the population is directly or indirectly linked with all the activities of the people in a society, and often even with activities and events in other countries. There are almost no areas without an influence on health condition of the population. Every law or regulation has certain elements that can contribute to improvement or deterioration of the health of the population.

The plan has political character and because of that the political agreement is necessary regarding resources and decision-making methods on the status of health care system. The development of health care can lead to more or less conscious efforts to allocate more or less funds from GDP, or to set the priorities in a different way, deadlines for their implementation, to define the solidarity and relationships in the society in a different way, or to change the organization and financing of the health care service. Because of that any health care plan has to certain extent its political dimension. This follows from the fact that the health care system is a component of the social system that can function only in its framework and it is interdependent with other economic and social and developmental trends. Health sector is not an expenditure but an investment in achieving social, economic development and development of the society as a whole.

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, the strengths and weaknesses;
- Data on health condition of the population and their needs,
- Professional and scientific knowledge about possibilities and methods of improving health, early diagnosis, treatment and rehabilitation of the diseased i.e. injured;
- Data on size and population structure and its projections in the future;
- Respecting social, ecological, cultural and other social diversity and characteristics of the society;
- Economic potentials for financing the health care;
- Health care facilities for the improvement of health and on other necessary resources;
- Results of the utilization of available resources for health service,
- The objectives of health policy and

- Strategy for the development of 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 health sector in Montenegro (2003.),
- Law on health care and Law on health insurance (2004.),
- International conference on primary health care, Alma Ata (1978),
- Declaration on health promotion- Ottawa (1986),
- Health reform in Europe, WHO (1996),
- Ljubljana document on reforms of health care systems, WHO (1996),
- The fourth international conference on health promotion, Jakarta (1997)
- European strategy of WHO '' Regional health for the 21st century'' (1999)
- WHO declaration on health condition of the population in the world (1999),
- UN millennium development objectives (2000),
- Bologna declaration on high education (2000),
- The fifth world conference on health promotion, Mexico (2000),
- Dubrovnik document on health needs of vulnerable groups in SEE (2001),
- Agenda for economic development of Montenegro (2002 – 2007).

The general aims of development of health sector in Montenegro are:

- Development of health policy to raise citizens awareness that health outcomes depend on their personal decision and their responsibilities for their health,
- Improvement of health care in the most acceptable and equal way,
- Development of health care system in line with development 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 scientific technology,
- Financial stability of the system.

Strategy for health care development defines the activities in the system that aim at implementation of the objectives of health policy by 2020. Montenegro has achieved certain results in the development of health care system but at the same time has come up against more demands for its improvement. Because of that the health care system reform has started, mainly with changes in organization of the health services and restructuring levels of health system levels, particularly primary health care as well as the financing method in order to ensure the stability of the system.

The reform of the whole health care system and its operation in the framework of the 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 documents of WHO and EU strategy for health care development with the main objective of adding years to life and what is more important adding life to years. Because of that further development of health care system should be based on financial potentials of the Montenegrin economy what would inevitable lead to selection and setting new priority objectives and tasks.

1.1. Planning the health care service

In socially-oriented societies, health care and health services are of public interest for the country. Because of that its development cannot be uncontrolled, left over to ambitions and skilfulness of certain groups of service providers or to the market but to meet the needs of the society. In the health care system the law of supply and demand is not completely acceptable and it does not operate fully that is characteristic of market economy. If the development of health care is left over to service providers, i.e. supply, that would lead to misbalance, where the supply of certain services would be too high and of some other services too low. It could happen that service providers (health institutions) are not interested in certain service programs (because of financial or other reasons). Also it could 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, that health professionals are very interested in could be very high. A great number of needs could not be ever met or they would be met under unacceptable conditions. Because of all that the objectives of health improvement, citizens' satisfaction and success of the health care system could not be achieved.

Good health care system has to meet the needs in all narrower fields of medicine that are the results of health condition of the population. In public health care system provision of development and supply of all health care services is the task and the obligation of the government. It has to take care of resources (human, space, equipment) that are needed for making the services accessible to the citizens. Those services are needs that are identified and defined by the profession for the whole population everywhere in the country. Therefore the needs that are consequence of the health condition of the population should be taken into account but also how to financially cover them. All the needs cannot be met by any society, i.e. country, because there are no necessary resources so when the health services are planned the method of setting the priorities is used. On basis of such principle all the fields get the possibility of meeting the needs, but those where better results in improving health are expected are getting better possibilities for development. Therefore the plan is the document and instrument for regulating complex interacting 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 lawfulness in health care but as a request that the management, organization and functioning of health services as well as the health insurance have to be under the social control.

The purpose of health care planning is to:

- provide conditions for better health and satisfactory functioning of health care system,
- set priorities in health care programs with orientation to prevention, early diagnosis and treatment of diseases in vulnerable group,
- develop primary health care,
- define the resources for achieving complete health care
    - human
    - material
    - financial.

In public health care systems the principles of comprehensiveness, solidarity, equality, non-discrimination and non-profitability and democratic decision-making about most important issues in health care are applied. According to those principles public (state) health care system have to cover the treatment expenses to all citizens , i.e. enable them to achieve their rights to health care regardless of their income ,age, sex, nationality, religion, health condition or other differences. The equality of the citizens, who are included in the system (non-discrimination), is valid for health insurance rights, accessibility to health services and their quality and equality of treatment, of health services and insurance. All of these have to be based on relation of solidarity between the rich and the poor, the young and the old, the diseased and those in good health, where the solidarity means the equal rights and obligations of the health insurance according to income of an individual i.e. his family and equal rights.
On the basis of those principles that are incorporated in the Laws on health care and health insurance, health care has become public and common welfare and the care of the whole society.

1.2. The objectives of the plan

The main objectives of the Master plan are:

1. **planned and organize development of capacities in order to provide equal access to health care,**
2. **defining the priority fields for development,**
3. **bringing the health care system in state of optimal operation and in line with socio-economic development,**
4. **increase in efficiency and quality of health care through changes in organization and functioning,**
5. **improvement in management of health care system**

Through planning , in line with adopted principles for health care, better use of available resources and greater satisfaction of needs is ensured and with this better health condition of the population. It is achieved through defining the following activities:

- tasks of the government and its authorities for making conditions for better health and satisfactory functioning of the health care system for the population,
- priorities in health services programs with greater orientation towards strengthening the health, prevention, early diagnosis of chronic diseases and primary health care tasks for most vulnerable groups;
- framework for providing resources (financial, human and material) for health care;
- solidarity relations in health insurance and with this linking the 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 in an inseparable whole;
- needed facilities for public health institutions that will be financed by the 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 their operation in the framework of available resources;
- information system for health 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 The tasks of the non-health departments of the Government in relation to health

Better health of the population will not be achieved if it is being taken care of only by health service. Therefore it is necessary to plan the needed measured outside the health care system. The health does not originate in hospitals, health clinics and pharmacies these are the places where the diseases are treated and prevented and they have originated in social and natural environment where an individual live and work. Health service has almost no influence on the environmental factors that affect the health and those factors can have positive but more often negative effect. Health services cannot solve the issues of protection of the environment and its pollution, traffic safety, work safety, housing, employment, education, social problems and poverty, alcoholism and other addictions.

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 on the diseased and injured. Application of those principles of the health insurance and relation between the entities is regulated by the law and other regulations as well as by the health care planning.

Since health care is provided to the population, when the needs for health services, facilities, and funds are planned, the number of inhabitants, age and sex structure of population, expected trends, number of inhabitants in an area, health condition and estimated needs now and in future as well as the economic situation in the country and its financial potentials in relation to health services, have to be taken into account. The role

of the development of the facilities, the organization of health services, how well it is equipped, qualified personnel, payment method and other factors are also very important.

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

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

Care for health i.e. treatment, in all countries has also its economic dimension and it outgrows the narrow fields of health care. It is becoming clearer and clearer that health care system depends very much on economy of a society that sets its developmental framework and certain limitations. Instead of increase of funds for health care, health economists and politicians, who make decisions on economic and social development of the society, demand that health care and its organisers use better available resources and achieve better efficiency and effectiveness in its operation. This conflict of interests, present whenever we have GDP allocation, can be solved through planning approach.

Through planning and its implementation the dependence of funds and development possibilities of the health care on the growth of GDP, with development of other sectors is established. Planning of health care is a method of harmonizing the needs and funds that can be provided by the society. Because of that the reality that no society in the world can meet all the needs and pay all the services that can be provided by health service should be accepted.

All above-mentioned factors have very important role and influence on health. Because of that better health and higher quality of life is not the responsibility only of the Ministry of health but also of other departments, i.e. the Government and the Parliament. Therefore the implementation of the tasks and responsibility for the health condition of

[1] Data on funds for health care are taken from database OECD Health data 2003 (Credes, Paris) and from d 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)

the population will depend on the adopted approach for settling these issues. These principles are taken into account when the plan is made:

- certain commitments and orientations of the development of these fields that have more important role in changes of health condition of the population,
- plans for improvement of health will be taken into account when passing laws and other regulations and ensure their implementation;
- activities for promotion of better health aim at raising awareness of the whole society about the purposes and intentions of those laws and planned measures;
- activities of the Government for creating positive atmosphere and conditions for achieving better health of the population and provision of equality at all areas in social and health care for the whole population.

As a guideline for necessary changes and activities for achieving better health in Montenegro the documents of the WHO and the EU are used. A number of issues from different areas of non-health services, where the changes should be made , is linked with investments i.e. economic potentials, and that will directly affect the health. Because of that the planned necessary changes are not acceptable and cannot be implemented in a short period. It is a fact that a better health everywhere in the world is related to financial situation. Nevertheless there are a number of activities that can have an important role in improving health but do not require new or heavy investments. For some other areas, where that it is necessary, more investments should not be regarded as an expenditure, but as an investment in human resources that will give back better productivity and higher revenue, and that will contribute to better health, economic development and better possibilities for development of other sectors.

The plan for health care is a document that shows how different subjects can do more for health and at the same time not expecting the results only from the health service.

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

The Ministry of health will initiate, together with other competent authorities preparation and implementation of the adequate regulation in the following areas:

- education for introducing the health education in primary and secondary schools as a school subject or/and as a part of the content of some other school subject. The children and the youth (and indirectly their parents) have to acquire basic knowledge and habits for healthy life style, personal hygiene, healthy nutrition, necessary physical activities, prevention of diseases and injuries, sexual education, addictions (alcohol, drugs, smoking) and their harmful effects etc. The second task of the education sector is to raise the level of general education and to enable greatest possible number of inhabitants to acquire general knowledge and to eradicate illiteracy as it is known that the health condition are the worst with illiterate people and those with low level of education.
- traffic safety for adopting regulation about compulsory use of helmets for bicyclists and motorists (and their co driver especially children), for compulsory

use of seat belts for all passengers in cars and buses and special seats for small children in cars, limitation of carbon dioxide in exhaust fumes of cars, limitation of the alcohol in blood for all traffic participants, prohibition to drive under influence of drugs etc. Apart from this the Ministry of health will support consistent control and paying a fine for not respecting the traffic regulations as that can reduce the number of tragic accidents and health insurance expenses and also contribute to improvement of health. It will also propose to insurance companies not to cover the expenses of those who were involved in traffic accidents because they were not complying with the traffic regulations. It will insist on strict compliance with Health insurance law and recourse procedure for treatment expenses. On the basis of this, the traffic safety strategy will be developed by adopting a concrete objective of reducing the number of traffic accidents casualties i.e. injured for 30% in 2007 comparing to 2003.

- ecology, where it will support the adoption and consistent compliance with regulations in relation to protection of the environment and prevention of the activities that are most harmful to health of the population. The Ministry of health will, with other competent authorities who are responsible for ecology, municipal service and agricultural service, support the safe disposal of waste, especially, rubbish and waste waters, prevention of pollution of water springs and for more strict control over usage of pesticide and herbicide in agriculture, high quality and safe food and exhaust fumes from all sources. It will especially strengthen the work of inspection services that will control and when it is needed fine those not obeying the regulation. Similar to practice in many European countries competent authorities of the Government will support and assist activities of existing and new recycling companies of industrial and household waste (glass, paper, plastics , organic waste for bioenergy) etc. Therefore the protection of the environment will become in a way an economic activity. Montenegro will follow the practice in the EU countries where it is compulsory for the producers and sellers to provide for safe decomposition, dumping i.e. recycling of their products and that those expenses are included in the price of the product. The Ministry of health will especially insist on strict compliance with Law on smoking in public places : preschool institutions, schools, hospitals, sports and other halls, public services and offices, public traffic and in any place where a greater number of people gather.
- social policy that will be oriented towards active employment policy, finding possibilities for opening new jobs and support development of small business and special care for marginal groups of population, for elderly and disabled, who live alone, who are weak and bed-ridden and who need help of other people for every day activities, for socially disadvantaged, pensioners with very low pensions and implementation of the Strategy for poverty reduction. All of these is necessary because poor economic position and poverty of an individual and family is the most frequent cause of diseases and poor health condition. The measures will be carried out according to possibilities of economic development.
- taxation policy, that will with lower taxes and other deductions stimulate companies, employers and citizens for activities (services) , production, processing and consumption of products that are good for improvement of health

,or at least they are not harmful, and some services and activities that are, necessary for protection of health will be tax exempted. Higher tax rates will be foreseen for products that are harmful to health such as cigarettes, alcohol, food with high animal fat and sugar, production and products that pollute the environment such as pesticides, herbicides, diesel fuel etc. With adequate instrument of taxation policy the Government will support social policy and give its contribution to reduction of poverty and solving most difficult social problems that lead to poor health.

- life style and habits with activities for better information of citizens and their involvement in efforts to change bad habits which are outside risk factors and are linked with '' outbreak'' of chronic degenerative diseases. The measures will be taken to strengthen the personal responsibility of the citizens for their own health and health of others. It is especially emphasised the need to reduce the number of smokers, consumption of alcoholic beverages, prevention of drug abuse, needs for more physical activities, and recreation, changes in nutrition habits, weight control. Montenegro is the second country in Europe that has restricted smoking in public places by the law. The Ministry of health will propose activities for restriction on alcohol consumption for young people, near the schools, and in other places. Apart from that an effort will be made for introduction of ''Healthy City'' program in Podgorica and some other towns in Montenegro by 2006. All the activities for strengthening health mostly related to changing the life styles and habits will be coordinate by Public health institute and units for health promotion in dom zdravlja facilities, NGOs, humanitarian and other associations of disabled, the diseased and other citizens and local community will be involved in implementation of the program .

1.4The tasks of the Government in providing health facilities and achieving citizens' rights

Apart from tasks from Article 13 of the Health care law (''Official Gazette of the Republic of Montenegro'' No 39/2004) the Government will provide funds for capital investments and supply of equipment for health institutions founded by the Government.

The investment plan will be determined for each year and it will include all health institutions.

- According to criteria for including in public health service network;
- According to priority tasks of health care and by approval of the Ministry of health;
- According to specific needs of health institutions when their capacities are fully used and on the basis of analysis and needs with proofs for justification for investment.

For capital investment in public health institutions the funds from the Budget will be used and also from sale of health facilities for which it will be determined that they are not

needed for implementation of the public health service program. Health institution will participate in payment for new equipment with revenue from renting the space and equipment and with the part of the revenue from depreciation, included in the price of health service.

Requests for investments in new more complex medical equipment i.e. its modernization, health institutions will submit to the Ministry of health and together with the request for the new equipment analysis of medical and economic justification for investment will be submitted too on the basis of anticipated needed scope of services i.e. treated patients with that equipment as well as the needs of population, advantages in comparison to current methods of treatment, the prices of services and consequences on the value of their programs which will be financed from public funds i.e. Health insurance fund.. On the basis of such analysis the decision will be made about justification of the proposed investment by the Ministry of health. Before making the decision the Ministry will request the opinion of Republic Health insurance fund about the possibilities of financing the extended service program.

The Ministry of health in cooperation with the Ministry of education and science will prepare the program to provide medical and other personnel for health care to meet the needs on the basis of public health service network, anticipation of those needs, on the basis of age structure of the employed in health sector, their anticipated retirement, migration and needs in relation to development of new services i.e. programs in the scope of human resources of the Master plan. On the basis of this the Government will decide on the number of students to be enrolled in school with health orientation i.e. medical faculty for each school year that will be financed from public funds.

The Ministry of health as well as other government departments will pursue the policy and direct the development of the health care and health insurance so that health sector at certain time would be prepared and meet the requirements and standards for joining the EU. The changes in health care and insurance will be made in the direction of:

- adopting and implementing EU Strategy for developent of health systems ;
- further democratisation through involvement of greater number of citizens i.e. their representatives in decision-making process about issues in relation to health and compulsory health insurance;
- better adherence to the principle of patients rights when they exercise their rights in health institutions and health insurance;
- ensuring greater stability of the 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 health care system.

2. Development of the new public health

In WHO Strategy for Europe '' Health for 21st century'' almost all of 21 regional objectives are directly or indirectly linked to public health and in EU program (2003 –

2008) integrated strategies for health take special place through following main objectives:

- promotion of information and knowledge in the field of public health
- strengthening the capacity of public service and 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.

Having in mind above-mentioned documents and approach of new public health, strategic orientation is based on multisectoral and participatory strategies for creating sustainable health of the population in Montenegro in the 21st century. These strategies consider public health as a science and art of prevention of diseases, prolongation of life and promotion of mental and physical health through organized efforts of the community. Strategies for public health 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 in the community.

Public health includes those programs and activities that are directed towards community level where either all benefits from them (e.g. clean air and water) or certain individuals who are not covered (various screening programs, counselling centres for sexually transmitted diseases, counselling centre for nutrition and so on.) At the same time the responsibility for carrying out public health activities is on 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 for health promotion project.

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

Institute of public health founded according to law, will be developed as an institution that promotes and initiates continuous education in public health, offers expert consultancy to the Ministry of health and carries out priority research in public health in Montenegro. Promotion of health represents one of the main objectives in the strategic plan of the Institute of public health of Montenegro.

The Government, i.e. Ministry of health will give support to compliance of development plans in Montenegro with EU Strategy for developing health care. In line with that it will prepare and implement the programs for:

- better information of the citizens about issues in relation to health and diseases, their prevention, early detection and treatment in order to strengthen their awareness, responsibility and positive attitude towards own health, the health of the family and the whole population. Mass media will be involved in those efforts and special attention will be paid to organization of public campaigns and other activities so that most citizens put the value of the health above all other values;
- cure of the most serious chronic degenerative diseases such as cardiovascular diseases, diabetes, cancer, obstructive bronchitis and others. These programs will include all activities from elimination of risk factors in relation to these diseases , their prevention, early detection, treatment that are based on scientifically proved procedures (evidence based medicine) at all levels of health service;
- introducing efficient information system which will provide updated information about occurrence of any communicable disease which because of tourism and open borders can suddenly break out in Montenegro or in the region as well as about new diseases which break out in the world (AIDS, SARS, BSE ,aviary influenza) that can threaten the health of the most of population. That tasks also means 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 taking quick and efficient measures for their dissemination;
- higher quality of health service i.e. health institution performance;
- financial stability of the health system ;
- making concrete and speeding up the activities from strategic documents of the Government in relation to health;
- functional links and cooperation of service providers and social care when meeting the specific needs of the elderly and disabled for long-term care and for defining the financial obligations between these two service providers.

2.1.The 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 EU , an employer is the most responsible for health of the employees and indirectly for other citizens who for example live near the manufacture site or use the products manufactures by the employer. That principle is accepted in general more in theory than in practice. In general the employers neglect health care of the employees and safety measures and health at workplace are regarded as unnecessary expense because of surplus of work force. Because of that workplace safety and professional diseases are increasing and that results in increase of expenses for health care and insurance as well as great economic damage for employers and that has a significant influence on decrease of GDP.

For improving the health of the active population and conditions for its implementation the Ministry of health will support consistent implementation of workplace safety regulation and measures for specific health care. In cooperation with the Ministry of Labour and social care it will insist on compliance with new law on workplace safety and work together in development of other regulations in relation with safety and health at workplace in a way that the Law on workplace safety will be implemented fully, in line with the EU principles. In preparation of these regulations both the trade unions and the employers associations will be involved. The objective of the measures to be adopted is to ensure:

- Gradual adaptation and adoption of European standards in relation to workplace safety and health in Montenegro;
- Taking responsibility and obligations by employers for consistent carrying out the measures for workplace safety and health as well as the consequences for not fulfilling them;
- Reduction and financial incentives for employers for protection of work environment , establishing healthy work environment and elimination of the factors which pollute the working and natural environment; and threaten the health of the population;
- That every employer has to have his own program with measures for workplace safety and health that will be based on risk analysis of the each workplace and that would be used in assessment of the company management;
- Transfer of all obligations in relation to health prevention, early detection, treatment and rehabilitation of workplace injuries and professional diseases to employers according to newly adopted laws on health care and protection at work. Because of financial limitations of the Health insurance fund it is necessary to introduce special contribution rate for injuries at workplace and professional diseases for employers for this type of health insurance. In that way those expenses will become a component of the cost of workforce.
- Extension of obligation and rights in relation to safety and health at workplace apart from workplace injuries and professional diseases to other diseases in relation to work i.e. health consequences of the long-term exposure to work environment to the health of an individual;
- Program and safety measures for health will have to become a component of development plans of all employers and the tasks of their management;

Changes in the field of safety and health at workplace will be implemented gradually and introduction of special contribution rate for insurance in relation to injuries at work and professional diseases will be made according to 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 the workplace injuries and expenses for their treatment per an employer.

3. Analysis of the current situation

3.1.Population, vital statistical data

According to 2003 census the population of Montenegro was 620 145[2] . Apart from this number, 55 000 inhabitants live and work abroad. There are also 31 217 refugees and displaced persons[3] and Health insurance fund has to provide for their health care too. It is expected that the population who work 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 who come from non-members countries. The changes are also expected in the number of refugees as a result of the 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 get the permanent residence in Montenegro. When planning was made those data were used in order to provide the financial and other resources for health care.

57% of the population in Montenegro live in urban areas and 43% in rural ones. As in many other countries there is the tendency of decrease in number of rural population as well as of populations in small town and increase and concentration of population in Podgorica and some other towns. This has the consequence for the organization of health service. In some areas where the number of inhabitants is small the certain health capacities have to be planned for that small number too, although that would be not in line with norms and principles of rationalization. This is of course true mainly for primary health care, emergency services and partly for pharmaceutical service.

From the total number of inhabitants 50.2% are women and 49.8% are men. The percentage of the population in age range of 0-14 years is 20.7%, 15-65 years is 67.2% and over 65 years is 12.10%.Because of lower birth rate this ratio has been changing recently so that the young population is decreasing and the older population is increasing.

For the last ten years the young population decreased for 4.8% and the oldest population (over 65) has increased for 3.8%. This trend is very important for planning because demographic changes i.e. age structure have influence on the health service needs.

The oldest population (over 65) has 3.5 to 4.5 times greater needs than population in age range 0-65 years, in other words with aging of population there are increase in needs for all types of health service[4]. Women have also greater needs for health service, and they are the smallest for men in age range 7- 44 years. On the other hand for planning health

[2] Monstat data
[3] Commissariat for displaced persons , 2004
[4] In EU countries it is anticipated that because of the aging of population the costs of health care will increase from 0.3% up to 2.3% at the annual level.

needs the ratio between active population (workers, employees, self-employed, farmers) and supported population (children, unemployed, pensioners, people with no income, social care beneficiaries, refugees etc.) is also very important. If there are less people to be supported by the employed one there are better possibilities for provision of high level of social security and in that way higher standard of health care.

Table 1. Population age structure of Europe compared to Montenegro in 2001[5]

Country	The share of the old 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**

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

Table 2. Population structure in Montenegro, and ratio of the active and supported population in 1991 and 2002

	year 1991		year 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, reduced by older pupils, students, pensioners)	**370.399**	**60,2**	**372.973**	**60,1**
Real active population (the employed, self-employed, farmers, persons with income)	**…….**	**……**	**164.881***	**26,81**
Supported population	**279.458**	**45,4**	**450.119**	**73,19**
Number of supported persons per a potentially active person	**0,75**	**xxxxxxx**	**0,69**	**xxxxxxx**
Number of supported persons per a real active person	**0,90**	**xxxxxxx**	**1,72**	**xxxxxx**

[5] Data source: Europen region of the WHO, Health for all Database, 2004. Kopenhagen

The population of Montenegro shows gradual tendency of aging. From 1953 to 2003 census the population increased from 422 037 inhabitants to 620 145 or 46.9%. During that period there were significant decrease in number of new born babies, from 13 880 to 8345 or 32.9% in comparison to 1953. The birth rate decreased from almost 28 in 1950 to 12.8 in 2002.[6]

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

If the parameters of the vital statistics are analysed it can be estimated that the population will increased in the next five years for 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 condition, so increase in the number of chronic degenerative diseases can be expected and that would lead to increase in needs for health services.

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

That ratio will be improved by higher employment of the active population what is the component of the active employment policy and creating conditions for development of small business foreseen by the Agenda for economic development.

3.2.Health condition of the population

Montenegro has relatively good indicators of the health condition. 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[7]

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 in age range 65 -74 years 1641 of them, then in age range 55-64 years 755 of them and in the infant and children group up to one year of age 92. Infant mortality rate is a very important indicator of health condition of the

[6] Data from Statistical yearbook of Institute of public health 2003
[7] Data source Statistical yearbook 2003, Institute of public health

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 deceased infants per 1000 newborn babies it decreased 14.8 times and in 2003 it was 11.00 deceased infants per 1000 newborn babies.

Comparing the indicators of health condition 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 fall behind only with infant mortality rate while other two indicators show relatively good health condition. Indicators of the health condition at the level or near the average for countries of the European region of WHO. One of the reasons for health condition of the population is the preserved environment and Mediterranean climate as well as a particular life style of the population .It is well-known that all Mediterranean countries (Malta, Cyprus, France, Spain, Greece) have rather good health condition of the population.

Relatively good health condition of the population does not have to be a reason for being a very satisfied because among the causes of premature death, there are a lot of diseases i.e. conditions that can be influence on and prolong the life. There is less satisfaction when indicators of health condition in Montenegro when it is compared to situation in EU countries (without 10 new members that joined EU in 2004) where the situation is far better. It should be pointed out that life expectancy of those born in Montenegro, due to different influences the population was exposed to in the recent past, decreased in the second half of the 1990s.Since then there has been a tendency of increase but it is minimal.

Life expectancy of those over 40 and older when compared to situation in1950 even decreased indicating poor living condition and possibilities for achieving better health for that population.

Health condition indicators in selected countries of the European region of the World Health Organisation, in 1999[8]

Table 3.

Country	General mortality rate	Infant mortality rate	Life expectancy
Albania	**8,1**	**11,3**	**76,5**
Czech	**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	**8,2**	**14,6**	**75,2**
(2001)		**11,0***	**73,3***
Europe	**9,7**	**10,4**	**73,7**
European Union	**6,8**	**4,9**	**78,4**

**Data from 2003*

Infant mortality for the period in the table was very high as a consequence of what was happening in the region, refugees' 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 service, especially the part regarding reproductive health and infants. This can be supported by the fact that most infants deaths are in perinatal period (first week of life).

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

It is encouraging that this important indicator of health condition in Montenegro is improving and it has a tendency of decrease so that post neonatal mortality is near the average of the countries of the European region of WHO.

[8] Data source : OECD Health data 2003, Credes Paris and Health for all database , QWHO, Copenhagen

Table 4. ***Perinatal, neonatal and postneonatal mortality of infants in Europe in 1999 and Monenegro in 2001 and 2002*** [9]

	Infant mortality rates		
	Perinatal	**Neonatal**	**Postneonatal**
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**

General mortality, as one of the indicators of health condition 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) .Blood circulatory diseases and tumours mostly cause the premature deaths**. Blood circulatory diseases participate with 50.37% in total mortality rate and tumours with 16.95%.**

Comparing causes of death the health condition in Montenegro is very similar to other European countries. The frequency of blood circulatory diseases, tumour and respiratory diseases as causes of death in Montenegro is lower than the average in the European region of WHO and partly than the average in EU (table 5). What is for concern is that very high percentage (14%) of the causes of death where only symptoms i.e. abnormal clinical findings were recorded. That data for European countries is up to 3%.Various conclusions can be made out of it. There is very poor compliance with law on keeping records in health care (reporting, collecting, analysing and interpreting of data on cause of death that are submitted to Institute of health) and because of that there are unreliable and incorrect statistical data. This data shows inadequate diagnostics of the deceased, the cause of death has not been determined and that can also be an indication of 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 condition of the population, operation of the health service as well as to plan health care i.e. take measures to solve health problems. At the fourth places of the mortality by cause are respiratory diseases and injuries, poisoning and consequences of outside factors are on the fifth place.

Table 5. ***Mortality rates by causes in Europe in 1999 and Montenegro in 2001***[10]

REGION	**General mortality rate by causes**			
	Blood circulatory diseases	**Tumors**	**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**

[9] *Source of data: Health for all Database, WHO, Copenhagen and Institute of health, Republic of Monenegro (data for Montenegro)*

[10] *Source of data: Health for all Database, WHO, Copenhagen and Institute of health, Republic of Monenegro data for Montenegro)*

For planning health care and setting the priorities indicator of **PYLL** index (Potential Years Life Lost) is used and it indicates the number of years the population has lost because of premature deaths i.e. before the average life expectancy has been reached. This index can be calculated for all mortality causes together or for group of diseases (injuries) separately.

According to data of Institution of health in 2002 **because of premature death 10.5 years were lost, the largest part of 30% of it was caused by blood circulatory diseases, then followed tumours with 21.4% and symptoms and abnormal findings with 9% and all other causes with 40%.** The use of this index is very important for the planning the measures for more efficient cure of blood circulatory diseases, first of all for programs for strengthening the health, change of life styles and habits (smoking, irregular and high calories nutrition, stress, physical inactivity) for early detection of risk factors in the population (triglyceride, cholesterol, hypertension, blood sugar, obesity) and for timely treatment of the diseased. The same is for 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 with conscious measures these diseases as causes of premature death can be reduced.

Among the reasons for visiting a doctor i.e. using health service at the first place are respiratory disease which takes almost half of the total number of diseases in non-hospital morbidity : in paediatric service – 68% in general medicine - 34.14%[11]. At the second place are the visits because of the factors that influence the health condition: blood circulatory system and digestive system.

Communicable and parasite diseases because of a very high level of vaccination of 89.6% are not major causes of health problems. There are separate cases or from time to time epidemic (most frequently influenza). In 2003 7621 persons were recorded as having communicable diseases which are compulsory to report (influenza and AIDS not included).

Mortality caused by communicable diseases is 0.14 per 100 000 inhabitants and morbidity is 1080 per 100 000. Among registered communicable diseases (influenza not included) the most frequent disease is varicele (36.43%). It should be noted down that in Montenegro there is a number of person suffering from tuberculosis – morbidity 14.1 per 100 000 inhabitants i.e. in 2003 92 persons were reported with active tuberculosis. Among the population there is a certain number of people with HIV and AIDS and in 2003 4 cased of HIV infection and 1 case of AIDS were reported, what is incidence of newly infected of 0.56 per 100 000 inhabitants and those with AIDS 0.14 per 100 000 inhabitants. In 2003 the number of new cases in adult population was 5 and there were no infected children.

Although this is satisfying situation in the field of health care of communicable diseases it is necessary to take precaution in future too because of the modern tourism, open

[11] Source: data from Statistical yearbook ,2003, Institute of public health

borders and new communicable diseases (SARS, aviary influenza, Ebola), risky behaviour of certain groups of the population These diseases can occur in greater number and threaten or worsen the health condition of the population in Montenegro also.

Among the reasons for hospitalization at the first place are the blood circulatory diseases. Of all hospitalized 16% were admitted to hospital because of these diseases, then follow respiratory diseases , digestive system diseases, muscular and bone system diseases and connective tissue diseases, and each of these groups represent 10-11% of the total number of the hospitalized. At the fifth place are tumours with almost 9% of all cases of hospital treatment and it is constantly increasing. Very important fact for planning health care is that among those admitted to hospital one third of them is over 65 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 that would be provided in an adequate special institutions i.e. their houses or flats. Both of these are very important for planning health and other capacities for meeting the specific needs of the elderly that will have sensitive influence on the all needs for health services in Montenegro.

3.3 Health capacities in Montenegro

Dom zdravlja facilities, hospitals, clinics, pharmacies, other institutions i.e. capacities for providing health service with their equipment, personnel and knowledge have very important role in health promotion of the population. It is believed that health institutions and health workers are the most responsible for health condition of the population. The roles and the tasks of the health workers are focused on prevention of diseases and taking specific measures and implementation of specific programs for prevention, early detection, treatment, rehabilitation of the diseased 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 significant influence on the health condition of an individual and family and the whole population as well.

Health originates in human environment and it is dependant on it and responsibilities and care of health services is concentrate on the specific measures for prevention and treatment of the diseases. In that role its contribution to better health can be very significant especially if its work is organised well, efficient, effective and focused on solving health problems of the population i.e. particular population groups.

In order to fulfil its set obligations and meet the expectations to great extent, health service has to have adequate organisation, personnel, facilities, equipment and other and sufficient finances for its work and functioning.

There are differences in health care systems regarding organisation of health infrastructure and that reflects social, economic, cultural, religious and other policies,

tradition and attitudes towards medical science and health care. The most important fact is that health care and its development is heavily dependant on the economy of the country i.e. GDP and that has influence on the number of the employed and other health capacities and the quality of health service.

Existing network of public health institutions comprises 18 Dom zdravlja facilities, three health station for smaller municipalities in Plužine and Šavnik that are organisationally linked to Dom zdravlja in Nikšić and health station in Žabljak is linked to Dom zdravlja Pljevlja.In Dom zdravlja in Mojkovac, Plav, Plužine, Rožaje and Šavnik and Ulcinj there are inpatient units.

Hospital health care is provided in 7 general hospitals organised at regional principle, three special hospitals for the needs of the Republic and the Clinical centre as the institution of the tertiary level care. In public health system there is also Institute of public health as an institution of importance for the Republic.

Health care to the citizen is also provided by 153 private health institutions- surgeries with no pharmacies where 34 different medical services are provided most of them from the field of dental health care in 70 private surgeries and dental 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 far smaller. Above-mentioned institutions provide outpatient primary health care or specialist care.

3.3.1. Non-hospital health capacities

On the basis of existing health infrastructure non-hospital health care is provided through Dom zrdavlja facilities which are organised on the service principle, and they provide both primary health care and specialist health care. Existing organization is not in line with principles of modern and efficient organization of primary health care based on the Declaration on primary health care[12] .Unclear role and tasks of dom zdravlja, mixing of primary and secondary health care, disproportion in dom zdravlja capacities, different level of training as well as accessibility were the main reasons for the reform of this very important segment of the health system. Establishing a new organization and content of work in dom zdravlja facilities as the ones responsible for primary health care with teams of chosen doctors is the main effort of the reform activities for the health system in Montenegro.

[12] Source: WHO, Declaration on primary health care, Alma Ata 1978

Table 6. ***Number of the organisational units in Dom Zdravlja facilities and health stations in Montenegro in 2003***[13]

Name of the organisational unit	Number of services	Number of doctors	Health workers with high school education and higher education
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**
Occupational medicine	**27**	**56**	**91**
Protection and treatment of teeth	**111**	**264**	**366**
Physical medicine	**8**	**14**	**70**
TOTAL	**336**	**680**	**1 271**

New law on health care has clearly defined the roles and functions of the primary health care as being the responsibility of chosen teams of doctors as a gate keepers of the system and Dom zdravlja facilities where the support centres for chosen doctors such as centre for mental health, tuberculosis, reproductive health, diagnostic centre, centres for children with special needs, units for health promotion and day-care centres for elderly are organised. New organization of primary health care started with the Pilot project of the reform of primary health care in Podgorica and in 2006 it is planned to introduce new organization and work of chosen doctors in the whole Montenegro. Chosen doctors will have tasks to, by themselves or in cooperation with the centres, provide to all those who have chosen them all preventive and curative services. That means clearly determined scope of services, the standard of these 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 the development of the health service is the number of inpatient beds and their occupancy i.e. level of hospitalization. Montenegro has inherited the hospital network and its structure and number of hospitals which was very important in the past, when those institutions were status symbols and when right to accessible health care at his level was dominant criteria for opening a hospital. The role and the method of work has changed today completely so that more and more patients are treated in day hospitals or in units for one- day treatment The hospitals are more and more redirected to non-hospital care through outpatient service and inpatient service is provided only in

[13] Sorce. Statistical yearbook 2003,Institute of public health

those cases when outpatient treatment for medical reasons is not possible. This trend in methods of work and organization of hospitals has to be present in Montenegro tot, because this type of health care is justified only for medical and humane reasons , so that patients would stay in hospitals far less. At the same time such organization has its economic justification because in that way expenses for health care are reduced for the cost of care, stay and food in hospitals.

Table 7. ***Number of inpatient beds in hospitals of Montenegro and number of staff per an occupied inpatient bed in 2003*** [14]

	Number of inpatient beds	***Number of occupied beds on a daily basis***	***Number of free beds on a daily basis***	***Number of the staff per an occupied bed:***		
				Doctors	***Other health workers***	***All workers***
General hospitals	***1166***	***760***	***406***	***0,28***	***1,45***	***1,99***
Special hospitals	***622***	***418***	***204***	***0,14***	***0,62***	***0,85***
Clinical Centre	***740***	***508***	***232***	***0,52***	***2,53***	***3,99***
TOTAL	***2528***	***1686***	***842***	***0,33***	***1,57***	***2,50***

Montenegro has 2528 inpatient beds at secondary level and 70 inpatient beds in dom zdravlja facilities i.e. 2598 in total. It is 4.2 beds per 1000 inhabitants i.e. calculated for population including the refugees it is 4 inpatient beds per 1000 inhabitants.

From a total number of hospital capacities 44.9% is in general hospitals, 28.8% in special hospitals, and 25.5% in Clinical centre in Podgorica. In Dom zdravlja facilities there are 2.7% of inpatient beds.

The structure of inpatient beds according to 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 wards (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)

[14] Source of data: Analysis of health care activities in Montenegro in 2003, Institute of health , Podgorica, 2004

- Otolaryngological 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 dom zdravlja 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 small so the conclusion can be made that Montenegro falls behind the European average. But if comparison is made to particular countries it is in front of Spain, Ireland, Italy, Holland, Norway, Portugal and others.

In the last decade the number of hospital beds in Europe has been changing and there has been the tendency of decrease because reforms and changes brought significant reduction in secondary inpatient health care sector and this service is redirected to outpatient service and strengthening the role of primary health care and house calls.
Comparing other parameters on hospital beds it can be concluded that there are surplus of hospital capacities.

Apart from low hospitalization rate of the population (about 40% below the European average) and average treatment time is for 14% longer then the European countries average. Utilization of beds of acute hospitals is only 65% what means that one third of the 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 Montenegro***[15]

	Number of beds per 1000 inhabitants	***Bed occupancy in acute hospitals ****	***Average of treatment 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 utilization of the hospital beds are at dom zdravlja facilities and health stations (56%), General hospitals Berane and Cetinje (below 60%) Special hospital Dobrota – Kotor (48%) and some wards at Clinical Centre (infective clinic 5.5%, pulmonology 31.9%,endocrinology 34.2%, rheumatology 42.5% and gynaecology unit (sterility, pathology of pregnancy , gynaecology) Utilization of the paediatric wards of general hospitals is on average 50% with the exception of wards in Bijelo Polje and Kotor.Low level of utilization of bed capacities is noticeable at gynaecological wards of general hospitals and it is over 54% with the exception of General hospitals in Nikšić and

[15] Source: Health for all database. European office of the WHO, Copenhagen 2004

Pljevlja. Very low bed occupancy is at internal wards in Bijelo Polje (59%) and Berane (65%) and internal wards in Berane (57%) and Cetinje (62%)

Data on utilization of hospital beds indicate that it is necessary to rationalize the organization, functioning and finances of hospitals in order to provide greater efficiency of this segment of health service. The transition from extensive employment and increase in capacity utilization with the aim of improving the current situation and higher rationalization, because of insufficient finances is the obligation of decision makers in health sector at all levels. From heath economics point of view the current situation is untenable. The problems are not only in unoccupied beds because they do not produce expenses but in personnel employed for that number of beds, because they are not sufficiently used and they represent the main expenses of the hospital service.

In economic situation in Montenegro as well as in more developed countries rationalization of hospital service is one of the very important issues in finding the causes of financial instability of the system. It is especially important in Montenegro because secondary health care where the hospital treatment is dominant participate in total expenses of the health care in Montenegro with more than 41%. Sudden increase of hospital capacities as well as expenses in general and special hospitals is very noticeable in period 2000 to 2003 when the number of beds increases for 6.7 percent but their utilization decreased from 81.41% to 75.72%. Objective reviews of situation in hospitals, especially utilization of their capacities, require analysis of how well they are equipped with medical equipment. Detailed analysis shows outdated equipment, especially in radiology, where the equipment is more than 20 years old.

3.3.3. Catchment areas of hospital wards

The provision of hospital beds and personnel for particular region can be calculated comparing the capacities and size of catchment areas of particular hospital i.e. their wards. The size of catchment area is defined by number (total) of population who gravitates toward that hospital. Since the capacities, expertise and equipment of wards (e.g. paediatric, internal) i.e. their specialty very different, each ward has its own catchment area and that is more objective parameter than hospital as a whole catchment area.

Calculation of the catchment area is done on the basis of admitted i.e. released 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.

Catchment areas can be calculated only for those wards that are not defined as tertiary i.e. special services that are used by all inhabitants of Montenegro. Less complicated method of calculation of catchment areas is to calculate the participation of a particular hospital in total number of treated patients by specialities. On the basis of that, as well as the

participation of all population the catchment area is determined for a hospital ward. When calculating the catchment area for Montenegro there are certain problems in relation to quality of data on the one hand and absence of clear definition of Clinical centre services between those at secondary level for ''its'' catchments area (Podgorica, Danilovgrad, Kolašin) and those at tertiary level for the needs of Republic. The same problem is with Special hospital Risan with absence of clear definition of services among neurological, neurosurgical and orthopaedic services and with General hospital in Nikšić and Cetinje which have orthopaedic i.e. otolaryngology and ophthalmology as a part of surgical wards but the number of released patients is not recorded for those services

Calculation of catchment areas also requires clear definition of specialists and inpatient service[16] . Existing available data indicate that some wards have very small catchment area and because of that a very small number of potential patients so the question is raised about the provision of quality care and at the same time the costs of supporting that care is not acceptable.

*Table 9a**: Catchment areas of internal wards in 2003***

Hospital	***Number of released patients***	***% of treated patients in the 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 Nikšič	***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 the surgical wards in 2003***

Hospital	***Number of released 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 Nikšič	***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 the paediatric wards in 2003***

[16] Note: in calculating the catchment area the refugees were not included if that would be done the number woukd increase for about 5%
The data on the number of relesed patients are date of Institute of health and with Clinical centre the data on number of treated persons are from Report on work and running of health institutions of Montenegro in 2003 – Republic Health insurance fund

Hospital	*Number of released patients*	*% of treated patients*	*Catchment area*
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 Nikšič	***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 the gynaecological and obstetrical wards in 2003***

Hospital	*Released patients*	*% of treated patients*	*Catchment area*
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 Nikšič	***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 the psychiatric ward in 2003***

Hospital	*Number of released patients*	*% of treated patients*	*Catchment area*
Special Hospital Dobrota-Kotor	***694***	***56,15***	***347.374***
Clinical Centre	***542***	***43,85***	***271.933***

Knowing the catchment areas is very important for planning and financing the inpatient service. With uniform norms and standards for hospital service, the differences in provision of hospital capacities for the population should be reduced and some of them could remain for only specific conditions. On the basis of this, the number of doctors can be defined and other health workers per 1000 inhabitants for the inpatient treatment or per a bed and realistic plan of work of each hospital can be determined. That would of course have the influence on the number of personnel needed for inpatient treatment.

Analysis show that there is not only the question of surplus of hospital beds and their inadequate utilizations but that Montenegro has too many hospitals for very small catchment areas. This very important question for planning the network of public capacities will be further considered after special analysis of inpatient capacities has been carried out. The analysis should indicate which capacities could be redirected for the needs out of health sector or old people's homes.

Defining the catchment areas of the hospital wards is very significant for planning the health capacities and because of that it is necessary to :

- Introduce special record keeping for work and personnel in specialist outpatient service of the hospitals using FTE (Full time equivalent) method in order to ensure specialist outpatient and inpatient capacities for the population.
- Define the tertiary service of the Clinical centre and separate it from its secondary service;
- Introduce record keeping and statistics of released i.e. inpatient treatments in hospitals per wards after the treatment
- Introduce the same methodology of hospital reporting about their services and definition of services

Implementation of those tasks is planned as an activity of the Ministry of health in cooperation with Institute of public health through Project for improvement of health system and hiring consultancy services.

3.4. Organization of the health service

In European countries health service is organized at three levels. **Good organization of the health service is based on developed and adequate primary health care, which should provide for 85% of all population needs.** The first contact of a citizen with the health services is at primary health care level which has to be capable of meeting the greatest number of population needs for health services. Primary health care is the most accessible to the population, it monitors their health condition, studies the factors that can influence their health and provides preventive and curative services which do not require very complex technology or very specialist knowledge and experience. Primary health care at the same time is the basis of '' health pyramid '' where the specialist services at secondary and tertiary level build on and complement their tasks in solving the most complex health needs. Primary health care has also the task of ''gatekeeper'' when a citizens enters health services system and it refers to higher levels only those who really need more complex diagnostics and treatment which is significantly more expensive that the primary 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 at this first level are organized those services which can meet the numerous needs of the population. Primary health care comprise general services i.e. family medicine, services for specific needs of the most vulnerable groups of population e.g. children, school youth, women in their reproductive age, active population, elderly and services for treatment of most common spread diseases such as mental illness, caries and others. Apart from this at this level there are diagnostic services (laboratories, radiology, and ultrasound). All of these services are organized in public health centres or dom zdravlja facilities and in many countries in private facilities (surgeries, clinics and various forms of group practice).

In organized health care systems all other specialist services that do not operate at primary level are organized as specialists outpatient i.e. inpatient services at secondary and tertiary level.

The task of the secondary level services is the treatment of more complex health needs that require specialist knowledge, team work of specialists and other health workers as well as more complex technology. Provision of services at this level is possible only when the patients stay in hospitals for certain time. At the secondary level of health care smaller number of patients is treated and they were referred to this level because of the complexity of the treatment by the primary care institutions.

In well-organized health care systems admittance to the secondary level is possible only with referral by the 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, and they have to be used rationally i.e. organized where there are enough causes for their work in three shifts daily. Secondary health care in most countries uses 60% of all funds for health care i.e. insurance in a country but only 15-20% of the patients are treated there. This orientation has also its professional and medical rationale. It is well-known that medical specialists can provide and keep the quality of their work only with sufficient number of patients and interventions which enable them to acquire and have necessary experiences and routine.

Tertiary health care deals with most complex problems. It provides services which can be only done by utilization of most sophisticated technology and multidisciplinary work of teams of medical experts. In this service there are subspecialties for treatment of patients and conditions because primary and secondary levels are not qualified to do that or it would be uneconomical at those levels. Apart from this some, countries organise at tertiary level services which deal with some very narrow fields of diagnostics, therapy or rehabilitation and they are of small number and because of that they are concentrated in one location. It is known also that tertiary service apart from most complex health service carry out the education of health workers as well as the research in the field of medicine and health care. In most countries tertiary health care has the task of developing professional, medical doctrine, prevention, diagnosis and therapy of a particular condition at all levels of health service.

A tertiary service operates at the same organizational principles as secondary through outpatient and inpatient service. Access to this health care is only possible by the referral of chosen doctors (family doctors) and very often after treatment at secondary level.

Good organization of the health service is based on this distribution of work among those 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 is the performance of its tasks. Although there is a distribution of work among these levels of health service all three levels make inseparable whole and there are no

obstacles for cooperation and unhindered patient flow and exchange of experiences among the health professionals.

Efficient and high quality of health system is possible to achieve only by adequate organization at all levels of the system and cooperation and complementing capacities among the levels, adopting and applying standardized medical doctrine and exchanging information between the levels.

3.5. Health personnel in Montenegro

According to Institute of Health data the number of employed in the health sector in Montenegro in 2003 was 7521, 5465 of them were health workers and 1787 non-health workers. The data on number of employed according to Health insurance fund data for the same period is 8420, 6156 health workers and 2264 non-health workers. The number of employed in private health institutions are not included in those data and that makes difficult to monitor analytically the work of health sector and to compare it to other countries.

The personnel potentials of a country that can be used to meet the needs and requests of the population for health services is main resource of the health system and non inclusion of private sector in records is only important regarding the source of their financial resources. The health personnel records in Montenegro are not very transparent also mostly because the distinction between those who have permanent employment and those who have temporary employment. So it happens that for the same posts there are two (or even three) employees what makes difficult to have the precise number of physical persons (PP) i.e. number of employees on the basis of working hours (Men/year) or to recalculate working hours into equivalent of working teams for full working hours More precise data on number of personnel can be provided by using these parameters and certain unclearness can be avoided regarding the exact number of the employees because of those with temporary employment or because of longer working hours.

When analysing the personnel data the most important parameter is personnel qualification i.e. adequate territory distribution, level distribution and specialist distribution. Personnel analysis usually gives data on personnel qualification which usually makes the difference between health systems, organization of health service and the method of financing health services and programs. By comparison to other countries the health personnel and possibilities of financing them can be appraised. Ex -socialist countries developed the health system extensively and using quantitative parameters created the picture of high standards in health care. It was made possible by very law price (salaries) of work force in health care and other public social institutions. At the same time other countries based the development of health and the objective was the quality care and capacities on realistic economic possibilities and the objectives were the quality of work and salaries of the employed that would ensure adequate standard of health professionals. In some countries development of personnel capacities was an

instrument of demonstration of high level of social and health care of the population and the proof of right ideological orientation , while the others their development in building health potentials based on economic possibilities of the society i.e. payer of the services. Analysing the data in the last decade in Montenegro it can be concluded that there was uncontrolled development of personnel capacities that did not take into account the financial possibilities for covering the cost of their work. The result was that the development of health capacities and employment was uneven, that led to disproportion in development of primary and other health services and had negative effect on relations between levels of health care.

*Table 10**: The employed in the health sector in Montenegro in 1991 and 2003***[17]

Profile	***Number of staff***		***Index 2003/1991***	***Number of inhabitants per 1 employed person***		***Index 2003/1991***
	1991	***2003***		***1991***	***2003***	
Doctors and doctors specialists	917	1139	124,2	670	544	81,2
Dentists	275	265	96,3	2236	2340	104,6
Pharmacists	120	103	85,8	5125	6021	117,5
All health workers and associates	3485	5464	156,8	176	113	64,2
Administrative and technical staff	1961	1787	91,1	313	347	110,8
All employed in health sector	6815	7251	106,4	90,2	85,5	94,7

In the last 12 years the number of doctors in public institutions in Montenegro has increased for 24% while the number of dentists and pharmacists had decreased for 3.7% i.e. 14.2%. The decrease in number of dentists is not real because in statistical data only those who work in public health service are included but not those who work in private sector. The fact is that there is no decrease of personnel in dentistry but there is privatization of service where a large number of dentists left the public service. The total number of all health workers and associates has increased for 56.8% and the number all employed in health sector for 6%. The number of health workers per population has increased i.e. the number of inhabitants per a doctor has decreased from 593 to 544. The data also indicate the large participation of administrative and technical staff in number of the employed in health institutions. In non-hospital services the participation of non-medical staff is 27.5% and in hospital even 38.2%. The data show that there are no unemployed doctors, the extensive employment in health institutions from the past has continued, without possibility that the system financially support that.

[17] Source of data: Analysis of capacities and human resources in primary and secondary health care in the Republic of Montenegro for the year 2002. Analysis of health care activities in Montenegro in 2003, Institute of health , Podgorica, 2004

The data on the number of the employed in health institutions as well as the number of inhabitants per an employed in health sector do not give sufficient information on whether the health care is adequate or not. The answer to that question depends on demographic structure of the population, its health condition, the scope of benefits package, organization of health service and of available funds for financing health system. In stable health care systems the number of medical personnel i.e. employed in health sector depends on the economic situation in a country i.e. population and the level of investments in health care. Countries with higher GDP have better provided the population with health personnel and vice-versa .There are exceptions to this rule related to political and social decisions. In many countries of central and east Europe the practice of full employment of medical workers continues having as a result low salaries, poor motivation, dissatisfied personnel and fluctuation of the medical workers to economically more developed countries. Interdependence of the number of employed in health sector economic situation in a country and salaries as well as the working conditions is even more evident when situation of the employed is compared to amount of funds for health care per an inhabitant in some European countries. The difference is 1:10 even and more when investments from public and private funds in health care are taken into account (USD per an inhabitant calculated according to PPP) and the differences when the number of the employed is taken into account is only 1:2. This situation is only possible because the price (salaries) of health services is kept low i.e. work force.

*Table 11**: Number of inhabitants per a health worker i.e. an employee in the health sector in selected countries of Europe in 1999*** [18]

Country	***Number of inhabitants per an employed person in the health sector***				***GDP per an inhabitant in USD****	***USD for health protection per an inhabitant (PPP method)***
	Doctor	***Dentist***	***Pharmacist***	***employee in the health sector***		
Austria	**327**	**2126**	**1823**	**64**	**25582**	**2061**
BiH	**695**	**5097**	**10438**	**…..**	**…..**	**…..**
Czech Republic	**324**	**1600**	**2148**	**…..**	**13595**	**972**
Denmark	**315**	**1034**	**2012**	**…..**	**27690**	**2358**
Greece	**228**	**867**	**…..**	**105**	**15772**	**1375**
Croatia	**436**	**1560**	**2192**	**….**	**7371**	**…..**
Hungary	**281**	**1758**	**2149**	**95**	**11501**	**787**
Portugal	**314**	**2650**	**1281**	**…..**	**16776**	**1402**
Romania	**522**	**4268**	**14045**	**…..**	**6041**	**271**
Slovenia	**464**	**1655**	**2860**	**…..**	**15900**	**1230**
Europe	**288**	**1989**	**2088**	**….**	**14939**	**1183**
EU	**261**	**1427**	**1363**	**…..**	**23269**	**2014**
Montenegro*	**543**	**2331**	**5997**	**85**	**2700***	**196***

[18] Data source: OECD Health data 2003, Paris and HFA database , WHO Regional Office for Europe.

∗Notes: Data on personnel in Montenegro are for 2003 and for GDP for 2001. For data on GDP the method of recalculation PPP was used and for Montenegro the absolute figures were given because the coefficient for recalculating purchising power is not known. According to unofficial estimate that coefficient can be about 1:2.1 If this is accepted the GDP per an inhabitant in Montenegro would be 5670 USD and the funds for health care is 411USD.

From international comparison of health personnel and economic power of the country and especially the funds allocated for health care it can be concluded that Montenegro has enough or even surplus of personnel. The number of administrative and technical staff is particularly high in comparison to European countries (in Slovenia it is only 14% of all employed).

When deciding whether to keep the existing personnel capacities or gradually adjust them to foreseen objectives of the development of health and economic situation of the system, the objectives set in Strategy for development of health system are fulfilled. Keeping too many employees would mean preservation of the existing uneconomical work and employment of health institutions and accepting the situation that employed in health sector still have low salaries and inadequate working conditions (equipment, facilities, education) . The chosen option can lead to increase in salaries of health workers, and at the same time create dissatisfaction of those who could not be employed or keep their post in the health institution. In any case the changes will have to be made in all cases of unrationality or cases of employment of staff that are not fully being used.

3.5.1. The employed in the primary health care

Efficiency of the health service depends very much on distribution of medical personnel according to services i.e. levels of health care. It is also very important that there are the sufficient personnel at the primary health level. 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 in that way the cost of health care is reduced. It is particularly important for public funds because of that countries take special care about development of primary health care and that includes the employment in this service.

At the primary level[19] according to Institute data (2003) in public health institution there were 3260 employed persons , 2591 medical workers and associates (79.4%) and 669 (20.6%) non-medical workers

- 575 doctors , 398 of them are specialists
- 236 dentists (including specialists)
- 2 pharmacist
- 86 persons with higher education
- 1616 with secondary education

Taking into account the domicile population at primary level there are:

- 1 doctor (general medicine i.e. specialist) per 1069 inhabitants,
- 1 dentist (including specialists) per 2539 inhabitants

[19] Source : Statistical yearbook -2003 . Institute of Public Health
All data are only for personnel of Dom zdravlja facilities and health stations as a primary health service in its narrowest definition of primary health care. The personnel of Institute of public health and pharmacies are not included.

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

Analysis of the personnel at the primary level by the narrower services shows that at this level there are a number of specialists who as a rule do not belong to the primary health care (specialists in internal medicine, physical medicine, ophthalmology, otolaryngology and other in total 21%)

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 the presumption that a part of the above-mentioned specialists has decided to become chosen doctors. .

Table 12. ***Profiles of the health staff in Dom zdravlja facilities and health stations in Montenegro in 2002***

Field	***Doctors (including specialists and dentists)***	***Staff with higher education***	***Staff with high school education***	***Doctor/other staff ratio***
General medicine	***182***	***13***	***445***	***1: 2,52***
Paediatrics (children and school youth protection)	***132***	***9***	***201***	***1:1,52***
Gyneacology- health protection of women	***32***	***0***	***47***	***1:1,47***
Occupational medicine	***61***	***2***	***92***	***1:1,54***
Dentistry [20]	***268***	***0***	***266***	***1:1,05***
Laboratory	***……***	***15***	***159***	***1: 0,30***
Pulmonology, pneumophtisiology	***17***			
Psychiatry	***18***			
Radiology	***13***			
Other specialties	***122***	***16***	***231***	***1:2,02***
Non-medical (administrative and technical staff)				
Administartive staff- higher education	***44***	***12***	***215***	***1:0,47***
Technical staff-total			***379***	***1: 1,01***

There is no possibility to compare directly the number of doctors in Montenegro to other European countries because of differences in organization of the health care and education. All countries do not have chosen doctors but family doctors or general practitioners and paediatricians and occupational medicine are not included. When comparison is made data on number of doctors of general medicine are taken into account i.e. number of inhabitants per a doctor of general medicine because in most countries they

[20] The dentists working in hospitals are included because the dental service with the exception of maxillofacial surgery belong only to primary health care

carry out the tasks of chosen doctors. On the basis of these comparisons it can be only concluded that the number of doctors of general medicine i.e. future chosen doctors in European countries is very different.

Montenegro falls behind European region of WHO in the number of available chosen doctors but in whole it can be compared to countries that first introduced the concept of chosen doctors as a gate keeper in the health care system e.g. England, Holland and some other countries.

Table 13. ***Number of inhabitants per a general practitioner in Europe in 2000***[21]

Country	***Number of doctors per 100.000 inhabitants***	***Number of inhabitants per a 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 are enough personnel for this kind of heath care comparing it to European countries. However , the changes in the law according to which only the insured population under 15 and over 65 years of age have right to dental services , the population for calculating the norms for dental services are reduced for one third of the population (about 221 000) and as a result there are 820 inhabitants per one dental team. Particular problem in dental service is surplus of specialists who make 44% of total number of dentists. The distribution of work is also inevitable for this service to so the dentists will in the future provide all services i.e. refer to specialists only the most complex cases from the field of maxillofacial surgery and orthodontics and in all other case only exceptionally.

Particular problematic characteristic of the personnel at the primary level is the ratio between medical and non-medical workers per a doctor. That ratio is very unfavourable because one doctor in institutions of the primary care '' support'' 3.18 other 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 the all employed. Disproportion of the team composition is most obvious 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 lack of certain profiles of medical workers such as psychiatrists, psychologists, physiotherapist and partly radiology technicians.

Apart from disproportion in team compositions for particular service, there are great differences in number of personnel per a municipality i.e. Dom zdravlja facility. The

[21] Source of data: Health for all database. 2003, European region of WHO , Copenhagen
Note: The data for Montenegro reffers to 2003 and includes all potential chosen doctors

number of inhabitants per one potential chosen doctor is from 1123 (Tivat) to 4270 (Plužine) , per one gynaecologist from 1283 (Mojkovac) to 9643 (in Nikšić) The deviation are noticeable in the range from 66 to 252% comparing to average for the number of inhabitants per potential chosen doctor and between 30 and 225% for chosen gynaecologist. Because of this in some regions the doctors are not used enough and in some other regions they cannot meet all the needs of the population.

Above-mentioned problems do not contribute to development of efficient health care system where the accessibility is one of the basic principles of organization. This situation inherited from the past is result of the uncontrolled employment of doctors and other staff because the needs of the population were not taken into account and need for the rational employment and utilization of the health resources.

The problem of inadequate number of the personnel becomes even more evident when looking at the number of doctors per municipalities and services. In some municipalities there are no doctors i.e. specialists of general medicine (Plužine) in two municipalities there are no paediatricians and gynaecologists. At the same time there are 24 doctors of urgent medicine and 16 specialists of internal medicine who cannot be fully employed because they carry out the tasks that do not belong to their service or specialization.

From the above-mentioned situation the necessary measures for reorganization of the primary health care and employment policy can be prepared as well as financing of the primary health care in order to provide the population with the adequate number of chosen doctors. Also it can be concluded that:

- the total number of personnel and its number in relation to population is according to existing needs and possibilities is satisfactory,
- 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 i.e. dom zdravlja. Since they do not have all necessary working conditions for specialists services, they are not used adequately and provide services that are not those of specialists,
- because of large number of specialists the number of potential chosen doctors is relatively small because the number of those who according the law are profiles for work in primary health care is small,
- there is a large disproportion between medical and non-medical workers in dom zdravlja facilities where the number of administrative and technical staff is almost two times higher than in EU countries
- taking into account the insured benefits from the heath insurance package there is a very large number of employed dental teams in dom zdravlja facilities at least for one third;
- the number of other health workers per one doctor is too large;
- doctors and their teams are unevenly distributed in Montenegro and there are great and unacceptable differences.

3.5.2 Primary health care services

For the analyses of work the data on utilization of the capacities by services is very important and it is based on the number of visits to a doctor. Those data indicate among other things the ‘’load’’ i.e. standard for population and population groups by municipalities. The largest number of daily visits has the general medicine: 28 visits i.e. somewhat more than 4.5 per an hour. Similar workload is in occupational medicine that provides mainly curative services as general medicine. In both cases it is noticeable the increase in number of visits in the last ten years while the number of visits in gynaecology decreased probably because of less pregnancies. The decrease in number of visits in dentistry is also present in all its narrow fields with the exception of orthodontics. In all services in dom zdravlja facilities the number of repeated visits is very high. That ratio in general medicine is 1: 2.2 in occupational medicine 1: 1.82, women health care 1:2, children health care 1: 0.62. The ration of first and repeated visits in paediatrics is favourable, because the large number of visits to counselling centres, while with others the high number of repeated visits is probably the consequence of poor organization, equipment, lack of diagnostics, low level of quality of work, lack of knowledge in diagnostics and therapy and similar.

Table 14. ***Number of visits to a doctor in Montenegro in 1993 and 2002***[22]

Field	***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 protection of children	***487***	***443,8***	***91,1***	***21,9***	***21,4***	***97,7***
Health protection of school youth	***147***	***179,4***	***122,1***	***10,4***	***13,7***	***131,7***
Health protection 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***

It is noticeable from these data that there is an increase in number of visits in all services in dom zdravlja facilities except in children health care because of the decrease of young population in the total population and because of use of private paediatric services.

Workload of the service that will be reorganized is very important for defining the network of public health service in Montenegro at the primary level. That will have an influence on determination of main tasks that will have to be carried by every dom

[22] Note: For recalculation of visits per day the average of 256 working days is taken. The data shows only visits to surgeries without visits to other health workers, house calls , visits to schools etc.

zdravlja and those centres in dom zdravlja that will be organized for two or more dom zdravlja as regional centres.

The size of population, norms and principles of good organization and rationalization will be criteria for defining the content of a particular dom zdravlja i.e. others responsible for primary health care according to law.

3.5.3 Personnel in pharmaceutical service

The network of public pharmaceutical service is the personnel of the Pharmaceutical institution ''Montefarm'' which has pharmacies in all municipalities in Montenegro. The number of employees in that institution is 343 in 2002, 232 (67.6%) of them are health workers and 111 (32.3%) non-health workers. In this service it is evident too large number of non-health workers that has an influence on the price of drugs used by the insured and financed by the Health insurance fund as well as on price of drugs used by other health institutions. Among the health workers in pharmaceutical sector the participation of employed with secondary education (135) is dominant while there are 97 pharmacists (no specialists). The ratio of pharmacists and pharmaceutical technician is 1: 1.4. In four municipalities: Andrijevica, Žabljak, Plužine and Šavnik only pharmaceutical technicians work in pharmacies.

According to 2002 data[23] in pharmaceutical sector in Montenegro there were:

- 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 realized prescription in public pharmacies in 2003 was 3 500 000 [24]that is:

- 15 217 prescription per a pharmacist, i.e. pharmaceutical technician per a year
- 59.44 prescriptions per a pharmacist, i.e. pharmaceutical technician daily (working day)
- 9.65 prescription per a pharmacist, i.e. pharmaceutical technician per working hour

According to statistical data the pharmaceutical service in Montenegro is less developed than the average in European countries, especially if the number of inhabitants per number of employed and their profile is taken into account. That indicator of development is rather relative. The needs for pharmacists does not depend only on the size of population but also on how health service is developed and number of doctors in it and as well as on the method of regulation of insured rights to drugs. The important role also has the financing of pharmaceutical sector (margin system, service system) the issue

[23] Data from public health system
[24] Data from Health insurance fund

of ownership (public or private) and status i.e. regulation allowing or prohibiting hospital pharmacies to provide non-hospitalized persons with drugs and medical devices).
For planning the needs of pharmaceutical service the best indicator is the ration between doctors who prescribe the drugs and the pharmacists. i.e. the number of prescriptions per a pharmacist. The EU countries have one pharmacist per 6 – 8 active doctors who treat patients (without doctors in institutions of health, doctors in management, pathologist, radiologist etc.). According to this indicator in Montenegro in pharmaceutical sector there is certain deficit, which is covered by pharmaceutical technicians who are not allowed to work on their own. According to another approach for planning the pharmaceutical capacities i.e. personnel the number of realized prescriptions per a pharmacy is taken into account. On assumption that one pharmacist realizes 9 – 10 prescription an hour (effective working hours) than it can be planned to have one pharmacist per 13 800 to 15 360 prescriptions yearly. In planning the capacities of pharmaceutical sector the roles and tasks of pharmacists and teams have to be defined. In the framework of the World Bank project the hired consultants will prepare the study of organization of the pharmaceutical service and regulations for implementing the law in this field.

3.5.4. Personnel in specialist service – outpatients and hospitals

The function of a hospital is to provide outpatient and hospital specialist services. Both of these services can be provided by the same personnel, with the same equipment but those two services because of their specific technology are usually separated. Because of weaknesses in the records keeping there are no separate data on work of specialist services. There are only data on hospital personnel without records of the scope of services and number of treated at hospital wards. Because these data are not available it is difficult to create the strategy for development of hospitals. One of the more important activities in the framework of improvement of records keeping in health care will be the introduction of keeping records of work in hospitals in the field of specialist outpatient services and defining standards for health statistical research of the work of outpatient services. A particular characteristic of the health care system in Montenegro is the existence of hospital beds in some dom zdravlja facilities that is not known in EU countries inherited from the earlier system. The number of those beds is not large, but certain number of health personnel is attached to them and they should provide primary health care services. It is also very controversial the professional question of quality of services in such a non-standard conditions as well as the funding of those capacities. According to new law Dom zdravlja can not provide inpatient services only day care and treatment units for those who need special care.

Table 15. ***Number of staff employed in hospitals in Montenegro in 2002***[25]

	Number of health workers and associates:					
	Doctors	***With high education***	***With higher education***	***With high school education***	***Administrative and technical staff***	***total***
General hospitals	***240***	***8***	***32***	***820***	***416***	***1516***
Special hospitals	***59***	***6***	***17***	***177***	***117***	***377***
Clinical Centre	***265***	***50***	***71***	***901***	***479***	***1766***
TOTAL	***564***	***64***	***120***	***1898***	***1012***	***3659***

According to data in Montenegro in general and special hospitals and the Clinical centre there were 564 doctors, 2082 other health workers and associates and 1012 administrative and technical personnel employed. There were 3.6 employed health workers and associates per a doctor i.e. 1.83 administrative-technical personnel. The ratio of employed health workers and associates and administrative-technical staff is 72.3%: 27.7%. The participation of administrative-technical staff is large in special hospitals (33.00%). The data on hospital health institutions, similar to primary health care shows the extensive and uncontrolled employment of staff who do not provide health service. Of all employed doctors in hospitals the largest number of specialists are specialists in internal medicine 67 , surgeons 73 including specialists in neurosurgery, urology and children surgery, paediatricians 50, gynaecologists 43 , anaesthesiologists 40, radiologists 31 , orthopaedists 28 etc. The number of doctors by specialties in total is sufficient but as also in primary 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 the secondary and tertiary service should be based on the number of hospital beds, their occupancy and the number of hospitalised patients in order to have objective review of the utilization of these capacities.

[25] Data source: Analysis of the health care services in Montenegro for 2003, Institute of health , Podgorica 2004

*Table 16**: Number of doctors, medical and non-medical workers and number of released patients, hospital days per a doctor in Montenegro in 2003***[26]

Hospital	***Number of the employed***			***Number of medical and non-medical workers per a doctor***	***Number of released patients***	***Number of hospital days***	***Number of released patients per doctor***	***Broj BOD na 1 ljekara***
	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***
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***
TOTAL	***564***	***2647***	***1012***	***6,49***	***67218***	***629935***	***119,2***	***1116,9***

Analysis of the utilization of health personnel i.e. their workload and work efficiency by hospitals shows that:

- workload of health workers in hospitals in Montenegro is rather low;
- per a doctor there are 4.69 other employed health workers and associates and 1.79 non-health workers, significantly more than in EU,
- on average there are 119.2 released patients per a doctor or less than a half of patient a day,
- per a doctor employed in hospitals on average there are 4.36 hospital daily that means that he treats that number of patients daily,
- great number of hospital doctors work certain time in specialist outpatient surgeries in hospitals and in that way spend part of their working hours for outpatients (the extent of that work in not known and in Slovenia it is 12%),
- data shows poor utilization of personnel capacities in hospitals and possibilities for rationalization of work and reduction of personnel capacities,

[26] Data source: Analysis of the health care services in Montenegro for 2003, Institute of health, Podgorica 2004

- in developed European countries one doctor in a hospital daily treats about 10 - 12 patient on average.
-

Average length of treatment by wards i.e. possibilities to treat as many patients as possible with as intensive treatment as possible in the shortest possible time has an influence on the number of hospital days per a doctor. When analysing the work of hospitals there are rather great differences so that average length of treatment is at:

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

The average length of treatment is the indicator that shows the efficiency of work so that with less investment better results could be achieved and with that the needs for personnel capacities in hospital to be defined. By reducing the length of treatment in hospitals, the needs for health services are reduced and particularly for health care and non-medical services what in general reduces the need for personnel. The average length of treatment in hospitals in Europe in acute hospitals (without psychiatry, rehabilitation and gerontology) is: in Austria 6.3 days, in Denmark 3.8 days, in Finland 4.4 days in Ireland 6.4 days, in Sweden 5.0 days etc.

Reduction of average length of treatment is the trend in the world that Montenegro has to follow and that will be included in the plans of health care of each institution. Reduction of the average length of treatment will have the influence on rationalization of the secondary level of health care through intensifying the process of diagnosis and therapy and that will increase the need for doctors in outpatient services in radiology, functional diagnostic services, anaesthesiology, nuclear medicine and laboratory units. On the other hand there will be decrease in need for other doctors in inpatient services, especially for personnel for care.

The rate of hospitalization in Montenegro is 108.9 persons per 1000 inhabitants. It is rather low in comparison to other countries of Europe. Reduction in the hospitalization will depend on the method of solving the care for elderly and quality of work of the primary health care, and with that the there will be an increase in diagnosis of diseases for hospital treatment. Low rate of hospitalization of population in Montenegro has the influence on the level of hospital ''expenditure'' Because of that the measures for rationalization are needed and reduction of length of hospital treatment is significant one and in that way the reduction in needs and pressures for specialist and hospital care can be solved.

Table 17. ***Hospitalization rate in Europe and Montenegro in 2000***[27]

[27] Data source : HFA database, European region, WHO , Copenhagen 2004 and Institute of health

Region	*Number of hospital treatments per 1000 inhabitants*
Europe	***187,1***
EU	***184,0***
Montenegro	***108,9***

The trend of increase in hospitalization can be expected in the next 5 to 7 years so that the level of 120 to 125 treated persons per 1000 inhabitants can be reached that would mean the increase for 10 to 15%. This increase does not have to be followed by the increase in personnel capacities of hospitals but their better organization and rational operation. . Data on utilization of existing capacities shows that there are objective possibilities for improvement of internal organization of the work in hospital, work productivity and better efficiency.

4. Financial resources for the health care

Health care system is based on the principles of Bismarck social health insurance which is financed from the contributions of employers, insured and other categories. The contribution rate is 7.5% of the employees' income and 6% from the employers. Law on health insurance sets the base and the contribution rates for other categories of insured. Contrarily to the practice in countries with similar health insurance the law has not foreseen special contribution rate for injuries at workplace and professional diseases. In western and central European countries employers pay special rate for their employees. From those contributions health services and salaries for those who are injured or suffer from professional diseases are paid and they are different and depend on the amount for risk expenses .In some countries ''bonuses'' for employers are introduced for those who have low expenses for that insurance or penalties for those with high expenses. In that way the obligation and responsibility for safety and health at workplace required by the International labour organisation and in line with directives of EU is on employers. Special contribution for workplace injuries and professional diseases means at the same time excluding those risks from general comprehensive solidarity in health insurance and transfer of expenses for treatment of those conditions to the cost of workforce and indirectly to cost of products and services.

Contributions set by the Law on health insurance are paid to Health insurance fund and from those funds the insured benefits and public health institutions that provide health care are financed. The only institution responsible for compulsory health insurance is Republic Health insurance fund with the seat in Podgorica and branches all over Montenegro. Founding of Health insurance refund as the only one responsible for health insurance was the most rational solution due to small number of the insured in Montenegro. Law on health insurance envisage that the voluntary insurance is also the responsibility of the Health insurance fund and it has to provide professional support to all types of health insurance. Because of that professional development of the existing service of the Health insurance fund will be necessary.

In Montenegro according to the Law on health insurance the whole population has compulsory health insurance and persons are insured according to different categories

defined by the law. The largest number of insured is employees and their family members, then unemployed persons and pensioners with family members in total 45% of all insured. The farmers and other categories are very small.

Table 18. ***: Number and structure of the insured at the Health Insurance Fund***[28]

Type of insurance	***The insured***	***Family members***	***Total***	***%***
Employed	***155.131***	***137.573***	***292.704***	***50,78***
Unempoyed	***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***
Others	***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 gives to population certain rights to health services and compensation but it is also related to compulsory contribution in proportion to their financial capabilities.

For many years the expenditure of the health insurance fund exceeded the revenues but there is a positive trend of cutting the deficit. In 2001 the deficit of the health insurance fund was over 6.2 million euros and the level of coverage of expenditure by the revenues was somewhat below 92%. Total debits of the health insurance fund by the end of 2003 were 28 million euros.

The transition process which is followed by certain social and economic problems reflects on the capacities in real economic framework - real sector which contributes the most to funding the health care. The data shows that there is faster grow of needs for health services than coverage of their cost and that is known in all European countries. This situation calls for necessary measures for rationalization of health care, harmonization of the rights and health programs with real possibilities and finding new financial resources other than public finances.

In Montenegro the situation is that public health insurance and services are funded almost completely from contributions and partly from the Budget. Private funds for financing health care are mainly the participation and it is hardly 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 the most of the population is low there is private market of health services on the basis of supply and demand. This should be taken into consideration when finding solutions for financial situation of the public health insurance and improvement of rather bad financial position of health institution.

[28] Data source: Republic Health insurance fund (for 18 October 2004)

The greatest part of funds for the health insurance benefits are contributions of employees and their employers. Their participation in total revenues of the Health insurance fund was in 2003 almost 70% of all revenues. Then follows the revenue from pensioners' contribution (25%), unemployed (3%) and farmers (0.1%).

When we look at the expenditure the picture is quite different. The greatest '' consumer'' are the pensioners who exceed the average expenditure for 51%. Only the employed and their families cover completely with their contributions the costs of health insurance benefits while all other categories the revenue from contribution are less than costs of their treatment what is particularly evident with farmers. According to Health insurance fund data financial deficit is most evident in health insurance of unemployed and farmers and a particular problem is uncovered expenditure for financing health care for refuges and displaced persons. In social health insurance we have to accept the fact that because of the solidarity all categories of the insured cannot cover their costs of health care and it is also evident that the contributions for unemployed are far bellow all other categories.

In 2003 the Health Insurance fund revenue was 88.296 million € what is 153.16€ per insured or 145.29 per a refugee. The average amount of the funds for financing health care benefits cannot ensure high standards of health care and too wide range of rights to health insurance**. In current economic situation, 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-level medicine.**

In 2003 the Health insurance fund expenditure exceeded the revenues for 5.943 million. Negative financial result of the Health insurance fund has been occurring for several years showing unstable financing and discrepancy between financial resources and the needs i.e. demands for health care.

Table18: ***Income and expenditures of the Republic Health Insurance Fund in 2003***

Type of insurance	***Income from contributions in 000***	***Expenditures in 000***	***Per an insured person in €***		***% expenditure coverage with income***
			income	***expenditures***	
Employed	***66.033,3***	***45.192,5***	***225,6***	***154,4***	***146,11***
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***
Others	***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***

The financial resources of the Health insurance fund are the most important source of funds available to health institutions and they are 91.1% of their total revenue. Other sources of revenue are participation of the insured 0.88%, and funds from health insurance funds of Serbian and Republic of Srpska 1.0% and for services provided to the refugees.

From the total revenue Health insurance fund had expenditure for financing health services in the amount of 67.288 mil€ as follows:

- dom zdravlja facilities 28.188 million €;
- general hospitals 13.445 million €:
- special hospitals 4.500 million €;
- Clinical centre 20.460 million €
- Institute of health 0.695 million €;
- for prescribed drugs and for work of pharmaceutical service 11.746 million €

The participation of Health insurance fund in financing health institutions has increased since 2000 and at the same time the participation of the private funding has decreased (direct payment i.e. the insured participation in the cost of health care what is contrary to trends in developed countries. That has as a result the situation that health institutions completely depend on the public financial resources i.e. contribution to compulsory health insurance. The Budget of Montenegro that provides the funds for the unemployed health care, refugees and for tasks of public health, participate in funding of health care with the smaller part.

Analysis of the expenditure by levels of health care[29] shows that the amount of funds for primary care is somewhat over 40 million and for secondary cares about 31 million. Objective data on costs of health care by levels are not available because dom zdravlja facilities that are responsible for primary health care get also funds for specialist health care that belong to another level. At the primary health care there are 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 by levels requires changes in organization and functioning of health institutions and the method of their financing according to reform principle to fund the health care not the capacities.

Of all health institutions in 2003 , 6 dom zdravlja facilities , 5 general hospitals and one special hospital, Clinical centre and Institute of health had deficit in the amount of 5.397 million €, while the others had surplus in the amount of 2.042 million €. These data do not include the surplus of the Public institution Montefarm which according to Health insurance fund data was 0.456 million €. Deficit in operation of health institutions indicates the increase in material costs such as drugs and medical supplies and inadequate method of financing of health institutions according to which the capacities are paid

[29] Financial plan of the sustainability of the health system in Montenegro for the period 2005 – 2007, Goverment of the Republic of Montenegro

including all uneconomicalness in health institutions. Financial operation and situation in health institutions is the reflection of the role and capabilities of their management.

New law solutions determine the autonomy of the health institutions and responsibility of the management for their running and functioning of the institutions as one of the general principles of the decentralization of the health care system**. 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 employ new staff and expands its capacities although 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 really autonomous business entity in public service.**

In the public health institution expenditure structure the salaries prevails with 47.95% then follows recurring costs with 45.5%, and the expenses in the amount of 6.55% are legal obligations. This structure is different for different institutions. Gross salaries and legal obligations in the expenditure structure of dom zdravlja facilities are the largest part., while the total expenditure in hospitals and particularly in Clinical centre are far larger. This is logical consequences of the 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 because of that the part of expenses for salaries is adequately larger while in hospitals the situation is opposite. In some health institutions there are great differences in expenditure structure what indicates some developmental trends and lack of consistent approach to development of particular segments of the of health service from the past such as differences in their services, personnel, extensive organization, keeping the capacities, poor management etc.

According to the Report on work and operation of the public health institutions for 2003 in Montenegro the expenditure per a patient in general hospitals was between 359.28€ in General hospital Kotor and 692.72 i.e. 914.51 € in the Clinical centre (on average 705.81€) Also the average costs of a hospital day in general hospitals was from 45.91€ in General hospital Kotor to 74.03€ in General hospital Pljevlja or 67.43€ on average in all hospitals. Average expenses do not make possible further analysis because there are no data on expenditure structure by wards and basic elements for calculation of costs. Estimated expenses for a chosen doctor team in primary care is about 30 500€ and it provides 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 priority of the primary health service. This at the same time means that there is a need for rationalization in hospitals and definition of professional medical criteria for hospital treatment.

The expenditure of health institutions compared to other countries is low mainly as a result of low salaries of the employed in health sector. 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) nor from new financial resources (participation or similar) .The possibilities for increase of the salaries of the employed are in the system itself. It is obvious that restructuring of health service towards primary care

and reduction of personnel who are not being used, as well as the reduction in drug consumption can make possible the raise of the salaries of the employed. There are enough possibilities for reduction i.e. rationalization of the personnel particularly in administrative and technical services and some specialist services in dom zdravlja , in hospitals where there are unused capacities, in dental and some other services.

Table 19. ***Expenditure structure of certain types of health institutions in 2003***[30]

Type of health institution	***% expenditures***			
	gross salaries	***legal commitments***	***expenditures for drugs, medical, laboratory and dental materials***	***other expenditures***
Dom zdravlja	**57,53**	**7,45**	**13,03**	**21,99**
General hospitals	45,82	5,70	15,02	33,46
Special 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 in a way shows the developmental problems of the health service. If expenditure is compared to similar ones in developed countries the conclusion is that the gross salaries in Montenegro are very low, and in EU countries the salaries participate in primary care expenditure with 75% to 80% and in hospitals with 65% to 70%. Material costs also have great influence on the expenditure structure because the largest part of supplies used in health service come from countries with high technology and because of that with high prices. That is one reason more for necessary changes and adjustment of 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 the financing of health programs have direct influence on the operation of health service. Because of that it carries great responsibility for functioning of health system and even more for health insurance. Payment method has great influence on the funding of health institutions. The system so far gave priority to funding capacities, and because of social situation it was the most important to provide the funds for salaries and after that for other expenses if there was possibilities for that. As a result there were high liabilities towards supplier for delivered goods, and also delay in supply of goods particularly drugs.

Unclear role and tasks of the Health insurance fund, with the elements of old system, having no developmental strategy and shortcomings of public health care service network influenced the development of health institutions and the system without clear approach. Contracting between the Health insurance fund and health institutions, which was the legal obligation, with defining the program of work for particular services and institution has not been done for more than a decade. That made possible for public health

[30] Data source: Report on work and operation of health institutions in Montenegro for 2003, Health insurance fund

institutions to develop their capacities over the limits of potentiality and against the principle of economic justification what was particularly noticeable when their expenses are analyzed because there were no investment in knowledge and training of personnel, equipment i.e. maintenance of the facilities and the equipment except in Clinical centre with some diagnostic services. Because of all these nowadays the health institutions have poor working conditions, the personnel is not motivated for more rational work and of higher quality i.e. better organization of work.

5. Planned developmental orientations

The basic strategy for further development of the system is related to improvement in health condition of the population, raising the quality of health services and stability of the system so that the insured and the providers of services could have adequate health safety. 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,

Planning of health care is done according the principle of priority services which can with available resources achieve the best results in improvement i.e. health protection of particular groups or the whole population.

Priority measures:

- Activities and programs for strengthening the health that will be supported by Ministry of health, government departments, local governments, NGOs, and in they will be implemented in the units for strengthening health in dom zdravlja facilities and be funded by Health insurance fund;
- Adoption of scope and standards of health care provided to the population as a service package from compulsory health insurance will ensure equality and accessibility of health care to all groups of population ;
- Programs for implementation of health care will include the obligation to carry out preventive measures and according to it they will be funded by the Health insurance fund;
- Adoption of the public health institution network will define the optimal health infrastructure which will ensure accessible and quality health care;
- Implementation of the preventive programs for some vulnerable groups of the populations and for prevention and early detection of the diseases will be the compulsory part of the program of work of each dom zdravlja 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 the conditions for strengthening the system;
- Investment in education and training of the personnel in primary health care will raise the level and the quality of the team services in dom zdravlja facilities;

- 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 the health services.

Master plan as the fundamental plan of development of health system in the next medium-term will be used for determining the following planning documents:

1. Plan for development of the personnel in health system
2. Yearly plan of specializations
3. Network of health capacities
4. Plan for restructuring the hospital capacities
5. Investment plans in health service
6. Organization plan for pharmaceutical service
7. National programs for strengthening the health and health care;
8. Yearly programs of health care

5.1. Priorities and orientations for achieving better health

Priority 1. Health institutions have compulsory preventive programs

Dom zdrvlja will be responsible for preventive programs and measures at the local level and the national level Institute of public health will be responsible for it.

National program of preventive health measures at national level will prepared by the Institute of public health. Preventive programs for the population at local level will be in line with the national one by scope, type of services and groups of the insured. The compulsory part of the program of preventive measures for health care in the next 3 years must reach the 100% coverage of the population .The Health insurance fund will finance the dom zdravlja according to contract for planned value of the preventive program .

Priority 2. Development and expanding the health education in dom zdravlja which will support the preventive programs and efforts for increasing the responsibilities of the citizens for their own health. The content of these activities will be to transmit the knowledge about risk factors, avoiding the risks, behavior in certain situations with some diseases and most vulnerable groups. Health education in dom zdravlja will have as target groups pregnant women, preschool and school children and youth and other vulnerable groups. It will be implemented by the teams of chosen pediatricians, gynecologists and dentists in dom zdravlja units so that each chosen doctor and nurse team provide preventive measures according to the content and the scope. Institute of public health will prepare standardized content and orientations for implementation of the programs and necessary material for implementation of particular health campaigns.

Priority 3. Improving the women care and reducing the infant mortality. In order to achieve that the preventive measure should have complete coverage particularly with pregnant women and infants. The chosen gynecologists will be responsible for this at the

primary level and between gynecologists at the primary and secondary level the communication and cooperation will be established for the exchange of information, experiences and knowledge. Gynecological clinic of Clinical centre will prepare doctrine for improvement of health conditions of the pregnant women, their living conditions and as a result decrease in perinatal mortality rate. The objective of these measures is to reduce the perinatal mortality rate in the next 5 years for at least 50%. On the basis of Strategy for reproductive health the national capacities in hospitals will be determined and harmonize total hospital capacities for childbirth with baby friendly standards and standards of professional work.

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

Priority 5. Measures for cure the most common and the most serious 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 programs in the primary health care, with programs for strengthening the health and early detection risk factors: hypertension, 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 the early phases of the disease and timely treatment particularly of breast cancer, cervix cancer, lung cancer, and better education and qualification of the health worker and improved accessibility of diagnostics (mammography, colposcopy) and therapy for all citizens. For the chronic diseases there will be detailed programs of screening for early detection and treatment so that the health service will identify the risk factors and treat the patients in the most efficient way. The introduction of these programs will be responsibility of Institute of public health and preparation of the standardized doctrine for early detection and treatment of chronic diseases according to principles of gradual diagnostic and therapy which will be the responsibility of the expert consultations in the Clinical centre.

Priority 6. Compulsory health insurance will direct the fund towards priorities of health care. Restructuring of health care system and its rationalization according to norms and standards will ensure the financial balance. Depending on the implementation of the priorities the norms for capacities and level of expenses of some services will be adjusted what is one of the elements of the reform trend in Montenegro

Priority 7. Programs for elderly health care are very important first of all treatment of chronic diseases so special attention will be paid to their home treatment. The Ministry of health will prepare for the Government Strategy for elderly health care and programs for their care and that will include institutional and non-institutional care. These

programs will be funded from different sources: the insured own and their families, Health insurance fund, Social welfare, and the Budget (for social services and social welfare). The establishing of old people's homes for those insured to whom the long-term care at their homes could not be provided will be proposed.

Priority 8. Measures for strengthening and protection of mental health and prevention of addictive diseases will be used to carry out the activates set in Strategy for improvement of mental health and on the basis of the principle mental health in the community , 7 Centers for mental health will be opened in dom zdravlja facilities.

Priority 9. The rights of the citizens to health insurance will be achieved by better accessibility of the services, shortening the waiting time for examinations and treatment. The conditions will be made for provision of the drugs from the Positive list by the Health insurance fund. The standard of health services and rights in relation to health insurance will be gradually increased by financial instruments.

Priority 10. Improving working conditions and operation of the health institutions and workers will be ensured by the rationalization measures in the next 2 to 5 years. It is real to expect the raise in salaries of the employees in health institutions for about 20% and improvement of working conditions (equipment, professional development) through reduction of the number of employees by 5% per a year.

5.2 Priorities and orientations for the development of health institutions

The priority in the development of health care service is the primary health care. Reformed dom zdravlja will completely change the content of their work and organization in 2006. According to the results of the Project in Dom zdravlja in Podgorica, the 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 programs and priority planned tasks for improvement of health condition. At the same time the units for strengthening the health and development of children will be introduced in dom zdravlja. By those changes dom zdravlja will become really responsible for health care of some population groups i.e. the whole population.

Those changes in Dom zdravlja will gradually set right the developmental disproportions existing so far in the development of health care. Focus on the priority development of primary health care will not lead to increase in capacities of dom zdravlja facilities i.e. the number of employed chosen doctors. Employment will be in line with personnel norms for this service, and those Dom zdravlja that fall behind in personnel capacities and development will be the priority.

At existing locations Dom zdravlja facilities will keep the services in the scope according to fulfilled conditions (norms and standards). Dom zdravljas will organize regional centers for catchment areas according to WHO recommendations for: mental health, children with special needs, reproductive health, TB and those capacities will be used

evenly by the population in that area. Diagnostic centers in dom zdravlja will be organized on the principles of rationality and division of work between Dom zdravlja and hospitals in order to have full utilization of the existing capacities.

In municipalities with low population density : Andrijevica, Cetinje, Kolašin, Plav, Pljevlja, Plužine, Šavnik and Žabljak, standards for personnel and work of chosen doctors , pediatricians, gynecologist and dentists will be more favorable (upper limit) than average 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 the priorities in development of primary health care. The approval of the specializations that do not belong to primary care will be denied and slowed down i.e. the employment in service that are not component of the primary care will be stopped .Dom zdravlja will not provide hospital treatment any more and at the latest in 2006 it will be transfer to general hospitals Professional medical opinions will be preferred to political ones. Part of the inpatient capacities of dom zdravlja will be transformed into day centers for elderly and the other part for post-operation care of the patients who after hospital treatment cannot be sent home and who need only professional medical observation.

Development of general and special hospitals will be focus on the raising the quality of services .In their work the priorities will be outpatient service and introduction of ‘’daily’’ (one day) hospital through gradual reconstruction of their capacities according to standards for hospitalization.

According to the Law general hospitals will organize their capacities for 24 hour service for care and treatment based on standards and service protocols. Hospitals will organize anesthetic units and intensive care, blood transfusion, laboratories, radiology including ultra sound diagnostics. Patients will be by the rule referred to hospital treatment upon making the diagnosis by the chosen doctors or outpatient service specialist.

The investments in equipment for better diagnostics (radiology, ultra sound, blood transfusion diagnostic functional units, and cytology and pathoanatomical diagnostics) will be according to standards and professional doctrine and in that way the treatment will be speeded up and the standard of treatment will be raised.

All general hospital will take over the organization and provision of emergency services for the territory they cover from Dom zdravlja. Emergency services will remain in dom zdravlja only in areas where the transport of patient to a hospital is longer than 1 hour. Organization and work of emergency services will be define in details by the Development plan for organization of this service taking into account future health needs, development of road network, development of tourism and regional integrations.

The number of hospital beds and personnel will be according to norms and hospitals will gradually adjust to it in 3 years from the date of adoption of this Plan. **The hospital capacities are determined on the basis of size of the catchment area of a particular**

hospital ward and norms and standards for hospital work. In the case of reduction in capacities of some hospitals because the utilization of hospital beds is below 80%of the norms, those ward will be reoriented to specialist outpatient and consultative services. Inpatient services of that ward will be taken over by another ward in that hospital or another hospital. New services i.e. new wards in hospitals can be opened only in cases when there are needs according to catchment area criteria on the basis of norms for determining at least 15 hospital beds and provision of 5 specialists i.e. specialties as well as the other conditions for successful and rational work.

Planning the personnel and specialization will be based on the plan of needed capacities in inpatient specialist services and outpatient services and according to priorities. The Ministry of health until the plan for specializations is adopted will not approved specializations for hospital wards where there are enough or surplus of doctors and priority will be give to those specializations which are deficient. Specialization plan will be in accordance with human resources plan for medium-term period.

In general hospitals which have wards with small capacities comparing to standards for number of doctors and other health workers and where it is difficult to organized 24 hour service, they will merge into one organization unit – ward. For long-term planning of hospital capacities the expected gradual increase in hospitalization should be taken into account. In general hospitals the emergency service will be organized and it will provide health care for emergency cases through services of surgeons and specialists of internal medicine, with the possibility of organizing on call service.

The standards for hospital beds and personnel will be criteria for approval of all specializations as well as for employment. The Ministry of health will not approve the employment in hospitals which have enough staff or surplus of it according to standards or if it is possible to provide deficient staff by taking it over from other hospitals.

The future development of health institutions will also have to include the development of information system as one of the priority tasks. The development of the system will be based on the same principles, definitions, and databases and other common elements which will enable to link local networks in one information system and exchange the information among the users. Health information system will enable the better managing of the system, better reporting on health condition of the population, adequate monitoring of the expenses and operation of the health institutions, exchange of data between different levels of health care system, financial control and professional supervision. Development of health information system started with Health insurance fund project on the insured database and it will continue with the Health care improvement project, Consolidation of contribution payments to funds project and with investments planned for the development according to financial potentials and plans. The health institutions will gradually reduce the number of non-medical workers through development of information technology, changes in organization and other measures and in that way contribute to rationalization of their operation. Reduction in the number of non-medical workers will be ensured by consistent compliance with regulations and not

employing new staff for the vacant posts because of retirement, giving notice and other reasons and with rationalization of work of administrative and technical services and entering into contract with other legal entities for non-medical work (out-sourcing).

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

Determined development of the health institutions will be followed by the investments**. In investment plan for each year approved by the Ministry of health on the proposal of Institute of public health and Health insurance fund the priority will have the purchase of the new equipment which is necessary for achievement of planned priorities and investment in information system.**

The purchase of the new equipment will be based on analysis of its utilization, its contribution to improvement of the health of the population and cost and benefit analysis. Health institutions will with the depreciation funds, that would be calculated into the service cost and based on the criteria of financing defined by the Health insurance fund , maintain the facilities and equipment. Apart from these resources for purchasing the equipment and maintenance of the existing ones, additional revenues generated at the market will be used.

Changes in health condition and its improvement will be dependent on the knowledge and skills of the health personnel first of all doctors and nurses as the ones responsible for health programs. Medical science and technology advance very fast and because of that professional development of doctors and other health personnel is one of the conditions for implementation of the 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 in the process of education Medical faculty in cooperation with Doctors' chamber and other professional organizations. In the course of the project all chosen doctors will undergo training programs and professional seminars. The Law on health care has envisaged the compulsory professional development as a condition for getting and renewing the license. The content and the scope of programs for licensing will be prepared for the specialties i.e. 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 will be included in the amount of capitation i.e. for other doctors and health workers in the cost of services and set by contacts with the Health insurance fund.

The Ministry of health will initiate the training in health economics and health management in order to improve the management at all levels in health care. Knowledge from these fields will be one of the conditions for appointment of managers/directors in dom zdravlja and hospitals and it will be also useful for capacity building of the Ministry of health and the Health insurance fund.

6. Organization plan of the health care service

Current organization of health service is not completely in line with the principles of modern and efficient organization according to WHO recommendations on primary health care (Declaration on primary health care, Alma Ata , 1978, www.who.org) Analysis of the current situation indicated the problems in development of health institutions: unclear role of dom zdravlja, mixing of primary and secondary health care, disproportion, unevenness, and non-utilization of capacities; unequal territorial distribution ,too high employment, high operational costs in health services and (dis)satisfaction of the insured and the employed in health sector with health care system.

The plan as an instrument for development and changes sets the foundation for new organization of health care service what is at the same time the main area of the reform efforts.

6.1. Organization of the 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 dom zdravlja will be introduces in whole Montenegro at the beginning of 2006. Chosen doctors in the primary health care who will be chosen by the insured exercising their right to primary health care services, will become the gate keepers of the system In that role they will have the public authorization that will not have the other doctors of primary and other levels of health care.

Chosen doctors will have the task to , by themselves or in cooperation with dom zdravlja centers, provide to the insured who have chosen them all preventive and curative services including compulsory preventive checkups , immunization, screening services, diagnostic and curative eservices which will be determine in separate list of services of the primary health care. That document will be approved 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, delivery of: preventive, curative, diagnostic, and therapeutic services according to The scope of services and standards which will be determined for the 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 the institutions at those levels;
- referral to medical and disabled boards;
- collection and keeping medical documentation about health conditions, diseases and treatment of the insured disregarding 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, for example for consultations, treatment of certain diseases , prescribing drugs for treatment of that particular disease, referral for consultation to other specialists etc. Transfer of authorization will be done by referrals. Doctors, who will not have the status of chosen doctors, will provide the services covered by the Health insurance fund to the insured only in cases of emergency treatment.

Dom zdravlja will be responsible for the primary health care in the future too. Private doctors will be able to carry out the tasks of chosen doctors if they fulfill legal requirements on the basis of public announcement/tender put out by the Health insurance fund for entering into contract for providing determined scope of care under the same conditions as chosen doctors in dom zdravlja.

The scope of services provided by dom zdravlja with chosen doctors in municipalities will be in line with Program for health care and it will depend on the size of population groups i.e. population who need the health care in accordance with standards for particular services. Defining the work of dom zdravlja by the content and scope of work of chosen doctors, based on norms , will change the existing dom zdravlja services foreseen for the primary care so that some centers will be organized for territory covered by more than one dom zdravlja. This will be the case with centers for mental health, day centers, and centers for pulmonary diseases, centers for children with special needs as well as units for health improvement regarding hygienic and epidemiological protection. The content of the primary health service determined b the law regarding the centers will not be provided by each dom zdravlja because of the size of the territory, but it will carry out all the tasks in relation to primary health care chosen doctors services.

The function and tasks of dom zdravlja 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 these municipalities. The important role in determining the narrower services of a particular dom zdravlja will have the assessment of rationality and utilization of capacities. Most dom zdravlja will have mainly doctors of general medicine (i.e. specialist of general medicine) pediatricians, patronage services, dental preventive services (for preschool and school children) and laboratory services. Other segments of dom zdravlja that are organized in center such as gynecology, pneumophtisiology, radiology, mental health etc. will be organized and remain in a particular dom zdravlja 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 centers will provide services to population of the territory of two or more existing dom zdravlja i.e. health stations and some will be organized for population needs i.e. population groups from territories of two or more municipalities. For the reason of rationality and better organization of work health stations will be parts of dom zdravlja.

Other existing specialist services of dom zdravlja will not remain the component of dom zdravlja. That especially applies to hospital beds, dialysis unit and some specialist services. Above-mentioned capacities will be discontinue and join the capacities of the secondary health care or it will be offer at the market for private or other sectors. Some specialist teams will take over the role of chosen doctors if they decide so, especially in those areas where shortage of chosen doctors is acute and where there is a need for that. There will be no hospital beds in dom zdravlja, because there are no professional justifications for them, because dom zdravlja are not capable of providing hospital health care and there are enough of those capacities in Montenegro i.e. too much.

Doctors of occupational medicine who are not chosen doctors and work in Centre for functional diagnostic in Podgorica will be employed by the institute or some other organizations with responsibility for work protection, occupational medicine i.e. work safety and health. Apart from preventive checkups for needs of employers i.e. citizens (checkups for driving license, going in for sports, applying for a job) this institution will deal with epidemiology and study of relations between factors of working environment and health condition of the active population as well as providing consultative medical and technical assistance to employers for the prevention of workplace injuries and professional diseases. This institution foreseen by the Law on workplace safety in the part related to health care will be responsible for defining the doctrine of occupational medicine in Montenegro and providing professional assistance to those responsible for preparing regulation regarding workplace safety and health. The employers and the citizen who will use the services of this institution are to provide funds for its work and also the Budget for the part in relation to assistance and preparation of professional foundation for laws and various regulations in relation to workplace safety and similar.

6.2 Organization of the secondary health service

The reform of the primary health care and affirmation of chosen doctors as gate keepers of the health care system will reduce the number of referrals to the secondary level which will be relieved from 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 are in the domain of primary health care, change their organization of work and take over some new tasks. The Ministry of health in cooperation with consultants will do the analysis of the hospital capacities and determine which services i.e. hospital capacities will not remain in public health care system or they will be privatized.

At the secondary health care level the priorities will be given to outpatient treatment which will do 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 previously done i.e. if the constant observation of their vital functions is necessary. Specialist outpatient service will be organized only in general and special hospitals and Clinical centre. Although the specialist outpatient service and hospital service will not be organized separately, each ward in a hospital will have the definite time i.e. part of working hours, for outpatient services. Records will be kept separately for outpatient and inpatient services. The number of outpatients i.e. the number of the staff who will 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 service means the reorientation of the method of work in secondary and tertiary capacities. In this way the planned intervention will be provided, without unnecessary hospitalization and waiting for the operations. The exception to this rule will be emergency cases.

By this approach, which requires the changes in organization of work, it will be possible to change the ratio between inpatient and outpatient treatments in the favor of the first one 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 the patients because of certain treatment will stay for only one day i.e. few hours in a day. Most of the patients in day hospitals will be there because of planned operations .For those services '' classical hospital beds'' are not needed nor the services necessary during hospitalization.

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

Hospital services at the secondary level will be delivered in general and special hospitals and in the Clinical centre. General hospital will in the future have four basic specialties: internal medicine, surgery, pediatrics, and gynecology with obstetrics. Their services will be enabled by adequate laboratory, radiology, transfusion, functional diagnostic services, anesthetics service and pharmacy of internal medicine.

In general hospitals the treatment will be provided:

- 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 needed certain services from routine vascular and gastrointestinal surgery, less risk patients, fields of urology and oncology (surgical services) otolaryngology, and maxillofacial surgery;
- gynecology with obstetrics , for complete obstetric services, diagnostics and treatment of gynecological cases, except high risk and complicated gynecological interventions;
- pediatrics: diagnostics, treatment and cure of the children up to 15 years of age for all conditions except those foreseen for tertiary health care level

General hospitals:

Specialties	**Planned permitted services**
Infectology	Existing internal ward hospital beds can be used for closed hospital treatment, identification of the diseases, treatment and control, with laboratory testing in all cases except HIV/AIDS, and similar.
Psychiatry	10% of internal ward beds can be put in function for solving the needs of acute conditions of psychical episode; acute anxiety; support to chronic cases; support to Centre for mental health and in case when the patients need short- time isolation; control of the cases of self-neglecting and self-injuring
Anesthesia	General anesthesia for patients, stabilizations of injuries as a support to surgical cases; 24-hour service of specialist anesthesiologist and the equipment
Otolaryngology	In the scope of surgical beds , with the presence of ORL specialist procedures for less risk patients including children, diagnostic procedures and treatment of patients with medium high risk, possibility of treatment of wounds
Radiology	Basic diagnostic radiology, and ultra sound, routine radiology checkups, fluoroscopy, mobile apparatus for operating theaters
Pathology	Histology as a support to surgeons, cytology, mortuary
Transfusion	Blood testing, providing safe blood, tests for diagnostics

For the needs of consultative and outpatient services the hospitals will have some specialist services from other fields (dermathovenrology , orthopedics, otolaryngology) if the 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 some specialties for the whole republic in special hospitals. **Computerized tomography and other complex procedures will be possible to introduce if analysis shows that they are needed in a hospital and if there is no possibility to do that in some other hospital in Montenegro.** The criteria for new equipment will be anticipated scope of

service, which can be provided with the team using the equipment at least in one and by the rule in two shifts.
General hospitals will be able to introduce certain subspecialties if that will be in accordance with population needs, and if there are professional, organizational and economic justification for that .i.e. if that service is not included in the tertiary health care.

The number of hospital beds by wards in general and special hospitals is determined according to norms set by this plan and **criteria for defining the public health care network.** The changes in hospital capacities, introduction of new services as well as purchase and introduction of new medical equipment will be possible only if they are in accordance with standards for including in the network and with the approval of the Ministry of health.

The work of the hospital will be defined by yearly work plans, particularly in relation to number of beds, personnel, equipment and other conditions. Hospitals will be financed from public funds according to criteria for including in the health care network i.e. according to a contract with the Health insurance fund.

The public health care network will be the basis for planning investments in hospital capacities and specializations from some fields of medicine for the hospital and specialist outpatient services.

6.3 A new role of tertiary service

The tertiary health care is that part of health service that provides the population with the most complex health services for which hospitals and specialist services at the secondary level are not qualified or for professional or economic reasons it is not possible to organize them at that level. The content and the scope of the tertiary service i.e. health care is not standardized because the criteria for most complex health service depend on the size of population, the number of complex medical interventions in population, equipment and organization of the health service as a whole. Apart from that, the tertiary health car is usually combined with scientific research in the field of medicine. The research is funded from the Budget. The synthesis of the different roles of tertiary level causes unclearness in its definition and its roles. A tertiary health institution is an institution that provides services from the field of most complex health services and tasks of educating health workers and carrying out scientific research, and tertiary health service is related only to providing most complex health services i.e. programs. Such services can provide only health institutions that provide 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 the tertiary health institution. However, the 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 is a tertiary service that cannot be organized and provided by general hospitals. This is necessary for many reasons. First of all because of quality of medical services, than planning the capacities, funding the services and because the services of this level require different team composition, more complex technology and as a result different work and material cost.

The tertiary service in the Clinical centre is defined on the basis of analysis of the current situation:

- services of the complex cardiology diagnostics, non-operative and operative intervention on the heart (dilatations, PTCA, pacemakers , bypass)
- neurosurgical services
- services of thoracoplasty and plastic surgery with specialized hospital wards ;
- high risk patients of vascular surgery ;
- transplantations;
- combined oncology therapy – surgical, radiation, chemotherapy;
- surgery on spine and peripheral nervous system;
- treatment of traumatic conditions where intensive therapy is needed and constant control of vital functions;
- diagnostics and treatment of the most complex conditions and complications that cannot be successfully treated in general hospitals or because of the small number of cases it would be uneconomical;
- services of maxillofacial surgery including reconstruction of mandible, reconstructive surgery for various wounds;
- NMR diagnostics; PET; gamma camera;
- services from nuclear medicine;
- immunology , virology services , responsibility for standards;
- intensive therapy for new-born babies 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 special hospitals

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

The Clinical centre is, apart from providing tertiary services, responsible for standardized medical doctrine for prevention, early detection, treatment and rehabilitation of particular diseases, injuries and conditions in cooperation with Doctors' chamber , Medical faculty and other professional bodies. Professional doctrine will be basis for professional medical work of medical workers at all levels and it 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 the

segments of the health service. The doctrine will be transmitted to other health institutions and workers by organizing training, professional meetings 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 program for development of the plan for the doctrine which will be based on the priority tasks of the health care. For that purpose expert bodies will be formed for particular medical fields i.e. specialty from the most eminent experts and experts from other hospitals and from primary health care who 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 – Commission for quality will approve the plan and concrete proposals.

T**he Institute of public health will also have the status of tertiary level institution**. The tasks of the Institute are determined by the Strategic plan for development so that the function of the Institute will be focused on promotion, prevention and protection in the field of public health. The Institute will coordinate the plans for health promotion for the whole Republic. It is also responsible for professional tasks in preparation of national programs, development of strategies; public health programs for solving the most serious health problems and institutions; analysis of health condition of the population; health economics; management; and health informatics and development of adequate indicators for those fields as well as for determining the quality of the health care. The Institute will also be involved in planning the health care and provide professional and methodological support for planning and assessment of the plans of all health subjects. In the filed of prevention of communicable diseases Institute will prepare the program for immunization at the national level and supervise its implementation in all dom zdravlja. It will, according to the law, ensure the monitoring and control of parameters for the environment which are important for the health of the population.

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

6.4. Organization of pharmaceutical service

Pharmaceutical service is the primary health care service, which has different organization from dom zdravlja. The only task of the pharmaceutical service is to provide the population with drugs and medical devices. At the primary level this is done by pharmacies as independent institutions or private pharmacists and at secondary level the hospital pharmacies which are usually only for those treated in hospitals. Pharmacies at primary level can only provide for prescribed drugs i.e. some medical devices and in

some cases they can prepare some magistral and galenical medicine. Hospital pharmacies do not provide for prescribed drugs they only supply the hospital wards with needed drugs.

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 having larger profit while the interest of the ‘’consumers’’ who are usually those responsible for health insurance, is to have lower prices and non-profitable operation of the pharmacies. Because of these differences in opinions about production, distribution and supply of drugs the status of the pharmacies is different. In some countries the pharmacies are public health institutions and by that they are non-profitable institutions but in other countries they have the status of trade. Because of their work which is linked to health care and public interest of a country that they are under certain 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 consequences on the health and because the simple principles of completely free market cannot be applied in the health care. Those dilemmas are related to the issues of privatization of the pharmacies or alternative solution as public health institution. Development plan of the organization of this service should be prepared in cooperation with experts in this field assessing all solutions and final decision will be on the Government.

While solving this issue, during 2005 the Ministry of health will prepare regulations for pharmaceutical service and establish Agency for drugs as a regulatory body in this field. At the same time the Ministry will propose the following:

- to separate the pharmacies as health institutions in retail trade from wholesalers as a business activity according to the law;
- according to the law those who are wholesale traders have to ensure the availability of drugs from the List of essential drugs for use in health institutions and those for prescriptions;
- all drugs , under the condition that they are registered for sale , except those from OTC list, will be available on prescription regardless of status of a pharmacy: public or private;
- health insurance fund will refund only prescriptions for the drugs from Positive list of drugs

The number of pharmacies will be defined on the basis of personnel and other norms which will determine the number of employed in pharmaceutical service, the method of financing from public funds (Health insurance fund), the number of doctors working in public health care network, and professional position regarding the organization of pharmacies.

In some areas, where the number of the insured is less then the standard for functioning 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 it will include most

needed drugs for acute needs (‘’urgent prescriptions’’) of their patients and for house calls (‘’doctor’s bag drugs’’).

6.5. New medical technology

It is known that the increase of expenses for health care mostly depend on the new medical technology. **According to some data ‘’new technology’’ in developed countries each year increases the expenses in public health systems for about 2%.** The use of new medical technology is present in Montenegro, particularly if isolation lasting several years and needs to follow modern technological and scientific achievements in medical science and health care are taken in account. In those circumstances in Montenegro, it is not possible to identify that tendency, but it can be expected that that tendency will become more distinct. The new medical technology and its consequences will have more and more influence on health care, particularly in raising the quality of services but also their costs.

Because of the importance of new medical technology for the whole development of health system **the evaluation of the results of the new technology will be introduced through method of analysis which is scientifically based on 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 scarce financial possibilities for funding health care.

In order to evaluate the results of new medical technology the Ministry of health will appoint special commission for evaluation of new technology in health care and professional assessment for the work of commission will be done by the Institute of public health. **The tasks and responsibilities of the commission will be:**

- **preparations of proposals and amendments to standardization of equipment by the levels of health care and specialties;**
- **preparation of standardized procedures for pre-operative, operative other procedures in hospitals as well as recommendations for efficient and successful pharmacotherapy in health institutions ;**
- **follow the development of the new technologies in medicine and in health care, experiences regarding expenses and benefits for health improvement and evidence for justification of its use in practice,**
- **evaluate the proposals of health institutions for purchase of new equipment and introduction of new treatment methods and medical devices in practice on the basis of the evidence about their benefits and economic acceptability. One component of the analysis will be the evidence for :epidemiological needs; expected number of patients who will use this new equipment; number of examinations; benefits and possibilities for the use of this equipment instead of the old one or earlier treatment method ;whether the staff is qualified for use of the new equipment; service payment method etc;**
- **opinions and analysis of the Commission will be used by the Ministry for approving the decisions of health institution management on investments in**

health capacities and by Health insurance fund for evaluation of health institutions program of work and their funding.

Agency for drugs will register the drugs and issue the permit for putting them on the market and will be responsible for other jobs according to the law. Regarding drug cost management the Ministry of health will make in cooperation with Health insurance fund and Doctors' and Pharmaceutical Chamber the following decisions on in 2006:

- Control of the drug prices which will be based on comparative prices of the same drugs in the countries with similar GDP per an inhabitant,
- Introduction of referent prices of drugs as a model and method for determining the level of prices which are on the Positive list funded by Health insurance fund according to Financial plan;
- Development of clinical guidelines in pharmacotherapy of particular diseases and conditions, special working groups for particular specialties will propose the concrete solutions for the most successful and most rational use of drugs in health institutions and drug prescriptions.

6.6. The quality of health care

The development of health care is not related to the size of capacities but also to the quality. The issue of quality in health care has different meaning for health professionals and the users of their services. Doctors mean by the quality theof quality diagnostics therapy, technological potential of their work, the results of the treatment i.e. accuracy of the diagnosis. Patients mean by the quality the relation with the health workers, the condition of the stay in hospital, 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 health sector and because of that it is necessary to develop the quality indicators for all health services in cooperation with health institutions, Institute of health and doctors chamber.

The following general quality indicators for health service as whole are determined:

- Ratio of first and repeated visits for particular services,
- Percentage of non-defined conditions, when releasing patients or conditions with symptoms ,
- Percentage of wrong diagnosis,
- Percentage of prescribed antibiotics in particular service or particular diagnosis,
- 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 with immunization

Above-mentioned quality indicators will be controlled by the Institute of health through yearly analysis of the work of health services by levels and they will be also important when entering into contract with the Health insurance fund.

7. The plan of the health personnel

The employed in health sector with their knowledge, expertise, number, distribution and organization are very important segment of the whole health care system. Health condition and results of the efforts in improvement of health condition, population satisfaction with health care system, and the costs of health care, all of these depend on the health personnel. Human resources are responsible for health services in every country, its legal and traditional role in the society, the system of education of health workers and a number of other relations.

The number of personnel, employed in health sector is on the one hand reflection of quantative development of health service and on the other hand its accordance with real and planned needs of the system i.e. its capability to react to new challenges. The amount of investments 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 known that the costs of workforce (salaries) are by segments between 65 and 80% of the total health care expenditure and because of that they have great influence on needed funds for maintenance and functioning of system. All of these are reasons for planned employment in health institutions included in the health service network and it has to be in accordance with planned tasks and objectives and available financial resources.

7.1. The personnel of the primary health care

On the basis of personnel analysis and the results of the Primary health care project the norms for personnel are determined. The norms for personnel are defined in relation to the size of the population. It is one of the most important criteria for planning the needed health capacities and defining the network. The norms for personnel ensure the well-balanced organization of the health service , accessibility of all levels of the health care ,professional, sociao-medical and economic justifications for having those services at particular location. 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. Also in some cases because of economic reasons common capacities are planned especially in radiology, pulmonology, physiotherapy, psychiatry.

With the implementation of the new primary health care and foreseen changes in the number of population it can be established that the needs for chosen doctors and nursed as teams who will be responsible for most health care tasks will be on average 488 teams of chosen doctors an doctors in support centers i.e. total number of the employed in dom zdravlja will be 2427. The plan for the personnel in the primary health care will be prepared for each year based on norms and according to planning criteria.

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

Dom zdravlja	**Number of the employed**
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 the employed by teams of chosen doctors and profiles is given in the annex of the Plan

On the basis of the standards for the personnel, which were defined during the Project, some dom zdravlja and health stations will not fulfill the requirements for continuation of work in all services they have provided so far. For those services it will be planned the part-time employment or one team will work in two dom zdravlja facilities. According to the law which allows health workers to work for other employers, doctors will able to enter into contract with health institution where they have permanent employment for the scope of services determined by the norms to and to enter into contract with other health institutions. This is one way of solving the issue of providing the services to the population in areas where it would be uneconomical to have a team.

Work norms for chosen doctors and for support centers will be determined by the Ministry of health on the basis of scope of rights and services and catalogue of services of particular health service and it will be used for planning the work of health institutions and for determining new payment method based on capitation and the cost of services.

7.2. Plan of the personnel in specialist and hospital care

All preconditions for detailed planning of the personnel in specialist and hospital health care will be defined during the Health care improvement project where the norms and standards for this service will be determined. Also on the basis of health institutions network it will be determined the total institutional capacities in this segment of health care. Because of the need for directing this very important part of health care, planned frameworks are prepared for the number of employees as a basis for carrying out employment policy in this field.

Planned number of personnel was calculated using the following parameters:

- The size of the catchment area i.e. the number of released (or admitted) patients per a year;
- Norms for utilization of existing bed capacities;
- Average planned length of hospital treatment by specialties;
- Average number of inpatient hospital patients per a doctor i.e., his team (daily, per a year);
- Average number of standardized hospital days per a doctor in inpatient hospital service ;
- Norms for teams in inpatient and outpatient services

Analysis of the work of secondary service showed that the bed utilization in Montenegro is low and average length of the treatment too long. Proposed norms on average length of treatment and hospital beds utilization determine the real needs for hospital beds capacities in Montenegro .Implementation of the norms for utilization of hospital beds and average length of treatment, which are below European average, will not reduce the health care of the population, but will reduce the number of hospital beds for somewhat over 20% or for 441 beds that have not been used for decades.

The proposed norms are based on international experience. In European region of the WHO the average length of the hospital treatment in acute hospitals was 9.4 days and in EU 7.1 days (1999). In the same year the average utilization of hospital beds in Europe was 80.18% and in EU 77.13% [31]

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

[31] Data: Health for all data base , 2004 Copenhagen

Tabela 21 ***: Norm on the planned utilisation of hospital bed capacity***[32]

Field - ward	***Situation in Montenegro in 2003***	***Norm***
Internal *	76,70	80,0
Surgery (with urology, maxillofacial surgery, ophtalmology, ORL)	66,53	75,0
Gyneacology	54,40	75,0
Paediatrics	49,60	75,0
Psychiatry **	47,70	90,0
Orthopaedics **	55,1	75,0
Terciary fields *********	68,68	80,0

*Table 22****. Norm on the average length of hospital treatment ****

Field - ward	***Situation in Montenegro in 2003***	***Norm***
Internal *	9,88	8,5
Surgery (with urology, maxillofacial surgery, ophtalmology, ORL)	8,08	6,5
Gyneacology	6,61	5,6
Paediatrics	6,69	6,7
Psychiatry **	75,95	49,0
Orthopaedics **	15,20	12,5
Terciary fields ***	7,30	7,0

[32] Note : ∗Internal medicine with infectology, pulmology, and neurology in general hospitals
∗∗ data for Psychiatry is for special hospital Dobrota-Kotor an dfor orthopaedics for special hospital Risan
∗∗∗tertiaty service is all sevices of Clinical centre (secondary and tertiary)

Table 23. ***Number of existing hospital beds in general hospitals and needs according to the norms***

General hospital	*Number of existing beds*	*Capacity utilisation norm*	*Number of needed beds according to the norms*
Internal medicine			
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***
Gyneacology			
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***
Surgery			
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***
Paediatrics			
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 inpatient beds in special hospitals and Clinical Centre and needs according to the norms***

Special hospital	*Number of existing beds*	*Capacity utilisation norm*	*Number of needed beds according to the norms*
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 wards will be based on the number of hospitalized insured persons per 1000 insured persons so far and it there will be gradual increase from current 108.2 per 1000 to about 120 per 1000 inhabitants in 2007. Planned increase in needs for hospital treatment of the insured will mean the need for increase of norms for hospital beds capacities in comparison to 2003 for about 10% differently for different specialties. Planned expectations at hospital level will change in accordance with the changes in their catchment area i.e. the changes in the number of population.

The proposed number of hospital beds in Montenegro is 3.4 beds per 1000 inhabitants. The proposal is based on existing data on 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 the contracts with Health insurance fund are made on the basis of data on the number of released and admitted patients in previous years. This will become one of the criteria for preparation of work program of a hospital in relation to scope of work i.e. planned number of hospital days, needed staff and costs for entering into contract and setting the cost of the services. Instead of determining needed capacities the data on the size of catchment area of a patrticular hospital ward i.e. hospital will be used and calculation and control will be done by the Istitute of public health**.When the plan for hospitals are determined the proposed norms based on the number of hospitals days per a doctor i.e. team will be taken into account.** The norms are proposed using the experiences from European countries where the " productivity " of health workers is higher than in hospitals in Montenegro.Increase of the " efficciency: scope and quality " that are proposed with these norms in this plan are in European countries the usual workload of docotr's teams. Their implementation in Montenegro will mean further effort to improve the efficiency, rationalization of work in hospital service and significant financial savings.

Table 25. ***Number of hospital days in 2003 and planned number of hospital days by fields*** [33]

Field	*Number of doctors in 2003*	*Number of hospital days in 2003*	*Number of hospital days per a doctor in 2003 on a daily basis*	*Norm of hospital days per a doctor*	*Number of hospital days based on the norms on average length of treatment per a doctor*	*Number of doctors needed for dispensary treatment based on the working norm **
General hospitals						
Internal wards	***59***	***110.019***	***7,03***	***8,00***	***94.652***	***46***
Gyneacology	***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***
Special 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***

Apart from work norms , the makeup of the doctor's team is important i.e. how many nurses, technicians and other health workers there are per a doctor in inpatient service. The proposal of the average hospital teram is calculated using experineces and practice in other countries. In EU the average number of employed nurses and other health staff per a bed is between 0.77 and 1.70. In Montenegro that average was 0.52 and the number of other health workers was 0.29 or in total 0.81 per one bed.

The total number with docotrs was 1.00 employed per 1 bed. The average team per a bed was :

1 hospital doctor, 2.70 nurses; 1.52 other health workers

The proposed norm for hospital treatment is :

Per a planned bed:

- **0.14 doctors**
- **0.50 nurses**

[33] Note : For calculating the needed number of docotors the number of working days is 256 in a year. This norm does not incule doctors who do not providein inpatient service (directors, managers, professors at the faculty)as well as those who provide outpatient service.The total number of needed staff is calculated when the the number of those who provide spacialist outpatient service is added.

- **0.30 other health workers**
- **0.20 non-health workers**

Total for a team : 1 hospital docotr, 3.57 nurses, 2.14 other health workers

Concrete norms for inpatient service are part of reform activities that will be implemented after the organizational changes and separation of the secondary and tertiary service, inpatient and outpatient service in general and special hospitals and the Clinical centre. Propsed norms for staff for hospital treatment are given approximately as indicators for global development of the personnel in health sector in the next medium-term period.

Defining the plan of hospital beds and staff in relation 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 the hospital capacities, on the basis of this plan is the increase in efficiency and effectiveness of the hospital health care.

Hospital health service includes also the specialist outpatient service. Planned ratio between hospital outpatient service will be :

- 10% of the working time of doctor's teams in the fields of oncology and infectology;
- 15% of the working time of docotr's teams in the field of pediatrics and gynecology;
- 25% of the working time of docotr's terams in the field of orthopaedics and surgery;
- 40 % of the working time in the field of internal medicine, psychiatry and neurology;
- 50% of the working time in the field of ophthalmology and otolaryngology.

8. Financial framework of the development of health care

Planned changes in health care incluse also the changes in organization and work of the Health insurance fund as a part of reform process. It is particulary relevant for plaanning 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 fundung and changes in this field. **Having in mind the importance of the Health insurance fund for the success of the reform of the health care and financial sustainability of the helth care system , the Goverment of the Republic of Montenegro has adopted the Finacial plan of the sustainability for the period 2005 – 2007.**

This document has foreseen that the the funds for health care in the next period will have decrease in the real value of its participation in GDP from 7.10% in 2003 to 6.60% in 2007.[34]This is based on the expected economic growth and the GDP growth.It is planned

[34] The average in EU for health care is 8.66% of the GDP

that the finacial resources for health care have nominal growth for the period 2003 to 2007 for 16.4% or on average about 4.1% per a year i.e. from152.54€ to 177.61€. Development of criteria for contracting as well as 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 for the next three years does not ensure bigger financial posibilities for the development of health care in Montenegro .Possible approach to sustainability of the health care system is the rationalization of the health care and increase in additional funds on the account of reduction of public funding. Apart from measures determined be the Financial plan of sustainability based on defined priorities, the **Master plan emphasizes the following priority measures** >

- expansion and increase of participation of the insured for using health services. The law has exempted some categories of the insured from paying the participation,
- 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 insurance fund), services related to waiting lists (orthopaedics etc.), services from private sector which is not included in the public health care network and have not entered into contract with the Health insurance fund and others. Voluntary insurance can be introduced as a separate service of the Health insurance fund which will be financially and organizationally separated from compulsory insurance and will function according to principles and laws on health and general insurance and their regulations.
- Introduction of private outpatient services in the public health care network. According to the law public health care institutions can rent unutilized capacities for which there are no needs in public health care system i.e. insurance. Those services could be a component of additional voluntary insurance.
- Processing of refundable damages caused by legal and natural entities because in practice this has not been done to a satisfactory extent.
- Introduction of reporting and keeping records of workplace injuries and professional diseases of the active insured (employed, self-employed, farmers etc.) and risk categories in relation to workplace injuries and professional diseases.

With proposed measures the increase in financial resources for compulsory insurance and financing of health care will be achieved and better control over private resources, which are present in the system, as population expenses. At the same time with these additional financial resources the financial situation of the insurance sector will be improved and by that the operation of health institutions. Also certain objectives in relation to privatization of the health insurance will be achieved and the privatization will not be uncontrolled.

In order to improve the quality, the possibility of competitiveness is foreseen in providing health care and according to the law the regulation for including the

private capacities in the public health care network will be prepared. The criteria for granting concession to private sector will be prepared for those who fulfil the legal requirements and are interested in entering into contract with the Health insurance fund. All concessionaires will be able to apply for providing health care services if they offer better conditions than public health institutions or at least the same in the areas where the public institutions and their capacities are deficient.

The public health institution network will represent the needs for providing program of health services which will be funded from public funds. It will be determined on the basis of:

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

The public health care institutions network will:

- **be based on modern organization of health service and set priorities for health care determined by this Plan;**
- **be based on work technology, necessary knowledge of the teams of health workers and requests by specializations and higher education that is not needed for performing certain tasks,**
- **have and include only those capacities that can be funded from public financial resources i.e. additional resources and which will be sustainable and rationally used;**
- **be based on organization and distribution of health capacities on the territory of Montenegro for adequate catchment area i.e. the adequate number of potential service users;**
- **take into account the specific characteristics of particular municipalities, in order to provide equal accessibility of the needed service to the population.**

The Ministry of health will define the public health institutions network after the project activities on norms and standards in secondary and tertiary health care have been completed.

The health institutions network is adopted by the Government of the Republic of Montenegro according to the article 12. of the Law on health care.

9. Conclusion

By adoption and implementation of this Plan for the period 2005 -23007. the determined objective of the development of the health care system will be achieved through:

- harmonizing the development with the population needs and priorities as an integral part of the reform process;
- increasing the efficiency of the health service;
- reducing the capacities at all levels which will not reduce the treatment possibilities or accessibility and availability of health services;
- financial stability of the system:
- implementation of the plan which will effect 15% of the needed resources for health care. Those funds will be used for improvement of working conditions and operation of the health institutions, meaning better equipment, better possibilities for professional development and raise of salaries of the employed what are the objectives of the health care reform.

The Ministry of health will monitor the implementation of this plan through the yearly reports of the Institute of public health, the Health insurance fund and health institutions.

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