



Montenegro

Ministry of Health

**PROJECT FOR IMPROVEMENT OF GOOD GOVERNANCE IN MONTENEGRIN HEALTHCARE
SYSTEM**

**Document:
STRATEGY FOR OPTIMIZATION OF SECONDARY AND TERTIARY HEALTH CARE LEVELS WITH
IMPLEMENTATION ACTION PLAN**

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LIST OF ACRONYMS

GoM – Government of Montenegro

IPH – Institute of Public Health

MoF- Ministry of Finance

MoH- Ministry of Health

HIF- Health Insurance Fund

CCMN- Clinical Center of Montenegro

HC-Health Center

RC- Reference Center

BOT - Build-Operate-Transfer

BOO - Build-Own-Operate

QA - Quality Assurance

HTA - Health Technology Assessment

CALIMS – Agency for Medicines and Medical Devices of Montenegro

HIS – Health Information System

1. INTRODUCTION

In its strategic documents Montenegro has identified improvement and protection of population health as a main goal in healthcare, along with development of a sustainable and integrated healthcare system based on the principles of solidarity, equity, accessibility and quality – a system centred around citizens' needs.

The health condition of any country's population depends on a number of factors, in particular the lifestyle, living environment and biological features. Achievement of a certain level of health of both the individual and the entire society depends directly on the impact of healthcare system and its institutions - all levels of healthcare, both public and private institutions. For the first time ever, medical and pharmaceutical technologies (including medicines) offer the possibility of successful treatment of a large number of health problems. This implies managing the natural course of several disability-generating diseases and conditions in a manner that ensures enjoyment of a meaningful and productive life.

Healthcare system is expected to respond to citizens' needs for health services in a quality and timely manner, solve curable health problems, and provide care and accommodation in case of incurable conditions. The existing healthcare system is facing the challenge of maximum efficiency, which implies the need to achieve the best possible results and improved health outcomes with similar amount of funds.

Public health policies, which generate changes towards healthier lifestyles, can empirically demonstrate their efficiency in a number of areas - from controlled use of tobacco products to cancer screening procedures. However, if a healthcare system does not implement a public health policy so as to respond by adequate or service provision that is below a certain level, health interventions will not accomplish the intended results, and provision of ineffective services is always inefficient.

Costs of healthcare worldwide keep growing faster than the national incomes. In the recent years, the initiatives to overcome this problem relied mainly on retaining a specific level of costs. However, instead of focusing just on reducing the overall healthcare cost, significant efforts are made internationally to adopt the position that increased spending on effective healthcare services contributes to a more productive economy and is a way to improve health.

Decision makers across the European region assign priority to improving population health as a result of improved healthcare system. Combined functions of the healthcare system can improve population health by means of: provision of quality and effective services in a manner that ensures equity and fits the needs of patients; equitable financing of healthcare that differentiates between payment for services and service provision; investing in improved health of employees and innovative technologies, and managing the healthcare system so that all of its functions are oriented towards accomplishment of the main strategic goal. In order for such improvements to be sustainable, as in any other production function, the inputs (human resources, infrastructure, technology, procurement) need to be reorganized to enable provision of the most efficient procedures.

In cases where it is possible to allocate more funds to health, additional investments or costs may be justified, in the sense of achieving better treatment outcomes and health results; however, the most efficient way of treatment or intervention should be attempted at, even when different options are available.

In the given situation, it is difficult for Montenegrin health institutions alone - with their legacy of organizational structure and method of operation, as well as rigid frameworks - to carry out reorganization for the sake of providing adequate care. Inefficiency is always a risk and may also be a source of non-rational approach in utilization of resources.

These are the challenges that Montenegro is currently facing. Indicators of health condition of population are relatively low in comparison with other countries, which calls for fundamental changes in the organization of health service provision and entails a comprehensive transformation of the way in which founders, managers, professionals and certainly patients address the healthcare system.

Experiences of other European countries show that strategic vision, good governance and political will are capable of substantially transforming the system, even in a more adverse economic situation. This entails a design of integrated service provision at different levels of healthcare, clear definition of the rights of medical personnel and patients in the newly established system, as well as the method of implementation of such changes under a rigorously set fiscal stabilization program whose impact will be clear only over a longer period of time.

The issue of equity deserves special attention. Equity must be provided in the provision of effective health care to the population that has similar health needs; this is not only a moral responsibility, but a requirement for the efficiency of the overall health system.

Finally, the healthcare system needs to become more competitive, and in the process of European intergration maintaining the capacity to develop is important due to the challenges posed by the free movement of patients within the European Union.

The Strategy has the following general goals:

- Improved quality and safety of healthcare, and
- Hospital sector optimization in order to rationalize utilization of available resources and obtain savings to be **reinvested** in the healthcare system.

Strategy indicators

MoH will develop a set of indicators based on the key questions: What have we got? (resources); What are we doing? (output or production, including quality control), and, finally: What are we achieving? (outcomes, results, efficiency).

- **Resources (incomes):** including the evolution of costs by healthcare areas (primary care, hospitals and pharmacies), by providers, by regions and by patient groups.
- **Output:** including detailed activity by healthcare areas (primary care and hospitals) that requires internationally comparable casemix measures (e.g.: DRG); by providers (aiming to introduce benchmarking comparison); by region (aiming to assess equity on access) and by patient group (aiming to assess equity in exercising access, e.g. systematic waiting list control). In the case of Montenegro, a revision of capacities of the healthcare system capacity may be relevant to solve national healthcare problems. That requires an in-depth systematic analysis of the healthcare activity conducted abroad and its casemix characterization.
- **Outcomes:** as a tool to assess the “value for money“ of the healthcare system. Outcome assessment requires a mid-to-long-term strategy based on strengthening the national health statistics (mortality and morbidity). Although healthcare system impact on mortality / morbidity is not immediate, intermediate quality-related indicators may be used: hospital mortality, readmission and hospital infections are some of the examples.

2. SUMMARY AND MAIN PROBLEMS

The health condition of Montenegrin population, measured by health indicators, matches the level of Eastern and Central Europe. Health indicators show that it falls short in comparison with most EU countries. Poor health condition is a consequence of worse economic and social situation. Even with the positive trend with regard to the general situation over the past few years, main health indicators are not to expected to improve rapidly.

The identified main problems of the healthcare system which strongly influence health indicators and population health arise from the fact that secondary and tertiary levels are predominated by capacities and resources, whereas healthcare efficiency and quality were not considered priorities. For this reason, non-rationalities occur in the system, which in turn is unable to function in a coordinated and integrated manner. The main problems set as priorities to be addressed are the following:

1. There is a gap between the defined rights from health insurance and the financial capacity to fulfill them; a large share of private funds and existence of informal payments indicate unsatisfactory access to services in the public system – the basic package for the secondary and tertiary levels has not been defined.
2. Staff structure is inadequate and does not meet the expectations and needs of citizens; the share of non-medical staff is large.
3. The system of healthcare control and safety is undeveloped; there is no control of coverage and quality of registered data.
4. Inadequate method of service payment and unclear method of financing of health institutions – health care is financed according to capacities rather than needs.
5. Lack of a quality health information system and other mechanisms for better management – it is impossible to implement good health policy, set priorities and allocate funds without quality data available.
6. Private healthcare is not adequately regulated and is not complementary to the public system network in a way that would lead to coordinated and integrated processing of population health needs.
7. Active two-way communication in awareness raising on the importance of taking care of one's health and needs for services in the healthcare system always has considerable influence on population health indicators.

Although a number of healthcare policy goals for the secondary and tertiary levels have been achieved to a significant degree – such as development and efficiency of health institution network with existing financial and human resources - it is necessary to further monitor, review and set new and more demanding goals, taking into account the newly emerging needs of the population. It is also necessary to constantly accelerate the process of quality improvement, rationalization, optimization, resource management, transparency of funding and functional interface between public and private healthcare for the sake of a better functioning quality healthcare system and financial sustainability of healthcare. The main goal of healthcare policy is preservation and improvement of population health, along with sustainability of healthcare system. Development is needed, by means of a constant process of problem identification and analysis of causes, setting of priorities and timelines for relevant activities, and evaluation for the sake of redefining the goals. Constant development and improvement is the natural state and course of evolution of health systems!

3. AREAS FOR REFORM INTERVENTION

Improvement of secondary and tertiary levels entails interventions in the aim of strengthening the main functions of the system:

- Resources (HR, IT, medicines),
- Service provision (network/ integration, benefit package, quality, technology assessment)
- Financing of healthcare system (main principle: fee-for-service v. paying for the capacities)
- Management

Definition of priority areas for reform serves as the basis for selection of optimal programs and activities to improve population health and ensure financially sustainable and stable system of healthcare financing.

3.1 GENERATION OF RESOURCES

3.1.1 Human resources

As a rule, human resources have a central role in health sector improvement, provided that/if main requirements concerning professional competence, workload, scale and distribution are met.

Montenegrin health system is faced with significant new challenges, such as aging population, new health threats, rapid technological development, growing expectations of citizens, which impact health expenditures. Efficient and effective health professionals make a prerequisite for quality and successful response to these challenges.

For a number of years, development of HR policy in healthcare in Montenegro followed the development of infrastructural capacities, overlooking epidemiological situation and population needs. This was one of the factors that contributed to the inefficiency of the overall healthcare system and reduced its capacity to provide quality response to the challenges of the new era. One of the main features of the healthcare system is underutilization of existing HR potential due to inadequate geographic distribution and thus dispersion of specialties and subspecialties, method of organization of operation which mainly focused on in-patient s and ward operation, and method of developing job descriptions which results in specialists being burdened with duties that require lower level of expertise. This HR policy was developed and implemented regardless of available financial resources; after a number of years, this resulted in a system of low salaries and contributed to poor satisfaction and motivation. One of the key features of the doctor-patient relationship are discretionary powers granted to the doctor. In the course of practise to date, doctors frequently made use of their discretionary powers to increase the quantity and change the contents of services with the aim to keep the desired level of income.

Available data shows not only underutilized staff - primarily in surgery, internal medicine, pediatrics, gynaecology - but also a highly present and evident problem of insufficient number of specialists in anesthesiology, radiology, microbiology and pathology.

Having in mind the registered demographic trend of aging population - which will make up 22.4% of the total population by 2050 (compared to 13.4% at present), the epidemiological situation and the fact that Chronic Non-Communicable Disease share prevails in morbidity and mortality, it is assessed that current healthcare personnel is sufficient from the perspective of scale and will be capable of responding to the medical needs of the population if the recommendation from the Master Plan is observed regarding the number of personnel and if the breakdown and types of expertise and skills correspond to health needs.

In the aim of solving the problem of underutilized staff and insufficient staff in some areas, the following reform interventions are needed:

- Reorganization of the model of healthcare provision in order to improve the degree of utilization of medical personnel. Integration of management structures and auxilliary services by individual levels is expected to contribute and achieve balance between medical and non-medical staff, in response to the Master Plan recommendation on reducing non-medical staff.
- Redefining the concept of operation, with main orientation towards ambulatory operation and day hospitals.
- Continuous redefining of the roles of healthcare personnel in order to meet the needs of patients/insurance holders. Redefining the role of personnel implies introduction of new practise in their behaviour and taking over new duties that were previously performed by other categories of staff . Such

redefining would imply acquisition of new knowledge and skills. The main reason for redefined roles is improved effectiveness and efficiency of the services provided within defined protocols.

Redefined roles of personnel could also contribute to:

- Improved access to services, diagnostics, treatment;
- Shorter waiting times;
- Provision of quality healthcare when needed by the patient;
- Effective management of the growing volume of work;
- Increased satisfaction and motivation of employees;
- Better career prospects;
- Provision of flexible staff capable of responding to and meeting the needs of the system and patients;
- Organizing and implementing focused and targetted education in order to secure sufficient staff in the areas where staff is lacking, together with further education and continuous education, especially for the purpose of enhancing knowledge and skills in surgery and internal medicine that are required for the implementation of public-health programs (e.g. cancer control);
- Controlled awarding of specialization.

It is also necessary to align the curricula with the reform orientations and with the needs of healthcare system, EU standards and WHO recommendations.

It is necessary to develop a 10-year National Plan of HR Development in Healthcare in Montenegro, which will aim at equal access to quality services for all and effective performance of healthcare system through balanced distribution of professional staff.

Implementation of the National Plan of HR Development in Healthcare in Montenegro would:

- Ensure HR planning and development to match the volume and structure of population health needs;
- Enable effective and efficient service provision as a result of resolved issues of scale, distribution and staff 'skill mix';
- Improve the quality of education and training to meet staff needs concerning skills and development in changing circumstances of service provision;
- Strengthen management to ensure implementation of programs and services that are cost-effective, evidence-based and safe.

3.1.2 Medicines and Medical Devices

Medicines represent a highly important segment of the healthcare system, not only in disease treatment but also due to high share of available resources in healthcare spent on medicines. At present, Western European countries, which mainly have defined policies and strategies concerning medicines, spend 15% of total healthcare budget on medicines; in Montenegro, this share is around 25%.

Longer life expectancy and lifestyle changes result in more patients suffering from chronic diseases, along with new diseases, resistance to existing medicines, and new medicines that are developed and appear on the market. All these factors contribute to increased spending on medicines and a growing pressure on existing health resources.

A more balanced consumption of medicines cannot be attained without a clear and sound policy and strategy on medicines. Development and implementation of a policy on medicines is one of the goals of the healthcare reform in Montenegro.

National Policy on Medicines (NPM) is a professional and policy document which defines priority goals and tasks of the pharmaceutical sector, as well as how they are to be achieved.

The concept of the national policy on medicines - primarily aimed at matching health needs with economic capacity - contains guidelines as to how to achieve the goal and provides a framework for coordination of activities of all stakeholders in the domain of medicines.

Implementation of the national policy on medicines will ensure efficient management of the pharmaceutical sector by means of defining and developing four components:

- Policy-regulations-legislation,
- Accessibility,
- Quality, efficiency and safety, and
- Rational use of medicines.

Current system

Montenegro has 170 private pharmacies and 42 state-owned pharmacies supplied by one state-owned wholesaler - Montefarm and 43 private wholesalers.

The HIF refunds prescriptions dispensed in state pharmacies if the medicine is on the Positive List. Private pharmacies operate independently on a fee-for-service basis. Occasionally, state prescriptions can be dispensed in private pharmacies if there is a stock shortage in national pharmacies.

The Health Insurance Fund of Montenegro (HIF) has adopted a list of drugs with generic (non-proprietary) names (480 generic names) from the WHO Essential Drugs List. Additions to or deletions from this list are made by a working group consisting of pharmacologists, clinicians, economists and pharmacists from the Fund. The process by which a manufacturing company bids to have its medicine included in the Positive List is currently unclear.

State pharmacies are stocked with the medicines on the Positive List by the state wholesaler Montefarm. Manufacturing companies tender, via wholesalers, on an annual basis to stock Montefarm with the medicines on the Positive List. The manufacturer with the lowest unit cost is the one that gets selected. Recently, CALIMS has added several quality requirements to ensure European standards of certification and quality.

Currently it is common practice for prescription-only medicines to be sold without a prescription. This has profound public health implications; overuse of antibiotics through such sales will reduce their effectiveness. Sales of prescription-only medicines from state pharmacies can lead to shortages of stock and reduce confidence in the state system.

Currently available data

Both CALIMS and HIF collect data on the use of medicines. The HIF collects data on the prescriptions issued in primary care and dispensed in state pharmacies directly from the practices and pharmacies. CALIMS collects data from all wholesalers on the medicines distributed to both private and state pharmacies, primary health centers and hospitals.

CALIMS currently only has data for the financial year 2009-10.

The systems are data rich and information poor. There is currently no mechanism for CALIMS to provide feedback data on use of medicines to the medical community or the Positive List Commission.

Implementation of the policy on medicines

1. Regulations/legislation

Transparent and up-to-date regulations concerning medicines imply: national regulations that are harmonized with the European ones and implemented by means of rational and transparent criteria and processes in order to harmonize the standards and procedures and enable prompt access to quality medicines.

2. Accessibility of medicines

The aim of accessibility is to have all essential medicines accessible to patients at all times and across the country and to prevent financial costs from depriving patients of the required medicines.

To this end, the following activities need to be implemented within the components that contribute to achieving accessibility of medicines:

- Medicine supply system (supply and distribution), establishment of a system that enables supply of medicines across the country by means of fair competition, so as not to endanger the system of accessibility of medicines;
- Selection of essential medicines represents the most important part of the medicine policy, as a major step in ensuring accessibility, relevant for ensuring rational pharmacotherapy;
- Coverage of medicines by the lists financed from health insurance should be matched with the financial capacities of the health insurance system;
- Clear and transparent criteria for development of all lists of medicines financed from health insurance;
- Systemic regulation of the method and procedure of supply of medicines used in treating rare diseases;
- Introduction and finetuning of mechanisms to control compliance with guidelines;
- Pharmaco-economic elements should be taken into consideration, in the practical sense, when deciding on putting medicines on the lists,
- Financing of medicines – financial sustainability requires a balance between demand, cost and available funds. Since the funds are limited, it is important to use them to meet priority needs i.e. use them in a cost-effective way.

A sustainable system of medicine financing implies, *inter alia*, the following:

- A system with minimum population exempt from co-payment, since exemption from co-payment renders impoverishes the overall healthcare system;
- Financial participation of patients in covering the costs of medicines and other costs in the course of treatment increases accessibility of medicines (choice expanded) and improves control of use of medicines i.e. their use becomes more rational;
- All citizens covered by the health insurance system i.e. all means should be used to reduce the number of citizens without insurance;
- Data on the use of medicines should be made available to the doctors who prescribed medication, for insight and critical professional evaluation of prescription;

- A system should be developed for the purpose of monitoring the use of medicines by various parameters, such as age groups, structure, insurance categories and other parameters of relevance for rational utilization of resources;
- Human resources – professional staff is the most important segment of the medicine policy, and
- HR development that includes appropriate policies and strategies to ensure a sufficient number of trained and motivated professional staff capable of implementing the medicine policy.

3. Quality, efficiency and safety

It should be ensured that medicines meet the quality, safety and efficiency standards. The regulatory body will regulate medicines in a transparent and rational manner, aligned with the regional and international principles of good practice.

Efficient medicine monitoring systems need to be developed (data collection, reporting) after issuing a marketing authorization, in order to assess medicine efficiency and safety.

4. Rational use of medicines

In the medical sense, non-rational use of medicines leads to unnecessary patient suffering, iatrogenic diseases, hospitalization, higher resistance to antibiotics, but also death. In the economic sense, it leads to major losses of resources and inaccessibility of essential medicines.

Rational use of medicines aims to ensure rational prescription and use of medicines, as well as monitoring the use of medicines. This will be achieved by activities under the following components:

- Information on medicines, clinical guidelines, commissions on medicines, and human resources,
- Information on medicines – provision of adequate information implies:
- Existence of a system for informing medical professionals and the public on new developments in practice and guidelines on medicines, their proven efficacy and indications, use-related risks and proper use,
- Establishment of an integrated pharmaceutical information system which enables timely monitoring of all key indicators related to marketing, supply and distribution of medicines and medical devices, as part of a unified health IT system,
- Prescription, dispensing and use of medicines must undergo monitoring and evaluation – it is necessary to set up a Center for Medicines or a department for pharmacoepidemiology and pharmacoconomics within the institutions of the system in Montenegro, to collect and analyse latest information on medicines that would need to be made available to all medical professionals and patients; such a center/department would host a comprehensive, quality database on medicines and their use,
- *Clinical guidelines* are systematically developed professional algorithms – the recommendations stated need to be based on valid clinical evidence (evidence-based medicine) that includes pharmaco-economic analyses;
- Guidelines need to be regularly revised in line with the latest scientific insights and experience;
- *Commissions on medicines* – have a role and are responsible for development and coordination of all medicine-related hospital policies, such as choice of standard treatment, hospital formularies and budget for medicines;
- Lists of back-up antibiotics need to be established (by individual hospitals).

3.1.3 Information technologies

In addition to staff, premises and equipment, performance of healthcare and management of healthcare system require also information. **Information is a key healthcare resource.**

The use of information technology is imperative and the precondition of successful reform (modern) health system and it contributes to improving health care, better management and use of health data and rational use of available resources.

Each activity, event, or segment of a healthcare-related process, procedure and outcome need to be registered. In modern healthcare – due to potential digitalization – all these events and procedures need to be not just recorded but adequately stored so as to be available to the Institute of Public Health and to those who are authorized to make decisions: 1) designers of health policy, which prescribes, determines the concept, monitors implementation and performs permanent supervision, 2) staff, which needs to know what, when and how something was done in any segment of the system related to the individual who is the subject of medical attention, and 3) insurance, which covers the costs of healthcare.

The Government of Montenegro in 2009 adopted the Information Society Development Strategy of Montenegro 2009 - 2013, which pays particular attention to the strategy for eHealth. Since the earlier method of using information was utterly inefficient and health information was largely outdated at the time it was used the need was identified to develop an **integrated information system and define a platform for private service providers to enter the system and “share“ information as well.**

E-healthcare solutions foster progress in healthcare, enable better management and sharing of medical expertise, and assist development of evidence-based medicine. They are intended for all stakeholders in healthcare: patients identify adequate information in a suitable format; service providers access electronic documentation on patients that is generated at the point of contact with the patient; those who manage healthcare data obtain a good information basis, and health policy makers are assisted in making evidence-based decisions in the healthcare system, in generation and utilization of organizational and business information.

Strategic priorities for development of e-healthcare include:

1. Establishment of basic IT infrastructure in healthcare and securing organizational, HR and technological preconditions for IT system development, definition of the core collection of health and social data for the purpose of setting up and managing electronic documentation on the patient, which will serve as the basis for defining the electronic health file.
2. Definition of safety and technological standards for safe communication, management and storage of data (medical data) in the health care system,
3. Development of an integrated IT system in healthcare, and
4. Consolidation of all health and social IT systems into a single IT system, by means of developing an e-portal.

The Master Plan of Healthcare Development 2010-2013 identifies development of telemedicine as one of the priorities of HIS development, for the purpose of rationalization of diagnostic centers.

Use of modern ICT solutions and technologies in diagnostics (X-ray and laboratory) is expected to decrease the costs of equipment supply and maintenance, overcome the problem of lack of medical

staff in some areas of Montenegro, and, most importantly, improve the quality of diagnostics across the country.

One of strategic priorities is implementation of the teleradiology project in line with the Master Plan.

In this sense, the following objectives will be implemented:

- Healthcare system will be modernized by application of adequate IT networks of electronic medical documentation and telemedicine technologies in the areas where this has not been implemented yet;
- The burden of ICT services, tools and apparatus on nurses, doctors and beneficiaries will be reduced to the minimum; on the other hand, this will motivate medical professionals to use computers for the sake of better efficiency,
- Joint efforts of the Government, healthcare experts, agencies and international organizations for reliable, timely, quality and accessible healthcare by means of new electronic services and health IT systems will be promoted,
- Improvement of shared IT systems will improve the processes of alerting, monitoring and control of spreading of easily communicable diseases,
- Importance and relevance of continuous medical training, education and research will be highlighted by ICT application, taking into account gender equality;
- Access to new scientific and professional insights and contents of relevance locally will be facilitated in order to foster research in healthcare and prevention programmes;
- Proper attitude among general population will be fostered by offering high quality contents on healthy lifestyles and disease prevention through an adequate network portal;
- Citizens' right to privacy and medical data safety will be observed and protected;
- International standards in exchange of medical data will be adhered to;
- Healthcare of vulnerable groups, in particular women and children in remote and underdeveloped areas, will improve, and the role of women in preserving health in their families and communities recognized;
- Activities will focus on strengthening and spreading the ICT-based initiative for medical and humanitarian aid in disasters or emergencies.

In line with the strategic guidelines, HIF developed and implemented hospital IT system in all 7 general hospitals in Montenegro in 2010 - 2011, as part of the already developed integrated health care IT system; currently, the CCMN and 3 special hospitals are outside the system.

Current state

So far, the integrated information system in Montenegro includes the following: Health Insurance Fund and basic data on patients and exercise of their rights; primary healthcare through chosen (family) doctors with data on patient registration; pharmacy in the sense of distribution of prescribed medicines; dentistry at the primary level, provided by means of contracts with the Fund; all 7 general hospitals in Montenegro and IEMC. All entities are provided support for the medical and operational segments of their operational processes. This method is unique in the region and probably also outside the region; it provides large opportunities for insight into the operation of healthcare system. Special hospitals, CCMN and IPH are still not part of the system, which represents a big deficiency in the analysis and assessment of operation of all entities, as well as a major challenge for the coming period, when all segments are to be included and linked.

Electronic data is already available that may be accessed from any place in the integrated system, namely:

- **Basic data on the insurance holder, including** identification information, name, surname, date of birth, insurance grounds and status, ID number, address etc.;
- **Electronic data on prescriptions** – electronic prescription is in place in Montenegro and such data enables introduction of digital signature i.e. full digitalization of the process eliminating any print copies;
- **Data on medicines disbursed by pharmacies** – access to data on medicines prescribed to the insurance holder is available, so that a doctor has all information on the use of medicines and possible interactions;
- **Data on referrals from primary level to general hospitals** – full "digital dialog" is enabled vertically and horizontally, in the segments that belong to the integrated health system, i.e. "dialog" between primary level providers, sharing of specialist reports, discharge forms etc., as well as "dialog" between hospitals on patient data;
- **Data on the services provided and performance of service providers;**

Data from the e-health file – the integrated information system at the primary level enables recording of all data required for an e-health file. Elements of such file need to be defined in line with EU recommendations.

It is necessary to further develop health IT system at the secondary and tertiary levels, given the evident need for timely provision, aggregation and processing of data necessary as support in the management, planning and decision-making process.

In addition, interventions are needed to include the remaining institutions (MoH, IPH, CALIMS...) in the already developed integrated healthcare IT system. Since IPH, as the key institution in managing national healthcare statistics (Law on healthcare data collections) i.e. monitoring the status of population's health and healthcare, has not been integrated in the existing HIS, this hinders quality and prompt analysis and use of data from the system. Preparation for development of IPH IT system is underway; linking it to the existing HIS would provide timely data of better quality and therefore enable management of the information required by the decision makers in the healthcare system.

Further steps:

Digitalize all information in the overall healthcare system, which will enable permanent and accurate insight into all procedures and actions in healthcare system and provide quality data for health system management.

- a. Include special hospitals in the existing CCMN system and enable "digital dialog" of all entities included in the system. This will provide all institutions with access to data, taking into account their needs and responsibility for the security of medical information generated by the system.
- b. Connect the Institute of Public Health to existing information system in order to automatically collect data from all health institutions, necessary for managing data and disease registers, and resources in the health system too, for purposes of planning and programming in the healthcare system and other prescribed commitments within the health-statistical system of Montenegro;

- c. Provide clear, explicit and applicable rules concerning security and access to data, for all entities in the system to smoothly use the information system in line with their respective needs and authorizations;
- d. Work on constant improvement and development of operational procedures in healthcare system that would be digitally supported, which will enable better quality of service and better functioning of the system;
- e. Ensure the conditions and create an adequate operational environment for permanent education, both professional and management-related;
- f. The establishment unified system for data exchange between all health institutions (Ministry, Fund, Institute of Public Health, the Agency for Medicines and service providers, by using information and communication technologies and solutions). These institutions are working on securing contractors for IS through the project for the Improvement of the Healthcare System, which is taking place within the additional funding from the WB.

3.2 PROVISION OF SERVICES

3.2.1 Network of health institutions

3.2.1.1 Hospital care planning and overview of existing capacities

The practise concerning hospital care planning and organization confirms that capacities prevailed in determining the process, whereas the type and volume of population health needs were neglected. The planning process designed in such a manner resulted in duplication of capacities (staffing, technical, premises), their non-rational and insufficient use.

Overview of existing capacities

The current network of public health institutions is organized into three levels of healthcare provision. In 2010, the network consisted of 18 primary healthcare centres (PHC), 7 general hospitals (GH), 3 special hospitals (SH), the Clinical Centre of Montenegro (CCMN), IPH and Pharmaceutical Institution of Montenegro (7). The network includes the General Hospital Meljine and the Institute of Physical Medicine and Rehabilitation 'Dr Simo Milosevic', for part of the capacity, or activities in accordance with the signed contracts with the Fund.

The network of hospital capacities consists of the following:

- 5 stationaries with the following primary healthcare centres: Plav, Rozaje, Mojkovac, Niksic and Ulcinj.
- 7 general hospitals: Bar (for the catchment area Bar and Ulcinj), Berane (for the catchment area Berane, Andrijevic, Rožaje and Plav), Bijelo Polje (for the catchment area Bijelo Polje and Mojkovac), Kotor (for the catchment area Kotor, Tivat and Herceg Novi), Nikšić (for the catchment area Nikšić, Šavnik and Plužine), Pljevlja (for the catchment area Pljevlja and Žabljak), Cetinje (for the catchment area Cetinje and Budva);
- 3 special hospitals; (Psychiatric SH Dobrota, SH for Orthopedics, Neurosurgery and Neurology Risan and SH for Pulmonary Diseases and TBC Brezovik); and

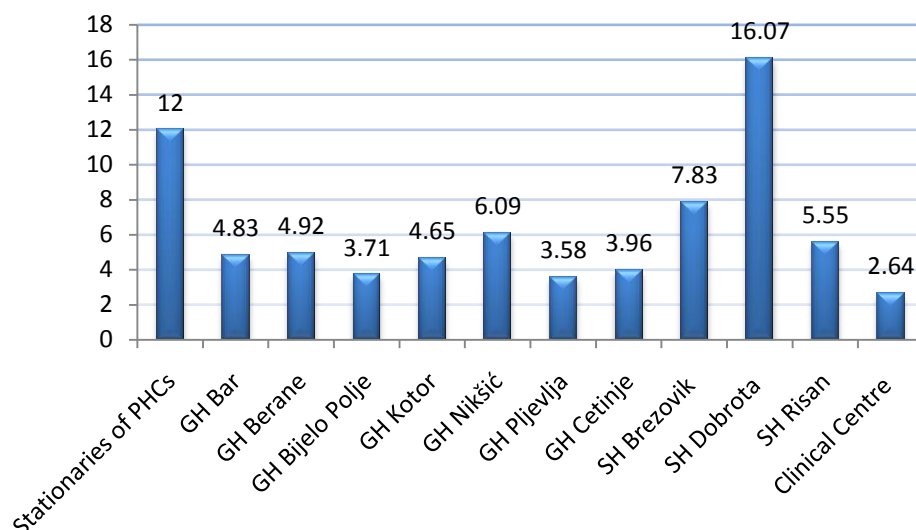
- CCMN, acting as general hospital for the catchment area Podgorica, Danilovgrad and Kolasin, country-level tertiary level institution.

According to the data from the Health statistical reports of the Institute of Public Health on 31 Dec 2010 the total number of beds was 2,466 (excl. nonstandard beds), out of which 1,110 standard beds intended for general hospital capacities, 96 beds in PHC stationaries (in 2010 there were 96 beds in use in stationaries), and 504 standard beds in special hospitals and 756 standard beds in the CC. This amounted 3.92 beds per 1,000 inhabitants, which is lower than the EU average (5.29 per 1000 inhabitants according to 2008 WHO-HFA-DB).

Table 1 contains the breakdown of hospital beds by individual hospitals, with indicators as to the number of beds per doctor.

Table 1: Breakdown of hospital beds in Montenegro in 2010

PHIs	No. of beds	No. of doctors	No. of beds per doctor
Stationaries of PHCs	96	8	12.00
General hospitals	1110	238	4.66
Bar	169	35	4.83
Berane	182	37	4.92
Bijelo Polje	141	38	3.71
Kotor	144	31	4.65
Nikšić	286	47	6.09
Pljevlja	93	26	3.58
Cetinje	95	24	3.96
Special hospitals	504	55	9.16
SH for pulmonary diseases and TBC Brezovik – Nikšić	141	18	7.83
Psychiatric SH Dobrota-Kotor	241	15	16.07
SH for orthopedics neurosurgery and neurology Risan*	122	22	5.55
Clinical Centre of Montenegro *	756	286	2.64
TOTAL	2466	587	4.20



The figures for numbers of beds per doctor show disparities by institutions: from 3.58 in GH Pljevlja to 12 in PHC stationaries (* in this case CCMN cannot be used for comparison because it provides both secondary and tertiary level services).

Hospital beds are planned based on the norms contained in the Master Plan for healthcare development in Montenegro for the period 2005-2010.

Table 2 shows distribution of beds per catchment area and individual insurance holders (special hospitals not included in the comparison because their specific activities cover the whole country).

Table 2: Beds per catchment areas with indicated number of beds per 1,000 inhabitants

Hospitals	Territory	No. of insurance holders per c. area	No. of beds	No. of beds per 1,000 insurance holders
GH Bar (ST PHC Ulcinj)	Bar, Ulcinj	63533	177	2.8
GH Berane (ST PHC Rožaje, PHC Plav)	Berane, Andrijevica, Rožaje, Plav,	79171	206	2.6
GH Bijelo Polje (ST PHC Mojkovac)	Bijelo Polje, Mojkovac	57377	156	2.7
GH Kotor	Kotor, Tivat, Herceg-Novi	71735	144	2.0
GH Nikšić (ST PHC Plužine)	Nikšić, Šavnik, Plužine	77298	291	3.8
GH Pljevlja	Pljevlja, Žabljak	36976	93	2.5
GH Cetinje	Cetinje, Budva	40049	95	2.4
<u>CCMN-Podgorica *]</u>	Podgorica, Kolašin, Danilovgrad	218794	756	3.5

Table 2 shows significant disparities in the number of beds per insurance holder: from 2 beds per 1,000 insurance holders in Kotor to 3.8 beds per 1,000 inhabitants in Nikšić.

It is also noted that there are more beds per insurance holder within the catchment area of GH Nikšić than the one of CCMN Podgorica, although the latter provides secondary and tertiary level services for the whole country.

*CCMN- Podgorica is used only for the sake of relative comparison: it should have maximum number of beds, since some of them are used at the tertiary level for the whole country.

Human resources

1. Medical staff

With regard to HR, according to the latest data from 2009, there were 7,934 employees in all public institutions in Montenegro, out of which 5,717 medical staff and 2,217 (27.94%) non-medical staff. The ratio between medical and non-medical staff working in all healthcare sector public services was 2.57:1 (i.e. 38 non-medical staff per 100 medical staff).

If we consider only the secondary and tertiary levels (health stationaries, GH, SH and CC), at the end of 2009 there were 4,008 employees working in the public institutions in Montenegro. Out of this number, 2,947 were medical staff and 1,061 (26.47%) non-medical staff. The ratio between medical and non-medical staff working at the secondary and tertiary levels in public services was 2.77:1 (i.e. 36 non-medical staff per 100 medical staff). This ratio is not favourable and has not changed significantly in favour of medical staff, although the Master Plan for healthcare development for 2005-2010 envisaged significant reduction of the share of non-medical staff in the overall number of employees, to 18%.

According to the latest data from 2009, the number of doctors in Montenegro was 1,309, i.e. 2.04 doctors per 1,000 inhabitants; this is considerably lower than in the EU countries (where there are 3.28 doctors per 1,000 inhabitants (according to 2008 WHO-HFA-DB).

In 2010, there were 587 doctors and 1,595 nurses in all hospitals in Montenegro. Distribution of doctors per hospitals is shown in Table 1.

In the previous period, human resources planning was done based on the norms stemming from capacities (Master Plan for healthcare development 2005-2010), rather than on the processes, outcomes and meeting of actual needs of the population in the sense of access to adequate and quality healthcare.

Analysis of utilization of overall hospital capacities (staff workload compared with needs)

The current network reflects the implementation of the outdated planning concept and model, which focused mainly on the size of catchment area and neglected the breakdown and volume of population health needs.

Implementation of such planning model resulted in the problem concerning access to healthcare; this was confirmed, *inter alia*, by long waiting lists, safety of services provided and low level of occupancy of beds and doctors' workloads, which is considerably below the occupancy rate in EU countries.

All hospitals in Montenegro registered a total of 80,457 hospitalizations in 2010; this indicates the rate of 128.8 discharged patients per 1,000 inhabitants (domicile population). This rate is considerably lower than the one in the EU countries, which record 177.7 discharged patients per 1,000 inhabitants (according to 2008 WHO-HFA-DB).

Analysis of discharged patients' diagnoses according to ICD 10 identified the following leading groups:

1. Cardiovascular;
2. Respiratory;
3. Metabolic disorders;
4. Gastrointestinal disorders;
5. Neurological disorders.

Slight disparities were also noted between the catchment areas of GHs with regard to incidence of the most frequent disease groups.

For the purpose of detailed and more specific consideration of the problem of utilization of hospital capacities, the volume and structure of work were carefully analysed, together with consumption of reagents in:

1. Wards
 - Surgical ward and the operation block (general surgery, orthopedics and urology),
 - Internal medicine ward,
 - Gynaecology with delivery room,
 - Pediatrics wards,
2. Attached ambulatory units

Performance on wards

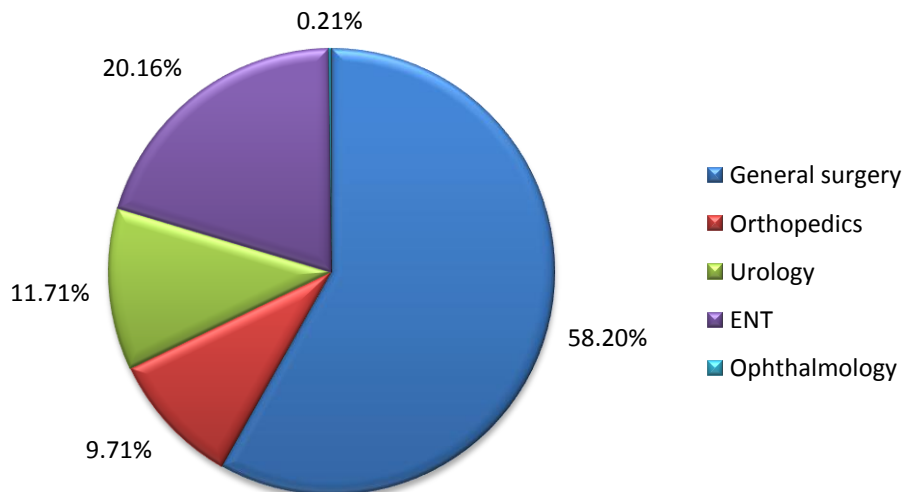
- a) Branches of surgery

Insight and analysis of data on operational procedures in hospitals show considerable disparities between and within specialties at the national level. Data indicates the following per year:

- General surgeon performs 63.6 – 156.8 operations, 107 on average,
- Orthopedist performs 35 – 160 operations, i.e. 99 on average,
- Urologist performs 51 – 142.5 operations, i.e. 89.5 on average.

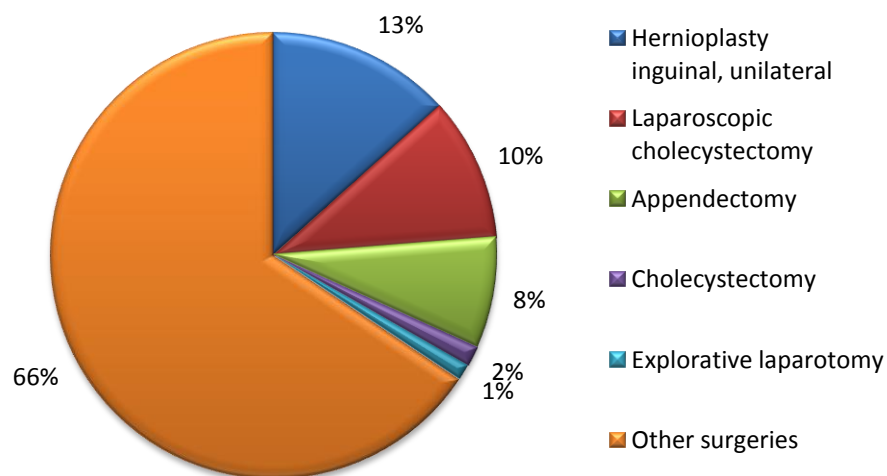
TOTAL GENERAL HOSPITALS

Wards	No. of surgeries	No. of surgeons	No. of surgeries per surgeon	No. of surgeries per surgeon/day
General surgery	3559	33	107.85	0.30
Orthopedics	594	6	99	0.27
Urology	716	8	89.5	0.25
ENT	1233	8	154.13	0.42
Ophthalmology	13	2	6.5	0.02
TOTAL	6115	57	107.28	0.29



Analysis of data on the most frequent operational procedures shows that the share of routine operational procedures from the domain of general surgery in the total number of operations is significant and amounts to 34%

General surgeries	No. of surgeries	% share
Hernioplasty inguinal, unilateral	474	13.32
Laparoscopic cholecystectomy	371	10.42
Appendectomy	284	7.98
Cholecystectomy	53	1.49
Explorative laparotomy	41	1.15
Other surgeries	2336	65.64
TOTAL	3559	100



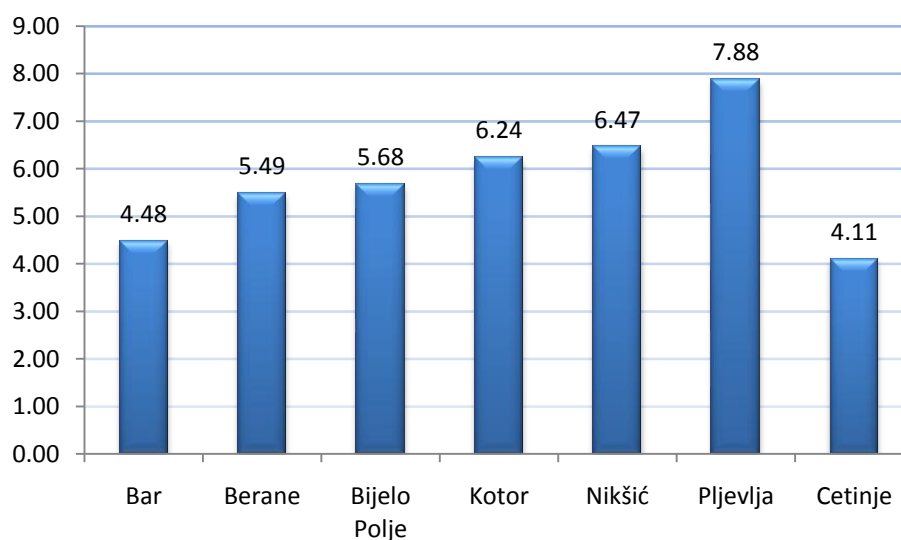
This additionally emphasises the problem of underused staff – general surgeons - and in the long run has a negative impact on the professional competences of staff, quality and accessibility of healthcare services and safety of patients.

Data on the number of daily in-patients on wards: internal, pediatrics and gynaecology (incl. the number of deliveries) also indicate low utilization.

1. Surgery

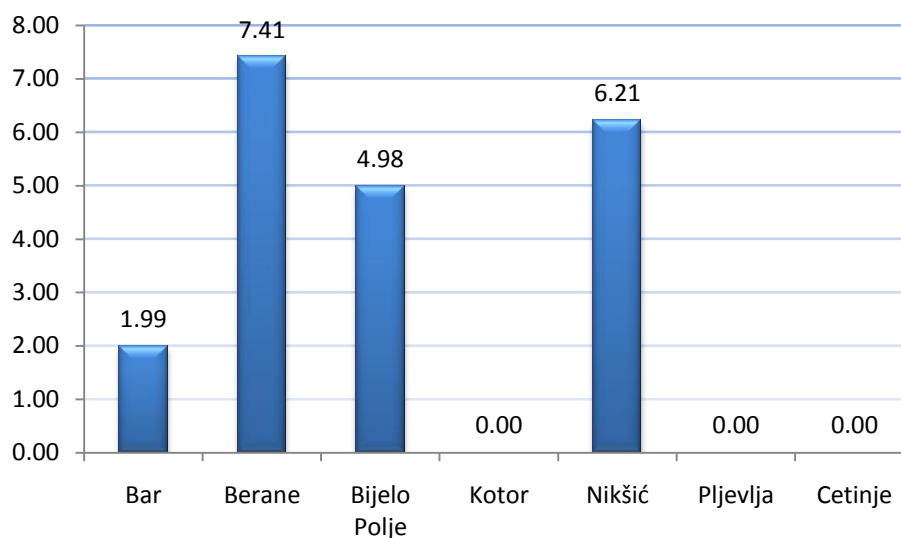
1.1 General surgery

PHIs	No. of General Surgeons	No. of patients on General surgery	No. of patients per General Surgeon	Avg. no. of hospitalized patients per day	Avg. no. of hospitalized patients per General Surgeon/day
General hospitals					
Bar	7	2191	313.00	31.38	4.48
Berane	6	1432	238.67	32.93	5.49
Bijelo Polje	3	753	251.00	17.03	5.68
Kotor	4	1046	261.50	24.96	6.24
Nikšić	5	1289	257.80	32.34	6.47
Pljevlja	4	962	240.50	31.52	7.88
Cetinje	4	769	192.25	16.43	4.11
TOTAL	33	8442	255.82	26.65	0.81



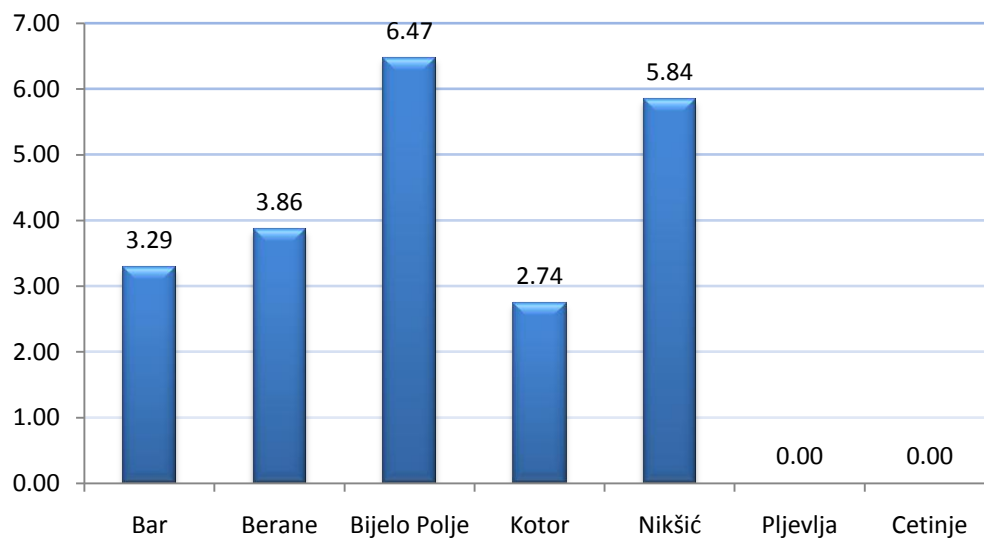
1.2 Orthopedic surgery

PHIs	No. of Orthopedic Surgeons	No. of patients on Orthopedic surgery	No. of patients per Orthopedic Surgeon	Avg. no. of hospitalized patients per day	Avg. no. of hospitalized patients per Orthopedic Surgeon/day
General hospitals					
Bar	1	103	103.00	1.99	1.99
Berane	1	220	220.00	7.41	7.41
Bijelo Polje	2	255	127.50	9.96	4.98
Kotor	0	0	0.00	0	0.00
Nikšić	2	355	177.50	12.43	6.22
Pljevlja	1	0	0.00	0	0.00
Cetinje	0	0	0.00	0	0.00
TOTAL	7	933	133.29	4.54	0.65



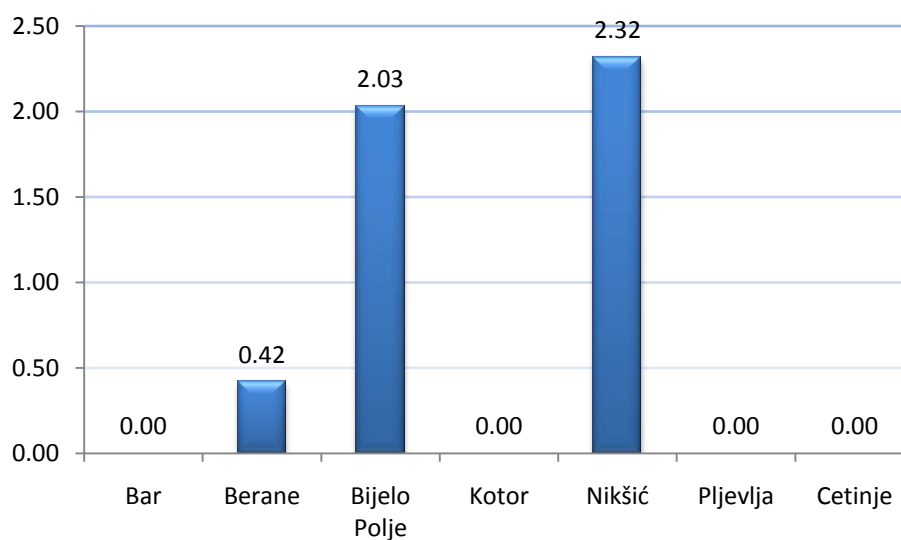
1.3 Urologic surgery

PHIs	No. of Urologic Surgeons	No. of patients on Urologic surgery	No. of patients per Urologic Surgeon	Avg. no. of hospitalized patients per day	Avg. no. of hospitalized patients per Urologic Surgeon/day
General hospitals					
Bar	2	380	190.00	6.57	3.29
Berane	1	193	193.00	3.86	3.86
Bijelo Polje	1	281	281.00	6.47	6.47
Kotor	2	335	167.50	5.47	2.74
Nikšić	2	479	239.50	11.68	5.84
Pljevlja	1	0	0.00	0	0.00
Cetinje	0	0	0.00	0	0.00
TOTAL	9	1668	185.33	4.86	0.54



1.4 ENT

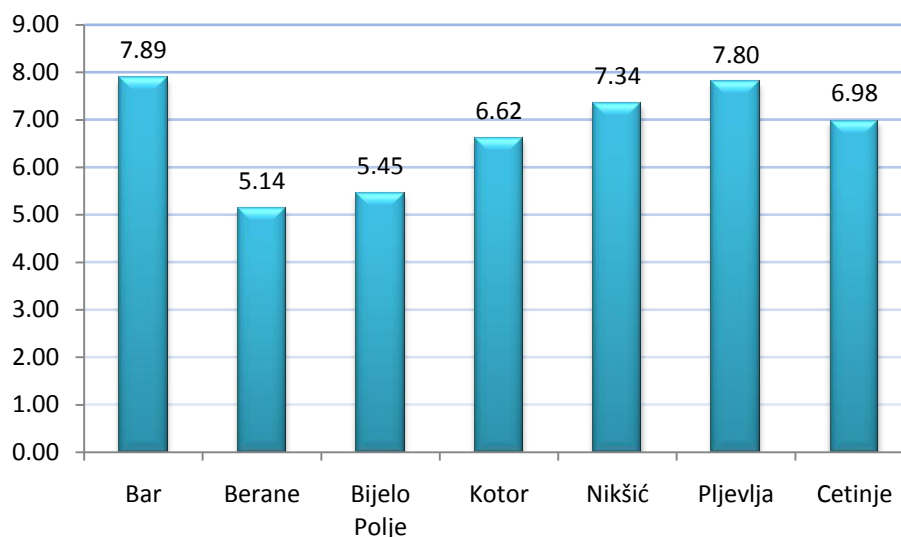
PHIs	No. of ENT Surgeons	No. of patients on ENT	No. of patients per ENT Surgeon	Avg. no. of hospitalized patients per day	Avg. no. of hospitalized patients per ENT Surgeon/day
General hospitals					
Bar	2	0	0.00	0	0.00
Berane	2	122	61.00	0.84	0.42
Bijelo Polje	2	220	110.00	4.06	2.03
Kotor	2	0	0.00	0	0.00
Nikšić	2	251	125.50	4.63	2.32
Pljevlja	1	0	0.00	0	0.00
Cetinje	2	0	0.00	0	0.00
UKUPNO	13	593	45.62	1.36	0.10



2. Internal medicine

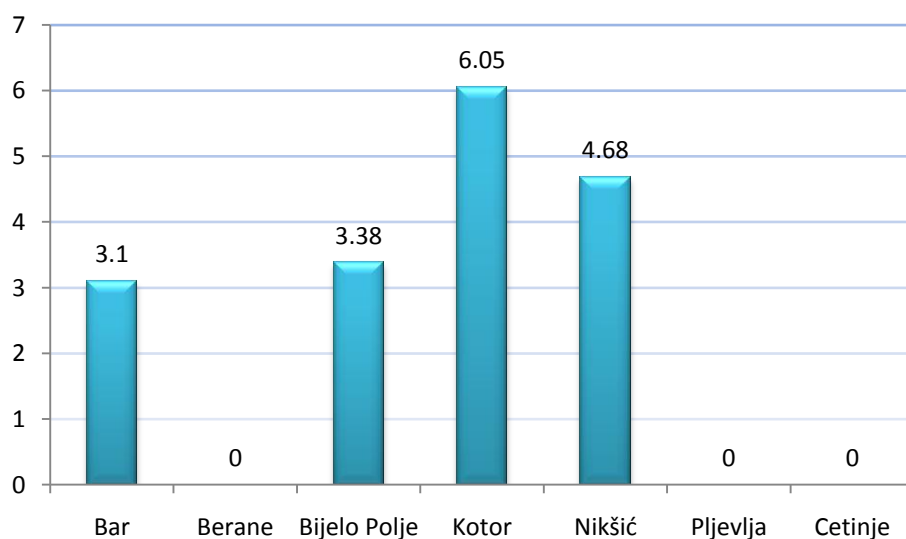
2.1 General internal medicine, coronary and metabolic units

PHIs	No. of Internal Medicine Doctors	No. of patients on General internal medicine, coronary and metabolic units	No. of patients per Internal Medicine Doctor	Avg. no. of hospitalized patients per day	Avg. no. of hospitalized patients per Internal Medicine Doctor/day
General hospitals					
Bar	7	2119	302.71	55.22	7.89
Berane	9	1480	164.44	46.25	5.14
Bijelo Polje	6	1090	181.67	32.72	5.45
Kotor	6	2196	366.00	39.7	6.62
Nikšić	5	1108	221.60	36.72	7.34
Pljevlja	4	1273	318.25	31.20	7.80
Cetinje	4	1073	268.25	27.93	6.98
TOTAL	41	10339	252.17	38.53	0.94



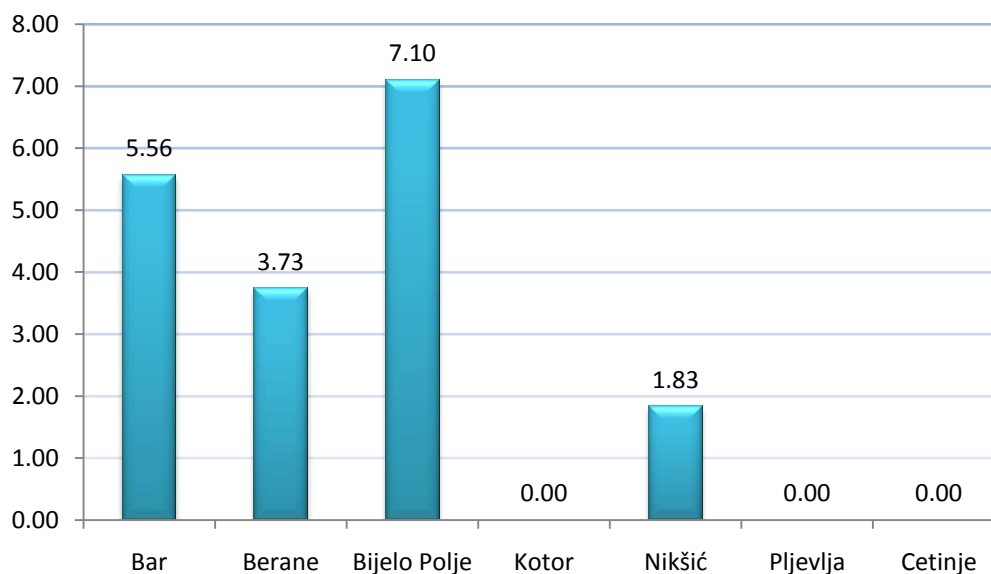
2.2 Infectious diseases

PHIs	No. of Infectious Disease Specialists on Internal ward	No. of infectious disease patients on Internal ward	No. of patients per Infectious Disease Specialist	Avg. no. of hospitalized patients per day	Avg. no. of hospitalized patients per Infectious Disease Specialist/day
General hospitals					
Bar	1	0	0	3.1	3.1
Berane	1	0	0	0	0
Bijelo Polje	1	125	125	3.38	3.38
Kotor	1	271	271	6.05	6.05
Nikšić	2	472	236	9.36	4.68
Pljevlja	1	0	0	0	0
Cetinje	0	0	0	0	0
TOTAL	7	868	124	3.13	0.45



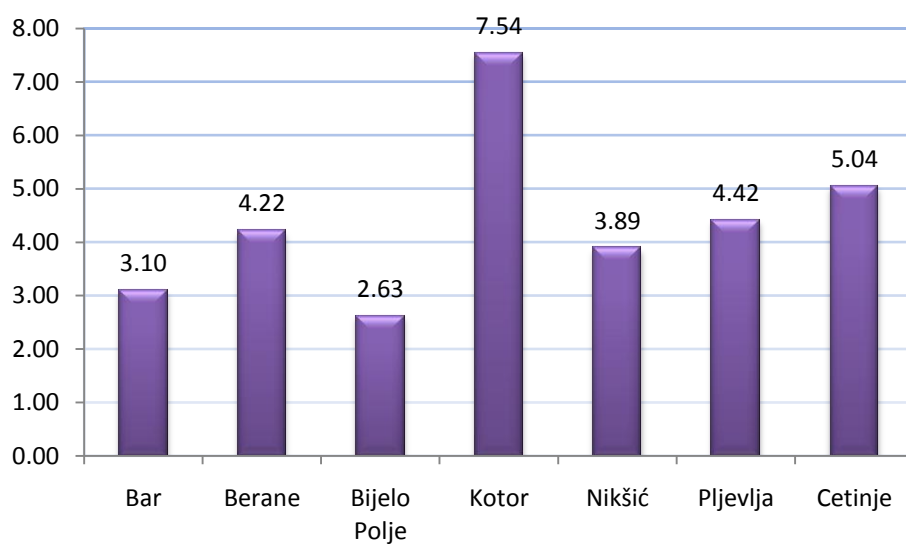
2.3 Psychiatry and neurology

PHIs	No. of Psychiatrists and Neurologists on Internal ward	No. of patients on Psychiatry and neurology on Internal ward	No. of patients per Psychiatrist / Neurologist	Avg. no. of hospitalized patients per day	Avg. no. of hospitalized patients per Psychiatrist / Neurologist /day
General hospitals					
Bar	1	191	191.00	5.56	5.56
Berane	1	164	164.00	3.73	3.73
Bijelo Polje	1	283	283.00	7.1	7.10
Kotor	0	0	0.00	0	0.00
Nikšić	6	459	75.50	10.95	1.83
Pljevlja	0	0	0.00	0.00	0.00
Cetinje	0	0	0.00	0	0.00
TOTAL	9	1097	121.89	3.91	0.43



3. Pediatrics

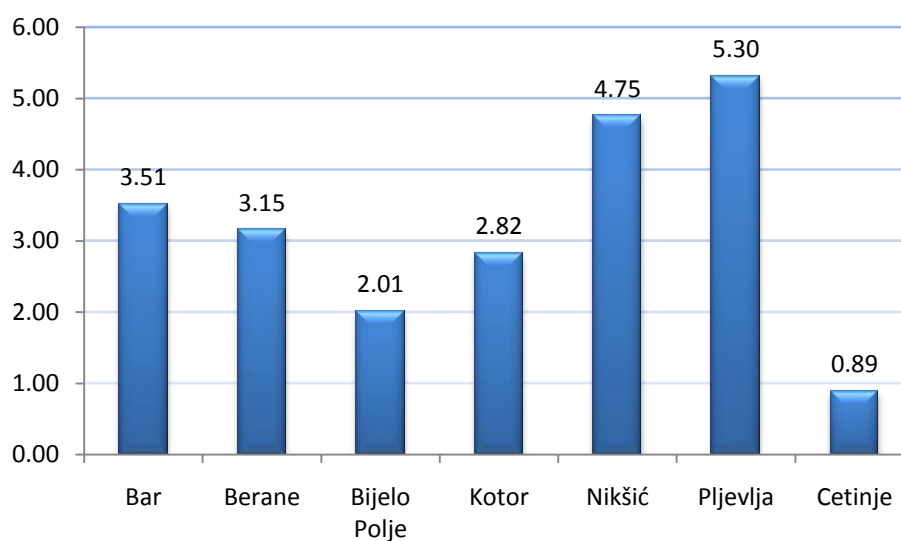
PHIs	No. of Pediatricians	No. of patients on Pediatrics	No. of patients per Pediatrician	Avg. no. of hospitalized patients per day	Avg. no. of hospitalized patients per Pediatrician/day
General hospitals					
Bar	4	801	200.25	12.39	3.10
Berane	4	948	237.00	16.88	4.22
Bijelo Polje	4	461	115.25	10.5	2.63
Kotor	3	1242	414.00	22.62	7.54
Nikšić	4	646	161.50	15.56	3.89
Pljevlja	2	433	216.50	8.83	4.42
Cetinje	2	544	272.00	10.08	5.04
TOTAL	23	5075	220.65	13.84	0.60



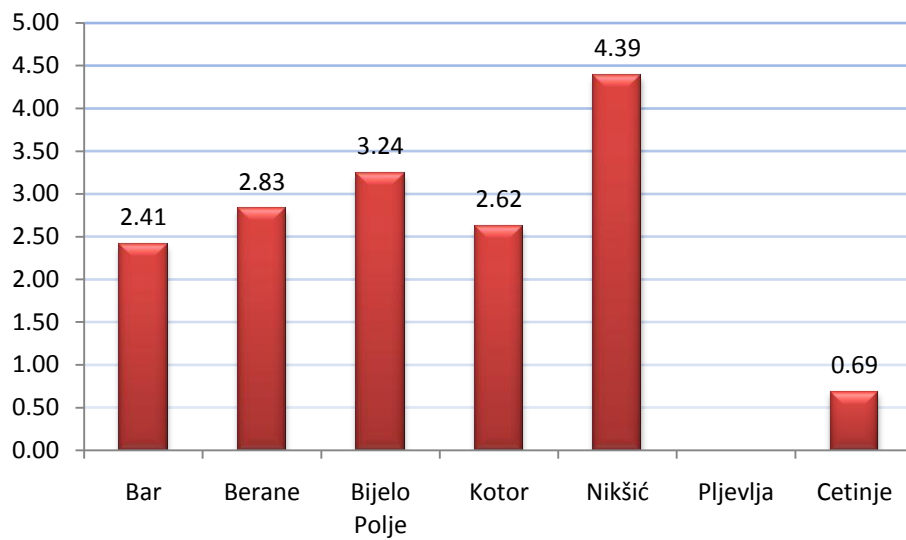
4. Gynecology and obstetrics

PHIs	No. of Gynecologists	No. of patients on Gynecology and obstetrics	No. of patients per Gynecologist	Avg. no. of hospitalized patients per day	Avg. no. of hospitalized patients per Gynecologist /day
General hospitals					
Bar	5	885	177.00	17.55	3.51
		669	133.80	12.05	2.41
Berane	5	696	139.20	15.75	3.15
		821	164.20	14.13	2.83
Bijelo Polje	4	380	95.00	8.04	2.01
		645	161.25	12.96	3.24
Kotor	4	394	98.50	11.29	2.82
		629	157.25	10.48	2.62
Nikšić	3	535	178.33	14.25	4.75
		917	305.67	13.16	4.39
Pljevlja	2	461	230.50	10.61	5.31
Cetinje	6	345	57.50	5.36	0.89
		313	52.17	4.11	0.69
TOTAL	29	3696	127.45	11.84	0.41
		3994	137.72	11.15	0.38

4.1 Gynecology



4.2 Obstetrics



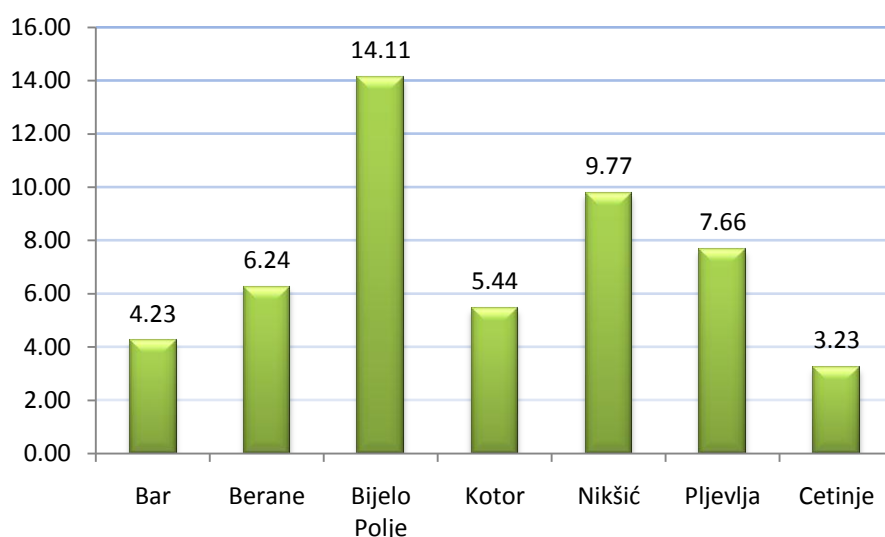
Analysis of performance in ambulatory care

Analysis of performance in ambulatory care across specialties in general hospitals in Montenegro showed disparities in the numbers of examinations and considerable room for increasing the workload of doctors in ambulatory care.

1. Surgery

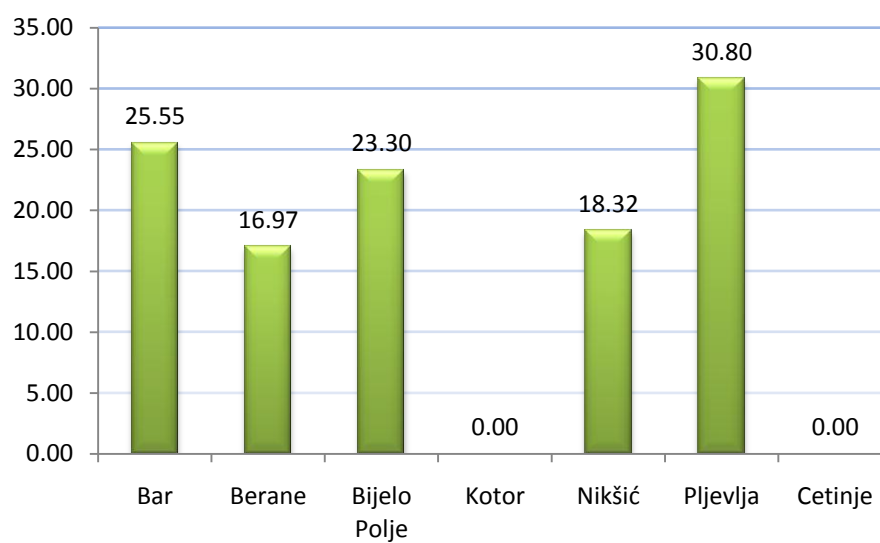
1.1 General surgery

PHIs	No. of General Surgeons	No. of examinations on General surgery	No. of examinations per General Surgeon	No. of examinations per General Surgeon/day
General hospitals				
Bar	7	6818	974.00	4.23
Berane	6	8609	1434.83	6.24
Bijelo Polje	3	9737	3245.67	14.11
Kotor	4	5004	1251.00	5.44
Nikšić	5	11231	2246.20	9.77
Pljevlja	4	7047	1761.75	7.66
Cetinje	4	2969	742.25	3.23
TOTAL	33	51415	1558.03	6.77



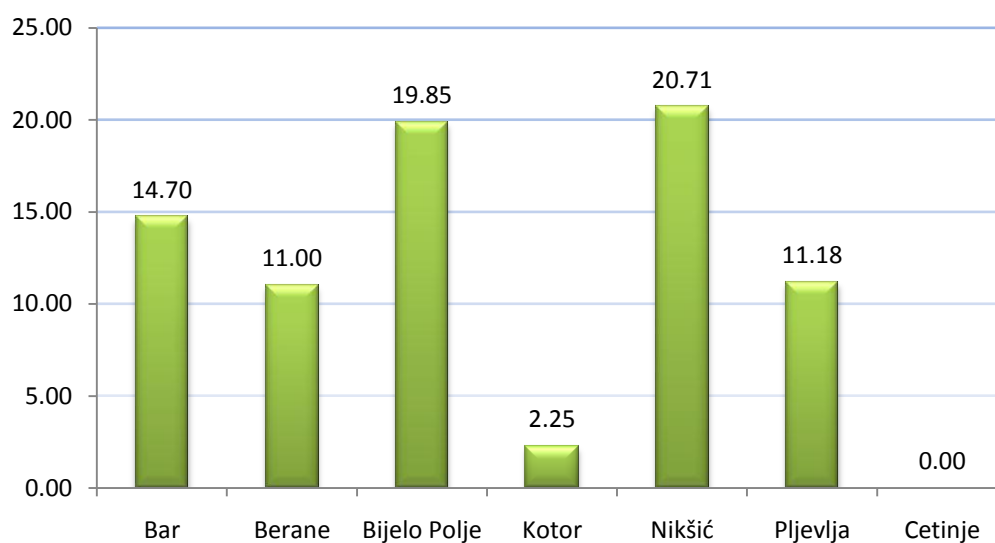
1.2 Orthopaedics

PHIs	No. of Orthopaedics	No. of examinations on Orthopaedics	No. of examinations per Orthopaedic	No. of examinations per Orthopaedic/day
General hospitals				
Bar	1	5876	5876.00	25.55
Berane	1	3903	3903.00	16.97
Bijelo Polje	2	10718	5359.00	23.30
Kotor	0	0	0.00	0.00
Nikšić	2	8428	4214.00	18.32
Pljevlja	1	7083	7083.00	30.80
Cetinje	0	0	0.00	0.00
TOTAL	7	36008	5144.00	22.37



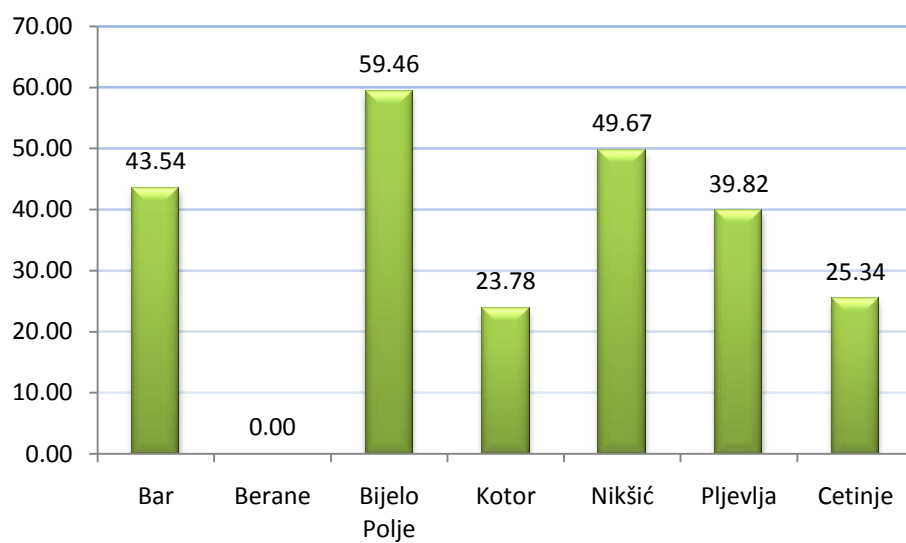
1.3 Urology

PHIs	No. of Urologists	No. of examinations on Urology	No. of examinations per Urologist	No. of examinations per Urologist/day
General hospitals				
Bar	2	6764	3382.00	14.70
Berane	1	2531	2531.00	11.00
Bijelo Polje	1	4565	4565.00	19.85
Kotor	2	1033	516.50	2.25
Nikšić	2	9528	4764.00	20.71
Pljevlja	1	2572	2572.00	11.18
Cetinje	0	0	0.00	0.00
TOTAL	9	26993	2999.22	13.04



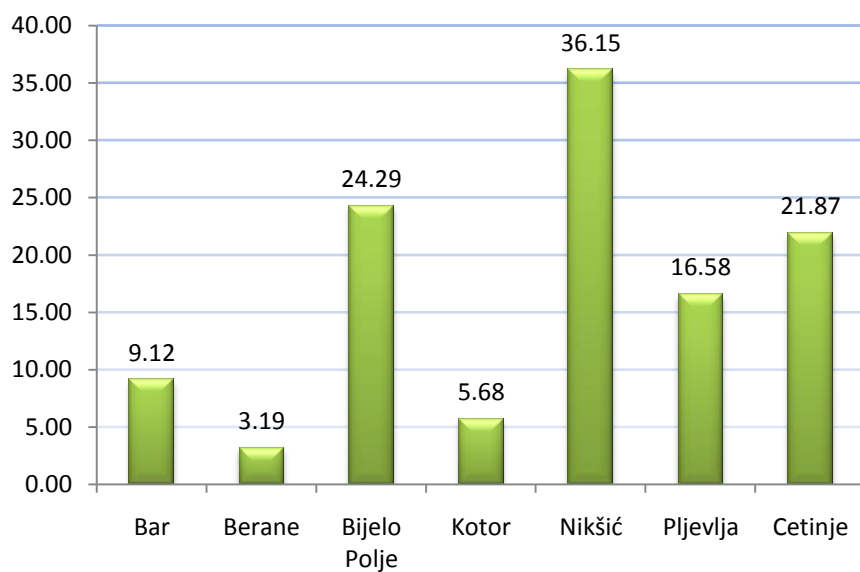
1.4 Ophthalmology

PHIs	No. of Ophthalmologists	No. of examinations on Ophthalmology	No. of examinations per Ophthalmologist	No. of examinations per Ophthalmologist/day
General hospitals				
Bar	1	10014	10014.00	43.54
Berane	0	0	0.00	0.00
Bijelo Polje	1	13675	13675.00	59.46
Kotor	2	10938	5469.00	23.78
Nikšić	2	22848	11424.00	49.67
Pljevlja	1	9159	9159.00	39.82
Cetinje	2	11655	5827.50	25.34
TOTAL	9	78289	8698.78	37.82



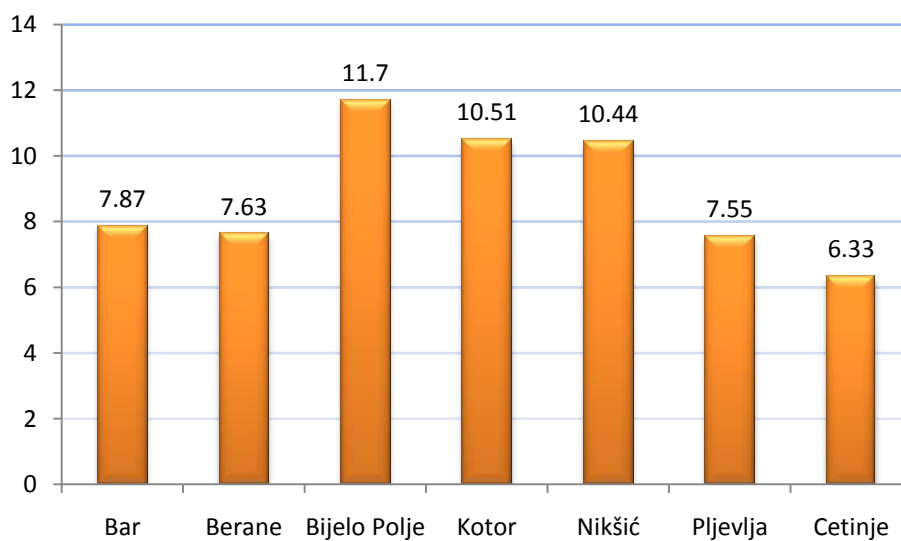
1.5 ENT

PHIs	No. of ENT Specialists	No. of examinations on ENT	No. of examinations per ENT Specialist	No. of examinations per ENT Specialist/day
General hospitals				
Bar	2	4194	2097.00	9.12
Berane	2	1467	733.50	3.19
Bijelo Polje	2	11175	5587.50	24.29
Kotor	2	2611	1305.50	5.68
Nikšić	2	16627	8313.50	36.15
Pljevlja	1	3814	3814.00	16.58
Cetinje	2	10058	5029.00	21.87
TOTAL	13	49946	3842.00	16.70



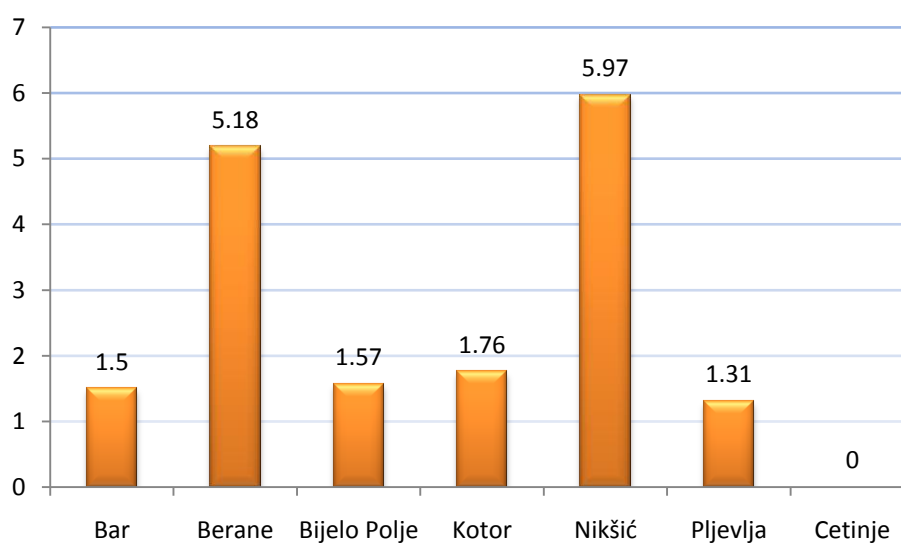
2. Internal Clinic (internal medicine, cardiology, endocrinology, nephrology, pulmonology, gastroenterology)

PHIs	No. of doctors	No. of examinations	No. of examinations per doctor	No. of examinations per doctor/day
General hospitals				
Bar	7	12675	1810.71	7.87
Berane	9	15795	1755.00	7.63
Bijelo Polje	6	16144	2690.67	11.70
Kotor	6	14509	2418.17	10.51
Nikšić	5	12001	2400.20	10.44
Pljevlja	4	6946	1736.50	7.55
Cetinje	4	5826	1456.50	6.33
TOTAL	41	83896	2046.24	8.90



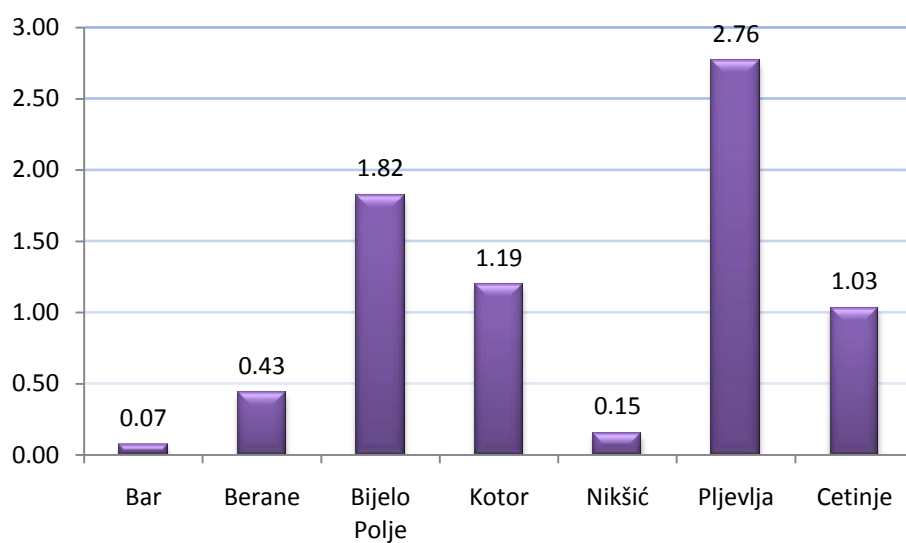
2.1 Infectious Disease Clinic

PHIs	No. of doctors	No. of examinations	No. of examinations per doctor	No. of examinations per doctor/day
General hospitals				
Bar	1	345	345.0	1.50
Berane	1	1191	1191.0	5.18
Bijelo Polje	1	360	360.0	1.57
Kotor	1	405	405.0	1.76
Nikšić	2	2744	1372.0	5.97
Pljevlja	1	301	301.0	1.31
Cetinje	0	0	0.0	0.00
TOTAL	7	5346	763.7	3.32



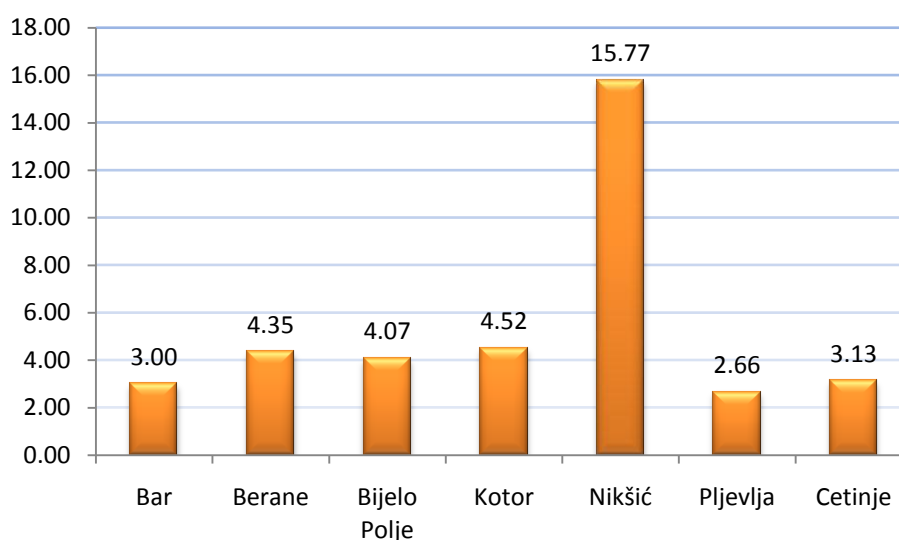
3 Pediatrics

PHIs	No. of Pediatricians	No. of examinations on Pediatrics	No. of examinations per Pediatrician	No. of examinations per Pediatrician/day
General hospitals				
Bar	4	65	16.25	0.07
Berane	4	399	99.75	0.43
Bijelo Polje	4	1675	418.75	1.82
Kotor	3	823	274.33	1.19
Nikšić	4	138	34.50	0.15
Pljevlja	2	1271	635.50	2.76
Cetinje	2	473	236.50	1.03
TOTAL	23	4844	210.61	0.92



4 Gynecology and obstetrics

PHIs	No. of Gynecologists	No. of examinations on Gynecology	No. of examinations per Gynecologist	No. of examinations per Gynecologist/day
General hospitals				
Bar	5	3446	689.20	3.00
Berane	5	4997	999.40	4.35
Bijelo Polje	4	3744	936.00	4.07
Kotor	4	4159	1039.75	4.52
Nikšić	3	10881	3627.00	15.77
Pljevlja	2	1222	611.00	2.66
Cetinje	6	4316	719.33	3.13
TOTAL	29	32765	1129.83	4.91

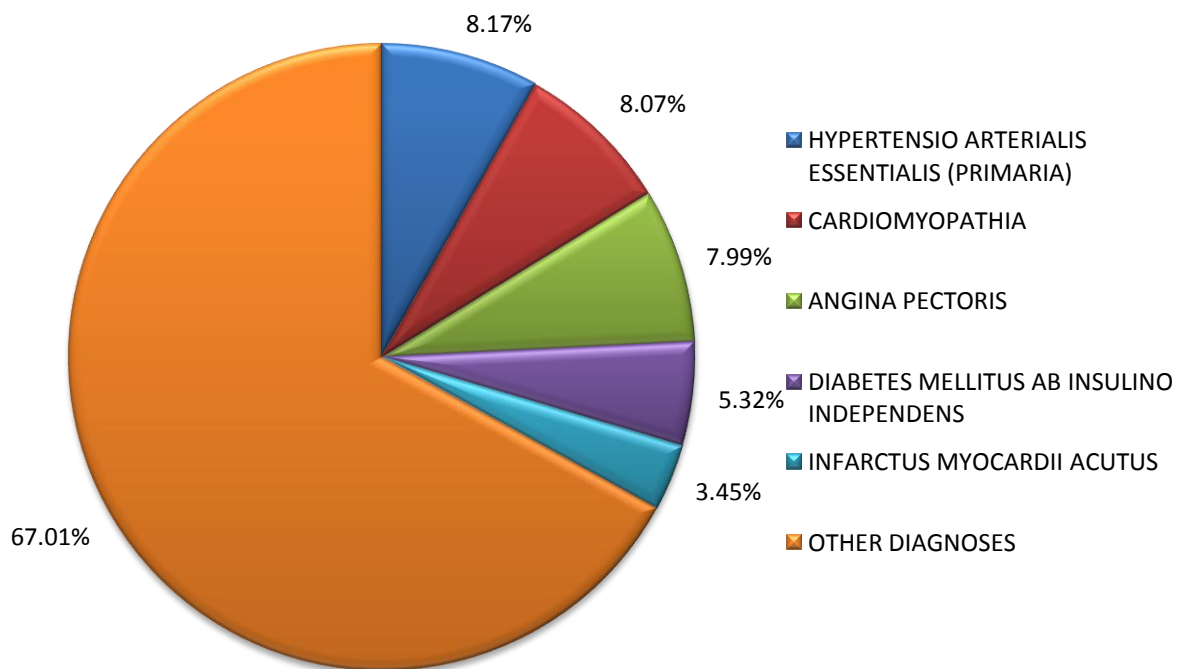


The relation between performance on wards and in ambulatory care

The situation is additionally complicated - from the perspective of accessibility, quality, patient safety and utilization of capacities - by the fact that hospital care was predominantly implemented on wards. Healthcare provision was organized so that there was a significant disbalance between the performance on wards and in ambulatory care, in favour of the wards. Besides, organization of available beds was not based on the concept of care.

Analysis of data on the breakdown of healthcare implemented on wards nationally provided the finding that significant share of services provided on wards could have been implemented in ambulatory care and day hospital.

The five most common diagnoses in the Internal department of general hospitals at the National Level		%
HYPERTENSIO ARTERIALIS ESSENTIALIS (PRIMARIA)	1126	8.17
CARDIOMYOPATHIA	1113	8.07
ANGINA PECTORIS	1101	7.99
DIABETES MELLITUS AB INSULINO INDEPENDENS	733	5.32
INFARCTUS MYOCARDII ACUTUS	475	3.45
OTHER DIAGNOSES	9240	67.01
Total of all diagnoses in the internal department of general hospitals at the National Level	13788	100



This placed additional burden on the healthcare system and exhausted it financially; all this had a negative impact on the vital indicators of quality of provided healthcare (reducing patient discharge and extending duration of hospitalization).

Analysis of performance in diagnostic services

The analysis of the situation and performance in diagnostic services organized at the level of primary healthcare and in hospitals was carried out for the purpose of the Strategy.

Diagnostic services included the following: biochemistry laboratory, radiology and microbiology.

Generally, each municipality has biochemistry diagnostics within its PHC. In those municipalities where hospital care is provided, in GHs and SHs (Pljevlja, Bar, Cetinje, Kotor, Niksic.), diagnostic capacities are duplicated. In some municipalities (Berane, Bijelo Polje and Niksic) integrated analysis of biochemical samples for the PHC and GH is organized at the PHC.

Radiological diagnostic is organized based on the same principle as biochemistry, the only difference being that each GH has its own radiological diagnostics, so the problem of overlapping is even more evident.

Microbiological diagnostics is organized by regions in 7 municipalities and is implemented at PHCs; in Podgorica, it is implemented at the Institute of Public Health.

The following staff has been secured for the provision of diagnostic services:

- lab technicians,
- biochemists,
- radiologists,
- radiology technicians,
- microbiologists.

It is evident in practise that in those municipalities where biochemistry diagnostics is developed both at the level of PHC and at hospital level, there are overlaps in staff, so there is a need to review and rationalize the number of lab technicians and biochemists in these municipalities.

Since there is a deficit of staff for radiological diagnostics, the problem needs to be addressed by means of targeted education and specialization programs.

Due to the current method of organization of diagnostic services, diagnostic equipment is also duplicated, which prevents optimal utilization of equipment in line with technical norms on capacities and results in increased consumption of required reagents. The problem is particularly present in biochemistry and X-ray diagnostics, so it should be addressed as a priority by means of integrating these services at a single provider. The organization of work of these services will be decentralized in the segment of sampling at the place where the need is recorded, while sample analysis will be centralized. The entity in charge of processing the samples is obliged also to collect samples. Such organization of work of diagnostic services will enhance rational and efficient use of available resources.

Analysis of utilization of management structures

Management structure was analyzed through the following components:

- management structure/scale
- services: admin and tech services
- allocations for management structure + admin services:total

the current network of health institutions in MN includes (excl. CCMN, IPH and Montefarm):

- 28 management boards
- 28 directors and their teams (deputy director, technical assistance, driver and head nurse)
- 28 financial departments
- 28 legal&HR departments.

Significant amount of financial resources is allocated annually to finance the management structure organized and designed in this manner.

The interventions to date, such as launching a call for private institutions to provide services from the basic benefit package and introduction of private-public partnership promote introduction of market operation principle, in order to make the health sector competitive in comparison with the rest of the EU healthcare systems and the private sector and to make it capable of a quality and efficient response to new challenges. These principles do not relate only to service provision, but imply an obligation to introduce professional, competent, efficient and rational management structure that corresponds to the size and structure of the network of health institutions.

Integration of management structures, both vertical and horizontal, is an imperative of the modern age and one of major features of an efficient healthcare system. It is assessed that reorganization of management structures according to this principle will generate significant annual savings.

Technical services make an important segment of management structure. The practise so far has been for each health institution to independently develop technical functions, with the number of staff according to the concept of planning based on capacities.

It is necessary to analyse the financial impact of organization of technical services and consider options for their privatization or outsourcing to specialized agencies.

Conclusions and recommendations

Available data indicates that the system of hospital care in Montenegro is faced with a paradox. Starting from vital health indicators, health needs of Montenegrin population match those in EU countries, whereas hospital capacities in MN are not just smaller than those in EU countries, but also have utilization rate which is significantly below EU average.

Starting from available data and assessment, better utilization of capacities requires the following to be done:

1. Review and revise the model of organization of hospital care in order to provide adequate workload of doctors for the purpose of rationalized use of available resources and improved healthcare quality.
2. Review and revise the model of organization of work in order to pay particular attention to healthcare provision in day hospitals and ambulatory care.
3. Channel the underused capacities as support to implementation of priority public-health programs.

3.2.1.2 New organization of the network of health institutions

Results of the above analyses supported the conclusion that the model of organization of health institutions needed to be restructured by integrating service provision, in line with the commitments from the Master Plan, in order to:

- Improve quality and continuity of healthcare provision;
- Control health cost increase;
- Increase efficiency in service provision.

Vertical integration is proposed, following the regional principle in service provision so as to contribute to the following:

- Achieving the economy of scale impact and avoid duplication of resources (administration, laboratory – diagnostics, transport, specialist ambulatory units...)
- Reduce price costs of services, better utilization of resources and infrastructure;
- Enhance flexibility in managing staff and resources;
- Standardize the service provision procedure;
- Focus on service quality and patient satisfaction;
- Focus on efficiency and effectiveness in service provision;
- Simplify the contracting process.

Establishment of Healthcare Centres

The process of vertical integration by levels of healthcare (primary, secondary and tertiary) i.e. merging of primary healthcare centres and general hospitals will result in the establishment of 8 Healthcare Centres:

1. HC Berane (PHCs Andrijevica, Plav, Rozaje and Berane and GH Berane),
2. HC Bijelo Polje (PHCs Bijelo Polje, Mojkovac and GH Bijelo Polje),
3. HC Pljevlja (PHC Pljevlja and GH Pljevlja),
4. HC Niksic (PHC Niksic, GH Niksic, SH Brezovik),
5. HC Kotor (PHCs Herceg Novi, Kotor, Tivat, SH Dobrota and SH Risan and GH Kotor),
6. HC Cetinje (PHC Cetinje and GH Cetinje),
7. HC Bar (PHCs Bar, Budva and Ulcinj and GH Bar) and
8. HC *Podgorica* (PHCs *Podgorica, Kolasin, Danilovgrad and the CCMN*).

From the organizational aspect, Healthcare Centres will recognize 3 entities:

- Chosen doctors with support centres and visiting nurse unit (adult and children's ambulatory care);
- Wards (two functional aspects: ambulatory care and day hospital)
- Services.

Primary healthcare will be implemented in accordance with the Model of Organization of PC by chosen doctors for adults and children. Duties of a women's chosen doctor will be functional and organizational sense, be connected with the ambulatory care of the gynaecology-obstetrics ward of the Healthcare Centre.

A minimum of 4 wards are set up within a Healthcare Centre for the purposes of implementing secondary and tertiary care:

- Surgery and traumatology, which establishes an operation block
- Internal diseases
- Gynaecology and obstetrics

-Pediatrics.

The model of organization of healthcare provision will be characterized by the principle of concentration of provision of certain specialist services at the level of the Healthcare Centre. Decision on the type of specialist services to be provided by a Reference Healthcare Centre will depend on:

-Sufficient staff that, over the specific period, provided the volume of services as prescribed by the Ministry of Health, and

-Necessary equipment.

The main reason for concentrating specialist services is improvement of healthcare quality, standardization of treatment procedures, and efficiency and effectiveness of service provision. By applying the principle of concentration, Healthcare Centres will not be directly competing among themselves, but giving support by providing quality services within the CC.

Since the results of the analysis of available data indicated that the health needs are stable in terms of structure and frequency, the policymaker will decide on the specialty area of concentration guided by the principle of providing effective access to quality and effective services.

The main orientation of the reform process is:

-Priority development of ambulatory -specialist care,

-Development of day hospitals,

-Development of capacities for treating acute conditions,

with the obligation to clearly define the capacities for non-acute treatment of chronic diseases and provision of palliative care.

Development of day hospitals is organized for the purpose of performing diagnostic, therapeutic, and rehabilitation services for ambulatory care patients in the following areas: nephrology (chemodialysis and peritoneal dialysis) and other internal medicine branches (primarily for the sake of applying parenteral and inhalation therapy); surgical branches (for the sake of performing surgical procedures and operations); psychiatry – mental health protection (for the sake of applying combined measures of psychotherapy, sociotherapy, occupational and work therapy and psychosocial support to the patients and their family members) and pediatrics.

The patients forwarded to non-acute hospital treatment are: those who have completed acute hospital treatment; those who require extended treatment, rehabilitation, care or palliative care; those whose health condition does not allow treatment at home or treatment elsewhere would be difficult to apply. Non-acute hospital treatment is an important area between acute hospital treatment and release home or placement in institutional care.

At the level of Healthcare Centre

-A minimum of 10% of beds on wards should be allocated for the needs of day hospital activities.

The share of work in ambulatory care is intended to predominate (to what extent and whether to define it by hours or number of examinations – to be agreed with consultants) over work with in-patients.

Diagnostics, anesthesiology and reanimation, supply of medicines and sanitary devices and supplies, urgent medical assistance, as well as non-medical functions will serve as support to provision of primary and secondary care in the form of “services“.

Changes in the model of organization of healthcare provision need to be accompanied by changes in the model of referral system. In order to eliminate formal barriers that complicate patient's mobility across levels of the system and to improve efficient link between various organizational and functional entities within and between Healthcare Centres, it is necessary to design the referral system so that it recognizes public authorization i.e. chosen doctors' and ward doctors' ability to refer a patient to further diagnostic processing and consultative examinations.

Establishment of Reference Centres

In order to ensure geographic accessibility, service providers need to be connected at the regional level, to secure better integration of knowledge and optimize utilization of resources. By linking some activities, regional Reference Centres can provide a better level of knowledge integration, organization of work procedures and more efficient use of equipment and other resources.

The process of horizontal integration i.e. aggregation of healthcare service providers will be carried out according to regional principle for catchment areas with population of 200,000 in such a way that organizational structure reflects the epidemiological profile of the territory.

A regional Reference Centre is established by aggregation and merging of a minimum of 2 Healthcare Centres.

Bearing in mind the size and characteristics of the geographic territory of Montenegro and the volume and type of health needs, it is possible to establish a maximum of 3 RCs: for the northern, southern and central region respectively.

Each RC will serve as scientific-teaching base for medical faculties.

Management structure of a regional RC will include a director and management board.

3.2.1.3 Introduction of private sector in the health institution network

In line with the new model of organization of healthcare provision, it will be possible to introduce private service providers, when required exclusively for the purpose of ensuring access to quality and efficient healthcare; at the same time, this eliminates the possibility of their parallel existence with a public health institution that provides services inefficiently and with lack of quality.

Public healthcare sector is facing challenges in healthcare financing, management and provision. Namely, the healthcare system is encountering fiscal constraints that force the health authorities in Montenegro to carefully prioritize and restrict public expenditures.

Moreover, Montenegrin public healthcare system is faced with chronic deficit and additional fiscal pressures, such as the need to provide health care to an increasingly aging population, improve quality, or invest in often expensive medical treatment and technological advances.

The solution lies mainly in growing private sector involvement in financing and service provision. Turning to private sector can help overcome specific challenges related to costs and investment, improve efficiency (e.g. better service provision and management at a lower cost) and improve service quality (e.g. better expertise, faster and larger investment in infrastructure and new medical technologies, potential to attract and retain top staff).

Application of this approach should be carefully examined on a case-by-case basis. The decision concerning private sector involvement should be made after:

- Conducting an analysis of health needs in order to identify potential disbalance between the “supply” – provision of healthcare services - and “demand” – health needs;
- Evident exhaustion of all possibilities and options to improve effective accessibility to quality and efficient services as a result of measures undertaken for the sake of reorganization and rationalization of the existing service provision model;
- Completing a detailed cost-benefit analysis on private sector introduction. In assessing the benefits of services being provided by private and public sector respectively risk can serve as an important criterion; therefore, a framework for assessment of risk-related issues needs to be established.

Recommendation: Identify the areas where it would be desirable to consider the possibility of introduction and implementation of private sector initiative (cancer, emergency care, respiratory diseases, diabetes, CVDs, mental health, palliative care, hip replacement, maternal health etc.).

It is necessary to prove that private sector involvement and participation will promote improvement in the sense of health care accessibility, equity, quality, efficiency, including cost and risk sharing.

Possible options that may be employed and considered in Montenegro for the purpose of achieving these objectives are:

➤ Contracting out:

• Service contracts:

Under a service contract a government pays a private entity to perform specific tasks such as routine procedures (laboratory services) or specialized services (radiology) within the hospital, to complement its own operations. Alternatively, a government might contract out functions such as basic preventive care or a health education campaign to private organizations operating outside public facilities. Because a service contract assigns responsibility for isolated tasks, it transfers little risk to the private entity. The government remains responsible for coordinating the tasks involved in providing comprehensive health care, maintaining publicly owned assets, and making necessary capital investments.

Service contracts may be a good option for introducing a private entity’s comparative advantage (highly specialized technology, access to rural communities) in a specific task. But because responsibility for coordination still falls on the government, this option is unlikely to improve performance much since overall management is weak.

• Management contracts

Under a management contract a government pays a private entity to manage public healthcare facilities and provide a range of services. The management authority transferred to the private sector varies from one contract to another and may include procurement of labour, supplies, medicine, and equipment. Because medical professionals are a key asset in health care provision, this distinguishes management contracts under which the public sector makes employment decisions—the “contract in” model—from those under which the private contractor makes these decisions—the “contract out” model. The contract-out model transfers the risks associated with inputs, including labour, to the private sector.

Available experience shows that management contracts may be a good way to gain access to the technical expertise and managerial efficiency of the private sector. But because commercial risks are still borne by the government, they may create little incentive to reduce costs and improve the quality of services.

- Construction, maintenance, and equipment contracts
- Hybrid contracts (e.g., large IT infrastructure and service contracts)
- Leases

Under a lease arrangement a private entity typically pays the government a fee to use healthcare facilities and takes on the responsibility for managing and operating them. In return, the private entity receives the right to the revenues from the operation. Since the government no longer provides the service in the leased space, the private entity bears all the commercial risks (such as low demand for services or a change in service fees).

Lease arrangements give the private provider strong incentives to operate efficiently, because the provider's profitability depends on how much it can reduce costs while still meeting the quality standards specified in the contract. But coordination between the operating program and the investment program can be cumbersome. Thus a lease may be a good option for public health facilities that need to improve operating efficiency, but not for those that need new investment.

➤ Concessions

- Concessions and build-operate-transfer (BOT) arrangements

Under concession arrangements a private entity pays the government a fee to operate and maintain health care facilities and also takes on responsibility for capital investment. Under BOT arrangements, a variation of the concession, the capital investment takes the form of constructing new facilities. A private firm builds the facilities, provides services, and then transfers ownership to the government at the end of a specified term. Build-lease-transfer and rehabilitate-operate-transfer schemes are also variations of the concession. Concessions and BOT contracts, which typically last longer than other types of arrangements, provide greater incentives for efficiency by transferring to the private sector full responsibility for operation and investment. They also offer a good way to tap the private sector's ability to access private finance and raise funding for new construction and investment.

- Divestitures and build-own-operate (BOO) arrangements

In a divestiture a publicly owned healthcare facility is sold to a private entity, and ownership is transferred indefinitely. Under a BOO contract, a variation of the divestiture, the private entity also takes responsibility for constructing new facilities at its own expense. Thus divestitures and BOO contracts transfer commercial risks entirely to the private entity and take full advantage of its access to private finance.

➤ Free entry

When qualified private providers are allowed to freely enter and exit the health care market without establishing a contractual relationship with the government, the private providers bear all risks and responsibilities associated with healthcare provision. But the absence of contractual relationships does not necessarily mean a lack of government oversight. A government may use other regulatory instruments—such as licensing, certification, and accreditation—to protect the public interest by ensuring safety and a minimum quality of care. In addition to legal requirements, a government might use financial and other incentives (taxes, subsidies, training opportunities) to influence the behaviour of private providers—such as their choices of clinic locations and target patients—to achieve public health goals.

In a policy environment allowing free entry, private providers develop their own organizational structures and operational models to achieve the best results. One emerging operational model is franchising, in

which a private firm (franchiser) licenses other private businesses (franchisees) to operate under its trade name.

To maximize the benefits of private participation, a government therefore needs to determine which option is best suited for achieving its policy objectives—and then choose the most appropriate contracting and payment mechanisms and the best regulatory framework for monitoring and enforcing the arrangements.

Public private integration model should be in line with the defined regulatory framework and strategic objectives and priorities for health sector development.

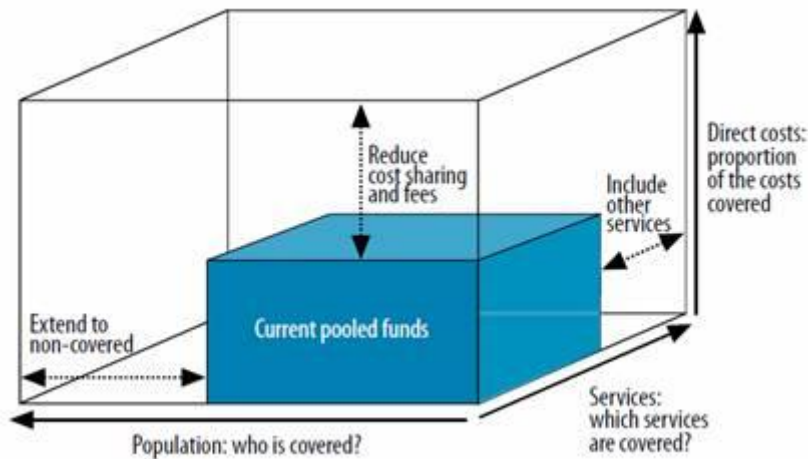
3.2.2 The benefit package

The health care system of Montenegro is based on the principle of universal access to free health care. The existing law on health insurance defines the basic benefit package covered by compulsory health insurance. The content of the package i.e. the list of services is rather comprehensive and includes all possible forms of care (whole range of non-basic services, even services that are non-medical and non-related to health care) and represents the legacy from the times of former Yugoslavia, the country that used to be known as a paradigm of social welfare and used to provide its citizens with a high level of financial security and provision of services. During the years of economic transition, marked by a considerable decrease in the financial resources allocated to health sector, a drastic imbalance took place between the list of services and the available resources. This was one of the key reasons for the deficit in the operation of the Health Insurance Fund (HIF), occurrence of informal payments and growing dissatisfaction with the functioning and quality of performance of public health care system.

Conceptually, the basic benefit package (hereinafter: BBP) has 3 aspects:

1. Breadth (who): refers to the segment of population covered by the basic package;
2. Scope (what): refers to the services that are the scope/content of the package;
3. Depth, cost sharing (how much): refers to the existence of an arrangement that aims at reducing the financial pressure on the health budget in the sense of possibility to introduce the arrangement of cost sharing i.e. costs for each service provided to be covered by the patient.

Graph: Three dimensions of the benefit package.



Source: The World Health Report 2010

The three aspects of the basic package are key determinants of the scope of protection of the population/insurance beneficiaries from financial risk. It needs to be highlighted that the scope and cost sharing have a strong impact on the implementation of the equality principle in the sense of the burden of financing the system and access to health care services. BBP has a particularly important role in enhancing transparency, especially in the circumstances when substantial informal payments are recorded, as they represent a considerable barrier to the achievement of effective access to quality health care.

The health care reform is ongoing and is particularly focused on the model of health care provision at the secondary and tertiary levels. One of the reform goals is introduction of a new result-based payment model, which implies introduction of contracting between service provider and payer. International theory and practice identify the existence of an explicit BBP as one of the key requirements in the process of defining the new contractual relation between service purchaser and service provider. In addition, demographic changes, continuous technological progress, **medical inflation**, economic transition and fiscal pressure are the factors that call for a proactive approach in redefining the service package. In this sense, the need has been identified to redefine the package in a precise manner, taking into account clinical efficiency, cost efficiency and changes in the insurance system in the following sense:

- The reformed package of services needs to fully observe the principle of universality.
- The reformed package needs to examine patients' rights and to define the corresponding service content, including the scope of services under an individual right granted to the patient. This process of redefining the rights from the basic package should run parallel to the process of developing clinical

guidelines and protocols in the sphere of diagnostics, treatment, rehabilitation among secondary and tertiary level specialists.

- The reformed package should define a clear and concrete arrangement for the sharing of costs between the payer and service beneficiary, in order to achieve fiscal balance and rational service provision. This will imply introduction of co-payment through voluntary insurance system.

Bearing in mind the size of population and market, as well as high risk for making profit, voluntary insurance system development assumes the audit of the basic package in terms of law, service scope and content as well as ways to cover costs.

The core characteristic of the basic package of services is:

- Integrated package of health services,
- There is no differentiation of services by levels of health care and
- Services are defined by complexity

3.2.3 Quality Assurance System

Definition

By definition, the concept of Quality Assurance (QA) implies *“activities and programs intended to assure or improve the quality of care in either a defined medical setting or a program. The concept includes:*

- (1) Evaluation or assesment of the quality of care,
- (2) Identification of problems or shortcomings in the delivery of care,
- (3) Designing activities to overcome the deficiencies, and
- (4) Follow-up monitoring to secure the efficiency of corrective measures”.

QA means delivering healthcare which is safe (does not cause avoidable harm), effective (has a positive impact in responding to health needs and overall health gain) and efficient (within the economic possibilities of the system).

QA is a systematic ongoing process geared towards setting up stadnards, monitoring and better performance of the system in order to ensure safe and effective healthcare. The aim of implementing this process is gradual transformation of an individual procedure or the overall system into safer, more effective and more efficient care in what is known as the virtuous quality cycle.

QA is not a magic bullet; it has been (and continues to be) a part of judicious healthcare for many years even if was not labelled as such.

Rational for QA introduction

What is relatively new, at least since the mid 1980s, is the growing interest in developing institutionally based and national QA programs. The following are some of the reasons:

- Increasing democratization - politicians and managers need to consider more carefully the need of citizens for better quality care;
- Economic problems i.e. increasing health costs and budget limitations restricted the capacity of healthcare system to improve quality by increasing investment and spending. Quality improvements can also be attained through improved efficiency in the use of existing resources.
- Managers and funders realise that charging for services previously free (or increasing charges when previously priced) is only possible if quality improves. Willingness to pay is present only if perception of quality improves.

Countries are using other procedures to insist on quality, beyond QA programs. Registering (sometimes known as licensing) health facilities, public and private, or practicing health professionals in a public register is a statutory function of most public administrations. They usually register against a set of minimum requirements and standards. These requirements can be prepared to ensure a minimum quality level in any new service being made available to the public.

Components of quality and QA

Quality is a comprehensive and multifaceted concept. Generally, several dimensions of quality are identified, varying in importance depending on the context in which the QA effort takes place. QA activities may address one or more dimensions, such as:

- technical competence,
- access to services,
- effectiveness,
- interpersonal relations,
- efficiency,
- continuity,
- safety, and
- satisfaction.

Whatever quality dimensions are used, QA requires measuring them. Experts also differentiate between input indicators (staff, resources, physical infrastructure, supplies, equipment), process indicators (how these inputs are organised in outputs such as admissions, operations, visits,...) and outcome indicators (or impact measurement, such as reduced mortality, increased satisfaction...).

Recent experience in applying quality management to healthcare systems suggests that four tenets should be adhered to in an ideal quality assurance program:

- Quality assurance is oriented toward meeting the needs and expectations of the patient and the community.
- Quality assurance focuses on systems and processes.
- Quality assurance uses data to analyze service provision processes.
- Quality assurance encourages a team approach to problem solving and quality improvement.

Current situation in Montenegro

QA efforts invested in Montenegro so far have brought about the following results:

- (1) Institutionalization of quality improvement concept by establishment of the Quality Control Sector within the Ministry of Health. In addition, the Law on Healthcare and the Law on Patient Safety provided the regulatory framework for quality control issues.
- (2) Development of capacities within MoH and IPH and specific health institutions to make use of the expertise and available data to assess quality aspects, identify shortcomings, design measures to overcome these, and monitor the effectiveness of corrective measures designed - these are key steps in any QA process. Capacities are evident, although they need to be developed. Besides, systematic and coordinated efforts need to be undertaken to set up a QA system.

Strategic recommendations to systematically introduce quality control and assurance

A QA program should be developed gradually through a carefully planned, phased process to ensure a genuine process. Unrealistic acritical acceptance of ambitious QA initiatives can be counterproductive if their cost and scale are neither sustainable nor appropriate for the present level of development of the Montenegrin healthcare system.

Recommended strategic actions to be undertaken with the view of introducing QA in practice:

1. Planning

This is the preparatory step to carry out QA activities. Planning begins with a review of the main weaknesses perceived in the health care system to determine which services should be first addressed. It is impossible to improve quality in all areas at once. Instead, QA activities should be initiated in a few critical areas. High-priority, high-volume, or problem-prone services should be selected for special attention at the start of a QA program. Once it has been decided where the QA effort will begin, a quality improvement approach must be selected. It would be possible to focus on monitoring desired or adverse outcomes of service provision and determine areas for improvement.

For introducing the QA program in practice it is important to:

- Assign responsibility for QA. This may entail forming a National QA Commission or an ad hoc team responsible for initial QA activities.
- Allocate resources for QA.
- Strengthen QA skills and critical management systems.

2. Development of clinical protocols and guidelines

Practice guidelines or clinical protocols, administrative procedures or standard operating procedures, product specifications, and performance standards must be prepared for the areas of intervention. Appropriate indicators should also be designed to measure the implementation of these procedures. Once practice guidelines, standard operating procedures, and performance standards have been defined, it is essential that these are communicated to staff members and their use is actively promoted.

3. Monitoring

Monitoring is the routine collection and review of data that helps to assess whether program norms are being followed or whether outcomes are improved. By monitoring key indicators, managers and supervisors can determine whether the services provided follow the prescribed practices and achieve the desired results. It is important that a base line measurement is taken before starting the communication and promotion of standards to allow later measurement of progress. The monitoring system is central to a QA program.

4. Identifying problems and selecting opportunities for improvement

Program and facilities managers can regularly identify quality improvement opportunities by monitoring and evaluating activities in the areas selected by the National QA plan. Employing a participatory approach in problem identification, such as suggestions from health workers, performing system process analyses, reviewing patient feedback or complaints, and generating ideas through brainstorming or other group techniques, offers several advantages. One of them is that staff members are more likely to contribute and to cooperate if they are involved in identifying problems.

Once a team has identified several problems, it should set quality improvement priorities by choosing one or two problem areas on which to focus. Selection criteria will vary from program to program. Two important principles should guide this process. The criteria should reflect team, not individual, priorities. They should also be explicit so that the decision-making process is as objective and as thorough as possible. Criteria might include the technical feasibility of addressing the problem, the potential impact of improving quality on the population's health, or the adequacy of the necessary available resources.

5. Defining the problem operationally

Having selected a problem, the team must define it operationally--as a gap between actual performance and performance as prescribed by guidelines and standards. The problem statement should identify the problem and how it manifests itself, clearly state where the problem begins and ends and how to recognize when the problem is solved.

6. Choosing a team

Once a health facility staff has employed a participatory approach to selecting and defining a problem, it should assign a small team to address the specific problem. The team will analyze the problem, develop a quality improvement plan, and implement and evaluate the quality improvement effort. The team should comprise those who are involved with, contribute inputs or resources to, and/or benefit from the activity or activities in which the problem occurs. This ensures the involvement of those most knowledgeable about the process.

7. Analyzing and studying the problem to identify its root causes

Achieving a meaningful and sustainable quality improvement effort depends on understanding the problem and its root causes.

8. Implementing and evaluating quality improvement efforts

The team must determine the necessary resources and time frame and decide who will be responsible for implementation. It must also decide whether implementation should begin with a pilot test in a limited

area or should be launched on a larger scale. The team should select indicators to evaluate whether the solution was implemented correctly and whether it resolved the problem it was designed to address. In-depth monitoring should begin when the quality improvement plan is implemented. It should continue until either the solution is proven effective and sustainable, or the solution is proven ineffective and is abandoned or modified. Once the solution has proved to be effective, program managers should codify and disseminate the new process so that others can learn from the experience.

Accreditation and QA

The second step in QA development could be to offer and promote accreditation of healthcare facilities. Accreditation provides complete and comprehensive benchmarking for healthcare facilities' structure and work. It is realized by accreditation agencies and it implies high costs in the sense of employees' time and resources. As QA commissions gain experience in quality management, accreditation could be a next step towards comprehensive quality.

3.2.4 Palliative care

Palliative care will be applied in the treatment and care of patients with some chronic diseases and those in the terminal stage. Palliative care is not the same as care for the dying, since it includes support to the patient's family or carers. Palliative care should enable the patient to feel as comfortable as possible by alleviation of pain and other adverse symptoms while providing psychological, social and spiritual support to the patient and persons caring for the patient.

Palliative care will be implemented within standard care, rather than as special service, and it has to become an integral part of integrated healthcare treatment (at all levels and across all specialties).

Palliative care entails categorization of patients to show actual needs of individual patients for a specific level of healthcare (average duration of care).

Preconditions for work in this area are: development of standards of palliative care, guidelines, staff training on knowledge, skills and attitudes, and establishment of tailored capacities.

A minimum of 3 – 5 % beds on wards need to be allocated for provision of palliative care.

Palliative care model

Institutional framework for provision of palliative care:

- Chosen doctors' offices,
- Visiting nurse units,
- Emergency units,
- Hospitals.

HR capacities for provision of palliative care by levels:

- Primary healthcare: chosen doctor and nurse, visiting nurse nurse, doctors and nurses from emergency unit (palliative teams);

-Secondary healthcare: predominantly nurses, with occasional involvement of doctors of all specialties (palliative wards).

In general, palliative care requires mainly involvement of nurses and technicians. a model needs to be defined to incentivize visiting nurse nurses to meet the needs for palliative care during 24 h, as well as to incentivize chosen doctors to motivate them for home treatment.

Equipment:

- Adequate equipment (e.g. oxygen bottle),
- Supplies (e.g. sterile supplies),
- Medicines (e.g. opiates).

3.2.5 The importance of Health Technology Assessment

Thanks to research and innovation, new technologies with the potential to improve the health of populations through more effective care are continuously being introduced.

Health service delivery is carried out under conditions of growing political and economic complexity – rapid technological change puts pressure on healthcare systems to add new preventive, diagnostic, treatment and rehabilitative interventions to their existing arsenal of technologies. This pressure is ongoing and it is difficult for providers of health services to live up to the expectations of all users. Limited resources require decisions on the introduction of new technologies and the use of those already available

However, not every technological development results in net health gains. The history of medicine and health counts many examples of technologies which did not produce the expected benefits or even proved to be harmful. However, technologies of proven effectiveness – i.e. those associated with relevant health improvements – create a continuous challenge for health systems since their application may require additional (and not only financial) resources or existing (finite) resources to be redistributed within the health system.

The rise of health technology assessment (or HTA) reflects the tension between national health systems built on the use of public funding (in the majority of developed countries) and the rapid global growth of science and innovation in healthcare.

As with evidence-based medicine (EBM) and clinical practice guidelines (CPG), HTA belongs to the group of best practice activities in the healthcare sector. HTA is frequently a highly politicised process, being linked to issues such as the allocation of scarce resources, centralisation of power in health systems, the division of responsibilities between experts and politicians, and more generally questions of equity and legitimacy.

Health technology is defined as the application of scientific knowledge in health care and prevention. It covers a broad range comprising diagnostic and treatment methods, medical and surgical procedures; medical devices, equipment and supplies: cardiac pacemakers, CT scanners, surgical gloves, diagnostic test kits ; pharmaceuticals; rehabilitation and prevention methods; and the organizational and supportive systems within which health care is provided (e.g., electronic patient record systems, telemedicine systems, drug formularies, blood banks, clinical laboratories); Organizational and

managerial systems: e.g., prospective payment using diagnosis-related groups, alternative health care delivery configurations, clinical pathways, total quality management programs

Health technology assessment (HTA) is a multidisciplinary activity that systematically examines the technical performance, safety, clinical efficacy, and effectiveness, cost, cost effectiveness, organizational implications, social consequences, legal, and ethical considerations of the application of a health technology. HTA summarises information about the medical, social, economic and ethical issues related to the use of a health technology in a systematic, transparent, unbiased, robust manner.

Its aim is to inform the formulation of safe, effective, health policies that are patient focused and seek to achieve best value. Despite its policy goals, HTA must always be firmly rooted in research and the scientific method. Health technology assessment (HTA) provides evidence-based input to the policy-making processes concerning the use of technology in health services and thereby seeks to promote evidence informed policy-making. Also, HTA has a general function in democratic processes since it creates transparency and can help to ensure accountability for government decisions and performance. Thus, it is necessary to ensure that health technologies are evaluated properly and applied to health care efficaciously. In order to optimize care using the available resources, the most effective technologies should be promoted while taking consideration of organizational, societal and ethical issues. Most European Member States have established a formal HTA programme or are considering the feasibility of establishing HTA intelligence to inform health policy-making.

Given the significance and implications of the HTA on the health care system, it is necessary to promote the structures and processes suitable to produce technology assessments in Montenegro that will be powerful in guiding policy and clinical practice towards the best possible health and cost outcomes (institutionalization of HTA)

Institutionalized HTA can be used in many ways to advise or inform technology-related policymaking. Among these are to advise or inform:

- Regulatory agencies such as the Drugs agency about whether to permit the commercial use (e.g., marketing) of a drug, device or other technology
- Health care payers, providers, and employers about whether technologies should be included in health benefits plans or disease management programs, addressing coverage (whether or not to pay) and reimbursement (how much to pay)
- Clinicians and patients about the appropriate use of health care interventions for a particular patient's clinical needs and circumstances
- Health professional associations about the role of a technology in clinical protocols or practice guidelines
- Hospitals, health care networks, about decisions regarding technology acquisition and management
- Standards-setting organizations for health technology and health care delivery regarding the manufacture, use, quality of care, and other aspects of health care technologies
- Government health department officials about undertaking public health programs (e.g., vaccination, screening, and environmental protection programs)
- Lawmakers and other political leaders about policies concerning technological innovation, research and development, regulation, payment and delivery of health care
- Health care product companies about product development and marketing decisions
- Investors and companies concerning venture capital funding, acquisitions and divestitures, and other transactions concerning health care product and service companies

In the appraisal of health care technologies cost - effectiveness should be considered, but also other factors should be taken into account.

This would:

- Improve the transparency of the decision-making process and the accountability of to taxpayers
- Improve the consistency of decision-making – for example, by ensuring that these considerations are treated in a similar manner;
- Facilitate greater consistency between the way that HTA decisions on new technologies are made and the way the health care providers decide how to allocate their budgets;
- Provide an opportunity to engage the public in decisions about what criteria to use, and their relative importance
- Sharpen the signals to industry about what aspects of innovation health sector values and where research and development (R&D) efforts should be directed.

Based on the comparative experience, the following principles and criteria are to be used for prioritizing new health technologies:

Principles:

Principles of allocative justice	Criteria
Need	<ul style="list-style-type: none"> • General • Severity of the condition • Availability of alternatives
Appropriateness	<ul style="list-style-type: none"> • Efficacy and safety • Effectiveness
Clinical benefits	<ul style="list-style-type: none"> • General • Effect on mortality (life saving) • Effect on longevity • Effect on health related quality of life
Efficiency	<ul style="list-style-type: none"> • Cost effectiveness/benefit • Budgetary impact • Cost
Equality	<ul style="list-style-type: none"> • General • Accessibility to the service • Affordability to the individual
Solidarity	
Other ethical or social values	<ul style="list-style-type: none"> • Autonomy • Public health value • Impact on future generations
'Other' considerations:	
Other considerations not elsewhere classified	<ul style="list-style-type: none"> • Strategic issues • Consistency with previous decisions and precedents

3.3 FINANCING

3.3.1 Situation analysis

The system of compulsory health insurance is based on the principles of obligatoriness, solidarity, equality and mutuality. The law on health insurance allows the possibility of introducing voluntary insurance to cover the costs of non-standard health care and special services in the provision of health care in the sense of choice of staff, accommodation and time of access to health care, as well as the rights to health care not covered by compulsory health insurance. Exercise of rights stemming from compulsory health insurance and financing of health care services are ensured through the work of the Health Insurance Fund (HIF), while voluntary health insurance may be implemented by the HIF and insurance companies.

Montenegrin health care system is financed from the contributions paid for compulsory health insurance, which represent the predominant form of financing and overall budget revenues. According to the execution in 2010, revenues from health care contributions make up 76% of total revenues for health care financing.

Due to the negative impact of the global financial crisis on health care budget replenishment, the Law on Amendments to the Law on Contributions for Compulsory Health Insurance, which is implemented as of 1 January 2010, increased the rates of health care contributions for the employed from 10.5% to 12.3 %. On the other hand, the rate of contributions for compulsory health insurance of pensioners dropped significantly, from 19% to just 1 %.

To ensure a wider coverage of those obliged to pay taxes and contributions and improve the efficiency of collection of public revenues, the Law on Consolidated Registration and Collection was adopted in 2005. The implementation of this law in the domain of ensuring consolidated collection of taxes and contributions started in January 2011. Tax Administration is tasked with these activities. It is expected that implementation of this law will enable an increase in public revenues and thus also create the conditions for an increase in funds for health care.

Unlike the situation in the past, HIF is integrated into the treasury operation system within the single consolidated state treasury account.

In accordance with the Budget Law, HIF's budget is implemented through 2 programs:

1. HIF Program

2. Health Institutions Program

In accordance with the Budget Law, the funds for financing providers of health care services defined under the “Health Institutions Program” are realized through the following budget lines: salaries, other personal income, transfers to institutions (funds for medicines and medical devices, other supplies: hospital meals, fuel, investment and current maintenance, contracted obligation, dental services, costs of disposal of medical waste, hygiene products etc) and capital expenditures (buildings and equipment).

This financial arrangement does not recognize the HIF as purchaser of health care services, but continues with the practise of payment of capacity. HIF is set as the administrator of financing of health care services, without the opportunity for health care providers from either public or private sector to pay for the service.

According to the data from the National Health Accounts, between 2004 and 2006 the share of private health care expenses made up cca 25% of the overall health care spending. The increase in these expenses was considerably influenced by informal payments, which amounted to 12.5% of average net salary in 2010.

Review of financial reports generated the conclusion that deficits in HIF’s operation represented a chronic and longstanding problem in the Montenegrin health care system. The deficit presented as total arrears of the Fund and health institutions on 31 Dec 2009 amounted to EUR 25 mil. Out of the total sum, the Ministry of Finance took over liabilities in the amount of EUR 14.8 mil in 2010 and paid them from the central budget.

Detailed analysis of financial reports showed that the etiology of the deficit was complex and involved multiple causes:

- insufficient funds for financing of health care, caused, *inter alia*, by the low rate of contributions with low volume due to significant unemployment;
- inefficient collection of contributions and evasion of payment;
- financing of capital investements and equipment from the funds raised by compulsory health insurance;
- gradual introduction of numerous new health technologies without prior analyses of their clinical and financial impacts;

- non-rational policy of prescription and use of medicines;
- non-rational network of health institutions;
- comprehensive benefit package;
- inefficient organization and provision of health care;

Recommendations:

In order to accomplish the main commitments from the Master Plan (2010 -2013) related to:

- limiting the increase in health care costs;
- promoting quality and efficiency of service provision;
- more efficient and rational utilization of resources,

and in order to ensure financial sustainability of health care system, it is necessary to:

1. Define the financial arrangement (introduction of contracting and new DRG-based model of payment).
2. Redefine the roles of key agents of health and financial policies (MoF, MoH, HIF).
3. Identify the main generators of costs in health care and address them with adequate measures.

Efficiency of health care system at the global level is achieved by means of technical efficiency (TE) - organization of service provision, and allocative efficiency (AE) – identification of financial resources. The Ministry of Finance is mainly responsible for the AE (budget share for the provision of health care services), so that it determines the total budget and sets financial priorities in the sense of relative financial weight of social policy in the budget. MoF also monitors and controls public spending by economic categories (including fixed and variable expenses).

Ministry of Health has to manage the health budget, since it is responsible for the TE. In the economic sense, it is necessary to take into account that the MoH is responsible for the best possible allocation of resources between the chief inputs of the function of health production:

$$H = f (K, S, HR) \text{ s.t}$$

Budgetary limitation

where K = capital / investment

S = Supplies

HR: Human Resources

Without the capacity to efficiently allocate resources i.e. the autonomy in financial management, it is impossible to achieve technical efficiency (i.e. optimization of production function).

It is therefore necessary to ensure health sector autonomy (MoH, HIF and health service providers) at macro-, meso- and micro-levels – the principle of subsidiarity^[1] in allocation of resources and payment model definition. Otherwise, efficient functioning of health care system is endangered.

The statement that autonomy in reallocation of funds is a prerequisite for efficient organization of service provision and motivation for rational behaviour i.e. savings of service providers is confirmed by the findings of the analysis of the number and structure of all deliveries in Montenegro at the level of general hospitals in 2010.

The analysis of available data generates the conclusion that the percentage of deliveries in Montenegro that end in a Cesarean considerably exceeds the 10 – 15% recommended by the WHO. A single reform intervention concerning a single type of health care service at the level of general hospitals (CCM excluded) that would aim to ensure autonomy in resource allocation at the micro-level and to motivate the immediate service provider to reduce the share of deliveries that end in a Caesarian to the level recommended by WHO would generate savings in the amount of cca EUR750,000.

Main cost generators in health care

If the MoF controls and determines the scope and price of one of health resources (number of medical and non-medical personnel and salaries), such model is incapable of maximizing/optimizing the function of health production. In other words, if the number and salaries of health care personnel are interpreted

¹ [1] The principle of subsidiarity aims to ensure that decisions are made at the levels that are as close as possible to citizens and that there is constant checking whether an action is justified within the possibilities available at the national, regional or local level.

as the main generator of expenses in health care and if the MoF is focusing solely on control, the system does not realize the potential for savings as a result of better / optimal allocation of resources.

Efficient cost control in health care cannot be achieved only by one-sided consideration of the breakdown of costs i.e. by taking into account the static aspect of costs. International experience indicates the necessity to monitor control of main cost generators i.e. to consider the dynamic aspect of cost generation.

According to the available HIF data, gross salaries and other personal income of health care personnel in 2010 made up 58% of the total planned budget for health institutions. It should not be overlooked that due to the nature of work, continuous health care needs to be provided throughout 24 hours every day of the year (365 days), which results in specific forms of work such as being on call, being on stand-by, working in shifts, working overnight etc.

According to available MONSTAT data for 2010, the share of personnel salaries in other public sectors in Montenegro was up to 95% of their respective budgets.

In the budget structure intended for financing health institutions, the share of costs of medicines and medical devices and equipment was cca 29 %.

The factors that foster the increase in expenditures are numerous and the degrees to which they respectively contribute to the increase vary.

International experience confirms that health technologies are the main cost generator and cause for the increase in cost, not only due to the cost of such technologies but also due to the fact that they are frequently introduced without prior analysis of their clinical and financial efficiency. According to international literature, new technologies and pharmaceuticals are responsible for 30-40% of the increase in costs, assuming that inflation is under control.

Bearing in mind the above, the strategy to control spending in health sector should promote the main principles of technical effectiveness i.e.:

- Health sector autonomy in resource allocation at the macro-, meso- and micro-levels;
- Service-based payment model instead of financing the capacity;

- Introduction of contracting for purchase of services in order to define the requirements for paying the effect and results of health care provision and regulate the relation between the single payer (HIF) and health care service providers;
- Rational approach in health care provision through a policy of incentives for the employees for the quality and efficiency in service provision;
- Consistent application of clinical protocols and guidelines in health care provision, and introduction of new technologies when this is clinically and financially justified;
- fiscal stability of health care sector by means of a long-term fiscal plan for stabilization of health care system, which will include an annual projection of spending and public revenues in the health care sector in the aim of reducing fiscal deficit to zero.

Starting from the role of the MoF in the design and implementation of fiscal policy and in securing and controlling the revenues required to finance the health care system, it is necessary for the MoF to be represented in the management structure of HIF.

Copayments and VIS strategy:

Healthcare copayments are normally used for:

- demand management (rational use of public financed services) and/or
- as a mean to increase revenues for the healthcare system (financial goal).

MNE participation model is basically orientated to be a financial tool because not only the established copayment structure is too low (in terms of financial participation) to be an access barrier, but also the payment system is related to doctor's decisions (referrals, admissions, prescriptions or length of stays) and not directly related to patients' self decisions.

It would be necessary to explicitly define the integrated benefit package covered through compulsory insurance, which would progressively include new health technologies that have been established through the assessment programme as cost effective. Cost-effectiveness principle is recommended in order to make public benefit packages financially sustainable. Once a technology is assessed as not cost-effective, a marginal copayment is introduced through voluntary health insurance system. In order to increase the number of users of voluntary health insurance copayment system, it is necessary to

introduce fiscal incentives (tax reduction related to personal rent). The benefit package offered by compulsory health insurance is not properly defined and the population is relatively small to apply standard for profit risk sharing (avoiding the interest of private companies to participate because it can be considered a dangerous “narrow market”).

Through voluntary health insurance copayment system the price will be socialized and services will become financially more affordable compared to prices of services which are covered by direct out of pocket payments.

Comparative experience shows that this kind of “price socialization” is frequent when talking about healthcare services related to dentistry, ophthalmology or pediatrician areas.

The system of voluntary insurance participation to cover part of costs for the provision of health services has proved to be justified especially when planning the revision of the basic package of services covered by the compulsory insurance in terms of rights, scope of services and ways of covering costs. Also, this system allows additional funds to the healthcare system, it responds to increasing expectations of citizens and it allows the increase of patients’ participation in covering healthcare costs.

Informal payments:

Informal payments are 'giving the individual or institutional service provider goods or cash outside official channels of payment or purchase, which were supposed to be covered by the health system'

Montenegro Health System Integrity Assessment

Results of the recent “Montenegro Health System Integrity Assessment” showed a significant share of informal payments at the secondary and tertiary level, with patients spending on average €60 on informal payments to medical staff. The share of informal payments in the average net salary in 2010 was 12.5%². On the other hand, by paying the mentioned €60 Montenegrin citizens top up the average monthly income of doctors at the secondary and tertiary level by 5-6% per payment, and that of nurses by 14-15%. This data also indicates citizens’ payment capacity and readiness to pay for healthcare services.

Since informal payments take place at the time and point of service provision, they have direct impact on healthcare accesability as one of the main principles of healthcare organization and functioning. Because of the sensitive nature of the situation and vulnerability of those who pay, this type of payment is considered blackmail and extortion. Each individual is exposed and affected by this form of

² Average salary in 2010 was €479 after tax, MONSTAT.

corruption. Informal payments particularly affect vulnerable categories (poorer segments of the population). Informal payments weaken national healthcare authorities' reform efforts geared towards more accountability and contribute to endemic corruption, at the same time undermining the trust in the structures of the healthcare system.

Informal payments represent a systemic problem whose solving implies strengthening of the links between anti-corruption initiatives and good governance activities.

It is also necessary to undertake the measures integrated in the Strategy of Hospital Sector Reform and concerning:

- a) payment system reform,
- b) strengthening the capacities of the system to implement control of the quality of services provided and monitor the work and performance of service providers;
- c) further strengthening of integrated healthcare IT system as a key tool of good governance;
- d) private sector development – in the domains of service provision and insurance;
- e) intensified involvement of citizens in the decision-making process in public health.
- f) raising public awareness with the aim to change the culture, ideas and habits of cherishing the myth of paying out of gratitude,

in a synchronized and coordinated manner so as to eliminate the practice of informal payments which undermines healthcare policy priorities and puts an additional burden on the citizens.

Introduction of case-based payment system (DRG model)

Service provider payment system is an important tool in promoting development of healthcare system and achieving health policy objectives. Method of payment to service providers is the mechanism to transfer funds from service purchaser to the provider, while the payment system is the method of payment combined with all support systems (information management system, accountability mechanisms accompanying the payment method). In the context of health system, the payment system serves to accomplish much more than mere transfer of funds to cover the costs. The incentives generated by the payment methods and the provider's response to such incentives have considerable impact on the method of resource allocation and service provision in healthcare.

The payment system contributes to the achievement of health policy objectives by enhancing access to needed health services, better quality of healthcare, equity in enjoyment of healthcare, at the same time promoting effective and efficient use of resources and, if required, cost control.

Bearing in mind the share of hospital expenditures in the overall health budget, the method of payment to hospitals has a strong effect on the performance of the overall healthcare system.

Comparative experience shows that a case-based payment system is a valuable tool in shifting from an input-based payment system and maintenance of hospital infrastructure towards a payment system that promotes results. This is a way to introduce incentives for improved efficiency and competitiveness in the hospital sector.

Introduction of case-based payment system using DRG model in Montenegro will aim to promote control over spending in the hospital sector. In addition, introduction of this payment system seeks to improve resource management and use, ensure that costs are reallocated to cost-effective services and improve equity in financing.

Implementation of DRG model in Montenegro will contribute to the following:

- change in attitude among policy makers and service providers in the sense of delivering services to citizens rather than developing and maintaining infrastructure;
- motivating hospitals to improve the quality of services using less input;
- introducing competitiveness among service providers and the patient's right to choose, resulting in increased capacity of the system to respond to and meet the population's health needs;
- opening room for private service providers to be paid from the public health fund;
- restructuring of healthcare service provision system;
- closing down inefficient hospitals or wards;
- improved efficiency in resource allocation among hospitals and between hospitals and other levels of health care;
- improved equity in financing between hospitals, catchment areas or population groups;
- generation of information needed for better management of the healthcare system;
- more management autonomy for service providers.

Introduction of DRG model implies the following prerequisites:

- developing the capacity of the service purchaser to manage the new payment system, including the capacity to develop and implement contracts with providers, manage IT system and the system of quality control and assurance, and conduct monitoring and evaluation of contract execution;
- clearly defined relationship between service payer and provider, especially with private providers; this includes contracts or other mechanisms specifying the services to be provided and the prices to be charged, the mechanisms available to parties in case of breach of contract terms;
- establishment / definition of a certain degree of competitiveness and financial risk that hospitals will be exposed to within the new payment system. So that, for instance, if the new system aims to restructure the service provision model, it is possible to decide that hospitals should be exposed to greater competition and greater financial risk, with the new payment system resulting in fewer hospitals and some of them closing down;
- service providers must be informed about the incentives generated by the new payment system; considerable efforts need to be invested in educating service providers on the new payment system to make them realize the changes that are possible and required for their successful operation in the new system;
- service providers need to be provided certain autonomy in reorganizing the service provision model and input management in order to respond to new incentives stemming from the payment system. Service providers need to enjoy autonomy with regard to the following:
 - a) staff: hiring and firing decisions, wages, benefits;
 - b) other inputs: decisions on the quantity and type of medicines, supplies and other inputs in healthcare delivery;
 - c) physical infrastructure: management decisions;
 - d) organizational structure: decisions on management structure, departments, ancillary services, technical service agreements....
 - e) use of profit: decision on what to do with the profit generated by efficiency measures.

- Service providers need to have the capacity to manage internal resources within the new payment model including accounting and IT systems.

Establishment of the prerequisites relevant for introduction of DRG model requires changes in the regulatory framework (labour law and public finance regulations).

3.4 MANAGEMENT FUNCTION

- **More autonomy for healthcare policy makers and service providers**

The Ministry of Health (MoH), being the policy maker, performs the function of managing the hospital sector by defining minimum HR, technical norms and norms concerning premises, approving internal acts (statute and rulebook on internal organization and job systematization), determining maximum operation and financial framework for operation.

Since January 2011, in accordance with the Law on Healthcare, the Ministry of Finance has exercised autonomy in managing human resources in healthcare.

Hospital managers do not have autonomy in managing human resources or finance, which stifles innovation and motivation of hospital management for achieving the most rational utilization of resources within the set budget.

Therefore, the following is necessary:

- a) To prescribe that exclusive autonomy in HR management belongs to the micro-level i.e. service provider. The Law on Healthcare needs to be amended to this effect. The specific nature and duties within health sector (service generation) identify micro-level HR management as the only efficient and rational form. Employees' performance can be successfully monitored only at the micro-level i.e. service provider level. Results of performance evaluation provide updated input for determining the scale of actual HR needs. Rigid recruitment policy in healthcare which is centralized, defined and implemented/ controlled from the national level results in a countereffect, in the sense of increased costs when a specific employee becomes a cost-generating factor. This arrangement is in line with the main idea of hospital sector reform of paying for results i.e. services rather than capacities. It is also in line with the Law on Healthcare, which stipulates equality between public and private health institutions.
- b) To prescribe shared autonomy of MoH and service providers concerning organization and provision of specialization and continuous training.
- c) To prescribe shared autonomy in financial management, in the sense that Ministry of Finance should perform the function of generating and collecting funds for healthcare, while healthcare sector, through relevant institutions (MoH and Health Insurance Fund) should autonomously plan funds and decide on reallocation of resources. It should be provided that unified procurement activities are conducted by the Health Insurance Fund, which would based on the balance statement of providers prepare technical specifications and conduct the process of evaluation and selection of the best bidder, while the service providers would be signing contracts. This arrangement would contribute to creating conditions for ensuring a better purchase price, given the small size of individual procurement plans of service providers. It would be necessary for the cash flow to follow the flow of goods.

- d) To prescribe that consolidated procurement should be implemented by the Health Insurance Fund; based on the service provider's balance sheet, the Fund would prepare technical specifications and carry out the procedure of evaluation and selection of the best bid; service providers would sign contracts. Such an arrangement would contribute to better purchase price, having in mind the small scale of procurement plans of individual service providers. Cash flows would need to follow goods flows. Consolidation of procurement would result in improved competitiveness and efficiency in the operation of public health institutions.
- e) Service providers need to be recognized as autonomous entities rather than budget spending units, in order to move away from the earlier practise of paying for capacities and strengthen the concept of payer and provider agreeing on a contract for services. Service providers are obliged to report to the Health Insurance Fund according to the categories of costs as set by the Ministry of Finance.
- f) Prescribe larger autonomy of hospitals accompanied by defining and implementing accountability of the management.

These interventions are prerequisites for provision of more efficient and rational healthcare and a curb on the increase of cost, given the option of incentives.

4. IMPLEMENTATION ACTION PLAN

ACTION PLAN

for implementation of the STRATEGY FOR OPTIMIZATION OF SECONDARY AND TERTIARY HEALTH CARE LEVELS

I Area of intervention: SERVICE PROVISION

Health services Network	Responsible party	Time frame	Estimated amount (€)	Source of funding
1. Creating a network of health care institutions, with a model of integration of public and private health sectors	Ministarstvo zdravlja, Institute of Public Health	2011-2012	225.301,20	World Bank / project
2. Making the act on systematisation with job descriptions in the hospital sector	Service providers	2011-2012	0	Budget of service provider / Regular activity
3. Amendments to the Law on Health Protection in the part related to the types of health institutions	Ministry of Health	2012	0	Regular activity
Beneficiary Package				
4. Development of an integrated package of services	Ministry of Health, IPH, Health Insurance Fund	2011-2012	234.939,76	World Bank / project
5. By-law with a description of the service content	Ministry of Health	2012	0	Budget - Regular activity
6. By-law on the scope of services	Health Insurance Fund	2012	0	Budget - Regular activity
7 Amendments to the Law on Health insurance	Ministry of Health	2011	0	Budget - Regular activity
8. Development of the programme for health technology assessment	Ministry of Health	2013	2.000,00	Budget
Quality				
9. Development of a model for quality assurance and improvement	Ministry of Health, IPH	2011-2012	150.096,02	World Bank / project
10. Development of an integrated model of palliative care	Ministry of Health	2012- 2013		Budget - Regular activity

II Area of intervention: RESOURCE GENERATING

Personnel				
Activity	Responsible party	Time frame	Estimated amount (€)	Source of funding
11. Development of the Master Plan for human resources in healthcare, including specialization plan	Ministry of Health, IPH, HIF in cooperation with the Ministry of Finance	2012	120.481,91	World Bank / project
Medicines and medical supplies				
12. Preparation of document on the National drugs policy		2011-2012	48.192,77	WHO, World Bank / project
Information technologies				
13. The introduction of integrated hospital information system a) development and installation of SW for special hospitals and Clinical Center b) development and installation of SW for IPH c) development and installation of SW for the Agency for Medicines d) development and installation of SW for the Ministry of Health e) procurement and installation of hardware for the hospital sector	Ministry of Health, HIF	2011-2012	2.560.000,00 256.307,22 256.307,22 256.307,22 490.000,00	World Bank / project, HIF budget
III Area of intervention: FINANCE				
Activity	Responsible party	Time frame	Estimated amount (€)	Source of funding
14. Introduction of DRG model	Ministry of Health and HIF	2011-2012	372.263,77	World Bank / project
15. Introduction of contracting with hospitals	Ministry of Health and HIF	2011-2012	100.481,92	World Bank / project
16. Amendments to the Law on Health Insurance / introduction of insurance co-participation	Ministry of Health and HIF	2013	0	Budget - Regular activity
IV Area of intervention: GOVERNANCE				

Activity	Responsible party	Time frame	Estimated amount (€)	Source of funding
17. Amendments to the Law on Health Protection in the part related to the bodies of health care institutions and their internal organization	Ministry of Health	2013	0	Budget - Regular activity
18. Amendment to collective agreement in the part of base salary (which is included in the structure of the minimum wage)	Ministry of Health, Ministry of Labor and Social Welfare and Union	2013	0	
19. Amendment of regulations on the implementation of procurement activities / centralization of procurement activities within the Fund	Ministry of Health, Health Insurance Fund, Ministry of Finance	2011	0	
20. Revision of regulations related to determination of responsibility of the management of service providers	Ministry of Health	2013	0	
GRAND TOTAL			5.070.679,01	