Baština Akademije nauka i umjetnosti Bosne i Hercegovine

Symposium HEALTH MANAGEMENT WITH SPECIAL ATTENTION TO CARDIOVASCULAR DISEASES

Mesihović Dinarević, Senka

2018

Akademija nauka i umjetnosti Bosne i Hercegovine

https://bastina.anubih.ba/items/3b33fc42-146d-4c18-a8fd-e2774e12484a

Preuzeto s Baštine Akademije nauka i umjetnosti Bosne i Hercegovine

https://bastina.anubih.ba/

DOI: 10.5644/PI2018.177.01

Professional article

HEALTH MANAGEMENT WITH A SPECIAL FOCUS ON CARDIOVASCULAR DISEASE – STUDY OF INSTITUTION AT THE TERTIARY LEVEL

Senka Mesihović-Dinarević

Department of Medical Sciences
Academy of Sciences and Arts of Bosnia and Herzegovina
Bistrik 7, 71000 Sarajevo
Bosnia and Herzegovina
e-mail: *dsenka@bih.net.ba*

Submitted: 2018, accepted: 2018, published: 2018

Abstract

The aim of this study was to evaluate the health system in Europe, including a vision of health care in the 21st century, human resource management in health care, doctrinal approaches, the basic tasks of public health, and the main health problems in Europe. The review of the state of health care in our country has been provided. The special emphasis was on the issue of human resource management ie. principles, techniques and problems of management of human resources in health. The activities and processes of importance to business management in the health sector were emphasized as well. The paper points to the openness towards European integration in the areas of health and education, the need for financial, organizational and strategic reconstruction of the health system and education, a stronger connection between educational sector and the health sector and the labor market, with the condition that patient is always in the focus of the health care policy. The second part presents a model for the organization and management of the health system of most vulnerable population: paediatric, age from birth to 18 years, in Bosnia and Herzegovina, during period from 2003 to 2016, which has resulted in health brand, competitive in the Balkan countries as well as on the European market labor, a brand that respects the principles of good medical practice and evidence-based medicine. When institutions invest wisely in human resources: eduction, training its staff, the result is a satisfied and motivated staff, which provides high-quality health services in the country and the region. This institution fully fulfills its mission, contribute to society, providing an excellent healthcare services to population, institution which is recognized and acknowledged in this region by the medical experts.

Keywords: management**,** health

One of the **ten** global goals of the policy of WHO "Health for 21st century" is "Improvement of comprehensive, high quality health care".

What is quality in general and what is quality in health care, how to quantify it?

Quality of health care can be defined as "the level of excellence achieved and documented in the process of diagnostics and therapy based on the best knowledge whilst achieving result with the least possible mortality and morbidity values" or "the level at which the health system increases the possibility of desired effects". (1)

According to ISO (International Organization for Quality) (3) the quality of health care is defined as:

- "the level where a group of more characteristic products or services satisfy specific or expected requirements", while some define quality as
- "That systematic, critical analysis of health care quality also includes procedures used in diagnostics and therapy, then resources and results of effects, patient's quality of life (2)".

On the other hand, standards of health care quality should be at a level where health care is available, suitable, continual and documented as well as a level where adequate therapy is based on precise diagnosis, not on symptomatology.

There are other numerous definitions of quality and therefore one American physician said that "quality is difficult to define, impossible to measure but easy to recognize" (5). In general, those without enough experience in the clinical field require easy, precise and complete directives. The truth is that some elements of quality are easy to define and measure while others require more complex procedures. Quality represents a level of excellence, it is recommended that quality development shouldn't represent administrative control of previously defined quality levels but rather a dynamic process.

Health services should be organized in a way so that medical results are main in:

- input identification,
- process definition and
- evaluation of results (output).

Dimensions, characteristics and quality elements

Maxwell defines six basic dimensions of quality in health care (6):

1. Equality - offering the same level of health care to people with the same needs, regardless of their participation in certain social or other groups;
2. Relevance - represents the requirements of a community for health care, i.e. solving priority health problems;
3. Accessibility - health care should be available in the geographical, temporal and functional sense;

4. Acceptability - health care should be suitable for population;
5. Effectiveness - to do correct things in acorrect fashion that yields results, and
6. Efficiency - to undertake endeavours in health care correctly, i.e. to use available resources rationally.

The main characteristics of a modern system of quality in health care are: that it is focused on the user; that the process of quality improvement is managed by the highest instances of management; that each employee of a health care institution has certain responsibility for quality; that it is directed to prevent errors, not to detect them; and lastly, that Quality has to be accepted as the given lifestyle in a health care institution.

The key elements of health care quality are:

- Customer
- Commitment
- Expectations and
- Continuity

These elements together represent *the quality diamond* (2). The customer is in the centre of the health care system. Each patient has to be examined individually, not as an anonymous person classified in a certain group (diseased etc.). One must keep in mind that no two patients are the same, each of them has their own specific problems, needs and expectations. Commitment starts from the physician, towards both the patient and quality because without commitment the full meaning of quality is not going to be achieved. Patients' expectations have to be recognized as well, they have to be met and if it is possible surmounted, and namely health care requires continuity. Continuity enables permanent, consistent concentration towards quality, to be permanently improved and never to be finished. Quality has to be incorporated into all activities, so that gradually it becomes a habit.

The most precious parts in the quality diamond are:

- Patients' satisfaction
- Motivation of the staff
- Professional work, and
- Successful practice.

Reasons for establishing a system of quality?

The answer to the question why to establish a system of quality in health care is of high significance, aiming also to find justification and purpose for these activities. **Professional motivation** is of vital importance in order to

motivate medical staff to be more active in enabling and improving the quality of health care. **The participation and engagement** of medical professionals in establishing and using the system of quality is also a professional challenge for all employees and their additional motivation for work, it is an important mechanism for the identification and analyses of differences in results in health care that is the basis for further activities in the improvement of quality. **Socio-economic motivation** is also important for activities in the field of quality improvement. Quality in health care is the measure for efficiency that indicates not only the importance of achieving particular results but also the efficient and rational allocation of available resources. In order to obtain desired results, finances spent on health care have to be justified. **Patients' satisfaction** is an important parameter of health care quality that also includes their expectations and their assumptions of health care services and also represents the result of provided care and treatment. Finally, it represents an essential contribution in further treatment since it inspires patients to continue cooperation with physicians in order to solve their own health problems.

Together with other relevant motives, it should lead to the **Improvement of population health** as the general and main goal of all activities in health care (7, 8).

After II World War, two new concepts of quality were developed:

- TQM (Total Quality Management) and
- CQI (Continuous Quality Improvement).

Both concepts are managing strategies described as "permanent efforts of all members in a particular organization focused on the needs and expectations of customers". They represent managing strategies main steps of which are managing consciousness, strategic planning, management implementation and training of employees. The main principles are:

- that the patients' needs, opinions and experience represent important information forthe permanent improvement of quality,
- that it has to be an integrated part of everyday work,
- that all employees in the system of health care have professional responsibility towards permanent improvement of quality and particularly managers have a responsibility for quality at all levels in a health care institution,
- that a permanent improvement of quality means a positive approach to work and that all activities should be based on data and information not on assumptions.

A significant parameter of quality is also a patients' satisfaction, which is defined by WHO as "the level when the health care system has met the patients' expectations". One of the approaches in management and the explicit measuring of quality is **accreditation** and its purpose is the improvement of quality, gaining of information and responsibility. For example, a hospital (or some other health institution) wishing to provide medical services of a high quality, according to patients' requirements, should have the following elements:

1. Delivered services have to be:
   - Acceptable;
   - Effective;
   - Available, and
   - Appropriate,

concerning the patient and other interested subjects.

2. Health care services have to be organized in the sense of:
   - Clear managerial devotion, leadership and capability;
   - Optimal teamwork and the recognition of value among employees;
   - Implementation of quality techniques (existing standards, clinical control, communication with patients etc.);
   - Monitoring and identification of performance.

3. The Quality of health care services have to be analysed at the following levels:
   - Hospital level (level of the health institution);
   - Managerial level;
   - Specialist level;
   - The level of individual members of staff.

An important part in the process of quality management is the enablement of all processes to be controlled, confirmation that they are complete, documented and also the enablement of corresponding persons to be included (12-15).

EFFECTIVENESS, EFFICIENCY AND EQUITY

Health is perceived as our most precious gift and people feel its vulnerability. Societies have been trying to absorb, ameliorate or compensate consequences and health risks with varying emphasis and varying success. Due to the uniqueness of good health to a persons' ability to live the life he or she wants, health care and the performance of health care systems are under

critical observation. Sometimes they are used as arguments to challenge economic considerations by proclaiming "the freedom of therapeutic choices", and pointing out the humanitarian aspect of an individual's health and the danger of withholding intervention options or rationing. It is not surprising to see that many health care professionals and patients see a certain incompatibility between financing, operational aspects of health care such as allocation of resources, and ethical expectations. WHO policy "Health for all" defines ten global goals and one of them is related to health care quality: "Improvement of comprehensive high quality health care". There are numerous definitions of health care and WHO defines it as "the level where delivered health care achieves the best results establishing the balance between the risk and benefit within specified economic conditions". The basic dimensions of quality are: equality, relevance, accessibility, acceptability, effectiveness and efficiency. The motives for establishing a system of quality in health care are: professional, socio-economic, patients' satisfaction, and the final, and at the same time the most important motive, the improvement of the health of the population.

Patients' satisfaction

A significant element in health care quality is patients' satisfaction concerning provided health care because users of the health care system provide a great contribution in identification of quality and standards used in measuring these aspects. Their opinion and estimation, i.e. their satisfaction, is a very important indicator of health care quality. The easiest way to define it is satisfying their expectations, desires and needs. WHO defines patients' satisfaction as the result of estimation of an individual, in regard to the expected and received health care or simply "the level of patients' expectations that are satisfied by a health care system". Certainly, a patient will be more satisfied if he/she is not made to wait too long for health care to be provided to him/her, when there is an existing continuity of health care, when a patient can rely on the same physician every moment, and when he/she is in the situation to present his/her problems without rush and get clear explanations for the recommended treatment, including the risks of various procedures (15, 16).

Accreditation in a health care system

By establishing a system of quality in health care, the question of accreditation of health care institutions arises. Accreditation is defined as "a system of

external estimation of coherence with a certain set of standards". The term accreditation is used for a wide range of measures or inspections in health care, including certification, license acquirement etc. All the procedures entailed in the process of accreditation have to be documented.

This documentation should include:

- The field of activity: **what** has been done;
- Applied procedures: **how** it has been done;
- Quality standards: **how well** it has been done;
- Procedure verification: **how much we know how good** it has been done.

The **accreditation system** is best recognized through the following five characteristics:

- The estimation of performance of a health care institution;
- The external involvement in estimation that is usually coordinated or managed by a professional agency;
- Standards which define performance attributes that are to be estimated;
- The measuring of performance regarding standards and identification of parts with identified deviations where changes are necessary, and
- The report on results of the process of inspection which can include one explicit judgment on the level of performances and whether an acceptable level was achieved, while the conclusion can also include certain recommendations (18).

The basic objectives, i.e. purposes of accreditation are:

- **Quality improvement** – using the accreditation process in order to achieve changes in practice that are going to improve health care quality;
- **Gaining information** in order to make decisions – presenting data on health care quality, health care insurance fund, politicians, managers, medical professionals, the public and others who can use this data as a basis for various decision makings, and
- **Responsibility** because in this way, a health institution, that is usually responsible in regard to various subjects, the government, the health care insurance fund etc., is able to regulate and coordinate its behaviour in order to protect the interests of patients and other users.

Accreditation has a long history in the so called public services, particularly in health care. The first real accreditation system was developed in the USA and established by the American Surgeons Association just after World War II. Nowadays, accreditation is very widely applied as an approach in managing

and improving health care quality. In many countries various accreditation programs are established with high degrees of variation, regarding the way of implementation, the person who is going to manage the program, the standards which should be used etc., that have many advantages because they offer the possibility to obtain new knowledge from different experiences and approaches that go towards the improvement of health care quality and also the improvement of life quality of the population.

HEALTH SYSTEM

Over the past decade, the imperative of building strong national health care systems has gained greater global attention. The unprecedented resources made available for global health, particularly for combating major pandemics, have enabled countries to significantly expand the reach of life-saving health care interventions. Yet, in many countries, efforts to scale up these programs have been impeded by weak health care systems.

The six building blocks of a health care system as defined by the World Health Organization in *Everybody's Business* offer countries a broad perspective on health care system components. Six building blocks constitute the overarching WHO health care systems framework. They are:

1. service delivery
2. health workforce
3. information
4. medical products, vaccines, and technologies
5. financing
6. leadership and governance (stewardship)

If all the six components function effectively and deliver their intended results, the assumption is that the entire health care system, which includes health care organizations or programs, is strong. Together, these building blocks are the foundation for health care systems that support access to high-quality health care services, leading to positive health care outcomes for clients and communities - especially those who are most vulnerable and underserved.

One of the biggest challenges facing health care managers and health care service providers is how to turn a demoralized or overworked and stressed staff into a proactive, motivated team that delivers high-quality health services every day.

Weakly managed systems are major contributors to frustration and the sense of futility that countless professionals feel when they are not able to

make sustainable contributions to improved health care outcomes. But any attempt to improve management systems without addressing the needs of the people who do the actual work is bound to end in disappointment, more stress, and even lower morale, reinforcing a vicious circle of ineffectiveness and inefficiency. Addressing this challenge requires attention at every level for both systems and people. Medical knowledge exists to reduce illness and death caused by preventable diseases. Applying knowledge and scaling up evidence-based practices requires strong health care systems with skilled and motivated leaders/managers who can manage, support and motivate the health care workforce.

The People at the Centre of Health care Systems

Health care managers and administrators who have the knowledge, skills, responsibility, and authority to build and maintain management systems needed to deliver health services; Personnel at all levels, including health care providers and administrators, who use management systems to address challenges and achieve results; Communities and families that are educated and empowered to promote their own health and demand quality of service; Clients who have adequate information on how to use health care services appropriately and are not impeded by poor quality, high fees, gender disparity or other forms of discrimination.

Health care managers and providers in facilities, ministries, and nongovernmental and civil society organizations have to operate and sustain management systems and provide health care services after the technical experts leave. Cultural or organizational factors, if not addressed, can jeopardize the ability for people to fully use a health care system successfully. For example, the design of a nationwide training curriculum for community health care workers might require a literacy level that is higher than the one existing in many rural areas. If the curriculum developers fail to "scan" the environment and gather information on potential trainees, a much-needed human resource improvement could fail. With better information, the developers would create a parallel curriculum for workers with limited abilities to read and write.

Proven practices

People should always be put first when designing, modifying, or improving a health care management system whilst recognizing that no system can operate without skilled and motivated staff. The recognition, support, and reward

of staff members who take on managerial and leadership roles that make a health care system work every day and at every level is a proven positive practice. Rather than depending on outside experts to "fix" things, it should be arranged that managers and health care providers work side-by-side as partners with technical experts. This would give the ability and confidence to the people who will operate and sustain management systems and provide health care services when the experts are gone. Keep management systems as practical as possible: overly complicated management systems usually cannot be sustained when external support is withdrawn. The use of Frameworks for People-Centred Health care Systems strengthen and help the staff to understand how each management system strengthens and supports others and how all the systems work together to allow an organization to fulfil its mission. Leadership and management skills are needed at all levels of a health care system.

Health care system

A health care system is an entirety of political, economic and cultural, technical and organizational factors, relations, processes and elements, in which individuals, groups and communities interrelate, with the goal of satisfying their needs in regard to health. Health and health care can be adequately understood only in the broadest context of human life that includes social, economic and political issues besides the understanding of biological facts. It also requires the understanding of environmental, historical and cultural circumstances. These various aspects can be observed differently according to given situations and purposes of study. The depth of understanding will be influenced by our own experience, knowledge and ideology. Because of that, an active effort will be needed to observe, listen and compare, sometimes with patience and prudent tolerance. Without active involvement, honesty and openness, the reward will be minor, or meaningless.

Levels of a health care system

All models of health care systems are imperfect and there is no a model which is the best and broadly accepted and recommended. There are big differences among countries influenced by history, tradition, socio-cultural, economic, political and other factors. However, regardless of all present differences, there are some common characteristics typical for the organized health care system. One of the common characteristics of a health care organization is

the level of organization. Health care systems are usually organized on three levels: primary, secondary and tertiary.

Primary community (home) level with 2-100 or more members. The examples of this type of community are families, some neighbourhoods, small villages, workers in smaller workers' units, members of some societies, etc. **Local community level** (2000-3000+ members). Local communities are groups usually living in the same setting or otherwise sharing facilities or other resources or interests. A midwife, nurse, health technician or a general practitioner can be a typical health care worker. **Intermediate (municipal) level** (population of 10.000-50.000+people). A municipality (commune) or other similar social structure usually needs to function also as a basic administrative unit. On the **secondary level**, the district (or region in some countries) with a population of about 50.000-150.000 or more people is a larger administrative centre, also often being a centre of trades, manufacture and more developed cultural and social institutions. The **tertiary level** is a regional or a national level (a population of more than half a million). It is usually a regional or national administrative centre with regional or national authorities and legislation.

Clinical hospitals or clinical centres on this level have a referral function for health care services of lower levels, educational and research functions. These health care institutions are usually responsible for the development of national guidelines and standards. National institutes of public health are responsible for monitoring of national health, international communications and highly specialized public health care services (laboratories, blood supply, etc.).

Public health services - present organisation and the challenges of tomorrow

Public health: the main focus is health and disease prevention

This is reached through the following activities: it prevents epidemics and the spreading of disease, protects against environmental hazards, prevents injuries, promotes and encourages healthy behaviours, responds to natural and societal disasters and assists communities in recovery, and assures the quality and accessibility of health care services. The role of public health is of major importance for the health of the population, since many diseases are preventable through simple, non-medical methods. Public health plays its role in prevention efforts through local health systems or through international non-governmental organizations. There are several definitions of “public

health care services", one of them also being the definition of Organisation for Economic Co-operation and Development (OECD).

According to OECD, prevention and public health care services comprise services designed to enhance the health status of the population which should be distinct from curative services which repair health dysfunction. Typical prevention and health care services are: vaccination campaigns and programmes.

Essential tasks of public health care services are: to monitor health status in order to identify community health problems; to diagnose and investigate health problems and health hazards in the community; to inform, educate, and empower people about health issues; to mobilize community partnerships to identify and solve health problems; to develop policies and plans that support individual and community health efforts; to enforce laws and regulations that protect health and ensure safety; to connect people that need personal health care services and assure the provision of health care when otherwise unavailable; to assure a competent public health care and personal health care workforce; to evaluate effectiveness, accessibility, and quality of personal and population based health services; and to research for new insights and innovative solutions to health problems.

ANU BiH АНУ БиХ

Level of functioning of public health services

The population, covered by a single public health care service, can be as small as a group of people (a family or local community for instance) or as large as all the inhabitants of several continents (for instance, in the case of a pandemic).

Thus the level of functioning of a public health care service can be: local, regional, national, international, or global.

Major Public Health care Problems in Europe

The main causes of death in the region in most age groups are diseases of the cardiovascular system, cancers, and accidents. Suicides are also important and so is mortality from traffic accidents. The main causes of chronic disability are accidents, strokes and other vascular diseases, chronic lung disease, mental disease and disorders, senile dementia, arthritis, and physical disabilities of extreme old age. The main determinants of health lie outside the traditional health sector. Health policy cannot remain a matter for health centres, hospitals, or other health-care services alone. Yet there are still

serious problems in mobilizing the expertise of health care professionals and applying their findings and recommendations through health care policy areas outside their traditional framework of employment. Meanwhile, the roles of national governments are chiefly restricted to controlling costs, guaranteeing equity in the distribution of resources and developing local services. There is little evidence of engagement with true health care objectives.

MANAGING HUMAN RESOURCES

Contemporary public health issues in Europe that challenge public health care services

Very important changes in society have occurred in Europe in recent decades. A falling birth-rate has resulted in small families where both parents work, and many children are cared for outside their home for most of the day. The divorce-rate is higher, urbanization is increasing, and more and more people live in satellite towns with long travel times to and from work. Further problems stem from an increasing proportion of older people in the population. The changing diseases and health care demand patterns, with increasing emphasis on the care of chronic disease, that are reflected both in morbidity and mortality statistics. The balance between primary health care and hospital care is under review everywhere, with increasing stress on the importance of long term care and a well-developed primary health care system. Reliable research and statistical information is important for monitoring these changes as the need for planning and priority-making in public health. The financial implications of the operations of health organizations are enormous: painstaking planning, prior evaluation, and detailed subsequent research are increasingly necessary. All recent experiences show how difficult it is to achieve a satisfactory balance between completing priorities in health care, between the demands of effectiveness and equity, and between attitudes of different health care professions.

Effective human resource management (HRM) is important in any public - or private - sector organization and essential when public health crises collide with workforce shortages. The three pillars that together form the HRM capacity of an organization are: policies, systems, management and leadership practices. Human resource management is a critical management area that is responsible for any organization's most important asset: its people. HRM typically accounts for 70 to 80 percent of an organization's budget.

THE HEALTH CARE SYSTEM IN BOSNIA AND HERZEGOVINA - today

Legalisation in health care in B&H: Health care and education area

In accordance with the Constitution of the Federation of Bosnia and Herzegovina

Responsibilities in the field of health care are divided between the Federation and Cantons; the field of education is in the competence of Cantons.

The fragmentation of the education system and the health care system, the division between the state entities and in the Federation of Bosnia and Herzegovina itself between the Federation and the Cantons, the World Bank assesses Bosnia and Herzegovina as a country with premature decentralization in which the administrative capacity of lower levels of government have not yet qualified for their assigned functions.

The BH legal system in the field of Health care

- Law on Health Care
- Law on Health Insurance
- Laws on professional self-regulation (law on medical activities, the Law on Dentistry, Law on pharmaceutical activities, the Law on nursing and midwifery)

The basis for the adherence of regulations

- legal acquisition of European Union;
- the Stabilization and Association Agreement EU (mandatory harmonization of Bosnia and Herzegovina legislation with the EU acquisition);
- Strategy for the Development of Health FB&H for mid-term period 2008th-2018th year-on of health regulations

The Education sector vs. Department of Health

Curriculum in undergraduate and postgraduate education are subject to the approval of the Federal Ministry of Health, a legal obligation which is not respected in practice; as well as revised programs of specialization and sub-specialization of health care workers, with the support and help of professionals.

The involvement of medical colleges of a health care orientation and other health care institutions in the creation of specialized programs are in: implementation of specialized programs; the nomination of candidates for the heads of specialist programs, the main mentors and mentor, as well as a list of examiners for specialist examinations; the nomination of candidates for commissions for professional examinations of health care workers of different profiles.

Health management system has been established, with the involvement of medical institutions and faculties of health, economic and other directions. The objectives of Centre for Health Management are: improving management skills of health workers in the health sector (strategic management, financial planning, etc.; continuation of family medicine education, transfusion medicine, early growth and development, with a focus on early detection and intervention and inclusive education, education for nurses in the field of patronage; involvement in projects that are supported by the World Bank, UNICEF, EU and other international organizations; University Hospital - teaching college of medicine.

Rules on the conditions to be met by hospitals for Assigned Names University Hospitals requirements: excellent professional work in the tertiary health care; conduction of scientific research; highly professional staff in the scientific and educational titles and others.

АНУ БиН АНУ БиХ

Clinical guidelines and clinical pathways

It is necessary to draw attention of the legal community on the growing importance of evidence-based medicine (EBM), clinical guidelines (CG) and clinical pathways (CP) in determining the appropriate standard of care; initiate codification of medical law in the field of EBM, CG and CP in our circumstances and determine their medico-legal status in litigations.

Agency for Accreditation and Quality in Health Federation of Bosnia and Herzegovina

Involvement of profession in: creating safety standards in the field of health care and optimal accreditation Standards; evaluating the quality and safety of health care services; raising the internal quality system in health care institutions: clinical audit, quality indicators, clinical guidelines, systems appeal, reporting incidents, questionnaires about the experience and patient

satisfaction, written strategies, policies and procedures, risk management in Health institutions.

Doctrinal approaches

The involvement of the medical profession is necessary in creating doctrinal approaches to disease treatment and therapeutic guides. There is a significance of the introduction of new medical technology to the health care system. Certification of health care professionals for the management of new health care technologies is obligatory, as well as creating a list of medicines according to new doctrinal approaches. Clinical trials of drugs and medical devices should be conducted with the involvement of highly qualified staff.

Chamber of the field of health care: professional associations of health care professionals at the level of Cantons and Federation of Bosnia and Herzegovina; public authorities granting chambers: work licenses, official opinions of Health care institutions or private health care practices, involvement in drafting regulations, certification of the Association members for management of new health care technologies; monitoring of the work of the chamber by the Federal Ministry of Health and Cantonal Ministry of Health.

Conclusion: openness to European integration in the areas of health and education; political consensus for the centralization of functions in the field of health and education; regulations harmonized with EU acquisition; financial, organizational and strategic restructuring of health care and education; stronger binding of the education sector and the health care sector and the labour market; strengthening LLL; the patient should be the focus of the health care system. Investment in health and education should not be seen as a cost but as a benefit to future generations which will contribute to greater economic development of the country and GDP growth. Gross domestic product /GDP/ is a macroeconomic indicator that shows the value of final goods and services produced in the country during that year, expressed in monetary units.

Study: tertiary level institutions: quality of health care

Successful study health management in Bosnia and Herzegovina today

Period of the study: 2003-2016

Clinic History

The Paediatric Clinic of the University Clinical Centre of Sarajevo is a respectable institution, which was established in 1947 at location "Jezero" as the first specialized stationary institution for the treatment of children in Bosnia and Herzegovina and Sarajevo with a capacity of 60 beds.

The collective of the Paediatric Clinic UKC Sarajevo in 1972 was awarded the Order of Merit with Silver Rays.

As the need for a larger bed capacity grew, the Clinic gradually expanded so that in 1991 there were 250 beds for patients and accompanying mothers at its disposal.

At the beginning of the aggression on Bosnia and Herzegovina and Sarajevo in May 1992 after intense shelling, the Clinic was relocated to the site of „Koševo"- Central block.

From January 1996, the Clinic was relocated to the building of the Clinic for dialysis, nuclear medicine department and the First Internal Clinic, at „Koševo".

2003.

The Paediatric Clinic in 2003 had 60 beds + 9 beds for intensive care. The first respirators were purchased in 1998 for the Intensive care by the Lions Club + Child Advocacy.

In 2003, the Clinic worked in extremely cramped and inadequate space - the ground floor of the building and two floors, without the hospital part of physical therapy, waiting room, playroom, mixed paediatric pathologies - which made the functioning of this highly specialized tertiary care centre difficult. The Staff was consisted of 24 paediatricians (one professor and 2 doctors with PhDs and 4 with Master), 5 residents in paediatrics, 3 general physicians, 1 clinical psychologist, 9 senior nurses, 67 secondary nurses and 22 employees of ancillary services, a total of: 131 employees.

A Development Strategy for the Clinic was made, it regarded adequate space, staff training, procurement of equipment, planning of new staff, the development of subspecialist services, new departments and sections with the help of friends from CCU Ljubljana, AKH Vienna, Sweden, America, Italy, Germany, with the aim of improving the provision of service to paediatric patients aged 1 day to 18 years.

In 2003, the training of staff: doctors and nurses / technicians completed at the Clinical Centre of Ljubljana - Slovenia, as well as previously in 1998 in Belgium.

Organization

The Paediatric clinic was organized into nine departments: Gastroenterology, Nephrology, Cardio rheumatology, Neonatology with an Intensive care unit, Pulmoallergology, Neuropaediatric, Endocrinology, Physiatrist department

and Haemato-oncology. The Outpatients department with an Emergency department was located in the clinics building, with 4 Outpts clinics in the Central block of CCU. The Paediatric Clinic of CCU Sarajevo was launched and in 1998 it established the Paediatric summer school, as well as the Asthma school for patients and parents in 2001. The Clinic has also participated in the founding of the Association of Parents of children with cardiac diseases, neuropaediatric, haemato-oncological and asthmatic diseases.

Admissions: 2002/2003:2685/2895.

BO Days 2002/2003: 31.291/31.146 Average BO: 9.2 days

Total number of pts at Outpts Clinics: 2002/2003:23.559/25.921

2004.

In accordance with the initiative of the Paediatric Clinic, the relevant authority, CCU Sarajevo as well as the wider community in 2004, after the reconstruction of the Clinic until March 2009, the capacity of beds at the Paediatric Clinic KCU Sarajevo was increased to 90 + 9 intensive care beds.

2009.

March 15th 2009 - After 17 years, the Paediatric Clinic was successfully relocated from the site "Koševo" to site "Jezero", with the assistance of the Government of the Republic of Turkey, the Ministry of Health of the Canton Sarajevo, the Ministry of Health of Federation of Bosnia and Herzegovina, Health Insurance fund of Canton Sarajevo, CCU Sarajevo and Friends of Paediatric Clinic.

The reorganization of the Clinic has continued spatially, educationally, personnelwise and also in terms of equipment with the goal of working and providing health care services more efficiently. New departments were formed in accordance with the modern, up-to-date approaches to the organization of paediatric services around the globe, namely: the Centre of Urgent Paediatrics with Day Hospital, Cardiology, Allergo-immuno-haematology, Neonatology, Neonatal Intensive care and therapy, Paediatric intensive care and treatment, hospital part of the Department of physiotherapy and rehabilitation, Playrooms, Day hospitals, and if necessary, a service of Day hospital was provided for the Department of gastroenterohepatology with a Day hospital within the department of Haemato-oncology, Outpts clinic for: rhythm disorders /24h Holter ECG/ and functional non-invasive cardiac diagnostics /24h Holter BP, Tilt Table test, ergometry/, Preventive cardiology and Sport clinic, Living rooms for diabetic children, Room for nursing mothers, an Internet connection for educational programs and cartoons, enriched and

designed space for patients of Haemato-oncology with accommodation for accompany mothers and apartment donated by the City of Sarajevo for accompanying mothers of children with haemato-oncological disease.

The intention is in accordance with the requirements of health care in several fields of paediatrics, the same plan to fill junior staff who have a propensity for paediatrics, with obligatory knowledge of a foreign language, computer skills and interest in scientific research.

2016.

In 2016, this highly specialized tertiary institution (one of the largest organizational units of CCU Sarajevo) worked with a capacity of 130 beds + 30 beds of intensive care, in the following years continuously with 130-140% capacity utilization.

Strategy: Every child and young adolescent who requires medical treatment should be able to receive it with the highest standard of health care and protection, from trained, competent professional doctors and nurses / technicians, on time and in adequate conditions, applying the principles of good medical practice.

The Paediatric Clinic of CCU Sarajevo is organized through:

- The hospital part and
- The Outpatient Clinic

The total area of the Paediatric clinic is 6500 m2; with a 24h laboratory serviceandX ray department including a mobile X-ray machine for immobile patients, patients form intensive care and postsurgical patients.

The Paediatric Clinic of Clinical Centre in Sarajevo, offers **knowledge and experience** of the noble art of medicine to students of medicine, dentistry, Faculty of Health Studies, as well as interns, students of secondary medical schools, residents, subspecialists and doctors on professional education.

Its Staff consists of 232 employees as follows: 41 paediatricians (4 Professors, 8 Assistant Professors, 4 dr. med. sci. and 14 masters), 3 residents, 2 psychologists, 18 graduated nurses, 7 senior nurses, 2 graduate physiotherapists, 124 medical nurses, 4 physiotherapists, with workers of support services.

It requires courtesy, professionalism, hygiene, order and professionalism to provide optimal health care services to the youngest citizens of Bosnia and Herzegovina through diagnosis, care and treatment.

The Clinic Organization

The Clinic is organised through13 departments and 3 Sections:

- Centre of urgent Paediatrics (CUP) and **Day hospital** /9 beds/
- I = Gastroenterohepatology, **Day hospital** (if needed),

Section for invasive gastroenterohepatology,

- II=Nephrology,
- III= Cardiology,
- IV=Neonatology,
- Paediatric intensive care and therapy /8 beds/,
- Neonatal intensive care and therapy /22 beds/ and Post-intensive Care,
- V=Pulmology,
- VI=Neuropaediatrics,
- VII=Endocrinology,

Section for insulin pumps and education,

- VIII=Haemato-oncology with **Day hospital,**

Section for autologous transplantation of autologous stem cells

- IX= Physical therapy and early rehabilitation department
- X = Allergo-immuno-rheumatology

Each department has Out-pts clinics**.**

Paediatric rooms:

- Room for Cystic Fibrosis
- Room for Autisms
- Rooms for TBC
- Biologic room
- Sterile room

and being prepared:

- Room for palliative care
- Simulation room /for staff training/

The working and living space /hallways, children's rooms, day care centres, playrooms/ are modernized and humanized by TV-switch cartoons and appropriate educational and promotional materials of Sarajevo and Bosnia and Herzegovina, the hallways are painted by students of the Academy of Fine Arts in Sarajevo in collaboration with the Association of Women Helping Hands and Hearts and there are posters on the walls showing different Schools,

training seminars, educational posters from Congress for the acquisition of knowledge of the pupils, students, residents.

Every department and Outpatient clinic with an Emergency centre of Paediatrics is equipped with network computers, as well as the administrative department of the Clinic. On the TV screen at the entrance to the Clinic and the Clinic floors there is a schedule of doctors on duty and daily scheduling of physicians in outpts clinics, clear signalling of Departments and Out patents clinics. A second shift of psychological work in counselling is performed, and if necessary, these rooms are used for meetings of the Association of parents. Outside the Clinic, thanks to the Friends of Paediatrics, a Fountain is placed with a place to rest and play.

In the **Book of impressions** there are records of the stay of patients and parents at the Clinic. There are three **boards** in the lobby of the Clinic which are also presented on the Web site: ”Board of staff: We are here for you“; „Board of Clinics Friends“; Board of Chair for Paediatrics“.

The functioning of the Clinic

The clinic is open 24 hours continuously. Teams are formed and they consist of an on-duty doctor /five doctor specialists/ during 24h: on the Standard and Post-intensive care, paediatric and neonatal intensive care and therapy with a specialist physician at the Centre emergency paediatrics. The transport of patients from “Jezero” to “Koševo” is organized: an ambulance with a monitoring system, oxygen, transport ventilator, patients are accompanied by doctors and nurses trained for the transport of life-threatened patients (plan made prior to relocation: ambulance car, training staff, plan (24h) day and night transport) to and from surgery: Children, Cardiac surgery, Neurosurgery, Maxillofacial surgery, Otorhinolaryngology, Clinic for Infectious Diseases, Orthopaedic Clinic, Eye Clinic. A 24h schedule of visits with specialist paediatrician in transport of patients for consultative check-up at Koševo, and the transport pre and postoperative cardio surgical patients, an on call team for emergency procedures of removing a foreign body from the digestive and respiratory tract, and if necessary, the placement of insulin pumps, with monthly schedule of cardiologists and intensivists on duty at the Centre for heart, during visits of foreign cardio surgical teams.

Morning meetings are mandatory as well as meetings in the afternoon, where the college of physicians is informed of the status of patients at the ICU, post-intensive and standard care, admissions, discharges, transfer and

consultative examinations, along with discussions of each case and consultations for solving possible problems. In addition to the daily Department rounds, Grand rounds (which are stored on CD-s) are conducted weekly in the presence of the entire medical staff, as well as residents, interns, students (medicine, dentistry and Faculty of Health Studies), sub-specialists and doctors on professional education in different fields of paediatrics. The Heads of Departments organize work of their departments and outpatient clinics, with an indicated time of consultation, time of patients discharge, hospital discharge letter and interview with a parent.

The College doctors and College of General Nurses are held every Friday during which the following issues are discussed: patients, the state of each department in relation to available facilities, equipment, staff, interpersonal relationships, solving of possible problems in their day to day work, epidemiological situation, with a plan for the upcoming weekend.

The College of Nurses, during the process of admission and deciding on future working places of new nurses / technicians, evaluates their supervised period of training in all divisions. Proposals are made for future working places according to necessities for the provision of a service. The Education of accompanied mothers is established on site and is conducted by the General Nurses in all 13 departments,

July 15th 2011 - *The Discipline for child's health is established together with Children's Surgery clinic.*

June 12th 2014 - *The Discipline for health protection of child and women together with Children's Surgery clinic and Clinic for Gynaecology and Obstetrics.*

Interactive classes are introduced, they are held once a week for residents, doctors interns and doctors on training with organized training for transportation of life-threatened children, Paediatric Advanced Paediatric Life Support /APLS/, Neonatal reanimation training, communication in healthcare. Every month, an analysis of the **Clinics Business** is conducted: work of departments (admissions/discharges), outpatient clinics, admissions infirmary, clinic services, day clinic with diagnostic procedures, clinic services, consultative examinations, collection services and through the cantons, as well as patients status on discharge: cured, recovered, tested, uncured, transferred. At the weekly meetings of the **Expert College of physicians** interesting cases are presented with current news/insights from literature, as well as at **professional meetings of nurses.**

Monthly meetings regarding **Mortality** with an analysis of each patient, weekly meetings with children's **radiologists,** and, where appropriate, **Consultative meetings**, **meetings of the Cathedra for paediatrics**, represent daily work of the Clinic. Monthly meetings of the **Epidemics-Micro Infectious groups** are also organized. The **Hospital school for children** has continued its work from February 21st 2005. i.e. the pre-war practice of Paediatric Clinic of Clinical Centre in Sarajevo in the form of continuous teaching for our patients.

The Clinic achieves remarkable results in the diagnosis, treatment and care of patients, education of personnel of all profiles. All thirteen departments have **a mandatory written consent form for parents regarding interventional and invasive procedures,** which are forwarded for approval of the Legal Service of CCU Sarajevo. **Internet access** is provided to all employees.

The **Cathedra for Paediatrics** of CCU Sarajevo created its **Web page** in 2003 - Internet site of Paediatric Clinic of CCU Sarajevo: www.pedijatrija.sa-ba, which is exceptionally well visited, organized in a modern fashion and regularly updated. The DRG and AKAZ system are in progress for the Clinic and IMPAX established program (X-Ray, MRI, CT on the network) with the pager system.

Continuous staff education and research is a process that is sustained through participation in conferences and meetings in the country and abroad. From 2015 onward /with or without scientific papers/ the staff of the Paediatric clinic travelled 55 times. **The following scientific research projects** are in progress**:** Strategy "Early growth and development" - Federal Ministry of Health and UNICEF, as well as the "Strategy Nutrition - Federal Ministry of Health and UNICEF."

In accordance with good medical practice and evidence-based medicine, **clinical pathways and clinical protocols** were established /procedures for all 13 departments are stored on desktops of each department/.

The best reflection of the development of a country is reflected in the level of development of paediatric cardiology and cardiac surgery, which achieved remarkable results in Sarajevo till 2016 thanks to cooperation with colleagues from Austria, headed by Prof. Wollenek as well as a Swedish team headed by Prof. Sune Johansson. The total number of cardiac paediatric patients from 1997 to date is 1189, of which 883 were operated and 306 were catheterized. Period: 1996 - 2003: relocated 165 patients. The staff for non-invasive diagnostic tests was educated in: echocardiography, Holter ECG 24h, 24h

Holter BP, Tilt Table Test, exercise test, EFCG as well as in invasive diagnostic and therapeutic cardiac catheterization: closure of ASD and DAP, balloon dilatation of PS. The cardiosurgical team that was formed was composed of physicians, cardiac surgeons, anaesthetists, nurses, perfusionists. The training of local staff from 1996 to 2016 was undertaken by teams of experts from America, Switzerland, Austria, Sweden, Germany, Italy; training of cardiologists/intensivists with certified APLS+*NICU, masters from Cardiology: 5 paediatricians.* Regular preoperative Consultations were established from 1997 - 2016 and they consisted of: cardiologists, cardiac surgeons, anaesthesiologists, nurses, radiologists, perfusionists with local and foreign teams during which a list of pts was presented for cardiac catheterization and surgery including History disease, invasive and non-invasive imaging tests, with discussions of Board members, a treatment plan and a talk with parents. In 2015, a total of 58 cardiac patients were treated: the Swedish team operated on 9 patients, 7 CC, whilst the Austrian team operated on six patients and 3 CC, a local team in 2015 operated on 43 patients and 11 CC patients and implanted 3 Pace makers. Patients allocated via the Federal Institute for health insurance of BHTurkey: 5, 9 in Austria and in Italy 6.

2009: Neonatal Intensive Care Unit: 22 respirators, Paediatric Intensive Care Unit: 8 respirators, at which time a surgical room for interventions was opened.

In 2015, the first autologous stem cell transplantation under the supervision of doctors from Clinical Centre Ljubljana was performed, including another 2 patients which saved about 1.500.000,00KM.

Mortality in 2015 was up to 1.8% (on 5297 patients), compared to 2014 where mortality was 1.6% (5828 patients).

Business of Paediatric Clinic during 2014 / 2015.

In the course of **2015,** 5031 patients were admitted (Canton Sarajevo - 3161, Outside Canton Sarajevo - 2140) in the Admission room and Outpatient clinic 53.347 patients were examined. BO days: 2003 - 2016: 9.2 - 6.7

From the aforementioned it is obvious what remains: the number of diagnostic and therapeutic procedures increased, the number of services increased with statistical significance, new diagnostic tests + treatments were introduced, and the number of days spent in hospital is shortened.

During the period of time from 2003 to 2016, several contacts and meetings were made, including written suggestions to **Health centres /HC/ in Canton Sarajevo**, offering help to paediatricians in HC, until their additional education and training by clinical paediatricians is completed, in order to

reopen Outpatient Clinic within Health Centres in Canton Sarajevo. The aim of this initiative was to decrease the number of patients requiring service at tertiary health institutions. Now, those services could be provided in Outpatient clinic in the Canton Sarajevo by competent staff. Such Outpatient centres within the Health centres would offer the same pathology that is most required by patients of the Paediatric Clinic. The services would be provided by further educated specialists and subspecialists, resulting in no waiting lists, the possibility of having therapy nearby to their home, so that the colleagues from the tertiary level health centre would have less pressure in everyday work and provide their services at an adequate level. Also, suggestions of the management of Health Centres were given to plan in advance the admission of new paediatricians as was done at the Paediatric clinic.

The interest for Paediatrics is remarkable. Currently, 20 physicians and related disciplines including psychologists, librarians, biologists, and geneticists have applied for employment at the Paediatric Clinic, as well as 30 nurses and technicians.

Teaching / Training is performed for students from the School of Medicine, School of Dental Medicine, Faculty of Health Sciences, Specializations in paediatrics, subspecialty, Education and Training.

The survey of students in 2011 at the School of Medicine, University of Sarajevo, on the organization of teaching, textbooks, CDs, lectures, exercises, hands-on techniques, schools, training, showed that the Department of Paediatrics is one of the best departments at the Medical Faculty of the University of Sarajevo.

2003 Academic Status: 1 Professor, 2 Assistant Professors, 1 dr. med. sci, 6 MSc, 0 graduated nurses. During the period from 2013 - 2016, 20 master thesis were done, 12 doctorates, 15 medical nurses graduated at the Faculty for Health studies, so the **Academic status in 2016 was:** 5 Professors /2 full professors and 3 associate professors/, 7 Assistant professors, 4 Dr. med. sci: 4, 14 MSc.

Friends of Paediatric Clinic of Clinical Centre in Sarajevo and people of good will in the the period from March 2nd 2003 to January 1st 2016 have enriched the clinic through equipment, diagnostic and therapeutic educational possibilities of this institution in the value of 1.638.662.74 KM. Adequate thanks were presented to all organizations and people of good will who have remembered the patients and staff of the Paediatric Clinic with their humanitarian gestures.

Equipment, diagnostic/therapeutic procedures, new medications, protocols

In the period 2003 - 2016, modern equipment was purchased and new diagnostic and therapeutic procedures were introduced with new medication, so the Paediatric clinic of CCU Sarajevo was successfully completed in 2015, with new diagnostic procedures/therapies available to all patients in Bosnia and Herzegovina of paediatric ages from birth until they are 18 years of age:

Proximal endoscopy, plasmapheresis, kidney biopsy, peritoneal dialysis, ergometry, ECG, EFCG, 24hrs Holter ECG, blood pressure and glucose in the blood, heart therapeutic and diagnostic catheterization, pre-and post-operative cardiac treatment, Tilt Table Test, ultrasound of the: heart, brain, abdomen, thyroid, kidneys, hips and wrists, portable colour ultrasound, transoesophageal echocardiography, Long line insertion with central venous catheter, video EEG, bronchoscopy, spirometry, allergy tests, determination of chloride levels in sweat, tests on respiratory syncytial viruses, hypothyroidism and phenylketonuria, ventilatory therapy: IMV, IPPV, CMV, BiPAP, CPAP, HFV, 24hrs electroencephalogram, placement of insulin pumps, determination of nitric oxide level in exhaled air, lumbar, sternal and ventricular puncture, puncture of lymph node, uroflow /multifiltrat, biopsy of small, large bowel, stomach, liver and kidney, LP, SP, LE cells, growth hormone determination, the method of Vojta&Bobate, applications of botulinum toxin, distal endoscopy/colonoscopy, removal and extraction of foreign matter, electromyography, haemodialysis, plasmapheresis intra-articular application of steroids are, PH metry, hypothermia, implantation of PEG.

Organization of Clinics work: internal control, epidemics-micro-infective group, regular meetings of mortality, professional meetings of doctors and nurses/technicians, business of departments, education, grand rounds, publications: books, textbooks and CDs, CD publications, newsletters, Days of open doors at the Clinic together with the Association of parents, health education: seminars, symposia, schools, printed and electronic media, TV, participation in conferences, symposia, trainings of staff within the Clinics.

Residents: work under the supervision of a Mentor and heads of departments during residency, organisation of regular Interactive teaching for residents. The Manual of knowledge and skills for residents was created in accordance with good medical praxis, algorithms of modern knowledge and skills. The presence at rounds at various departments, Great rounds, Expert meetings, Interactive training, schools, training for the transportation of

life-threatened children, the continuous acquisition of knowledge and skills of labour at departments with training in communication with patients and parents. The passing of colloquium with the exact number of techniques mastery and procedures was mandatory. Providing the stimulus for writing and publishing research and scientific papers, is an ongoing process.

Regular meetings on **Communication in Healthcare** with moderators: psychologists; mobbing in health.

The Paediatric clinic within the **education program** traditionally organizes the following Schools for doctors nurses/technicians, parents, patient, students: Paediatric Summer School, Asthma schools, Ultrasound schools, Reanimation school: Advanced Paediatric Life Support + Neonatal Intensive Care Unit (all doctors APLS certified, in cooperation with the Manchester branch in RCPCH, UK); Diabetes school; School of Pulmonary Arterial Hypertension; School of Foetal echocardiography; Coeliac school.

Publishing: Annual Publications: "News from Paediatrics"; 2003-2014; ISBN 978-9958-9903-6-6; Book 60. and 65. years of Paediatric Clinic of Clinical Centre in Sarajevo; Textbooks on Paediatric + CD for 3 Faculty: Medical, Dentistry and Faculty of Health Science (2005); Bulletin no.1-12; CD: Professional Papers (News, Dilemmas in paediatrics and Case reports) of doctors, nurses / technicians from 2005 - 2013, printed on 2500 pages. Expert and scientific works of employees Clinic: physicians and nurses in country and abroad.

Admissions: *2003: 2895**;** 2014: 5789*

Outpatient Clinic: *2003: 25 921;2014: 52 584*

Stimulation of staff: public praise, days off, proposals of financial incentives towards managers, the training of nurses / Faculty of Health Studies, individually adopted new technologies / and doctors; masters and doctoral theses, subspecialisations, writing scientific papers by nurses and doctors, public praise for published and presented papers in journals, congresses, symposia, surveys of customer satisfaction, employee satisfaction surveys.

On 10th October 2014, Paediatric Clinic of the University Clinical Centre in Sarajevo was assigned the name of the **Referral centre for paediatric subspecialist of:** gastroenterohepatology, nephrology, cardiology, neonatology, neonatal intensive care, paediatric intensive care, pulmonology, neuropaediatric, endocrinology, haematooncology, rehabilitation and habilita tion,alergoimunorheumatology and emergency paediatrics, for the period of five years by the Federal Ministry of Health Bosnia and Herzegovina.

Specialization and subspecialisation are conducted within Paediatric Clinic after Paediatric clinics staff training at the Clinical Centre of Ljubljana and individual physicians trainings.

Savings:

- reduced number of patients' days spent in hospital
- decreased mortality
- cardiac surgery and autologous transplantation of stem cells, as well as intensive therapy with developed subspecialty diagnostic/therapeutic procedures within the Referral Centre of Bosnia and Herzegovina.

PRIZES:

- April 6th 2007 - Sixth of April Award of the City of Sarajevo,
- European Society for Quality Research Rome, International Diamond Prize for Customer Satisfaction, 2012,
- European Society for Quality achievements Award, London 2013.

VISION:

The continuation of the construction of the Centre/Institute for Mother and Child at the Jezero locality

The acts of the Ministry of Health of Canton Sarajevo preliminary drafted and adopted the draft in 2000 that entails the construction of a modern Centre for mother and child at the site of Jezero, which every developed country in Europe has.

Phase I construction of the Centre for Mother and Child completed the reconstruction of the Paediatric Clinic at the site of Jezero on March 15th 2009. The clinic started working on 6.500m2 (hospital and Outpatient clinic).

Phase II involves the completion of construction and procurement of equipment for the Clinic for Genecology and Obstetrics (completed on November 25th 2010).

Phase III Reconstruction of the "Pavilion for accompanying mothers, visiting doctors, nurses / guests /2500m^2/- donated the completed preliminary design.

Phase IV Reconstruction of the remaining buildings on the site of Jezero: the amphitheatre, technical block, Outpatient clinic, Kindergarten for children of employees.

Phase V Reconstruction of flats for Paediatric employees.

Phase VI Reconstruction of the former main building of Paediatrics for the needs of Children's surgery Clinic /2800m^2/ with two surgical theatres / completed procedure of preparation: preliminary design /.

Phase VII Restored function of the Children's Hospital "Dr. NemanjaVlatković" in Cavtat, Croatia.

Finalization of the afore mentioned Centre / Institute for the Woman and Child, would at its disposal have the capacity of 3 clinics, namely: Paediatrics 6500 m^2, Clinic for Gynaecology and Obstetrics 8500 m2, Children's surgery clinic /2800m^2/ with the "Pavilion for accompanying mothers, visiting doctors, nurses / guests"/2500m^2/, the amphitheatre, Facilities (Laboratory and X-Ray, CT), Flats for employees, Kindergarten for the children of employees.

The Institute for the Health of the Woman and Child

It is the only institution of tertiary health care in the Federation, it is comprehensive in its structure which includes comprehensive multidisciplinary therapeutic and diagnostic activities, with further expansion of its activities, both in the diagnostic and therapeutic sense, following the most recent trends in paediatrics and child surgery. The Institute would be „national„ because of its leading role and responsibility in the planning and carrying out of numerous (epidemiological, health, research and educational) activities.

One of the Clinics of the Institute is engaged in Paediatrics (medicine of developmental age) i.e. a branch of medicine which is defined by the object of their interest – a child, from birth to the end of its adolescence. The time span of human life in regard to paediatrics has expanded from prenatal (foetal) medicine to the time after reaching maturity. Paediatrics covers and combines three main forms of medical activities: prevention, treatment and rehabilitation.

A special responsibility of paediatricians in caring for the health of the child in the developmental age is largely for what the health of future generations of adults will be like. Therefore, the development of a country is reflected by the level of development of paediatric services, and in the profile of the Institute for the Woman and Child's Health, which includes Child Surgery, would be the same and realized.

In the following years the Institute for Women and Child's Health was like a comprehensive paediatric centre, it conducted activities and took care of the child from birth to 18 years of age, providing a multidisciplinary balanced

development of all health professions that are related to paediatrics and the treatment of treating child's diseases. In terms of organization, the Institute's activities were divided into 4 groups: - health care, research, education and epidemiology. In addition to such an organizational association through the Institute, in cooperation with other clinics of CUS, as a basic working model, it re-established the existence of multidisciplinary paediatric teams for each paediatric disease. The Institute would, as the leading institution of its kind in Bosnia and Herzegovina, be responsible for the implementation of a multidisciplinary treatment through the formation of Consilium, which in their work would open not only to clinics and centres of CCUS but to all health institutions in the country. The leading role of the Institute through these activities, in collaboration with the Federal Ministry of Health and the Association of Paediatricians of B&H culminated in the final presentation of the guidelines for the diagnosis and treatment of childhood disease. Through professional connections with all medical disciplines, the basic quality mode of Paediatrics, different from other medical disciplines - multidisciplinarity would be carried out at the Institute in a manner of quality. The Institute would serve for the implementation of health activities at the secondary and tertiary levels, as well as in the field of education, training and research, in collaboration with the Federal Ministry of Health in the area of paediatrics.

As a comprehensive institution, the Institute in collaboration with other health care institutions and competent political authorities (Cantonal and Federal Ministries of Health, Cantonal and Federal Employment Health Insurance, Public Health Committee of the Canton, FB&H and others) would direct and coordinate programs of main activities in the field of paediatric disease, problems such as: - prevention - early detection (screening) of disease - diagnostics - treatment and rehabilitation - as well as research, education and training.

A multidisciplinary approach to treatment and teamwork, success in professional and scientific research, cooperation with other clinics within CCUS, other paediatric institutions in the country, proactive involvement in the network of international scientific research paediatric institution, gave the Institute a good foundation for further development.

VISION of ACTIVITIES of the INSTITUTE

The high quality of treatment and health care and intensive activity in the field of research and education should enable the Institute to have the leading

role among leading paediatric institutions in Southeast Europe. To realize this vision, the Institute set clearly defined goals in all areas of its activity:

- *In the vocational field* the goal of the Institute was to continue to improve its multidisciplinary approach throughout the whole process of diagnosis and treatment of patients with childhood illnesses through the equitable development of all specialties in paediatrics, which would enable the Institute to serve as the only comprehensive paediatric centre in the country. The particular aim here was the establishment of guidelines (recommendations) for minimum standards in managing patients with paediatric diseases in B&H, which would allow equal access to diagnostics and treatment for all patients. Also, an important objective was maintaining connections and co-operation with the leading European and American paediatric centres through the exchange of experts in all fields.
- *In the educational field* a goal of the Institute was to remain the reference institution for the Medical, Dental and Medical Faculty in Sarajevo, other colleges, and vocational schools at the high school, undergraduate and postgraduate level and become an international educational institution in the field of all branches of paediatrics for this part of Europe. Also at the national level, the goal of the Institute was to become a leading institution for specialist training in all branches of paediatrics,
- *In the research field* a goal of the Institute was to become the leading Institution in B&H and the Balkan region in the field of clinical research. Through increased participation in various regional and international research groups, the aim was to include a larger number of patients that participated in clinical testing. Further objectives included the process of initiation of organizing and implementing research as well as the improvement of the coordination of research in the field of paediatrics at the level of whole country.
- *In the area of financing* the Institute aimed to obtain adequate funds to enable stable management and development, to increase the impact of the policy of reassigning funds within CCUS, Canton Sarajevo, Federation of B&H and finally the country as a whole.
- *In the area of spatial planning and equipment* the goal was to complete facilities on the site of Jezero, and during the coming period to ensure the procurement of additional appropriate medical equipment, with subsequent proper maintenance and renewal.
- *The health activities* of the Institute would be, for the first time, organized through 2 Clinics with subspecialties in the field of child's pathology,

especially children's radiology and extending the range of laboratory tests relating to the child population, including a pharmacy.

Paediatric clinic and Children's Surgery Clinic

- *As a hospital institution:* CCU Sarajevo is the largest medical institution in B&H and its clinics in the context of this Institute receive patients mainly from the Federation, and other parts of B&H, i.e. regional centres and smaller hospitals for diagnosis and treatment and care of patients in regular and emergency department from Sarajevo, Visoko, Zenica, Tuzla, Bihać, Travnik and Mostar.
- *As a teaching base:* The Clinic Institute is the teaching base of the Medical Faculty, School of Dentistry and Faculty of medical studies and students of High medical school in which graduate and postgraduate study programs are taught. With the beginning of the Bologna process, teaching in the early years of the Medical and Dental School, which requires special conditions to be able to teach in accordance with European standards, must be conducted in a timely manner also meeting the terms for obtaining accreditation of the given institutions for the implementation of higher education in every teaching cycle. Associates of the Clinic are the leaders of a number of postgraduate studies and courses that require additional resources in the sense of adequate teaching space. Institutions must fulfil the conditions for the education of physicians in the specialties required according to European standards.
- *As an institution associate of the Ministry of Health FB&H*: FB&H Ministry of Health should, on the basis of staff, expertise, and equipment, i.e. the legal basis, establish reference centres at the clinics of the Institute.
- *As an institution Associate* of School of Medicine, School of Dental Medicine and Faculty of Health Sciences, University of Sarajevo. The Clinic's Institute is a teaching base, and thus it is necessary for it to fulfil the adequate space and staffing requirements. Clinics are highly specialized institutions with facilities for the diagnosis and treatment of child diseases from the moment of conception, birth to 18 years of age.

The work program and development in the future period

- *General work conditions:* At the Department of Paediatrics, spatial conditions are adequate with the possibility of reconstruction of other buildings on the site "Jezero", Gynaecology and Obstetrics is in function since

2010. The department of Children's Surgery will be moving to new premises where it will be able to function more efficiently.

- *Computerization:* It delves into all aspects of the entire CCU, including the aforementioned Institute. Small systems developed at the Department of Paediatrics have to be integrated at the level of CCU. Successful execution of this important segment will facilitate the provision of services to our customers starting from billing, medical records (discharge letters) and data storage, imaging and laboratory findings. The solution to this important segment for the functioning of the Institute is in the competencies of the CCU.
- *Staff :* doctors, nurses, administration, support staff

Program for specialization

In the past period a lot of improvement was done to the program for specialization and quality performance of service at the clinics. At the Department of Paediatrics, there is an educational team of: a mentor, a doctor in charge of the timetable, off-hours, and the doctor in charge of the seminar meetings with the heads of wards who perform weekly interactive classes with residents. Specialization internship is done according to a program which extensively lists the necessary knowledge and skills in various fields which have to be obtained. In the following period a chief resident should be appointed, and he/she would coordinate the work of residents, solve their problems and make contact with the head of the program i.e. Head of the clinic. A Club journal should be established and the residents could critically analyse scientific papers published in leading international journals with the help of specialists who are experts in certain areas. During the third and fourth year of service, if necessary, residents would return to the department as senior residents, within their future engagement, where they could make decisions and assist specialists.

It is necessary to provide conditions that according to good clinical practice would continue to implement clinical trials in the early stages I and II, conduct continuing education, additional education, and health and media enlightenment.

As for defining **the structure of management of clinics**, a similar level of organization and functioning to the one at the Paediatric clinic, which has received top marks for the way its organized in regard to all health institutions of this character, from the top officials in a country and abroad in the past

eight years, should be established at the at the Children's Surgery clinic and Clinic for Gynaecology and Obstetrics. So it is necessary to establish: monthly meetings of the epidemics-micro-infectious group, a two-month Analyses of the Clinic's Business, monthly meetings on mortality at the Clinic, weekly professional meetings for doctors and nurses, interactive classes for residents, training for new nurses and technicians, resume regular morning and after midday meetings of the Professional College. Also, it is necessary to establish weekly meetings of the College of physicians and the College of Nurses - major nursing departments, ensure the current Web page of Children's surgery and GAK modelled on the web Paediatrics, establish daily education of accompanying mothers, make further educational plans for doctors in CCU and outside the country, as well as nurses, introduce new diagnostic and therapeutic methods, plan publishing of textbooks, newsletters and manuals by the Clinic for Paediatric Surgery, expand Library Fund, subscribe to foreign newspapers, improve information system and "online" access to international medical databases and works.

The Pharmacy

The Pharmacy would in cooperation with the Central pharmacy of CUS supply the Institute with drugs, medical supplies and magistral formulas (i.e. a sterile solution for epidural and subcutaneous individually prescribed to patients for continuous pain relief). The Pharmacy with pharmacist at the forefront would be specialized in the field of paediatric pharmacy and provide a better and more regular supply of drugs to our patients. This would help to implement rationalization in the field of paediatric medicine by using so called equivalents that are less expensive. Generic formulas have certain economic effects and are not inconsistent with professional tendencies, they allow greater access for patients. Paediatric pharmacists would facilitate and participate in a variety of clinical studies, membership in internationally related associations. Pharmacy through its activity is responsible for: organizing the central preparation of cytotoxic and other oncology - preparation solutions individually for each patient in a separate unit with digesters for dissolving drugs, while ensuring security and economy, and finally conformity with EU legislation and the WHO, related to this issue.

The Department for the planning and analysis of the development of health care of the child would be formed as a part of the Institute.

The plans of the Institute relate mainly to the professional integration of these three Organisation Units for child care from birth to adolescence with the

intense development of prenatal diagnosis (ultrasound, genetic ... etc.), which will greatly improve the number of perinatal parameters. It would be necessary to realize and purchase additional equipment for the Children's Surgery Clinic, as well as to renew the equipment of the Department of Paediatrics and Clinic for Gynaecology and Obstetrics, with a special focus on in vitro conception, having in mind the fact that in 1981 the Clinic for Gynaecology and Obstetrics was the first Clinic in this region which delivered a test tube baby. By re-establishing this possibility within the Clinic, it would make this kind of service available to a larger number of patients, making the public sector competitive to the private sector. These services would be covered by health insurance. Certainly, it is necessary to realize education plans at all levels.

Epidemiological services - hospital REGISTER

Epidemiological activities and the existence of a hospital registry for certain paediatric diseases guarantee access to information (incidence, prevalence, treatment success) that are essential in establishing the optimal process of diagnosis and treatment of patients with paediatric disease. Expanding the capacity of the Clinics at the site of "Jezero" should make maximum use, not only in line with current needs, but also predictable changes in conditions in the health care market in the next 10-15 years.

Adaptation of the old space at "Jezero" and the emergence of a new space, will certainly improve the conditions of care for children within the Institution in accordance with not only the requirements of the regulatory authorities of the European Union, but also the demands of the market, where the Institute's assurance for health would be replaced by a series of market competition moves of insurance companies. In this context, the spatial, professional and scientific potential of the Institute may contribute to the development of better health as a whole in B&H, as well as a long-term planning in order to provide health care services in line with European trends. Within the Institute, the Department for Molecular Diagnostics would be created with a prospect to adopt different techniques and molecular diagnostics, given the current trends in paediatrics, and to participate in various scientific research projects.

Establishing this department is crucial because it would allow catching up with current trends in molecular pathology. In addition to the health service, clinical staff would be involved in all aspects of educational and scientific research. Besides the professional part, the Institute would give full consideration to the research and educational activities segment. It must be recognized

as a place for the implementation of multi-centre clinical trials as part of a network with other international groups and institutions. In addition, it would take active participation in the education of medical students and postgraduate education (specialization) of doctors. Paediatrics and Children's surgery are an indispensable part of multidisciplinary treatment of patients with paediatric diseases.

The work area of Paediatric includes prevention and treatment of complications by systemic treatment (supportive therapy), the treatment of the symptoms of the disease (palliative), and the finally treatment of dying patients (terminal Medicine). The plan would be to develop Pain therapy unit - a unit with the goal of optimal diagnosis, treatment monitoring in patients with confirmed pain, with a special segment for psychooncology and related subspecialties. Paediatricians and child surgeons would participate with colleagues from the Institute, but also from other Department of CCUS in the work of multidisciplinary teams in the planning and implementation of diagnostics, treatment and rehabilitation of patients with paediatric disease. The Clinic would confirm the regional recognition of the extent and quality of implementation of clinical research with the aim of introducing new forms of treatment to standard clinical practice.

CONCLUSION

Health system network study: Bosnia and Herzegovina/world

1. Service delivery: 24h
2. Health force: doctors, nurses, workers
3. Information: bulletin board /doctors + sisters + workers/, website, newsletter, regular courses: doctors + nurses
4. Medical products: treatment of patients at departments, outpatient clinics, application of modern technology
5. Finances: Federal Health Insurance Company, Cantonal Insurance Company, people of good will, savings by the development of clinic after training: Cardio surgery, therapeutic and diagnostic cardiac catheterisation, autologous steam cell transplantation, Intensive therapy and all the mentioned above.
6. Leadership: Director, Heads of Departments, departments, colleges of doctors, nurses and workers
7. Evidence based medicine; Clinical pathways, guides and protocols
8. Monitoring health system: in Bosnia and Herzegovina

9. International continuous contacts: Ljubljana, Beograd, Zagreb, Austria, Sweden, Italy, Germany, United States of America.
10. Highly specialised equipment: intensive modern therapy via ventilator techniques: IPPV, MV, CPAP; BiPAP, HFV, laboratory, IMPAX /X - Ray, CT, MR/
11. Network: all departments and Outpatient clinics: PC; administration; web site for all: employees, patients and parents
12. Education: specialization, sub-specializations, teaching for students of medicine, dentistry, Faculty of Health Studies, secondary medical school, students on summer praxis, additional education, training, schools: students summer practice, "hands on".

This is a model of a successful organization and operation within the health system of the most vulnerable population in Bosnia and Herzegovina that created a health brand competitive in the Balkan countries and the European labour market, while respecting the principles of good doctor practices and evidence-based medicine.

When organizations manage their investment in people wisely, the result is a satisfied and motivated workforce that delivers high-quality health services and an organization that fulfils its mission, meets its health objectives, and contributes to its community by providing excellent service.

ANU BiH АНУ БиХ

Literature

Barros P, De Almeida SJ. Portugal: Health system review. Health System in Transition 2007.

Bloom D, Canning D, Sevilla J. The effect of health on economic growth: Theory and evidence, NBER Working paper 8387, Cambridge: National Bureau of Economic Research, 2001. Available at: www.nber.org/paper/e8587.

Breyer F, Franz W, Homburg S, Schnabel R, Wille B, Reform der sozialenSicherung, Springer, Berlin, 2004.

Brown S, Bronkesh S, Nelson A, Wood S. Patient satisfaction pays – Quality services for practice success. An Aspen Publication, Maryland, 1993.

Colindres, Hector. Modernizing Health Institutions in Latin America. Cambridge, MA: Management Sciences for Health, 2007.

Donabedian A. Quality in Health Care. Whose responsibility is it? Am J Med Qual, 1993; 2; 32-6.

Everybody's Business: Strengthening Health Systems to Improve Health Outcomes: WHO's Framework for Action. Geneva: World Health Organization, http://www. who.int/ healthsystems/strategy/everybodys_business.pdf (accessed August 3, 2014).

Garside P. Organisational context for quality: lessons from the fields of organisational development and change management. Quality in Health Care 1998; 7: 9-15.

Gillies A. Improving the quality of patient care. John Wiley and Sans, 1997.

Gillon R, Preface: Medical Ethics and the Four Principles, in: Gillon R, Principles of Health Care, John Wiley and Sons, 1994: pp xxi-xxxi.

Graham N. Quality in Health Care – Theory, Application and Evolution. Aspen Publishers, JNC, Gaitheoburg, Maryland, 1995:359

Groene O, Jutta K, Skan H at al. An International review of projects on hospital performance assessment, Int J Qual, 2008, 162-171.

Hager W, Suhrcke M. A European bargain. Investing in CEEC health. Brussels, CEPS Task Force Report, 2001.

JUS ISO 8402, 1991.

Longest B Jr, Rakich J, Darr K. Managing Health Services Organizations and Systems, Baltimore – London – Winnipeg – Sydney, 2004.

MartinovCvejin M. Measurement of Efficiency and Work Quality in Health Institutions, in: Management in Health Institutions, European Centre for Peace and Development, Beograd, 1998.

Maxwell R. Quality assessment in health. Br. Med. J. 1984; 288: 1470-2

Mooney G, Economics, Medicine and Health Care, The Harvester Press Group, 1986, p. 90; 4

Navarro V. Assessment of the World Health Report 2000. Am J of Public Health, 2000; 92 (1):31-4. 5

Payne BC, Lyon TF. The Quality of Medical Care: Evaluation and Improvement. Chicago; Hospital Research and Educational Trust; 1976.

Quick, James C., et al. The Financial Times Guide to Executive Health. Harlow, Scotland: Pearson Education Ltd., 2002.

Richardson J, Wildman J, Robertson IK. A critique of the World Health Organization's evaluation of health system performance. Health Economics, 2003; 12: 355-66. Available at: http://www.buseco.monash.edu.au/centres/che/pubs/wp125.pdf.

Shaw C. Evaluating accreditation, Int J for Qual in Health Care, 2003; 15, (6), 455-456.

Stringer, Robert. Leadership and Organizational Climate. Upper Saddle River, NJ: Pearson Education, Inc., 2002.

Sutherland K, Dawson S. Power and quality improvement in the new NHS: The roles of doctors and managers, Quality in Health Care 1998; 16-23

Vuori JE. Quality assurance of health services. Copenhagen: WHO 1982.

WHO Regional Office for Europe, Copenhagen, Health 21, The Health for ALL, Policy for the WHO European region-21 targets for the 21st century, 1998.

WHO: The Principals of Quality assurance, Euro Reports and Studies, Geneva 1998.

WHO: WHO and Quality Assurance in Health Care 1989;1 (2/3), 71-192.

World Health Organization. "What Is a Health System?" Geneva: World Health Organization, 2005,http://www.who.int/features/qa/28/en/index.html (accessed July 1, 2009).

MENADŽMENT U ZDRAVSTVU SA POSEBNIM OSVRTOM NA KARDIOVASKULARNE BOLESTI

Sažetak

Cilj ovog rada je evaluacija zdravstvenog sistema u Evropi, uključujući viziju zdravstva u 21. vijeku, upravljanja ljudskim resursima u zdravstvu, doktrinarnim pristupima, osnovnim zadacima javnog zdravstva te glavnim zdravstvenim problemima u Evropi. Dat je i osvrt na stanje zdravstva u našoj zemlji. Poseban akcent je na problematici upravljanja ljudskim resursima tj. principima, tehnikama i problemima menadžmenta ljudskim potencijalom u zdravstvu. Naglašene su aktivnosti i procesi od poslovne važnosti za menadžment u zdravstvu. Ukazano je na otvorenost ka Evropskim integracijama u oblastima zdravstva i edukacija, potrebu finansijske, organizacione i strateške rekonstrukcije zdravstvenog sistema i edukacija, jaču povezanost edukacionog sektora i sektora zdravstva kao i marketa rada, uz uslov da je pacijent uvijek u fokusu zdravstvenog sistema. Neophodno je ulaganje u zdravstvo i edukacije, koje treba biti shvaćeno kao benefit za buduće generacije, jer će doprinijeti jačem ekonomskom razvoju zemlje, uz rast GDP. U drugom dijelu rada prikazan je model uspješne organizacije i poslovanja zdravstvenog sistema najvulnerabilnije populacije, pedijatrijske, uzrasta od rođenja do 18 godina, u Bosni i Hercegovini, u periodu 2003 – 2016. godina, koji je rezultirao zdravstvenim brendom, kompetitivnim u zemljama Balkana kao i Evropskom marketu rada, brend koji poštuje principe dobre lječničke prakse i medicine zasnovane na dokazima. Kada institucije mudro ulažu u ljudske resurse: edukacije, treninge svog osoblja, rezultat je zadovoljna i motivirana radna snaga, koja daje visoko kvalitetnu zdravstvenu uslugu u zemlji i regionu. Prikazana je institucija, koja u potpunosti ispunjava svoju misiju, doprinosi društvu, dajući izvrsnu zdravstvenu uslugu stanovništvu, institucija koja jeste prepoznata i priznata u ovom regionu od strane medicinskih eksperata.

Ključne riječi: menadžment, zdravstvo