

## Innovation – the answer to the economic crisis

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### **Abstract**

The Western Balkan countries are in agreement about one thing: they all want to become members of the European Union (EU). Accession to the EU has become a national priority for Croatia, Serbia, Montenegro, Macedonia, Albania, Kosovo and Bosnia and Herzegovina (B&H). The first decade of the EU accession of some EU countries meant progress. Years of economic growth and prosperity are behind us. In 2013, EU is over-indebted, with millions of unemployed and unable to address the present economic crisis. It is losing its share of global market for goods and services and aging population threatens to collapse the "welfare state." The inability of the EU to resolve the accumulated economic problems undermined the credibility of the European integration, opening the hazardous speculations on the nature and necessity of the union. Certain states, such as Great Britain, are openly announcing a referendum to remain in the EU. Some countries are partially affected by the economic crisis and achieved outstanding economic results. Along with some Asian countries, Turkey is an example of how, even without EU membership, a country can efficiently solve present economic problems. Small and underdeveloped countries, such as B&H, can learn a lot from Turkey. The essence of success is the open competition, simplified registration procedures and operations, the attraction of investors, innovations and management of innovations. The introduction of innovations is important in all aspects of the B&H society, but it is particularly interesting in health care. B&H annually allocates 11.0% of its GDP to health care. The study, which we had conducted, showed that there are different views regarding the quality of health care services, between service recipients (citizens and patients - clients) and service providers (nurses and doctors). Nurses and doctors believe that the current quality of health care is good, while patients and citizens argue the opposite. If we put the patients at the center of our attention, then we have to respect their opinions and all our measures and actions must be subordinated to their satisfaction. Innovative approaches and innovation management do not need additional funding. The use of the best techniques and practices, which already exist at our hospitals and clinics raise quality of health care while reducing costs. It should be kept in mind that the process of quality improvement must be continuous. A survey that we carried out on 313 patients in the Federation of B&H shows that the managers of health institutions are not satisfied with the quality of health care and believe that this situation needs to be improved. For innovation in health care it is necessary to create a critical mass of qualified managers - innovators who will be supported by the key decision makers. To this end, it is necessary for health care institutions, as in all other areas of B&H society, to create a climate conducive to innovation, as the part of national policy.

**Keywords:** economic crisis, management, innovation, health care, quality, innovation management, EU accession.

## **Introduction**

Improving health care through innovation and management of innovation in F.B&H is one of the most important tasks facing healthcare providers and other institutions and individuals whose activities are related to health. Innovating is an ongoing process that does not tolerate delay. Innovation should be approached systematically taking into account the specificities of F.B&H. Since this is a very broad field we must define priorities taking into account the limited financial resources available for this area.

The future of health care in F.B&H will go parallel with the improvement of quality. As in all other countries and our society will strive to reduce the cost of health services, thereby enabling access to quality health care. Cost reduction will be achieved by reducing the differences that exist in the delivery of services. The need for fast and high-quality information will necessarily propel health care institutions in automatic data collection and storage, which will make the industry more efficient and effective. The need for monitoring organizational performance (quality) system and measurement of processes and outcomes will advance the science of measuring performance in health care industry. The need for accountability through a system would improve the health care industry on the things that are important to patients. In short, the effects of health management will come through cost reductions, in the short term, but will be implemented through new innovative approaches that will be needed for healthcare industry to achieve these goals.

Of special importance will be monitoring of the quality of health services in relation to the formally established set of standards. Quality of work in health care can be improved by improving the quality of internal systems or external examination, on the basis of clearly defined standards of quality. External review shall be performed by an independent body, thus, taking into account previously set norms and standards. Some of them are: Accreditation, ISO certification, EFQM (European Federation for Quality Management), Malcolm Baldrige Award, etc. Thanks to the results of accreditation, health care organizations can create short and long-term plans for improving the work and for the rational use of resources, which will be used more effectively in order to meet organizational needs.

Every health care organization and its management has a reason for the introduction of the process of quality improvement. This may be due to reduced costs, increased profits, greater market share, patient satisfaction, promotion of health institutions in general, moral satisfaction of the business, etc.

Scientific and technological advances, modern procedures and diagnostic tests, new drugs, increased demands and organization of health care increasingly pose financial strain on the health care options in F.B&H. Managers of health institutions, ministries and others will need quality information related to the acquisition of new technologies, procedures and the organization of new systems. In recent decades, the important reform activities have been undertaken in the field of primary health care (PHC), in which significant domestic and foreign assets were invested. The reform has replaced general family medicine with family medicine and its principles are applied in all aspects of medical care. In this regard, it will be extremely important to monitor whether the introduction of family medicine will lead to improvement of PHC, in terms of better effectiveness, efficiency, economic utilization, greater therapeutic response and the like.

Today, there is generally a global consensus regarding public, political and professional dissatisfaction with health care services. Problems are specifically related to access and continuity of care, clinical effectiveness, patient safety, value for money, customer satisfaction and public accountability. Developed world began to focus on preventive medicine, primary care, service users' involvement, as well as more explicit government regulation of financiers of care through managed care and health networks. Continuous assurance and quality improvement of health care, at all levels ensure the development and implementation of quality improvement systems. Quality health care is a fundamental right of every individual and every community. Today, there is no universal model for a national policy on quality, but there are common elements of intent, organization and activities, which the governments intend to implement. These elements include:

- National values and priorities of quality;
- National organization and structure of quality;
- Methods, techniques and tools for quality development and
- Resources to improve the quality

## **Materials and Methods**

### ***Data Sources***

To test the research hypothesis, a survey was conducted at the level of management innovation activities and innovation capacity, in order to improve the organizational performance in health care organizations in Federation of Bosnia and Herzegovina. The primary sources of data were used, in order to conduct the empirical research. Sources of data for statistical sample were records of the Statistics agency of Bosnia and Herzegovina, the Federal and Cantonal health insurance funds, the Federal Bureau of Statistics, Federal and Cantonal Public Health departments, Federal Ministry of Health and the Federal Institute for Insurance and Reinsurance. As secondary data sources, the monographs, books, studies, journals and scientific papers were used. Additionally, the internet was utilized as a data source.

In the first part of the empirical research we surveyed 313 respondents, with the aim to find out to what extent they were satisfied with the quality and quantity of health services, and how to evaluate the work of institutions and health care employees.

Area of our empirical study was Federation of Bosnia and Herzegovina (F.B&H), an entity that is part of the Republic of Bosnia and Herzegovina. Out of ten cantons in F.B&H, the focus of our survey has focused on three: Sarajevo, Tuzla and Zenica - Dobož Canton. In these three cantons reside 1,337,834 inhabitants, or 57%, compared to the total F.B&H population of 2,866,157. Percentage of physicians in these cantons comprise almost 70 percent of the total number of doctors in F. B&H. Costs for health care in these cantons, comprise almost 50 percent of total expenditures on health care in F.B&H.

In course of this research we have given emphasis to medical facilities, which are, in some ways, leaders in healthcare in B&H, including the F.B&H. These are the Clinical Center of Sarajevo University (CCSU), University - Clinical Center Tuzla and the Cantonal Hospital in Zenica.

## ***Research Methodology***

This research project was designed to be a combination of retrospective-prospective study. In dealing with the problem set and presentation of research results, a number of scientific methods were used. Within the theoretical part of the research, historical and descriptive methods that describe the essence of innovation and development and innovation were utilized; in combination with the compilation of associated knowledge, attitudes, conclusions and the results of other authors. In the empirical part the methods of induction and deduction for setting the general statement of research, quantitative methods for proving the hypotheses, survey-based methods for data collection and analysis and synthesis methods were used. For presentation and statistical analysis of the data collected to investigate the influence of different variables, we used modern statistical methods for the analysis of health care, such as, methods of statistical analysis of variance (ANOVA) and Post Hoc Tukey – Kramer (multiple comparison) HSD Test. A comparative analysis of the research results for health care organizations and number of conclusions relevant to other business areas F.B&H were performed.

The planned study was conducted in two phases:

During the first phase we analyzed the available literature in the field of innovation and invention, with a special emphasis on innovative activity in the service sector, where health care organizations belong. We analyzed numerous secondary data sources, such as books in the field of innovation, strategic and entrepreneurial management statistical reports on innovation in the EU, U.S., Canada, Japan, etc. In addition, we explored numerous books, monographs, expert articles, brochures, manuals, dissertations and masters' theses on the topic of innovation. We also analyzed innovation policy, the structure of health care and business performance of organizations in light of the implementation of management innovation in health care. As a source of secondary data we also used the Internet.

In the second phase we conducted the empirical research using modern research methodology, adapted to the conditions and level of development of innovation in F.B&H. Modern research methodology implemented, in OECD countries in the domain of measuring innovation of national economies, were utilized. The aim of the empirical part of this research was to gather information about the level of innovative activity in the health care system, check the hypothesis of work and identify the most important variables that affect the innovation and business performance of health care organizations.

Data collection was conducted in the period September - December 2011 through a questionnaires, which were sent to postal and electronic mail addresses of health care organizations in F.B&H. Sources of data for the sample comprised from the records of the Central Bureau of Statistics, the Federal Bureau of Statistics, Cantonal and Federal Ministry of Health, Federal and Cantonal Public Health departments, Federal and Cantonal health insurance departments and professional association database (i.e. Medical Academy of Bosnia and Herzegovina) and Federal Institute for insurance and reinsurance.

From these databases we selected organizations by three criteria: the size of the organization, regional and geographical origin and classification activities. In order to ensure a sufficient number of responses, and thus the relevance of the sample, the organizations to which we sent the questionnaires were contacted by phone, mail or e-mail to respond to it in due time. The activities related to implementation of the survey

included: primary, secondary and tertiary levels of health care, in addition to: Federal and Cantonal Ministry of Health, Federal and Cantonal Public Health, Federal and Cantonal Health Insurance, Federal Insurance and Reinsurance Funds, State and Federal Bureau of Statistics, Cantonal Hospital in Zenica, Clinical Center University of Sarajevo (CCUS), University Clinical Center in Tuzla and other health care organizations in F.B&H.

## Results and Discussion

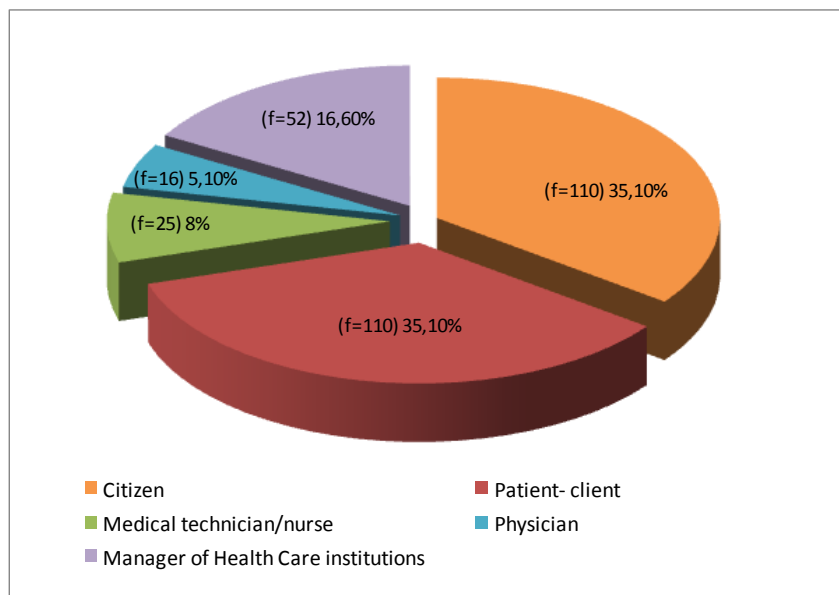
Table 1. Statistical data for all surveyed.

Group		f	Percentage %
		(Frequency)	
<b>Valid</b>	Citizen	110	35,1
	Patient- client	110	35,1
	Medical technician/nurse	25	8,0
	Physician	16	5,1
	Manager of Health Care institutions	52	16,6
	Total:	313	100,0

For statistical survey conducted we used the sample of 313 respondents. Out of total, 35.1% (N = 110) were citizens, 35.1% (N = 110) patients-clients and 8%, or (N = 25) were nurses. Physicians comprised 5.1% or (N = 16) and the managers of health care institutions 16.6% or (N = 52) (see Table 1).

All responses with processed statistically significant differences are summarized in the appropriate tables.

Figure 1. Structure of surveyed as percentage of a total sample



Theoretical and empirical studies clearly indicate that the innovation and management of innovation are the key factors of competitiveness and the survival in today's increasingly competitive market. Today, developed countries are doing significant efforts to making innovation a national priority, with a special emphasis placed on measuring innovation performances.

Empirical studies clearly show that the innovation process is complex and multidimensional. The process never developed in a straight line, and some of the stages of human history recorded accelerated growth or stagnation of innovation processes. It is interesting to consider the reasons that have contributed to this rather interesting dynamics.

Going back, for a short period of time, we can see that for our ancestors, who existed thousands of years before us, the life expectancy was 20 to 25 years. In 1800s the life expectancy has increased to approximately 35 years and in 1900s was 48 years. In the year 2000 the average life expectancy has reached 78 years, an increase of 66% or an additional 30 years of life, compared to 1900s. From 1900 to 1950 life expectancy is constantly extended, but since mid-50's to mid-60 of the last century this trend has been stopped. After that, the life expectancy begins to grow again, and this tendency continues in the 21st century. The reason for this increase was that in the first half of the last century the medical scientists were able to conquer infectious diseases, together with provision of cleaner household water, better sanitation and healthier eating habits. At the same time, for the first time in history, mankind has managed to conquer infectious disease due to the development of exceptional medications including penicillin, streptomycin and others. In mid-century, after the fight against infectious diseases was complete, medicine has not had adequate means to address new diseases, such as heart disease, autoimmune and malignant diseases. Since the mid 50's to mid-60 of the last century, the medicine had little to offer for the prevention or treatment of chronic and degenerative diseases, which have dominated the pathological picture of the society.

Medical innovations have had a significant impact on cardiovascular diseases and malignant neoplasms, which in those years took the largest number of lives. Many techniques, such as bypass surgery, stents, heart transplantation, new drugs to control blood pressure, lowering cholesterol and better clot-busting procedures had, as a result, since 1975 that death from cardiovascular diseases was reduced by 60%. Reduction in mortality due to malignant neoplasms was less dramatic, but it showed a constant decline.

In 1975, five-year survival period for all types of malignant diseases was 50%. Today, the five year survival period is almost 70%. Before 1950, children diagnosed with leukemia had a survival prognosis of three months. Today, children diagnosed with leukemia have a 85% chance to heal. With the help of medical innovation we have not only added extra decades of life and health, but the society also enjoyed additional years of productive work, economic value added, increased household spending and increased tax revenues. The study, which was conducted at Columbia University (New York City, USA) by researcher Frank Lichtenberg, showed that the use of new drugs increased life span by 40% between 1980 and 1990. In other words, for each year of life extension, five months was a result of the application of new drugs (Lichtenberg, 2007), (Lichtenberg, 2009), (Lichtenberg, 2010).

If we succeed to thoroughly clarify a complex process of innovation in health care, it would allow practitioners and decision makers to better assess, adapt and perform services,

in such a way to give priority to innovation in health care, thus, representing a true value. It is evident that the prioritization also poses a serious challenge. This process should be approached with full consideration of the specificities of each community. In the modern world, innovation is considered a critical component of business productivity and condition of survival in the market.

In the second half of the last century, medical science has progressed exponentially. Unfortunately, in many countries, including Bosnia and Herzegovina, the system of paper documents (i.e. medical records) still provides information vital to the delivery of health care. Patient information is routinely kept in the archives with the same mentality, which was used to store information about other goods and services. A paper record is always associated with the defects, which are very expensive in healthcare. From \$ 600 billion that is spent on laboratory tests in the U.S each year, 70 percent is paid for paper records. Huge savings are possible by introducing an electronic medical record (EMR). This electronic record can easily detect and eliminate errors. Treatment of patients and exchange of information on their health, through the medical paper (non-electronic) records are very tedious and often an impossible task. Without insight in this document it is impossible to know the patients' medical histories. Electronic recording of patients' conditions allows the doctor to quickly exchange X-ray, CT, MRI, etc. pictures and test results with colleagues in the same hospital, other clinics around the countries and the continents (Mašić, 2007)(Reid, 2009).

We estimate that the EMR will be one of the priorities of innovation in F.B&H. Unfortunately, for a number of employees in the health care sector; it is still a new fashion trend and not the essential need in changing for the better quality of health care. Empirical research shows that managers of health organizations recognize the importance of this document, but for its full application numerous barriers should be eliminated. Results of theoretical and empirical studies suggest, that, in the future, the treatment of the most serious and complex diseases of modern time, by applying effective innovation will get a completely new forms and outcomes (Mašić, 2007).

Malignant neoplasms, with new, innovative treatment approaches will become a chronic disease. Cancer, although it will not be eradicated, will create less anxiety in patients, who will be better informed and more easily learn to live much longer with this chronic disease. How true this picture is going to be will depend on the number and quality of new technologies that will emerge with innovation. It is evident that the longer life of these patients, will increase many times over the cost of their treatment, thus, creating a tension between the requirements of patients and those who pay for services. With malignant neoplasms our primary goal is to turn malignant disease into a chronic illness. To achieve this ambitious and noble goal it is necessary to promote a healthy lifestyle and diet, to educate health care professionals and patients on the basis of general control and organize early effective answers to the first signs of the disease. Five oncology centers exist in Bosnia and Herzegovina. In the treatment of malignant diseases they apply modern principles of surgery, chemotherapy, radiotherapy, citotherapy and immunotherapy. Through education and prevention in its current phase, the goal is to reduce by 10 to 20 percent the number of patients who reported, too late to doctors for the life – saving check – ups (Porter, 2006).

Innovations in the treatment of malignant diseases are inevitable because of the complexity of disease, morbidity and mortality. Innovation had primarily to be transformed into useful

therapies that will be directed to the true biological target that is appropriate to the patient and in a way that is acceptable to patients, healthcare professionals and society as a whole. Innovation must be successfully introduced to the market for the professionals, as well as patients and those who pay the costs. All of these stakeholders need to see the potential benefits of these activities. Today, we see an explosion of new therapies to treat cancer and their prices remain very high. It is estimated that the cost of drugs for the treatment of malignant neoplasms in 2005, globally totaled US \$24 billion. Of this amount, \$ 15 billion was spent in the United States. Technology will detect, which patients do not respond well to therapy. In this way, today known drugs, in the near future will become obsolete. Doctors will know very precisely, at which stage of the disease, the particular type of treatment is necessary. Ten years ago, the average cost to develop a new anti-cancer drug amounted to \$400 million. Today, these costs amount to about \$1 billion. If they continue to rise at this rate of growth, the cost of developing new drugs could soon reach \$2 billion, which is the amount that for the existing market could be difficult to sustain (Shi & Singh, 2003), (Reid, 2009).

Data from the U.S., from the year 2005 show that the costs of care for cancer patients, in the last six months patients' life accounted for 70% of total costs, and that will grow four times in 2025, since that patients will live longer and new and costly therapies will emerge. This increase in cost will inevitably create tensions between those who provide funds and those who consume them. Such a rapid rise in cost will necessarily lead to the efforts to figure out how to better direct the costly therapies and to use fewer hospitals, home care and more. One of the dilemmas in the future will be the political effects of an aging population, which will expect better service than what is offered to the majority of elderly people today. A small number of elderly people will be able to be provided with all the necessary care. The vast majority of others will have to rely on state protection. It is estimated that on a global level there continues to be a lack of those who provide health care services. Cancer or malignant neoplasms, cardiovascular diseases and dementia in the future will be controlled and will join the list of chronic diseases, such as diabetes, asthma and high blood pressure. New ethical and moral dilemmas will occur, in parallel with the success that brings a lower incidence of disease. Living longer and dying more quickly, according to some scientists, will be one of the basic principles of Western medicine in the 21st century (Raffel, 1997).

F.B&H, in all this, must determine its own path, so that the limited resources we have at our disposal for health care, ensure maximum for patients, their families and society as a whole (Mašić, 2007), (Mašić, Novo & Toromanović, 2009).

Information technologies (IT) are becoming a key factor for innovation in health care. The modern world is increasingly using outsourcing in diagnostic services - especially medical examinations, such as mammograms, X-rays and consultation of specialists. Telemedicine is used in the U.S. and other developed countries, in order to provide the care to patients in remote and difficult to access locations. Most of today's health information systems are designed to function autonomously, with its own rules and formats. They often prevent information to be globally integrated and always readily available. In some cases, the patient's electronic ticket from one hospital is not readable in another. Not only different languages and measurements, but also the conflicts and different encryption software, are the reasons, as to why it is impossible for the system to electronically exchange data. By eliminating these barriers at local, regional and state levels, our ultimate goal should be the



creation of medical records, which can travel along with the patient throughout the world (Porter & Teisberg, 2006) (Mašić, 2007) (Mašić, Novo & Toromanović, 2009).

A particular problem in the process of innovation is the production of drugs and their safety. Today's tendency is to produce drugs that are universally acceptable to all patients. Today's drug manufacturers will have to replace currently used drugs with new ones that have been specifically selected for particular groups or even individuals in the future. Analysis carried out in developed countries show that (for 88% of chronic and complex diseases), medications are first choice for medical intervention. Americans with chronic and complex diseases, such as diabetes, heart disease, osteoporosis and cancer, contribute to 75% of the cost for medical treatment in the USA. Regardless of the significant side effects, drugs now represent a remarkable segment of health care. For example, we can consider just diabetes. If not controlled, diabetes can lead to a cascade of potential complications that result in increasing human, social and economic costs, including blindness, amputations, kidney disease, heart diseases and ultimately death. In patients who regularly take medicine for diabetes, medication costs increase, but the total cost of treating diabetes and complications that it produces is declining. For many diseases the situation is very similar (Porter & O'Grady, 2007).

For all of these, innovative drugs are often, both medically and economically, most effective alternative. In developed countries, about 60% of patients with diabetes do not keep the disease under control in order to avoid serious complications. With innovation and appropriate management of innovation new modern medical science adjusted medication to individual needs of patients, providing them with the right medication, with the right dose at the right time. From the standpoint of value for money, drugs adapted to the needs of patients will also reduce the high costs associated with those who do not respond to them. This type of innovation is exactly what patients want today (Katz & Green, 1997), (Reid, 2009).

Medications (prescription drugs) that come on the market today in F.B&H, are either new, patented or generic. For generic drugs, the patent protection has expired. New (i.e. brand name) drugs are significantly more expensive than the generic. For these reasons, generic drugs should be used whenever possible. B&H and its larger entity F.B&H, unfortunately have no coherent funding and procurement of medicines. Ten cantons comprising F.B&H, according to Dayton Peace Agreement are independent in making decisions on procurement of drugs. Experiences, as well as scientific works made on procurement and drug prices in F.B&H, show that rationalization, transparency and uniform procurement policy remedies can save significant funds for taxpayers (Sivić et al., 2009), (AKAZ, 2009), (Šahovic, 2012).

A particular problem in F.B&H is how to provide the basic list of essential medicines for all of those who qualify. For this purpose, the creation of a special fund would certainly give good results. Further measures include the reduction of irrational consumption, ensuring that all patients have equal access to essential medicines and other lists, as well as annual audits of funds allocated to medications at Cantonal level and F.B&H. Establishment of a separate body within the Ministry of Health of F.B&H could create transparent procedures for determination of prices and negotiating platform with pharmaceutical companies. This body would have to establish close cooperation with the relevant authorities in the EU countries. The need for an international database related to drug safety is constantly growing, especially since more and more people are traveling

around the world. Unfortunately, the literature that we have analyzed does not largely show that, in the world today, there are agencies that would mediate in the collection and display of information about medicines, between countries. Health care, today is abundant with basic innovations. Innovations that have been successfully applied in one location often spread very slowly, or are not at all spread to other locations. Diffusion of innovation today is an enormous challenge for all industries, including health care in F.B&H and B&H (Rogers, 1995), (AKAZ, 2009), (Šahović, 2012)..

This process can be defined as "a clear, fact-based process, in which the identified needs of patients are clearly understood and supported processes that with the smallest possible variations lead to the most effective results achieved." The improvement is achieved by constant input, process and results analysis using a specific tool. It is clear that there are unlimited opportunities for improvement and innovation at every stage of the complex activity of ensuring quality and affordable health care. Unfortunately, today's medical practice is still dominated by processes, which from the perspective of patients are not clearing (explicit) and are rather vague (implicit). In addition, there are other operative procedures performed on patients who are not sufficiently familiar with the procedures that doctors intend to carry out, which create consequences on the quality of the final outcome. Being explicit, in medicine means, not only to clearly define the criteria for patients, but also the professional criteria and standards, so that they can be investigated and be subject to constant modifications and improvements (Rogers, 1995), (Stošić, 2007), (Prester, 2010).

The process of continuous quality improvement is based on the basic fact that people want to do a good job, they are motivated and they want to work and to be consistent. They do not want to be responsible for the variations that occur in the process. To avoid variations in processes, they must be defined, analyzed and improved. People who participate in the process may be praised, rewarded, warned, reprimanded, disciplined or dismissed. By itself, it is clear which way is the most productive. Quality improvement in health care is not possible if it cannot be measured. Managing the process of continuous quality improvement does not differ in essence, if it was applied to industrial or medical processes. Essential elements to be used in both processes are the facts, data and measurements that measure all aspects of the process, starting from the patients' needs and expectations. In health care today, we do not lack information, but we do lack correct data presented in the right way. Improving our performance in any sphere, be it, clinical, administrative or even field maintenance and cleaning facilities, is not possible without valid performance measurements (Lighter & Fair, 2000), (Kuratko & Hodgec, 2000), (AKAZ, 2009), (Mosadeghrad, 2012).

The process of continuous quality improvement should be focused on differences or variations. The variations are an integral part of the process, and their number increases with the complexity of the process. Variations must be identified, and our efforts focused on trying to restrict them their removal is a priority in the process of innovation in health care. Quality can be described as the interaction between patients and those who care about their health. Many patients and their relatives, pay special attention to the attributes of interpersonal relationships, such as the ability to listen carefully to others, trust, respect, confidentiality, courtesy, sympathy, understanding, a desire to respond with right measures, willingness to help and show compassion, as well as to communicate effectively. High quality does not have to be expensive. Right competition is based on the results, leading to significant improvements and efficiency. What is important is to

understand that the quality of health care and costs often improve simultaneously. Opportunity for simultaneous improvement of the above mentioned two items stem from several reasons. Just by applying best practices almost all suppliers of health services can improve the quality to increase profits without price increases (Berwick, 1991), (Katz & Green, 1997), ((Mosadeghrad, 2012).

Our research had shown that there are different views between patients, doctors and managers about the current status of quality of health care. Nurses and doctors believe that the current quality of health care is good, while patients and citizens argue the opposite.

Different opinion between patients, doctors and managers regarding the current status of health care quality in F.B&H are shown in Table 2. We valued all opinions on a Likert's scale from 1 to 7, where 1 means – „I totally disagree“and 7 means „I totally agree“. Mean values for patients, doctors and managers are shown in the Table 2. below:

Table 2. Means for different groups of population.

	Patients	Doctors	Managers
Health care organizations provide care appropriate to patients' needs	3,4636	5,6250	3,4423
Health care is accessible in legal and economic sense	3,3000	5,6250	4,0000
Health care is continuous	3,2455	5,7500	3,7885
Health care is effective	3,1636	5,5500	3,7115
Health care is efficient	2,9729	5,2500	3,9423
Health care shows adequate results	3,1909	5,4375	3,8269
Health care organizations provide total care to patients	2,9636	5,3125	3,1538
Health care organizations provide high level of care	2,9182	5,3750	3,2500
Health care safety is at the high level	2,8545	5,0625	3,7115
Health care is available at the appropriate time	2,6273	5,1875	4,3269

From Table 2 it is visible that there are differing opinions between patients, doctors and managers. While doctors in most cases hold the opinion that the quality of health care services is relatively good, patients do not hold that view. The managers are somewhere in between.

If we put the patients at the center of our attention, than we have to respect their opinions and all our measures and actions must subordinated to their satisfaction. Innovative

approaches and innovation management do not need additional funding. The use of best techniques and practices, which already exist at our hospitals and clinics raise quality of health care while reducing cost. It should be kept in mind that the process of quality improvement must be continuous.

## **Conclusion**

On the basis of research and analysis of the available literature, we conclude that innovation and management of innovation processes become key to successful operation of health care organizations in the future. Empirical studies show that in regards to the quality of health services there are different views among three essential participants in health care: patients - consumers, health professionals and health service managers. Patients – users, largely expressed disagreement with the current situation and the level of quality of health care, and health professionals (doctors and nurses) believe that the level and quality of care is good. These two, completely opposite attitudes seek our further elaboration. The goal of all of our innovative activities in the health sector must be satisfied patient. If patient is not satisfied, it must be a clear signal that the expressed disagreement should be further analyzed and action taken to eliminate the problems. This is supported by the views of managers of health institutions which, although run by these institutions, believe that the current situation is not good and that it should be changed. Health care is facing serious challenges, and innovations in this field are an imperative of our society.

At the same time innovating and managing innovation processes is necessary for several reasons. Financial resources that are at our disposal are limited and will be limited in the future. Increasing national debts that must be paid back by the future generations cannot be tolerated, nor can continue with this practice. It is naive to believe that the financial problems that we are facing are only a consequence of present economic depression and recession. Serious financial analysis clearly shows that we, as a society, cannot continue with the current trend of spending. The second part of the challenge that we are facing is an aging population. People are living longer, and to maintain health in the population over age 65 from year to year more and more resources must be spent. A particularly interesting part of the population is in the age of over 75 years. This group, which represents less than 5% of the total population, now consumes 25% of all patient-days in hospitals that treat acute cases of diseases. This happens despite the fact those in recent years, the length of stay in hospitals in for this age group has been reduced.

Previous preliminary and in scope modest research in B&H and F.B&H shows relatively low levels of innovation, as a factor in improving the overall health care. Innovation, in most cases, is left to the individuals who conducted their own research or „borrowed“ results of the developed countries, trying to innovate to change the existing situation and make it better. Unfortunately, the process of innovation in F.B&H is more the exception rather than the rule. For quality and comprehensive innovation in health care institutions and society as a whole, there is lack of critical mass of innovators, inventors and special task managers.

Innovating in order to improve the quality of health services, reduce treatment time, increase the number of recovered patients, reduce the cost of treatment and medicines, to create a patient-observer active and satisfied partners who collaborate with healthcare professionals during treatment, are all tasks that lie ahead of health workers and that we must deal with today. Innovation and management of innovation must have access plans,

to coordinate and guide them in the right direction, continuing to analyze and correct all phases. This is basically the task of innovation management.

Among the conclusions, in particular we want to emphasize the need for all relevant political, health and other factors that innovation policy becomes part of national policy. In this way, and society as a whole will be joined in the international competition. To achieve the goals we have to provide a critical mass of managers, particularly managers' doctor. Their creation will be provided through educational processes so that managers will be able to share their knowledge and innovative energy transferred to their co-workers, and all relevant factors, the health process and future EU accession.

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