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# SWOT Analysis of the Facility Management of Hospitals: The Case of Bulgaria

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## Abstract

The main objective of the paper is to make a SWOT analysis of the Facility Management of general hospitals for active treatment in Bulgaria. Facility management includes management methods and techniques of building management, infrastructure management of an organization and methods of overall harmonization of the work environment of the organization. The applied SWOT analysis of the facility management is based on the example of the Military Medical Academy – Sofia which is a medical, educational and scientific-research institution with an internationally acknowledged reputation. During the transition period the healthcare sector in Bulgaria is characterized by significant problems – understaffing, supply shortages, braindrain, huge debts and chronic lack of money. The reviewed hospital – Military Medical Academy-Sofia – is no exception in this respect. Currently, there is a crucial need to limit the economic costs of the MMA-Sofia and, in particular, to constraint the cost of utilities, which account for more than 33% of the total economic costs. The opportunities for development of the MMA-Sofia are also associated with investments in modern technical equipment, improvements in the built infrastructure, development of activities, related to further treatment, rehabilitation and care for the sick and the elderly people, and creation and maintenance of a Single Information Center in help of the patients, and medical and administrative staff of the hospital.

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## Introduction

The management of hospitals in Bulgaria is a topic with an enormous public significance. The main law of the country – The Constitution of the Republic of Bulgaria – gives the equal right of health care to every citizen.

Hospitals are the most important link in the healthcare system. This is due to the fact that the medical institutions providing hospital and out-patient help, can direct impact on various and manifold processes. The specific solutions for development of managerial, economic, financial and public policy in the field of health care, are subject of sound data, facts and evidence. Their explanation and evaluation is a subject of scientific research and studies of many specialists from different fields of knowledge. Issues related to the management and optimization of non-health care activities provided by hospitals, have become increasingly topical in the recent years. The main reason for this is the ongoing reform in the types of ownership, management and financing of hospitals. This process is complex and diverse and stems from the particular features of the hospitals.

The current healthcare system in Bulgaria is a complex bureaucratic structure that was created during the years of planned economy (1945-1989) and is still going through deep reforms to meet the modern standards. Since the accession of Bulgaria into the European Union

(EU) in 2007, the health policies of the Bulgarian government have been aimed to meet the existing requirements of the EU. Bulgaria is in the European region of the World Health Organization and is following the European policy for health and well-being - "**Health 2020**". However, numerous issues are not yet solved, including the economic instability of the healthcare system, the underfunding of hospitals and the unaffordable high prices of medication.

With the transition of Bulgaria towards the market economy, the Bulgarian hospitals have been legislatively transformed into commercial enterprises – subject to the Commercial Law. During a period of more than 15 years of existence as commercial enterprises Bulgarian hospitals have been predominantly operating at loss, with accumulation of high and rising debts. The healthcare sector continues to face significant problems – understaffing, supply shortages, braindrain, bribes to doctors and nurses to ensure better treatment, huge debts and chronic lack of money.

Currently all Bulgarian hospitals are decapitalized. Many of them, in accordance with the provisions of Bulgarian commercial legislation should have declared a bankruptcy. But they did not. Neither the managing boards of hospitals, which are responsible for declaring a bankruptcy according to the Commercial Law, even their creditors, have been taken any steps in this direction.

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This is due to the assigned highest social functions that perform medical institutions in Bulgaria, the political situation, and of course, the existing legislative base in the country.

A number of governments in Bulgaria have failed to implement reforms, a series of major reshuffles at the health ministry over the last few years have failed to make a difference and plug the holes in the system. As a result Europe-wide polls show that the lowest levels of satisfaction with health care are reported in Bulgaria, which even lags behind Albania and Macedonia (Guineva, 2012).

**General Hospitals for Active Treatment (called briefly Hospitals)** are commercial enterprises, which are equipped with the most modern equipment and qualified medical staff. Despite the fact that these hospitals provide healthcare services to a large part of patients in Bulgaria, they continue to generate very large deficits and debts. Regardless of the significant and huge number of Bulgarian and foreign publications in the scientific and medical literature concerning the management and operation of the healthcare system, definitely it can be declared that there is no comprehensive practical model of Facility Management (FM) of the healthcare facilities in Bulgaria. A small number of studies are focused on the relationship between the healthcare management and financial policy, particularly in that part of the cost optimization of hospitals. Regarding the theory of FM of hospitals, there is no detailed theoretical interpretation of the problem, neither any proposed practical model especially in the case of Bulgaria.

The motivation for this study is related mainly with the highest importance of the nation's health in the overall process of the healthcare system. Health for Bulgarian has always been one of the most important things in life. The main objective of the paper is to make a SWOT analysis of the Facility Management of General hospitals for active treatment in Bulgaria. With this aim, in the paper we are looking for answers to such questions as: What is in fact the facility management of a large hospital? Is it possible the facility management to be introduced as a working model in such conditions? What are its specific features? What are the key advantages and opportunities of Facility management as a tool for making management decisions?

The methodology applied in the paper is focused on the SWOT analysis of the Facility Management of hospitals. This method is applied for comparing and assessing the strengths and weaknesses, opportunities and threats of the FM of General hospitals for active treatment in Bulgaria. The applied SWOT analysis is based on the example of the Military Medical Academy – Sofia which is a medical, educational and scientific-research institution with an internationally acknowledged reputation. It is the largest military hospital in Bulgaria providing centralized care. Our observations for the practice of FM of hospitals demonstrate that the usage of the SWOT analysis as analytical technique in the field of healthcare system in Bulgaria is still underdeveloped.

The structure of the paper is organized as follows: Part 1 describes the role and functions of the facility management. Part 2 explains the specific features of facility management of general hospital base for active treatment. Part 3 represents a brief Overview of the Military Medical Academy – Sofia. Part 4 reveals the conclusions from the SWOT analysis carried out of the

facility management of hospitals in the case of Bulgaria. The paper concludes with summarizing the results from the study.

### **Role and Functions of Facility Management**

Facility management industry started in the early 1970s in the United States, followed by United Kingdom, France, Germany, Australia and many other developed countries in the 1980s. Main reasons for this trend were the advent of the cubicle in large office buildings, the introduction of computers, the arrival of the multinationals and the outsourcing agenda (O'Sullivan, 2014). The evolution of FM industry is also a consequence of more widespread outsourcing by business of non-core activities, such as the management and maintenance of buildings (Commonwealth of Australia, 2005, p. 1).

In December 1978, Herman Miller Research Corp. hosted a conference "Facility Influence on Productivity" in the U.S. where office administrators from various companies shared their business ideas and problems. Following the conference the Institute of Facilities Management (IFMA) was formed. The requirement for better productivity and efficiency, coupled with pressure to reduce costs, resulted in large elements of non-core activities being outsourced. This led to FM companies being formed from the traditional soft and hard services industries.

According to the International Facility Management Association (IFMA), "FM is a profession that encompasses multiple disciplines to ensure functionality of the environment by integrating people, processes and technologies." FM is also defined as an interdisciplinary area dedicated to the coordination of the space infrastructure, people and organization. It is often associated with the administration of the office buildings, arenas, schools, sports complex, convention centers, hospitals, hotels, etc. FM encompasses many diverse activities such as janitorial services, cleaning of common areas, maintenance of green areas, 24-hour security and video surveillance, and many others, as well as the infrastructure management – real estate management, engineering infrastructure, internal and external areas of the buildings.

There are views that the FM is defined as an approach that ensures the maintenance of infrastructure and providing the comfort of occupants – from delivering furniture to the repair works. Part of FM is the interaction with the organizations providing warranty service of the various systems in the object (for ventilation, air conditioning, etc.). Another task of FM is the work with electricity, water, heat and other facilities suppliers, as well as the work with security. The implementation of all the aforementioned purposes requires efforts in several key areas: commercial management, infrastructure management and technical management.

The FM industry plays a significant role in the delivery of facility services to the built environment. Its primary function is the provision of strategic management advice on the efficient operation of buildings and the minimization of operational life cycle costs. The industry is also responsible for ensuring that services are delivered in a way that contributes to the productivity and profitability of building occupants, as well as improved returns for owners and investors. The range of services provided include traditional building services such as

repairs and maintenance, security and cleaning, as well as more highly technical services requiring skilled personnel.

The European Facility Management Association (EuroFM), uses the definition of facility management, provided by the European Committee for Standardisation (CEN) and ratified by 31 European countries is:

“integration of processes within an organisation to maintain and develop the agreed services which support and improve the effectiveness of its primary activities”. According to this European standard, the scope of FM is ‘space and infrastructure’ (planning, design, workplace, construction, lease, occupancy, maintenance, furniture, cleaning, etc.) and ‘people and organization (catering, ICT, HRM, HS&S, accounting, marketing, etc.). As a result the European standardized framework of FM contains a set of definitions that focus on the provision of services, the quality of FM, the development of processes and standardization of space and costs.

In 2006 the European Committee for Standardization (CEN) approved the first two European standards on Facility Management - № 15221-1: Terms and Definitions; № 15222-2: Guidance on Facility Management Agreements.

These standards serve as a working and standardized tool in support of the participants wishing to enter in an agreement for FM within the common internal European market. The first European standard on FM (15221-1) includes a structured overview of FM, key terms and definitions for FM, as well as examples of services, activities and facilities. The second European standard on FM (15221-2) is designed to create a basis of cross-border transactions between companies and their customers for FM within the framework of the single European market. The two standards are adopted by the 30 participating European countries. In 2011, the second phase was completed in the development of European standards on FM (Mather-Derrick, 2012). The first two standards are added four more European standards on FM, in particular: № 15221-3: Quality of FM; № 15221-4: Taxonomy of FM; № 15221-5: Processes of FM; № 15221-6: Measuring the Space in FM.

The development of FM is determined by different concepts and approaches under the influence of historical and cultural circumstances, accumulated over the years in the world and in particular in the European context in terms of organizational structures and business segments. In practice, the market of internal and external (outsourced) FM services underwent a rapid development in Europe. Considering its total volume of several hundred billions of Euros, it becomes clear why the European standards on FM have been adopted.

All organizations, whether public or private, use the facilities, assets and services (facility services) in support of their core businesses. Through the coordination of these assets and services by using managerial skills and opportunities for adapting the organization to the changing environment, the FM affects the organization’s ability to act proactively and to optimize its costs, assets and services.

K. Lennerts (2009, p. 169) summarizes that the main benefits of FM approaches in organizations are the following:

- Clear and transparent communication between the demand side and the supply side by dedicating persons

as single points of contact for all services, which are defined in a Facility Management Agreements;

- Most effective use of synergies amongst different services, which will help to improve performance and reduce costs of an organization;
- Single and manageable concept of internal and external responsibilities for services, based on strategic decisions, which leads to systematic in- or outsourcing procedures;
- Reduction of conflicts between internal and external providers;
- Integration and coordination of all required support services;
- Transparent knowledge and information on service levels and costs, which can be clearly communicated to the end users;
- Improvement of the sustainability of an organization by the implementation of life-cycle analysis for the facilities in the organization.

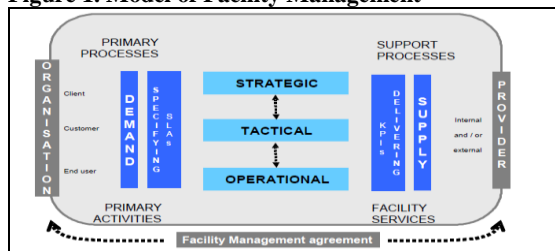
The product of FM is the provision of services by their providers to the customers according to their needs. Since the purpose of FM is to ensure optimal support to the primary (core) business processes, the requirements for FM are defined by the primary processes that it supports. The distinction between primary activities and support services depends on the organization itself. FM aims to provide integrated management at the strategic and tactical level in order to coordinate the provision of facility services. This requires specific competencies and therefore, distinguishes FM from isolated provision of one or more services (Lennerts, 2009, p. 170)

Figure 1 presents the model of FM, which provides integrated management of primary (core) processes (the demand side) and the support processes (supply side). The decision of an organisation to outsource some services or to provide related processes or services by itself depends on the capabilities of service providers and the efforts needed for their management. An organization that chooses to outsource certain activities and services may delegate to the provider’s direct supervision and control of its activity.

This specification concerns the monitoring and surveillance of Service Level Agreements (SLAs) relating to technical standards and quality standards. With regard to the objectives of each organization to know where it is, where it’s going and how it should assess its success, the so-called Key Performance Indicators (KPIs) are used. They represent the metrics that provide managers with the most important information on the functioning of the organization. These indicators should be linked to the strategic plan and the goals of FM, and, therefore, they need to support the monitoring of the achievement of business strategy. In practice there are databases with over 300 specific indicators. It has been found that no one need of numerous KIPs – only four or five are needed to monitor a given functional area of FM and they lead to a significant reduction of operating costs (Tuveson and Hodges, 2012, pp. 32-35).

In the field of healthcare system, all services that are not directly related to the patient care, can be defined as a facility services or products (although this depends on what is meant by direct help for the patient).

Figure 1. Model of Facility Management



Source: European Facility Management Data Standard.

In 2009 a Global Job Task Analysis (GJTA) defined 11 core competencies of the facility management profession. The GJTA included responses from facility managers in 62 countries. It is the most comprehensive to date and the first truly global survey and analysis.

1. **Communication** – Communication plans and processes for both internal and external stakeholders;
2. **Emergency Preparedness and Business Continuity** – Emergency and risk management plans and procedures;
3. **Environmental Stewardship and Sustainability** – Sustainable management of built and natural environments;
4. **Finance and Business** – Strategic plans, budgets, financial analyses, procurement;
5. **Human Factors** – Healthful and safe environment, security, FM employee development;
6. **Leadership and Strategy** – Strategic planning, organization, staff and leadership organization;
7. **Operations and Maintenance** – Building operations and maintenance, occupant services;
8. **Project Management** – Oversight and management of all projects and related contracts;
9. **Quality** – Best practices, process improvements, audits and measurements;
10. **Real Estate and Property Management** – Real estate planning, acquisition and disposition;
11. **Technology** – Facility management technology, workplace management systems.

In support of the above statement are the Hong Kong Institute of Facility Management legal and other requirements associated with FM (Hong Kong Institute of Facility Management, 2013, pp. 5-34). These requirements relate to: 1) functionality; 2) systems for construction, installations and engineering; 3) environment; 4) safety and health protection of employees.

### Specific Features of Facility Management of Hospitals

General hospital base for active treatment (so-called hospital) within the meaning of the existing Bulgarian legislation (Law on Health) constitutes a single therapeutic and educational-scientific complex with the task to carry out diverse diagnostics, diagnostic-curing, in which doctors or doctors of dental medicine alone or with the help of other medical and non-medical professionals perform diagnosis, treatment and rehabilitation of patients, monitoring of pregnant women and birthing aid; monitoring of chronically ill and at risk of disease persons, prevention of diseases and early detection of diseases, measures to strengthen and protect the health, transplantation of organs, tissues and cells. In medical institutions can be carried out training of

students and postgraduate training of healthcare professionals.

The hospitals should have modern material-technical base, built and maintained in accordance with all hygienic-sanitary, fire protection, security and technical requirements in the country. They should cover all the specific standards for the establishment of hospital care, guaranteeing quality and adequate health care. In order to ensure optimal functioning of hospital buildings and its adjoining infrastructure, more general hospitals for active treatment in Bulgaria turn insight and introduce the theory, the subject and object of facility management.

In Bulgaria, the most popular definition of FM is the one accepted by the Managing Board of the Bulgarian Facility Management Association (BFMA): "Facility management is the integration of processes within an organization to maintain and develop the agreed services which support and improve the effectiveness of its primary activities".

BFMA also defines FM such as follows: "Facility management is an interdisciplinary field primarily devoted to maintenance and management of assets of companies: cleaning, safety and security, building installations, building management systems (BMSs), computer aided facilities management (CAFM) systems, telecommunications, heating, ventilation, and air conditioning (HVAC) systems, energy efficiency, parking and fire systems, etc. The facility manager is the one, who should ensure comfort environment for the inhabitants and employees in a building".

In this sense, facility management, both of hospitals and other healthcare institutions, covers all activities on maintenance and management of non-productive assets of the hospital, as well as its buildings and infrastructure, organisation and supervision of the various activities. The facility manager is the one who takes care to provide a comfortable environment for patients or employees in the hospital buildings.

An important challenge to healthcare institutions is that they should have a high degree of flexibility, so that they can quickly adapt to the changing needs and expectations. The ageing of the population, the changing nature of the diseases, the introduction of new technologies and pharmaceuticals, the increased public and political expectations, and the creation of new financial mechanisms, are some of the factors faced by medical institutions (Rechel et al., 2009, p. 5). In recent years, the demand for health services is constantly increasing and is expected to continue to grow, both nationally and internationally. For example, in all Member States of the Organization for Economic Cooperation and Development (OECD) the demand for health services over the past 40 years has increased at a rate that is 2 percentage points higher than the growth rate of GDP of these countries (Sneider et al., 2010, p. 53).

Now the term "inflation of health services" has been introduced, i.e. the inflationary increase in the prices of these services. In many countries, that inflation is already higher than the underlying inflation indices. This leads to the problem of the increasingly strong pressure that healthcare has on public expenditures and on government budgets, and to the need for more financial resources and savings.

Facility management of hospitals is distinguished by certain characteristics due to their specific character compared to the other organizations. Some of the specific features of the hospitals are the following:

- 24-hour performance of the healing activity, 7 days a week;
- They provide comprehensive services;
- They must continually update their technical base and equipment in order to meet the highest technical standards and security standards and quality;
- An error or omission in the operation of the hospital could cost someone's life.

These specific characteristics of the hospitals create emergency conditions to work, generating a wide range of objectives that are much more complex than those of the business units, mainly oriented towards the maximization of profit.

#### What opportunities offers FM in this respect?

In many ways hospitals are moving in the direction of becoming health production industries (Rechel et al., 2009, p. 5). A growing number of patients are treated annually, while the numbers of beds in hospital facilities are permanently decreasing. This leads to a significant reduction in length of hospital stay and treatment of more patients on an ambulatory basis. Across Europe this requires better and coordinated treatment and greater efficiency, which increases the importance of FM. How this greater efficiency can be achieved?

It is estimated that around 20-30% of hospital costs are not linked to their primary processes, i.e. to the provision of healthcare services with the aim of treating patients. All other services may be treated as non-primary processes and fall within the scope of the facility management process (Lennerts et al., 2003, pp. 192–206). In Germany, for example, the volume of these FM processes corresponds to around EUR 18 billion per year (Statistisches Bundesamt, 2006).

Thus, the two types of processes – primary (core) processes and facility management (FM) processes,

contribute to serving patients through hospital services and clinical pathways. Clinical (or care) pathways have been developed in the United States and have been implemented internationally since the end of the 1980s. They represent tools used to guide evidence-based healthcare. The key element in clinical pathways is the standardization of procedures. Delivery of healthcare service in the hospital includes many 'customers'. The 'end client' is the patient whose interests are represented by the health fund. However, there are also intermediate customers, which, in the case of FM, have greater significance. They are clinical units (divisions) that provide health care and which are delivered from those who manage the facilities. Clinical units use the facilities of the hospitals and generate revenues in many countries in favor of the hospitals.

It is reported that clinical pathways had been implemented in more than 80% of hospitals in Bulgaria. This represents an enormous resource commitment both in the development of pathways, the training of staff, and in the ongoing implementation of pathways in the hospital setting (Saint et al. 2003, pp. 758–765).

The product of FM represents a supply of services in response to needs (Gabler, 2000). In particular, the product of FM service is delivered to the customers from a specific vendor. Since the objective of FM is to ensure optimal maintenance of core processes, the requirements for FM are determined by the core processes that it supports. With respect to FM the key requirement for the performance of an activity is the space, which is why it is the basic product of FM. Due to the need for high security and hygiene standards, construction of buildings and halls in hospitals includes significant degree of specification and is associated with high costs. In addition, the technical equipment in hospitals must be maintained in a reliable state, as well as the characteristics of space – such as ventilation, communication systems, etc.

Table 1. Facility Management Product List in Hospitals

FM Product List	
Outside facilities	Guard and security
Building and offices maintenance	Bed conditioning
Basic rent for buildings and offices	Maintenance of medical equipment
Technical maintenance	Management of automobile park and parking services
Electricity (power) supply	Information technology services
Water supply	Patients transport
Heating supply	Logistics
Cleaning / hygiene maintenance	Catering
Air conditions / equipment cooling services	Laundry / linen services
Office supplies	Printing and reprographics services
Sterilization services	Mail and telephone services
Waste disposal	Pest control

Source: Lennerts, K., "Facility management of hospitals", Chapter 9, In: "Investing in hospitals of the future", eds. by Rechel, B., S. Wright, N. Edwards, B. Dowdeswell, M. McKee, *Observatory Studies Series*, No. 16, World Health Organization European Health Property Network, European Observatory on Health Systems and Policies, 2009, p. 174.

A suggested classification of facility management costs and products in hospitals in Germany is shown in Table 1. In practice, the number of FM products is different for different countries. A survey in hospitals undertaken in Germany demonstrates that in the structure of the overall

costs of FM products the largest share is occupied by the following costs (Abel and Lennerts, 2005, pp. 531–541):

- Basic rent for buildings and offices or capital cost of available space – almost 41%;
- Catering – 8.62%;
- Cleaning / hygiene maintenance – 7.49%;
- Building maintenance – 6.63%;

- Maintenance of medical equipment – 5.07%;
- Technical maintenance – 4.48%;
- Heating supply – 3.45%;
- Laundry / linen services – 3.14%.

These eight facility management products account for 79.35% of overall costs, almost reaching the 80% threshold which is commonly used in ABC analyses to identify the most important categories of items. About 60% of the facility management costs are related with space-related products, 35% to quantity-related products and 5% to other-related products.

### **Brief Overview of the Military Medical Academy – Sofia**

Military Medical Academy – Sofia (MMA-Sofia) is a medical institution established under Section IV of the existing Law on Health (former Law on medical institutions) in the Republic of Bulgaria. MMA-Sofia carries out military research and military-academic activity.

In its structure the MMA-Sofia includes:

1. Management and central administration;
2. Hospitals, as follows:
  - a) General hospitals for active treatment in Sofia, as well as in other cities in the country, such as Varna, Plovdiv, Pleven and Sliven;
  - b) Hospitals for additional, long-term treatment and rehabilitation in the following Bulgarian cities – Bankya, Hisarya and Pomorie;
3. Medical posts, as follows:
  - a) Medical posts in the Central Administration of the Ministry of Defence, Defence Information Service and Military Police Service at the Ministry of Defense, as well as in the National Intelligence Service (NIS) and National Service for Protection (NSP) under the President of the Republic of Bulgaria;
  - b) Medical post in the State Agency for National Security (SANS) of the Republic of Bulgaria;
  - c) Medical posts in the Military Academy “Rakovski” and in the other higher military schools in Bulgaria;
4. Specialized units, as follows:
  - a) Military medical unit for emergency situations;
  - b) Research Center for military medical expertise and aviation and maritime medicine;
  - c) Center for mental health and prevention;
  - d) Research Center for military epidemiology and hygiene;
  - e) Research Center for radiological, biological and chemical protection.

The presented structural units are not legal entities. MMA-Sofia is a secondary authorizing officer to the Minister of Defense of the Republic of Bulgaria.

According to Art. 5 of the Rules and Procedures of the Military Medical Academy – Sofia, adopted by Decree of the Council of Ministers of the Republic of Bulgaria No. 168 of 02.07.2009, the MMA-Sofia has the following activities:

1. It carries out unique to the country diagnostic-curative and scientific and applied activities, as well as medical research in applying modern medical technologies.
2. It carries out primary and specialized outpatient medical care, prevention and rehabilitation of the personnel of the Ministry of Defense, the Bulgarian

army forces, the National Intelligence service, the National Service for Protection and the State Agency for National Security. Moreover, the MMA-Sofia undertakes specialized outpatient medical care, prevention and rehabilitation against payment – for other citizens.

3. It carries out hospital medical assistance, additional, long-term treatment and rehabilitation of the personnel of the Ministry of Defense, the Bulgarian army forces, the NIS, the NSP and the SANS, as well as to other citizens.
4. It develops new methods and tools for protection of the Bulgarian army and the Bulgarian population from nuclear, chemical and biological factors of defeat;
5. It prepares medical and non-medical personnel for the prevention and eradication of the consequences of disasters;
6. It conducts expertise of fitness for military service and establishment of suitability for military service.
7. It carries out scientific research and empirical activities in the field of mental health as well as psychological selection of military servicemen and civilian employees.
8. It carries out hygiene and anti-epidemic control in the Ministry of Defense and the structures directly subordinated to the Ministry of Defense, as well as in the units of the Bulgarian army forces, the NIS, the NSP and the SANS.
9. It creates, stores, maintains, preserves and updates material medical devices and medical products for institutional military stock with an agreement with the Minister of Defense.
10. It conducts trainings and specializations on military medical as well as on other medical specialties, trainings for professional qualifications for specific activities in a particular area of healthcare.
11. It conducts trainings for PhD education on scientific subjects, which are accredited under the Law on higher education and in accordance with the Law for the development of academic staff in the Republic of Bulgaria;
12. It performs periodical appraisals of its teaching and research staff in areas concerning military defence and the army forces, in accordance with the instructions of the Minister of Defense of the Republic of Bulgaria.
13. Carry out military and medical training of personnel and instructors in the Bulgarian army forces and medical insurance of combat and physical training of servicemen, as well as of the personnel of the Ministry of Defense, the NIS, the NSP and the SANS.
14. It is involved in operations and missions outside of the country with the army medical troops deployed.
15. It keeps in readiness a Military Medical Rapid Response Force for immediate actions in order to provide medical help and treatment in cases of disasters, wars and emergency situations.

The MMA-Sofia develops strategies, concepts and plan programs in the field of medical treatment in order to achieve interoperability with the armies of the other Member States of NATO, in coordination with the Ministry of Defense. It carries out prevention, diagnosis, treatment and rehabilitation of persons subject to the rights of the patients. These activities are carried out also

for other citizens subject to Medicare under the terms and conditions of the contracts signed with the National Health Insurance Fund (NHIF) and the National Social Security Institute (NSSI). The prices of these services are set out in the National Framework Contract for the respective year by the NSSI. The activities of all other citizens outside of the above two groups shall be made against payment in the price list approved by the head of the MMA-Sofia.

### SWOT Analysis of Facility Management of Hospitals: the Case of Bulgaria

The SWOT analysis is an appropriate method for identifying and assessing the strengths and weaknesses, opportunities and threats of facility management of any medical establishment. Initially, this analysis is intended for other industries, but it is increasingly important in the healthcare system. This method allows the hospitals to optimize their development opportunities and to implement prevention measures against threats to the environment. SWOT analysis combines the findings of strategic analysis of the external and internal environment (Grezky, 2010, p. 92). With /.

Strengths represent the factors that stimulate the successful operation of the organization. Examples are modern medical equipment, highly educated medical staff, high-quality health services which are provided, etc. Weaknesses are the factors that affect the quality of the health service or they increase the cost of these services. Such are, for example, outdated medical facilities, low application of ICT, the lack of financial resources, insufficient qualifications of the staff concerned, etc. Existing new business opportunities are viewed as opportunities for healthcare facilities. They include, for example, cooperation with other health organizations, the development of new programs for healthcare, increase resources for ICT in medical establishment, and so on. Factors that hamper the functioning of the hospitals are considered as threats. They include economic and political uncertainty, increased demand for expensive medical technologies, the state budget deficit, increased pressure to reduce healthcare costs, etc.

Our observations on the practice of health management demonstrate that application of the SWOT analysis has not reached the popularity, which is attributed to such analytical methods in the specialized literature.

At the current stage of development of the market of healthcare services in Bulgaria the reasons that restrict the possibilities for applying the methods of FM in the hospital's management are the following:

- a) The vast majority of general hospitals for active treatment are public and their goals diverge from their business criteria;
- b) The activities of the hospitals are highly regulated, and their management is a highly administered;
- c) Although the hospitals carry out numerous and various activities, their profiles are firmly fixed within the framework of one sector, which reduces the practical application of portfolio methods.

The strengths of the hospitals shall be determined by the available competences of staff, level of satisfaction of patients and staff, the location of the hospital and the internal distribution of the various offices, as well as the factors for competitiveness in comparison with other hospitals.

**Weaknesses** pose problems and malfunction of individual segments of the residence and the treatment of the patients in the hospital, the insufficient degree of satisfaction of the employees from working conditions and facilities. **Threats** to hospitals are the non-efficient property management and the provision of services at very low level, which lead to an increase in the cost of consumables, higher cost of facilities maintenance, lack of additional revenues from non-medical activities and to a reflux of patients who could receive similar treatment or consultation to another medical establishment.

**Positive potential for development** is determined by the ability of each hospital to serve a larger number of patients, to use the material resources, primary services and facilities in the most efficient and optimal way, and to expand its opportunities to sell a larger assortment of goods and services that accompany health care and to benefit and convenience of its employees.

Below are presented the strengths, weaknesses, threats and opportunities facing the facility management of the MMA-Sofia.

### Strengths:

- The structure of the hospital supposes closed cycle of healthcare – a diagnostic study, reception, room for hospital treatment, separate compartments for extra healthy facilities – laboratories and pharmacies.
- Patients treated in the MMA-Sofia have the opportunity to be healed by a highly qualified staff. Students studying in the MMA-Sofia can also benefit from highly professional education. At present in the hospital are employed 10 professors, 70 associate professors and other specialized medical and teaching staff. The MMA-Sofia currently takes measures to improve the specialized training of its personnel through encouraging its participation in courses for upgrading skills, expanding the spectrum of operations, particularly for the average medical staff, in view of the need for interchangeability and mutual assistance in the performance of daily duties. The hospital complies with all regulatory requirements for the selection and appointment of personnel as well as the requirements for the reduction of personnel in accordance with the Labor Code and other legislative documents in this field.
- Staff and patients at the MMA-Sofia have at their disposal retail (sales) offices, bank office and several ATMs located in the building of the hospital.
- Provision of quality living conditions of patients and staff of the MMA-Sofia, in accordance with the best European standards for safety and security, physical and psycho-emotional comfort.
- The large number of patients who visit the hospital daily are consumers of the retail offices in the hospital.

### Weaknesses

- Outdated facilities and equipment, which reduces the possibilities of renting teaching rooms and other areas. This leads to lower profitability of the MMA-Sofia.
- Closing of the Hospice at the MMA-Sofia, which has been operated until 10 years ago. This leads to the following negatives. Example: sick man spent stroke, in accordance with the established clinical pathway by the NHIF is entitled to stay in the hospital up to 5 day. After his discharge from the hospital, his family often diverted him to other medical centers for additional healthcare and rehabilitation, for which it should be



paid between EUR 30 and 60 per day, as the minimum stay is 10 days.

- The lack of a Single Information Center and a well-designed website of the MMA-Sofia which cannot give a profound, complete and update information on the patients and the staff of the hospital.
- The lack of parking area for patients and visitors to the hospital.

### Threats

- Reflux of patients to other medical establishments in the country. Loss of reputation of the hospital within the society.
- Decrease in number of beds in the hospital which leads to a significant reduction in length of hospital stay and treatment of more patients on an ambulatory basis.
- Financial losses from the mismanagement of the MMA-Sofia's property – building and offices, technical infrastructure, equipment, automobile park and parking services, etc.
- Increase in liabilities to external suppliers of goods and services, due to the generation of huge maintenance costs of built environment (buildings, offices, technical base and equipment) of the MMA-Sofia.
- Leaving the highly qualified medical staff and administrative personnel with managerial experience (Grezky, 2010, p. 93).

### Opportunities

- Development of activities, related to further treatment, rehabilitation and care for the sick and the elderly people.
- Performing the replacement of existing lighting fixtures with fixtures of new generation, which are energy saving and with long life. Investing in equipment and repair of modern teaching and meeting rooms, which can be attributed to partner organizations and to other entities with similar activity for organizing different events.
- Creation and maintenance of a Single Information Center (SIC), with a front office at the entrance of the hospital, which helps to direct patients and help doctors from diagnostic surgeries. SIC may be beneficial for medical and administrative staff of the hospital in providing different kind of information sought by them. As a result of an inquiry held among the hospital patients it is found that patients in the MMA-Sofia cannot navigate quickly to the location of the office that they need. Moreover, the correct and timely information would greatly facilitate the work of the medical staff and the administration of the hospital.
- Differentiation of a paid parking for patients of the hospital.

### Conclusion

The FM sector is now large and complex. The built structure and functional algorithm in the Military Medical Academy – Sofia in all their components (organization, personnel, equipment, buildings and related infrastructure) are the key factors for provision of high quality facility services. The specifics in the use and exploitation of the hospital's building makes greater load on the structure of the staff.

The shortage of highly qualified specialists in the hospital and their replacement on a functionality

principle through the outsourcing of certain services is a prerequisite for lower quality in the business of MMA-Sofia. The results of the survey on the subjective feelings of the patients about the quality of some of the supporting activities or absence of a certain facility services are subject to serious analysis and action plans for various improvements in this direction.

We consider that there is a crucial need to limit the economic costs of the MMA-Sofia and, in particular, to constraint the cost of utilities, which account for more than 33% of the total economic costs. We recommend also that the appropriate research on the quality of the facility activities from the point of view of the patients need to become a compulsory element when the patients are discharged from the hospital. In the case of low satisfaction of patients, the managing bodies of the hospital need to take appropriate measures.

Currently, facility managers are facing significant challenges – to know the markets and trends in their field and industry, and to be able to successfully consult their organizations or customers how to enhance and improve their services. Leading European and international facility management associations recognize the need the FM to become proactive in view of its key importance for each organization. This means Facility Management (European Facility Management Conference, 2014):

- To fight for a greater recognition and readability;
- To implement the key objective to add value and to contribute to the improvement of businesses and services and to processes' sustainability;
- To bind the strategy and merits of the organization with its services, which is essential for achieving its operational success.

In conclusion, it can be said that the development of the analyzed medical institution – Military Medical Academy – Sofia, will contribute to its recognition in the healthcare industry, both in Bulgaria and in the Balkan region. Thus the purpose of the managing board of the hospital can be fulfilled in the shortest definition of management – this is the “things to do” - undisputed in a timely and quality manner in the interest of the health of our fellow citizens.

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