

# THE IMPACT OF GOVERNMENT ACCREDITATION IN THE FIELD OF THE QUALITY OF MEDICAL SERVICES ON THE SATISFACTION OF PATIENTS IN ROMANIA

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## Abstract

*To achieve quality involves the use of standards in all medical and non-medical processes carried out in the medical system. Standards translate quality into operational terms. They set minimum levels of excellence or performance compatibility intervals. In the paper below I presented a brief history of quality management in the world, then a brief history of quality management in health to demonstrate the importance and relevance of implementing quality management in the current health system. The case study presents the interpretation of the data obtained after the evaluation of the medical unit by ANMCS, accreditation system of health units. In this content I presented the number of indicators implemented related to the applied standards and implicitly the number of non-compliant indicators. The results obtained lead to the presentation of the "strengths" of the health unit, also the recommendations are related to the processes that can be improved. The presentation of the results obtained from the application of satisfaction survey to inpatients during 2017 strengthens the belief that the implementation of quality management in a medical unit is not unnecessary work, on the contrary it is appreciated by patients and its continuation is an imperative action to have medical units at standards of excellence.*

## Keywords

quality management in health; quality management; quality standard; accreditation

## JEL Classification

I18; M20; O33

## Introduction

The appreciation of quality has changed a lot over the years. Traditionally, quality concerns were only the analysis of products removed from the conveyor belt. Nowadays, following the systematic development of processes, the cause of quality serves more for prevention than for subsequent analysis. In top companies, the quality system is applied in all departments, including marketing and sales. In all countries, in all sectors, and in education, and at the level of public administration, the quality management system is successfully applied.

Quality measurement is an essential cornerstone of the national movement to achieve a high value of healthcare that ensures significant results for patients and reduces costs, this being done by national and international accreditation bodies.

The role of legislation and development agencies is to encourage healthcare organizations to pay more attention to developing capacity-building activities.

### **Literature review**

The beginnings of quality are found in the medieval Europe of the end of the 13th century. In those times, craftsmen were organized into guilds that were responsible for elaborating strict rules for the quality of the products and services. In those times also, Inspection Committees were set up, that marked the seamless goods with a special symbol. However, the artisans also put their mark on products, thus having two marks: the inspection mark and the mark of the craftsmen, both serving as proof of quality, this system existing until the beginning of the 19th century. The quality system from factory production began in the mid-1750s in the United Kingdom, this turning into the Industrial Revolution of the 1800s due to changes in the prevailing production methods. In the United States, at the end of the nineteenth century, Frederick W. Taylor implemented a new management approach which goal was to increase productivity without increasing the number of qualified craftsmen, this being done by employing specialized engineers and using the craftsmen as inspectors whose duties were to execute the engineers' plans. This approach has led to increases in productivity but also to an increase in the number of rejects, leading to the establishment of inspection units in order to remove non-compliant products.

A new phase in the history of quality is the one when the United States, during the Second World War, introduced the sampling tables and published them into a military standard entitled Mil-Std-105, these were annexed to military contracts, suppliers knowing what they expected to produce.

At the same time, the Armed Forces sponsored the manufacturers to improve their quality through training courses in the statistical quality control techniques (SQC) of Walter Shewhart. Walter Shewhart began controlling the processes in the 1920s, showing that the quality of the final product is influenced by the quality of the processes that created it, and Shewhart also laid the foundation for control charts as a quality tool. W. Edwards Deming, is known for his activity in Japan after World War II, for his collaboration with the Japanese managers. Deming is known as "the post-war Japanese economic miracle." From 1950 to 1960, Japan had the largest economic growth, becoming the second largest economy in the world due to the processes partially implemented by Deming. He is the creator of the Plan-Do-Check-Act model

Joseph M. Juran, who predicted the quality of Japanese goods, will exceed the quality of goods produced in the United States in the mid-1970s due to the revolutionary pace of quality improvement in Japan. Working independently from W. Edwards Deming, Juran - focused on the quality management, went to Japan, started courses in quality management, the first beneficiaries being the top and middle managers, thus ensuring that in the 1970s Japanese products were seen as quality leaders.

Kaoru Ishikawa changed the way people think about work. He wanted to concentrate the activity for the customer's satisfaction, the customer following to receive services even after receiving the product. According to Ishikawa, quality improvement is a continuous process and can always be done one step further. He also drafted the cause-and-effect diagram, also called "Ishikawa" or "fish scheme", with the help of this diagram, the user can see all the possible causes of an outcome and can find the causes of imperfections, this being one of the first quality management tools.

Japan has revolutionized the quality approach from product inspection to improving all the organizational processes, the result being higher quality exports for lower prices. Thus, the "total quality" is born in the United States of America, which is a consequence of the evolution of quality in Japan, after the Second World War. Initially, US

manufacturers considered that the Japanese success was due to prices, but as time passed, quality competition continued to grow. The United States response was Total Quality Management (TQM).

Thus is born ISO 9000 - quality management standards, 1987, the national Baldrige quality program and the Malcom Baldrige national quality award established by the American Congress in 1987.

The quality management evolution continued with:

- Since 1995, the Malcolm Baldrige National Quality Award has added a criterion of business results to the successful measures of the applicant.
- In 2000, the ISO 9000 series of quality management standard has been reviewed in order to improve the customer satisfaction,
- In 2015 was implemented the ISO 9001 standard for the risk management,
- Six Sigma method, developed by the American engineer Bill Smith, while working for Motorola in 1980, in order to improve processes by minimizing defects.
- Dr. Yoji Akao centered the quality development by focusing on the wishes or needs of the customers in designing or redesigning a product or a service.
- There appear specific versions of ISO 9000 standards for quality management standards for the automotive industry (QS-9000 and ISO / TS 16949), aerospace (AS9000) and telecommunications (TL 9000) and for environmental management (ISO 14000).
- The services sector, healthcare, education and government implement the quality management.
- The education and healthcare sector was added to the Malcolm Baldrige National Quality Award.

Quality in health is the result of patients' expectations. One of the basic definitions of quality in health is given by Donabedian who describes the quality of healthcare as „those care that is expected to maximize the size of patients' well-being, taking into account the balance of expected gains and losses, occur at all stages of the health care process”.

Key points of the quality management evolution in the health sector:

- 1854 , Florence Nightingale in England, Quality improvement documentation
- 1861, Barton , SUA, Sanitary commissions,
- 1862,1918, Pasteur, Blue, France, SUA, Improvisations and innovation
- 1879, Chamberland, France, Sterilization
- 1895,1056,1960, Rontger, Safar, Laerdal, Germany, SUA, France, Norway, Tehnology
- 1910, Flexter, SUA, Education
- 1881–1955, Pasteur, von Behring, Kitasato, Descombey, Salk, Kendrick, Eldering, Pittman, Fleming, France, Germany, Japan, USA, England,
- Pharmaceuticals
- 1883–1945, Bismark, Beveridge, Kaiser, Germany, England, USA, Healthcare financing
- 1908, Ford, USA

The role of industry and mass production

One can say that the concern for providing quality health services began in 1854 during the Crimea War. With the outbreak of cholera among British soldiers, the British government sent a group of nurses to accompany Florence Nightingale to care for the sick people, their actions decreasing mortality from 42.7% to 2.2%.

The first improvements in the provision of healthcare, implemented by Florence Nightingale, consisted in:

- decreasing overcrowding,
- providing ventilation
- removal of the cavalry horses that were sheltered in the basement of hospitals,

- disinfection of sewers and latrines with peat coal (Nightingale, 1863)

Florence Nightingale has made meticulous records that led to the statistical measurement of quality from nowadays and has performed the collection, tabulation, interpretation and graphic display of descriptive statistics, for this she became the first woman elected in the Statistical Society (1860), in 1883, the Queen Victoria awarded her the Royal Red Cross, in 1907 being the first woman to receive the British Order of Merit.

In 1861, during the civil war from America, the Sanitary Commission was established, which, based on the lessons learned from Crimea, promoted clean and healthy conditions in the camps and hospitals of the Armed Union.

As a volunteer, Clara Barton has supervised the healthcare of soldiers in the state of Virginia in order to help meeting the goals of the Sanitary Commission. Dr. Elizabeth Blackwell helped Clara Barton, she worked with Florence Nightingale in England and was the first woman to graduate from the US medical school.

Louis Pasteur is identified as one of the "greatest benefactors of humanity of all times." He found that the disease is caused by microorganisms or microbes, which later became known as the germs theory. The discovery of the existence of germs and microbes led to the implementation of antiseptic practices by all physicians and hospitals in Europe and then in the USA. The entire research of Louis Pasteur led to "pasteurization", using heat to destroy microbes in food products.

The surgeon Dr. Rupert Blue, has contributed to the improvement of the health quality in America. During 1918 the flu pandemic has killed 50 million people, namely 1/5 of the Earth population. Dr. Rupert Blue instituted quarantine (for ships entering the country), compulsory medical examinations for all emigrants, newsletters that communicated weekly the status of the latest outbreaks. Also, Dr. Rupert Blue had to solve the problems that occurred during outbreaks of polio, smallpox, typhoid fever and bubonic plague. The surgeon took measures in order to eradicate rats and control mosquitoes during the opening of the Panama Canal.

Dr. Charles Chamberland, French physician and biologist, in 1879, invented the early prototype of the modern autoclave, based on the researches of the British physicist Dr. Denis Papin and the researches carried out by Louis Pasteur, with whom he frequently collaborated. He also led to the development of the Chamberland Filter and then designed the Chamberland Autoclaves.

Another significant moment in the history of health quality is represented by the discovery of X-rays, in 1895, by Wilhelm Conrad Röntgen, they revolutionized the ability to diagnose and eventually treat cancerous tumors and won the Nobel Prize for physics in 1901.

The development of Intensive Care Therapy was done by Dr. Peter Safar in 1956, his discoveries led to the development of the resuscitation technique, CRP, which was accepted worldwide, and Asmund Laerdal developed the first realistic dummy for CRP training.

In 1950, Dr. Safar convinced the Baltimore Fire Department to use fully-equipped ambulances with emergency medical staff. Dr. Safar also set up the first intensive care unit, being considered the largest specialist in the field of resuscitation research.

Medical education began in 1765 at the College of Philadelphia (now known as the University of Pennsylvania), which was co-founded by Benjamin Franklin.

Abraham Flexner has made the reform of medical education following the research on the state of medical education from US. The improvements proposed by him were followed by standardized tests for admission to medical schools (MCAT developed in 1928).

But some of the biggest discoveries that led to the increase in the healthcare quality have been the discovery of vaccines between 1881 and 1955:

- Antrax vaccine discovered in 1881 by Louis Pasteur;
- Antirabic vaccine discovered in 1885 by Louis Pasteur;
- Diphtheria vaccine discovered by Emil von Behring and Shibasaburo Kitasato in 1891;
- Tetanus vaccine discovered by Pierre Descombey in 1924;
- Polio vaccine discovered by Jonas Salk in 1955;
- Pertussis vaccine discovered by Peart Kendrick, Grace Eldering and Margaret Pittman in 1949.

The penicillin "miracle drug" discovered in 1928 by Sir Alexander Fleming in England has saved many human lives.

But the improvement in quality of the medical services was also made by the fact that health insurances appeared, during the nineteenth and twentieth centuries, in different countries.

In Germany, Chancellor Otto Von Bismarck devised a state health insurance program in 1883, Otto Von Bismarck being known as the father of healthcare in Germany.

In England, William Beveridge, responsible for the "Beveridge Report" from 1942, gave options for the reconstruction of the British healthcare system which led to the establishment of the national health service in 1948.

The US participated to voluntary, religious and charitable initiatives for the elderly and the poor people. The population who had money had easy access to quality healthcare. The American industrialist Henry Kaiser devised a health plan for his workers with a prepayment program. These prepaid programs evolved into Kaiser Permanente in 1945 in Oakland, California. The US health insurance system has developed unevenly, in a decentralized manner and has gaps even today.

Currently, Germany is on the 25th place in the WHO chart, England is on 18th and the USA on 37th.

## **Case Study**

### **Implementing the Quality Management System of medical services in *Medical Center SRL Tulcea***

The hospital MEDICAL CENTER SRL was opened in 2014, starting from January 2015 has started the implementation of the Quality Management System inside the medical unit. In 2015, in March, the application for registration to the accreditation process was submitted to the National Authority for Quality Management in Health Sector.

**Table 1 Situation of meeting the standards grouped  
by reference categories is the following**

Reference chapter according to OMH 446/2017	No. of indicators subject to analysis	Applicable indicators	Compliant indicators	Non-compliant indicators	Non-applicable indicators	Score achieved	Maximum score	Percentage %
<b>01. Strategic and organizational management</b>	533	4888	415	73	45	1,148.25	1366	84.06%
<b>02. Clinical management</b>	386	260	218	42	126	800.00	995	84.06%
<b>03. Medical ethics and patient's rights</b>	62	58	56	2	4	181.50	189	96.03%
<b>Total</b>	981	806	689	117	175	-	-	-

Source: ANMCS -Accreditation report

### **Reference 01 – Strategic and organizational management**

The purpose of the reference is to stimulate the hospital to conceive and substantiate its activities, based on the strategies and policies elaborated by the management structures, with determining on medium and long term the purposes and goals of the organization, with adapting the courses of action and the optimal allocation of resources for the accomplishment. of these goals, according to the mission of the organization.

It aims to determine the increase in the efficacy and efficiency of the hospital and its optimal interface with the healthcare system, maintaining and amplifying the market segment occupied.

The main goals of the reference are:

- Identifying the place that the hospital occupies and which it intends to occupy on medium term, in the health system;
- The correlative approach of the hospital with the environment where it operates;
- Synchronizing the activities of the organization with the potential of the resources;
- Establishing a pre-planned course of action destined to meet the goals proposed;
- Establishing a structure of consistent actions in behavioral plan, considering and favoring the development of an intense process of organizational learning, with the implementation of quality management and the development of the organizational culture.

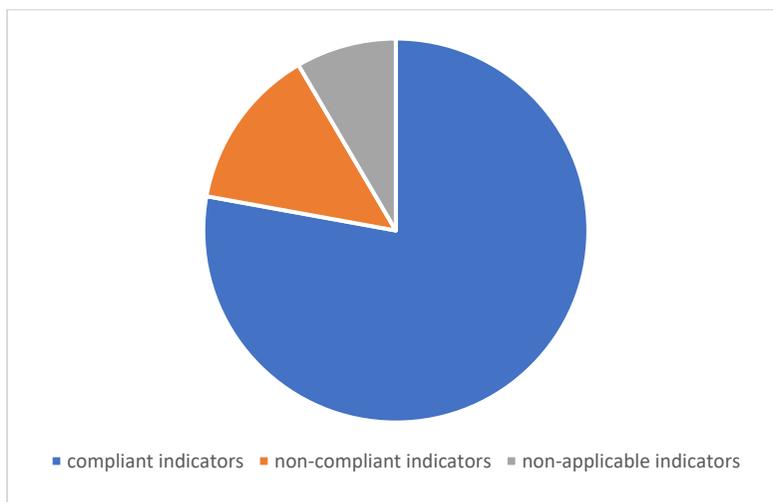
Score achieved by Reference 01 - 84.06%

**Table 2 Within Reference 01, 533 indicators have been subject to analysis,  
being identified:**

Applicable indicators	Number
Compliant indicators	415
Non-compliant indicators	73
Non-applicable indicators	45

Source: personal contribution

Achieving 1,148.25 points of 1366 maximum possible points, representing a percentage of 84.06%



**Figure 1 Structure of qualitative indicators used in the analysis of Strategic and organizational management**

Source: personal contribution

### Reference 02 – Clinical management

The purpose of the reference is focusing the healthcare services on knowing and meeting the needs of the patient generated by the disease condition and the social-behavioral particularities or the one's own or spiritual beliefs, expressed by him, under clinical safety conditions.

The hospital must apply best practices (efficient, effective and safe for the patient), in accordance with his health needs, ensuring his access to medical services and their continuity in a way that allows the traceability of processes, through proper, non-bureaucratic and real-time documentation.

The main goals of this reference are:

- Defining the mission of the hospital according to the level of available resources, by establishing the level of competence, expressed according to the types and complexity of the available services determined by the technical-material and professional capacity;
- Establishing the concordance between the patient's health needs and the mission and resources of the hospital;
- Limitation of the medical services provided within the hospital's competences;
- Ensuring the quality of the medical services provided and the patient's safety through monitoring continuously the healthcare results, its effectiveness and efficiency.

Clinical governance follows the steps of the patient's route from taking over to solving the case, its goals being reflected by the standards presented.

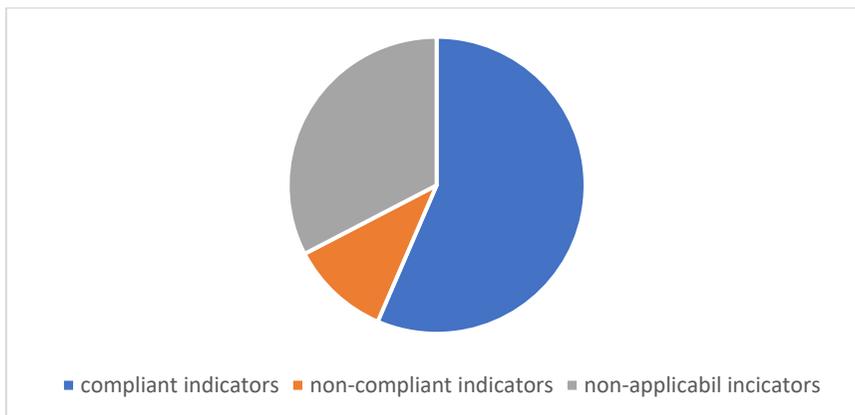
Score achieved by Reference 02 - 80.40%

**Table 3 Within Reference 02 386 indicators have been subject to analysis, being identified:**

Applicable indicators	number
Compliant indicators	218
Non-compliant indicators	42
Non-applicable indicators	126

Source: personal contribution

Achieving 800.00 points of 995 maximum possible points, representing a percentage of 80.40%



**Figure 2 Structure of qualitative indicators used in the analysis of Clinical management**

Source: personal contribution

### Reference 03 – Medical ethics and patient’s rights

The purpose of this reference is to support the hospital in establishing the conditions for conducting its activity so as to allow the qualitative goals imposed to the medical act to be achieved, with the respect of patients' rights, their protection against professional errors, but also the protection of the medical body and the health unit against the risk of entailing the civil liability.

The main goals of this reference are:

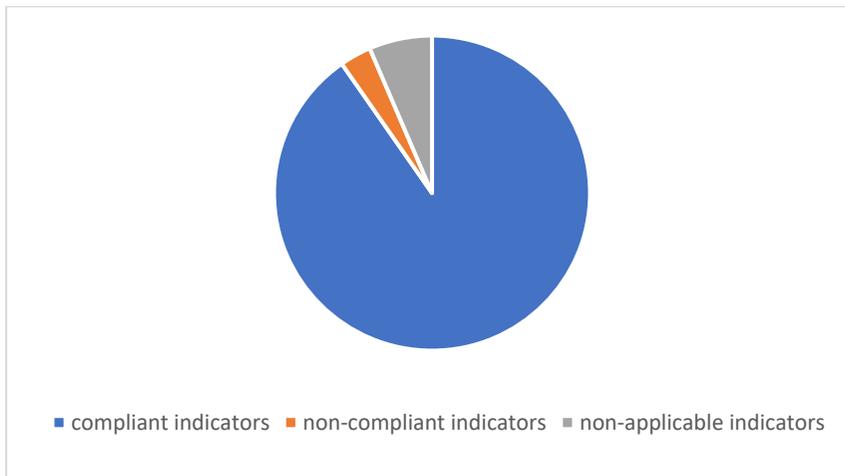
- adapting the qualitative requirements of the medical service to the current context of knowledge and compliance with the medical legislation
- managing the risk of civil exposure of the professionals and of the hospital within the interaction with the prejudiced patients or who consider to be prejudiced as a result of rendering the medical assistance.

Score achieved by Reference 03 - 96.03%

**Table 3 Within Reference 0362 indicators have been subject to analysis, being identified:**

Applicable indicators	Number
Compliant indicators	56
Non-compliant indicators	2
Non-applicable indicators	4

Source: personal contributions



**Figure 3. Structure of qualitative indicators used in the analysis of Medical ethics and patient's rights**

Source: personal contribution

### **Presentation of the results achieved and the health unit classification into the accreditation category**

Following the analysis of the documentation resulting from the assessment process for accreditation,

The hospital assessment and accreditation unit identified a number of 806 applicable indicators, of which 689 compliant and 117 non-compliant indicators, resulting into:

- ✓ total score achieved \* 85.90%
- ✓ number of standards with a score lower than 51% \*\* 0
- ✓ percentage of indicators with score (-10) \*\*\* 1.45%

Certain indicators are specific to certain activities depending on the specialty of hospitals, MEDICAL CENTER SRL being a monodisciplinary recovery hospital, specialized in treating chronic diseases, does not have authorized some activities such as surgery, operating room, neonatology, thus explaining the existence of a number of indicators that cannot be applied.

Based on the Order of the ANMCS President no. 10/2018 regarding the approval of accreditation categories of the sanitary units with beds related to the second cycle of accreditation, as amended and completed, published in the Official Gazette of Romania, Part I, no. 95 from January 31, 2018, MEDICAL CENTER SRL, Tulcea County, falls into the second category, Accredited with recommendations.

The implementation of the Quality Management System inside the hospital unit was a challenge for the management and the medical staff. The deficiencies of the employees from the health sector in terms of their vision on quality must be highlighted. Patients' fate is often determined based on the individual decisions of the employees in the health sector. Even today, in case of these decisions, only the limited medical knowledge play a decisive role and the related sciences, such as the economic aspects of the medical system, the health management or the results and the criteria of the quality management, are rarely applied.

Accreditation of health units:

- ✓ Represents the process of validating the compliance of the features of the health services performed by the health units, with the accreditation standards enforced by ANMCS and approved under the law, following which health units are classified

- by accreditation categories in order to give confidence in their technical-professional and organizational competence;
- ✓ is an external and, mainly, independent assessment process, carried out by persons specially trained for it – assessors;
  - ✓ focuses on three dimensions: implementation of the quality management system, organization of processes for accreditation of health services and improvement in professional practices;
  - ✓ regards the hospital as a set of processes carried out by an organization, resulting into patient-centered health services.

Accreditation purpose:

- ✓ Health services to provide safety conditions for the patients, staff and environment;
- ✓ The health services provided to meet the needs of the communities served;
- ✓ The patients' taking over by the health units to be done within the limits of competences and some categories of accreditation of sanitary units with beds

The general minimum mandatory conditions for the classification of the sanitary unit with beds into the accreditation categories are:

- ✓ each accreditation standard must be met at least 51%;
- ✓ the critical indicators regarding the patient safety to be met 100%.

The criteria according to which the classification into accreditation categories of the sanitary units with beds related to the second cycle of accreditation are the following:

- ✓ the total score achieved following the assessment of compliance with the requirements of the standards of the National Health Quality Management Authority;
- ✓ the share of indicators with value (-10) applicable to the sanitary unit;
- ✓ the level of fulfilling the requirements regarding the achieving of the sanitary permit, expressed by the existence or non-existence of a compliance plan.

## Results

The score achieved following the analysis of the documentation resulting from the assessment process in view of the accreditation confirms the effort that has been made in order to ensure that the health services we provide meet the needs of the community served and to ensure the safety conditions for the patient, staff and the environment.

## Strenghts

1. ensuring the optimal performance of all processes of providing medical and health care as a result of the correct definition of the organizational structure and organizational management;
2. ensuring the staff needs by the human resources management, according to the mission undertaken by the hospital;
3. the financial and administrative management that responds to the strategic and operational goals of the hospital;
4. the organization, respectively the functioning of the service quality management system, which ensures the performance of all processes related to quality monitoring and improvement inside the hospital;
5. customized organization of the discharge or transfer of the patient under safe conditions;
6. promoting respect for the patient's autonomy;
7. observing the principle of equity and social justice, respectively the patients' rights;
8. observing the principles of well-being and non-harm.

### **Improvement potential**

1. the existence of the consistency between the strategy and strategic management of the organization with the need for health care and the dynamics of the health services market;
2. the information system that responds to information needs and determines their effective use inside the hospital;
3. developing a communication system at the hospital level that meets the needs of the organization and beneficiaries;
4. preventing the occurrence of damages through the management of the non-clinical risks underlying the decision-making process;
5. the need for the care environment to provide the conditions necessary for the delivery of medical assistance;
6. taking care of patients, which is done according to their needs, mission and resources available from the hospital;
7. the initial assessment by identifying the needs of the patients within the context of knowing their exposure to risk factors (environmental, social, economic, behavioral and biological) for the establishment of the need for their assistance and medical care;
8. addressing the patient in an integrated and specific way, with applying the best medical practices, in order to ensure continuity of care and nursing;
9. the ability to provide paraclinical services according to the examination needs established by clinicians;
10. ensuring continuity of medicine treatment and patient safety through a high performance pharmaceutical management;
11. the concern for increasing the capacity to prevent and control the infections related to the assistance by implementing and observing good practices in the field;
12. development, respectively the implementation of the policy of insurance and improvement in the patient's safety;
13. the implementation of the clinical audit for the purpose of improving healthcare and decreasing variability in practice.

### **Conclusion**

The implementation of quality management in MEDICAL CENTER hospital, led to the improvement of the conditions granted to patients during hospitalization, the reduction of risks, the treatment of patients according to procedures developed according to national and international guidelines. A future research in 5 years when the next accreditation cycle will be showed you the value of implementing the quality management standards in the hospital MEDICAL CENTER hospital. Another tool for measuring the implementation of quality in hospitals is done by applying questionnaires to patients to measure satisfaction, this method led to the following results:

#### **Analysis report of patient satisfaction surveys**

Year 2017

During 2017, 595 surveys were distributed to hospitalized patients, of which 595 patients were respondents, so 100% of patients answered

Out of 595 responding patients, 77.64% were retired, 12.60% were employees, 9.7% were other categories

56.47% were urban patients

65.56% of rural patients

**6. How many times have you benefited from the medical services offered by the hospital?**

51.03% first time

36.13% benefited several times

0.75% loyal patients

**7. What is the general impression about the hospital visit?**

98.99% very good impression.

0.09% good impression

**8. How did you find out about the services offered by the hospital?**

0.16% brought by ambulance

45.71% from friends

0.16% of TV

19.15% of the family

1.1% via the Internet

0.16% of the written press

0.5% through street advertising

33.10% from the family doctor

**9. How do you appreciate the hospital environment?**

84.70% excellent

8.9% very good

0.16% good

**10. How do you appreciate the behavior of the medical staff?**

92.43% excellent

7.5% very good

**11. How do you appreciate the behavior of the non-medical staff employed by the unit?**

91.42% excellent

8.06% very good

0.33% satisfactory

0.16% unsatisfactory

**12. How do you appreciate the way you were treated during the visit?**

93.35% excellent

7.5% perfect

**13. Upon admission you were accompanied to the reserve by?**

99.66% health personnel

0.33% of the family

**14. Please provide ratings for the following services**

14.1 accommodation - 100% perfect

14.2 nutrition - 97.47% perfect, 2.5% good

14.3 time allowed by the salon doctor for your consultation - 98.65% perfect, 1.16% good, 0.16% unsatisfactory

14.4 quality of medical care provided by:

14.4.1 the salon doctor - 99.83% perfect, 0.16% good

14.4.2 nurses - 99.66% perfect, 0.42% good

14.4.3 nursemaid - 99.49% perfect, 0.5% good

**15. at the functional explorations/laboratory analyzes you were accompanied by:**

100% - medical staff

**16. Have you been instructed on how to take your medicines?**

93.78% yes, always

0.16, yes, sometimes

**17. Regarding the administration of drugs:**

10.1 Has it done under the supervision of the nurse?

88.57% yes, always

0.5% yes, sometimes

10.2 Have you received medication for one day of treatment?

4.7% yes, all at once  
75.46% divided partially  
3.3% never

**18. Were medicines administered in hospital?**

75.63% were administered only from the hospital  
3.19% do not know

**19. If the drugs were bought by the family, what was the procedure:**

0.5% based on a simple prescription issued by the hospital doctor;  
23.86% based on a prescription issued by the family doctor/specialist on the recommendation of the hospital doctor;  
12.10% do not know.

**20. You were satisfied with the care provided:**

13.1 during the day - 100% yes  
13.2 during the night - 100% yes  
13.3 in weekend - 100% yes

**21. General impression about the hospital**

97.98% very satisfied  
1.5% satisfied  
0.5% dissatisfied

**22. What would you like to improve in the hospital?**

0.67% personal behavior  
9.7% accommodation conditions  
89.4% do not know

**23. If you need to be readmitted, you will opt for the same hospital?**

100% - yes

**24. Will you recommend the medical services offered by the hospital and to your family or friends?**

100% - yes

Analyzing the data collected through these surveys we can say that there would be aspects to improve such as: the environment and accommodation conditions, but like any activity of providing health services, this is a perfectible and dynamic activity.

**References**

- Cavaillon, J.M., Legout, S. (2019), Duclaux, Chamberland, Roux, Grancher, and Merchnikoff: the five miskeeters of Louis Pasteur. *Gene& Immunity*, Volume 20, 344-356.
- Assmus, A., Line, B. (1995), slac.stanford.edu. [Online] Available at: <https://www.slac.stanford.edu/pubs/beamline/25/2/25-2-assmus.pdf> [Accessed 14 01 2020].
- Bordenave, G. (2003), Louis Pasteur (1822-1895). *Microbe and Infection*, 5(6).
- Conti, R.F., Warner, M. (1994), Taylorism, teams and technology in 'reengineering' work-organization, *New Tehnology, Work and Employment*, September.
- Delooz, P. H. (2003), International emergency medicine: the vision of a pioneer, Prof. Dr. Peter Safar, on emergency medical care, *European Journal of Emergency Medicine*, 10(3), p. 163.
- Donabedian, A. (1978), The quality of medical care, *Science*, 26 May, 856-864.
- Dr. Blue, R. (1948), Dr. Rupert Blue, US Health Leader; Former Surgeon General Dies i Noted for Work in Bubonic i Plague and With Leprosy, *The New York Times*, p. 27.
- H., E., 2010. Elisabeth Blackwell: a pioneer female medical graduate, *British Journal of Hospital Medicine*, Volume 71.

- Huston, R.P. (1972), Abraham Flexter in Perspective: American Medical Education 1865-1910, *Bulletin of the History*, 46(6).
- Juran, J. M. (2002), A call to actions: the summit: Carlson School of Management, University of Minnesota-Minneapolis, *Measuring Business Excellence*, 1 september.
- Mauleon, C., Bergman, B. (2009), Exploring the epistemological origins of Shewhart's and Deming's theory of quality: Influences from C.I.Lewis' conceptualistic pragmatism, *International Journal of Quality and Service Sciences*, 1(2), p. 160.
- Meyer B. C., Bishop D. S. (2007), [www.emeralddinsight.com/1751-1348.htm](http://www.emeralddinsight.com/1751-1348.htm). [Online] [Accessed 14 01 2020].
- Nightingale, F. (1979), Looking back. Taken from "Notes on Hospitals" by Florence Nightingale, 1863. 01 Septembrie, pp. 39-43.
- Peterson, P. (1999), Total quality management and the Deming approach to quality management, *Journal of Management History*, 5(8).
- Rotaru, D. M. (2013), Tendințe actuale a sistemelor de asigurari de sanatate in diferite tari. [Online] Available at: [https://ibn.idsi.md/sites/default/files/imag\\_file/66.Tendinte%20actuale%20a%20sistemelor%20de%20asigurari%20medicale%20in%20diferite%20tari.pdf](https://ibn.idsi.md/sites/default/files/imag_file/66.Tendinte%20actuale%20a%20sistemelor%20de%20asigurari%20medicale%20in%20diferite%20tari.pdf) [Accessed 14 01 2020].
- Suarez-Barraza, M. F., Rodriguez-Gonzalez, F. G. (2019), Cornerstone root causes through the analysis of the Ishikawa diagram, is it possible to find them? A first research approach, *International Journal of Quality and Service Science*, 12 June.
- Tjomsland, N., Peter Baskett, P. (2002), The Resuscitation Greats - Asmund S. Laerdal, *Resuscitation*, 53(2), 115-119.
- Yung, W. (1997), The values of TQM in the revised ISO 9000 quality system, *International Journal of Operations & Production Management*, 1 February.