

# THE CONCEPT OF QUALITY IN THE FUNCTION OF SECONDARY HEALTH CARE

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# THE CONCEPT OF QUALITY IN THE FUNCTION OF SECONDARY HEALTH CARE

## ABSTRACT

The paper brings an overview of basic approaches to the concept of quality and quality management in order to improve secondary health care. We observe the concept of quality from the perspective of accreditation, categorization and certification of health institutions in the secondary health care. Quality health care is one that meets the needs of users and professional needs, achieves its goals and uses resources in the most efficient manner. Quality in health care is an example of good practice of adopting and improving standards, processes and outcomes. Improving quality requires knowledge and skills with an emphasis on lifelong learning and adjustment to patient's needs and values. Quality is the responsibility of all individuals within the organization. Poor quality is expensive because of the inaction of people within the system. The Health Care Quality Act has determined the principles and the system of measures for achieving and improving quality. These are the measures for achieving quality health care and the implementation of the principles of efficiency and effectiveness of the quality of health care procedures at all levels of health care, the principles of orientation to the patient as well as the principle of patient safety. The implementation of quality systems results in some new expenditures and every expense incurred is in the function of creation and production of goods and services. In medical institutions we provide health services and thus achieve income. Expenses have to be calculated into the price if we want to generate profit.

**Keywords:** Secondary health care, concept of quality, quality improvement

## 1. Introduction

The concept of quality indicates to what extent and for how long the product/service meets the requirements of users. The quality of a product/service is, therefore, the result of two specific activities: product/service design and operating systems that enable the creation of products or services (Barković, 2009: 185).

“*Licensing* is the process by which a government authority grants permission, usually following inspection against minimum statutory standards, to an individual practitioner or healthcare organization to operate or to engage in an occupation or profession. This is the role of Monitor in England in relation to foundation trusts. *Certification* or formal recognition of compliance with a set of minimum standards

(e.g. the ISO 9000 series for quality systems) validated by inspection – a function vested with the CQC. *Accreditation* or public confirmation by an internationally recognized agency of the achievement by healthcare organizations of standards and quality assurance procedures, demonstrated through independent, external peer assessment<sup>17</sup> (Shaw, 2004: 5). “A wealth of knowledge and experience in enhancing the quality of health care has accumulated globally over many decades. In spite of this wealth of experience, the problem frequently faced by policy-makers at country level in both high- and low-middle-income countries is to know which quality strategies – complemented by and integrated with existent strategic initiatives – would have the greatest impact on the outcomes delivered by their health systems. There are two main arguments for promoting a focus on quality in health systems at this time. Even where health systems are well developed and resourced, there is clear evidence that quality remains a serious concern, with expected outcomes not predictably achieved and with wide variations in standards of health-care delivery within and between health-care systems. Where health systems – particularly in developing countries – need to optimize resource use and expand population coverage, the process of improvement and scaling up needs to be based on sound local strategies for quality so that the best possible results are achieved from new investment<sup>20</sup>” (WHO, 2006: 3).

The international standard that describes the quality management system is ISO 9001:2000. The requirements given in the standard can be applied to any organization, regardless of its type, size and products or services it delivers, and therefore the standard is called generic. Today, in a time of general globalization, much attention is paid to enhancing the quality, customer satisfaction with any product or service and standardization in the work process. Quality in health care is comprised of standards (of treatment and health care) and indicators (measurable acts). If we achieve good hospital practices through guidelines (standards), and we manage to maintain and improve them, we can talk about quality in health care. Mittermayer et al. note that the accreditation is an award for providing quality and safe health care, but also the most effective method of external evaluation of work (Mittermayer et al., 2010: 425).

Accreditation standards are focused on the customer, i.e. the end user of health care, and cover the areas of work and practice in the hospital system. Accreditation is a voluntary process and provides an

opportunity for health care facilities to get through the tender application and be selected. Recommendations for improving the quality of health protection and the functioning of the entire health care system include: further development and installation of quality standards in the operation of health facilities, improving information systems as a means of promoting the quality of functioning of the entire system, ensuring sufficient financial resources, investing in prevention, the development of quality indicators as well as the monitoring system and records to enable quick reporting. It is important to recognize and take into account the different dimensions of quality set realistic expectations and create a balanced health system pursuant to them (Ostojić et al., 2012: 109).

## 2. Literature overview

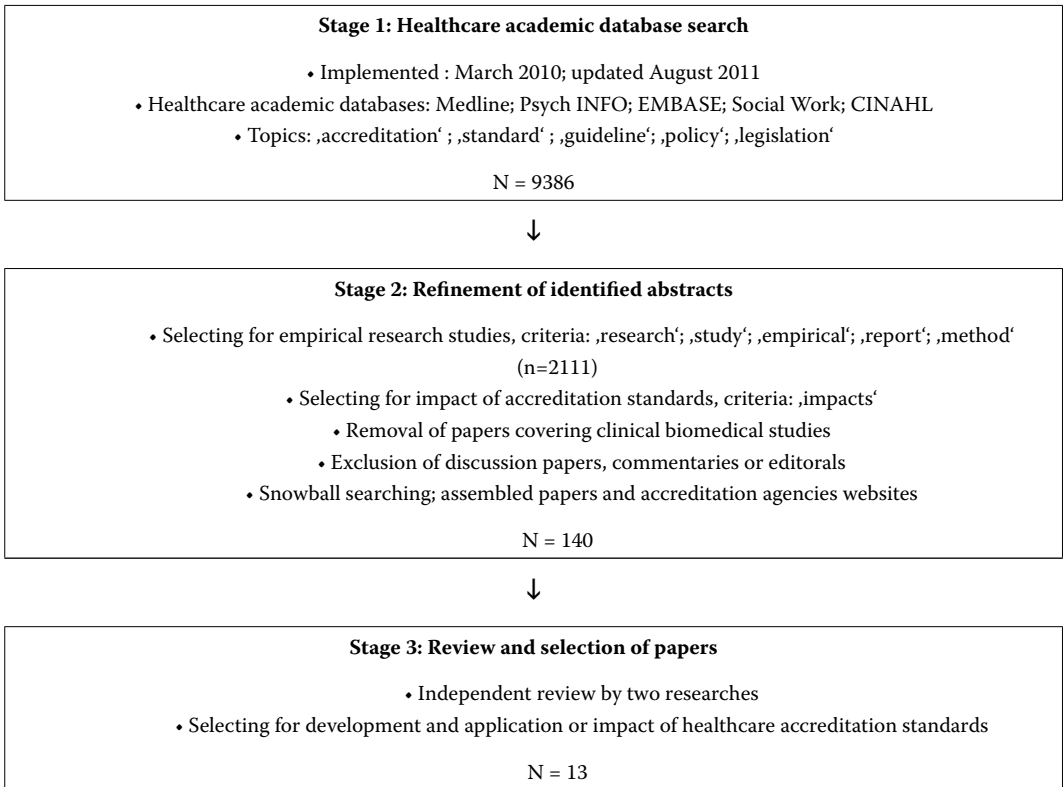
Studies to date have mostly focused on the impact of accreditation on health services and the focus is placed on accreditation standards and outcomes.

Roney and Oostenberg have proposed that accreditation should achieve the following:

- improving the quality of medical care by identifying optimal targets in meeting the standards for health facility,
- stimulate and improve the integration and management of health services,
- establish a comparative database of health care organizations that are able to fulfil selected structures, processes and outcomes of standards or criteria,
- reduce the cost of health care with an emphasis on increasing the efficiency and effectiveness of service,
- provide education and counselling on strategies to improve the quality and “best practices” in health care,
- boost public confidence regarding the quality of health care, and
- reduce the risks associated with injury and infection to patients and staff (Roney, Oostenberg, 1999: 18).

Greenfield et al. searched the literature through three phases related to the selection of databases for the terms ‘accreditation’, ‘standard’, ‘guideline’, ‘policy’ and ‘legislation’ in the health sector (Table 1) (Greenfield et al., 2012: 230-31).

**Table 1 Literature search, review and selection of flow chart**



Source: Greenfield et al., 2012: 231

Santos de Salles et al. have studied the culture of quality among workers at an accredited department of Traumatology and Orthopaedics. They point out that accreditation is developed to create a culture of safety and quality in institutions that have recognized the importance of improving care for patients. Accreditation is an institutional priority that should be used as a process and an effective means of evaluation and quality management (Santos de Salles et al., 2015: 248-253).

Salehian et al. note that accreditation is an international evaluation procedure, and can improve the productivity index by improving the quality of medical services. One can raise the quality of services to patients and managers recommend the implementation in hospitals participating in accreditation process (Salehian et al., 2015).

The study analyses the perception of the multidisciplinary team for accreditation. Interview analysis tells us that accredited hospitals are similar to private hospitals and that the satisfaction level is high-

er. Participants perceive accreditation as a convenient system for quality management which promotes the development of professional skills and improves cost and organization management as well as employee satisfaction (Camillo et al., 2016).

“The healthcare system in Australia is currently implementing a stronger regulatory framework that has many key and important features. These include common standards, legislated participation and sector wide involvement and the provision of common platforms for performance review and reporting. An important agenda is the identification and opportunities to enable a robust continuum of compliance to improvement in these formal quality processes. The provision of accreditation services to monitor against the national Standards as well as against standards focused on specialised service provision and linkage to individual health provides quality strategic agendas and plans should be supported. A key driver associated with both the interpretation of quality and performance and the consistency of ratings of organisations in a complex

system is the availability, training and engagement of assessors and surveyors with in-depth understanding of health service delivery and healthcare organisations” (McPhail, 2015: 63).

Most of the countries have more than one accreditation organisation, but only one was chosen for this analysis in those particular cases (usually the one

primarily focused on hospital accreditation). Table 2 provides the accreditation authority’s name, describes its relationship to the government, assesses whether accreditation in that country is voluntary or not, and states whether that organisation accredits public and/or private healthcare facilities<sup>3</sup> (Econex, 2010: 5).

**Table 2 Accreditation authorities in a number of countries**

Country	Organisation	Relationship to government	Voluntary	Public / private facilities
Argentina	Technical Institute for Health-care Organisations (ITEAS)	Independent, Non-governmental Organisation (NGO)	Yes	Public & private
Australia	Australian Council on Health-care Standards (ACHS)	Formal links, but not directly funded	Yes	Public & private
Canada	Canadian Council on Health Services Accreditation (CCHSA)	Independent, NGO (in some provinces government gives a financial incentive for accreditation)	Yes	Public & private
France	National Agency for Accreditation and Evaluation in Health-care (ANAES)	Independent public agency, partially funded by government	No	Public & private
Germany	Cooperation for Transparency and Quality in Hospitals	Independent, but partially funded by government	Yes	N/A
Italy	(individual provincial programmes)	Government agencies	Yes	Public & private
Japan	Japan Council for Quality Health Care (JCQHC)	Independent, but founded in association with government	Yes	Public & private
Korea	Hospital Performance Evaluation Programme	NGO, but government supported	Yes	N/A
Malaysia	Malaysian Society for Quality in Health	Independent, NGO	Yes	Public & private
Netherlands	Netherlands Institute for Accreditation of Hospitals (NIAZ)	Supported by government	Yes	Public
New Zealand	Quality Health New Zealand (The New Zealand Council on Healthcare Standards)	Independent	Yes	Public & private
Thailand	Hospital Quality Improvement and Accreditation Institution	Independent, but partially funded by government	Yes	Public & private
USA	Joint Commission on Accreditation of Healthcare Organisations (JCAHO)	Independent	Yes	Public & private

Source: WHO (2003) and Rooney & Oostenberg (1999) / Econex, 2010: 6, available at: [http://econex.co.za/wp-content/uploads/2015/04/econex\\_health-reform-note\\_2.pdf](http://econex.co.za/wp-content/uploads/2015/04/econex_health-reform-note_2.pdf) (Accessed on: July 21, 2016)

One of the integral elements of a well-organized health system is the process of monitoring the improvement of health care quality. This is the impera-

tive of all strategic documents on health policy and activities of agencies with an aim of meeting the set objectives (Stavljenić-Rukavina, Kalanj, 2010).

### 3. Quality – a way for improving health care

The benefits of a quality system are manifold: better communication, definition of procedures and accountability, better maintenance of equipment, keeping proper documentation, self-evaluation system, monitoring results and action in the direction of continuous improvement.

“In accordance with EU directives and recommendations of the Council of Europe and the World Health Organization, the establishment of accepted standards and quality indicators (indicators), risk management systems, internal and external quality assessment (accreditation) at all levels, national training system for quality and patient safety, strengthening the role of patients and financing a quality system with recognition and reward for improvement are very important. The lack of patient safety is a serious public health problem, creating high costs for the health care system, which is already faced with limited resources. The Council of Europe has in its document White Paper “Together for Health: A Strategic Approach for the EU 2008-2013” defined patient safety as a priority area”<sup>4</sup> (National Strategy, 2012: 318-319).

“While it is important to recognize these differences in roles and responsibilities, it is equally important to recognize the connections between them. Examples include the following:

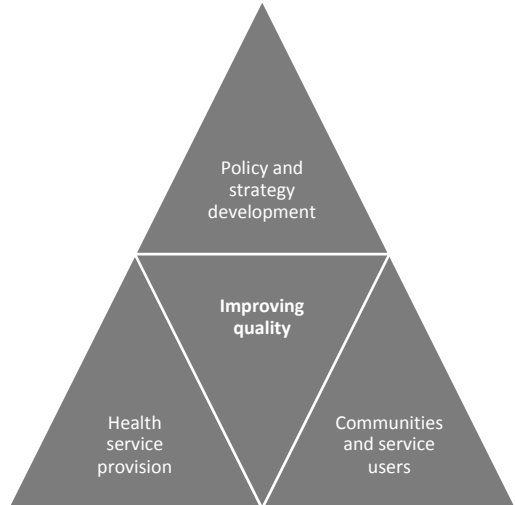
- Decision-makers cannot hope to develop and implement new strategies for quality without properly engaging health-service providers, communities, and service users.
- Health-service providers need to operate within an appropriate policy environment - Basic concepts of quality improvement for quality, and with a proper understanding of the needs and expectations of those they serve, in order to deliver the best results.
- Communities and service users need to influence both quality policy and the way in which health services are provided to them, if they are to improve their own health outcomes” (WHO, 2006: 10).

These critical relationships are summarized in Figure 1.

**Table 3 Universal quality management processes**

	Quality planning	Quality control	Quality improvement
1.	Establish quality goals	Choose control subjects	Prove the need
2.	Identify customers	Choose units of measure	Identify projects

**Figure 1 Roles and responsibilities in quality improvement**



Source: Authors, according to: WHO, 2006: 11

The concept of quality encompasses at least three dimensions, and consequently has three different meanings:

1. comparative meaning in terms of *the degree of excellence*,
2. quantitative meaning in terms of *the achieved level*,
3. suitability of something for certain purposes, i.e. a quality to *satisfy the specific needs*<sup>5</sup> (AKAZ, 2016).

The basic processes of Juran’s trilogy are the following:

- Quality planning
- Quality control
- Quality improvement (Table 3) (Juran, Gryna, 1993).

	Quality planning	Quality control	Quality improvement
3.	Discover customer needs	Set goals	Organize project teams
4.	Develop process features	Create a sensor	Diagnose the causes
5.	Develop process features	Measure actual performance	Provide remedies
6.	Establish process controls	Interpret the difference	Deal with resistance to change
7.	Transfer to operations	Take action on the difference	Control to hold the gains

Source: Juran, Gryna, 1993

The aim of quality policy is to implement a system of improving quality of health care in accordance with EU requirements, the establishment of European standards of quality, national program indicators, internal and external quality assessment at all levels, national training system for quality and patient safety, and financing of quality system with recognition and reward for improvement (Ostojić et al., 2012: 116).

Expenditures for the implementation of quality systems based on the Quality Act are divided into two phases, the implementation phase and the quality management phase. In the phase of implementation, expenses rose due to organizational and structural changes, which include:

- Establishment of units for quality (increased number of employees)
- Setting up the Commission for internal control (training and operation)
- Process approach
- Strictly defined competences of health staff
- Algorithms and guidelines
- Medical equipment and supplies
- Health environment
- Computerisation (Lukovnjak, 2008: 36-37).

### 3.1 Standards of health care quality

Standards are increasingly present and talked about in health policy. Greenfield et al. state that standards are an important tool for improving clinical practice and organizational performances. However, there is a lack of empirical evidence which examine the development, implementation and effects of health care accreditation standards (Greenfield et al., 2012: 329).

“Standards are generally classified as addressing a system’s inputs (or structures), the processes the organization carries out, or the outcomes it expects from its care or services. Table 4 provides a brief summary and examples of these types of standards. Standards can develop from a variety of sources, from professional societies to panels of experts to research studies to regulations. Standards might also be organization-specific, such as those reflected in a hospital’s clinical policies and procedures or clinical practice guidelines for the management of emergencies. Standards might evolve from a consensus of what are ‘best practices’ given the current state of knowledge and technology” (Rooney, Oostenberg, 1999: 9).

**Table 4** Types and examples of standards

**Structure standards** look at the system’s inputs, such as human resources, the design of a building, the availability of personal protective equipment for health workers, such as soap, gloves, and masks, and the availability of equipment and supplies, such as microscopes and laboratory reagents.

**Process standards** address the activities or interventions carried out within the organisation in the care of patients or in the management of the organization or its staff. Process standards for a hospital or health centre might address areas, such as patient assessment, patient education, medication administration, equipment maintenance, or staff supervision. Recently, professional bodies have developed explicit process standards called “clinical guidelines”. Such guidelines are based on scientific medical evidence [Evidence Based Medicine]. Governmental agencies, insurers and professional bodies are promoting their use in the management of common or high-risk clinical conditions.

**Outcome standards** look at the effect of the interventions used on a specific health problem and whether the expected purpose of the activity was achieved. Examples of outcomes, both positive and negative, are patient mortality, wound healing without complications (e.g., infection), delivery of a healthy infant without complications, and a resolution of an infection through the appropriate use of antibiotic therapy.

Source: Rooney, Oostenberg, 1999: 9

In accordance with the Health Protection Quality and Social Care Act, quality standards of health care are precisely quantified descriptions of standards in connection with the performance of medical procedures, health workers, equipment, materials and the environment in which medical procedures are performed, thus ensuring the quality of health care<sup>6</sup> (Health Protection Quality and Social Care Act, 2011).

Quality standards of health care are:

- Continuous improvement of the quality of clinical and non-clinical procedures
- Safety of patients and staff
- Medical records
- Rights and experiences of patients, staff satisfaction
- Infection control
- Deaths and autopsies
- Monitoring side effects and adverse events related to medical devices
- Internal rating
- Supervision of the insurance system and improving the quality of health care<sup>7</sup> (Health Care Quality Standards and the Manner of Their Application, 2011).

All health facilities with more than 40 employees are required to establish a Commission for health care institution quality. The Committee is obliged to submit to the Agency for Quality and Accreditation in Health and Social Care (AAZ) semi-annual reports on all the parameters of work and implementation of activities. In 2015 AAZ collected the data by means of an online form through the Service for Quality and Training in Health Care. The number of submitted reports on the work of Commission for Quality of Hospital Health Institution in 2015 increased significantly (81% in 2015 vs. 50% in 2014), with a significant growth in the number of reports for both reporting periods (47 in 2015 vs. 13 in 2014)<sup>8</sup> (Mesarić et al., 2016).

The safety of patients and health care professionals is monitored in health institutions according to the Regulations on Health Care Quality Standards and the Manner of Their Application (Health Care Quality Standards and the Manner of Their Application, 2011).

Health care institutions are obliged to submit quarterly reports on unexpected adverse events:

- Surgery performed on the wrong patient
- Surgery performed on the wrong body part
- Instrument or object left at the site of surgery requiring additional surgery or additional procedure
- Transfusion reactions due to ABO incompatibility
- Death, coma or severe damage to health due to incorrect pharmacotherapy
- Death of a mother or mother's serious illness associated with childbirth
- Kidnapping of a new-born
- Dismissal of a new-born to a wrong family
- Death or permanent disability of a healthy new-born of birth weight exceeding 2,500 grams, which is not associated with congenital disease
- Strong neonatal jaundice (bilirubin > 513 mmol / L)
- Suicide or attempted suicide in a medical institution
- Radiotherapy of a wrong body part
- Radiation therapy with a dose of 25% above the planned dose (Health Care Quality Standards and the Manner of Their Application, 2011).

Every six months a report is submitted to the AAZ on other adverse events which are applicable to the respective institution:

- Mortality from myocardial infarction within 30 days of hospital admission
- Mortality rate from stroke within 30 days of hospital admission
- Hospital mortality for acute pancreatitis
- Postsurgical wound infections
- Lack of hand hygiene
- Postsurgical pulmonary embolism or deep vein thrombosis
- Postsurgical bleeding or hematoma
- Unwanted drug side effects



- Obstetric trauma - vaginal delivery without instrument
- Post-surgical hip fracture
- Falls in hospital / medical institution
- Decubital ulcer
- Side effects of psychosis treatment (Health Care Quality Standards and the Manner of Their Application, 2011).

### 3.2 Indicators of health care quality - hospitals

The Health Protection Quality and Social Care Act prescribes quality parameters. Clinical indicators of quality are the means of measuring the performance of medical procedures and certain values are used to display the results of these procedures.

Quality indicators are:

- Waiting time for a total hip replacement
- Waiting time for the extracapsular extraction of lens
- Waiting time for magnetic resonance
- Waiting time for chemotherapy
- Waiting time for radiotherapy
- Share of visits to outpatient health care facilities within 12 hours of onset of symptoms
- The share of patients surviving after admission to a hospital with polytraumas and cardiac arrest
- Time spent in an inpatient admission
- Duration of hospitalization for acute pancreatitis
- Duration of hospital stay for laparoscopic cholecystectomy
- Duration of hospital stay for caesarean section
- Duration of hospitalization for acute myocardial infarction
- Duration of hospitalization for stroke
- Duration of hospitalization for hip arthroplasty
- Unplanned re-admission to a hospital health facility within 30 days

- Unplanned reoperation or unplanned return to the operating room
- Utilization of operating rooms
- Percentage of surgical procedures performed with the application of security checklist
- Share of caesarean births in a hospital
- Graft survival in a kidney transplantation
- Patient survival after renal transplantation
- Puncture injury incidents
- Percentage of patients discharged with a discharge letter (Health Protection Quality and Social Care Act, 2011).

A group of standards defines safety of patients and health care professionals, including 13 indicators of patient safety (other adverse events). Hospital health institutions must monitor their applicable indicators and deliver a report to the AAZ<sup>9</sup> (Mesarić et al., 2014).

The data collection system allows for monitoring and improving the quality of health care through standardized report forms for:

- Unexpected adverse events
- Indicators of patient safety / Other adverse events
- Adverse events for personnel
- Indicators of clinical efficacy and availability
- The report on the performance of Commission for the Quality of Health Care Institution (AAZ, 2011).

The data are entered from the existing administrative data, and a unique feature of the system is direct calculation of the indicators and insight into the result. In this way, it creates a prerequisite for comparing health care institutions and benchmarking<sup>10</sup> (AAZ, 2011).

### 3.3 Accreditation standards – hospitals

The basis of accreditation are accreditation standards with a purpose of improving the quality of health care. Standards are targeted towards users with respect to current legislation. Accreditation standards are:

- System for ensuring and improving the quality of health care

- Management of hospitals
- Hospital employees
- Overview of the use of health services
- Patients' rights
- Department of Medical Records
- Health care
- Discharge planning
- Infection control
- Safety Management System<sup>11</sup> (Rules on accreditation standards for hospitals, 2011).

The hospital in the accreditation process focuses on indicators of improving outcomes, prevention and reduction of adverse events. All operational units are involved in the support of the administration, according to the complexity of the services that the hospital provides.

*Quality assurance and improvement system* must be maintained to demonstrate that the institution manages the system (Rules on accreditation standards for hospitals, 2011).

Scope is related to services provided in the institution, whether they are clinical or not. Data on indicators of quality of patient care is collected, in order to track and analyse the efficiency of service. Clinical indicators are established by the Agency for Quality in Health Accreditation. Internal assessment is carried out once a year and the results are submitted to the management of health care institutions and then the management gives its assessment for all areas, based on which decisions are made with an aim of improving quality. Monitoring of adverse events is the activity of improving the quality in which we analyse the cause, implementation of actions and feedback. Projects for improving are planned on an annual basis, with a focus on the scope and complexity of services that an institution provides. Clear guidelines for the safety of patients and staff need to be established. The structure of the organizational system is of great significance, and it consists of the chief quality assurance officer, unit for improving the quality of health care, quality commission, commission for internal control and a representative for quality of each work unit (Rules on accreditation standards for hospitals, 2011).

System documentation contains statements and goals of the quality policy with an emphasis on permanent improvement and teamwork, a quality

manual and documented procedures. All services have to be evaluated, then measured and analysed during the given periods.

*Health care institution management* must be effective in accordance with the regulations, primarily the Statute which prescribes the organization of institutions and administration. It has to be registered in the court registry, have all permits for health activities, job classification system that includes level of education, work experience, additional training and licenses for independent work. An integral part of the plan and program is the financial plan as a comprehensive overview of funding sources. Overview of income and expenses for the three-year period must be balanced with the review and alignment with the actual situation. Evaluation and selection of suppliers includes the criteria for the selection and assessment (Rules on accreditation standards for hospitals, 2011).

*Hospital employees* are health care workers who can perform health care activities with a valid license and participate in all activities in compliance with the regulations and description of the workplace. The heads of work units comprise the expert council and decide on the area of professional work of the institution on monthly meetings as evidenced in minutes. By monitoring medical science and technology specialization, employees acquire knowledge and skills via training. Every profession makes a training plan and keeps records of this. Introducing an employee to the job means getting him / her informed on the workplace, other employees, the organizations and work related to the job description. Performance and efficiency of employees are monitored by the institution in order to measure and determine the quality profile for each employee. Employees should be familiar with the possible corrective and disciplinary measures in the event that they act unprofessionally. Medical documentation must be maintained in accordance with the regulations, and the process should be determined regarding improper documentation (Rules on accreditation standards for hospitals, 2011).

*Overview of the use of services* includes a documented plan of overviews of used services by the insured. The plan includes responsibilities and powers of the members of the Commission to review the use of services and procedures for review by the management of reports regarding patient admission, length of stay and provided health services related to medical justification.

*Patients' rights* are stipulated by the Patients' Rights Act. It is the duty of health professionals to inform in writing the patient and / or legal guardian, custodian of the rights in the course of providing health care. The procedure for submitting complaints and objections shall be prepared and implemented. Written informed consent / refusal of diagnostic and therapeutic procedures should also be obtained and the patient has to be informed about them. Patients' requests are documented and the staff is trained in the treatment of pre-imposed requirements. A patient is approached with respect and dignity, and has to be protected from restrictions and separation, if such actions are not medically necessary. The patient has the right to the safe use of restriction or separation performed by trained staff, who are able to demonstrate competence in the application.

*Department of medical records* must be organized and respond to the scope and complexity of the services provided. According to written instructions, medical records must be filled, archived and retrieved if necessary while protecting the authenticity and safety of records. Records comprise of legible, complete, dated and timed information (Rules on accreditation standards for hospitals, 2011).

*Health care* must be provided for 24 hours, performed by nurses with independent work license in accordance with the regulations. The head nurse is a member of the board and is responsible for the organization of work in the institution related to health care. Health care is integrated into the hospital system and in the system of improving the quality of health care.

*Discharge planning* applies to all patients except for emergency or outpatient admission. The process of discharge shall be effective through written policy and planning procedures. A written release must be understandable to employees, and the goal is to ensure the health and safety of patients in order to prevent adverse events (Rules on accreditation standards for hospitals, 2011).

*Discharge letter* of health care is written for patients who require continued medical care after leaving the hospital. Discharge planning is a part of the care plan involving the patient and family, and, if necessary, communities.

*Infection control* requires the establishment of programs for the prevention and control of infections in a medical institution to ensure a safe environ-

ment and to avoid sources and transmission of infections of transmittable diseases (Rules on accreditation standards for hospitals, 2011).

The Commission for infection control and infection control team are responsible for overseeing and monitoring with the help of all employees.

*Safety management system* includes: physical environment, equipment, medicines, food, emergency situations, physical and technical protection and waste management (Rules on accreditation standards for hospitals, 2011).

Regulations on the accreditation standards for hospitals regulate those standards taking into account the opinions of commercial agents and guidelines for assessors. An effective security and improvement of health care quality system sets requirements for the development, applicability and maintenance of the system in order to achieve an optimum degree of order. Accreditation standards serve as a framework for achieving quality (Rules on accreditation standards for hospitals, 2011).

We need to be oriented towards patients, teamwork, understanding systems and processes, we have to be able to change and accept change as a fundamental principle in maintaining quality. It is expected that in the future the quality of health care and the application of the monitoring system will increase (Ostojić et al., 2012: 122).

#### **4. Categorization of hospitals**

The process of categorization of hospitals began by issuing the Ordinance on the conditions for classification of hospitals, which entered into force in 2010. In addition to the aforementioned Ordinance, another foundation of categorization is the Ordinance on minimum requirements in terms of space, staff and medical-technical equipment for performing health care activities.

Hospitals are classified in categories "in order to ensure minimum standards of professional development, rational administrative management, rational management of space, equipment and employees in order to achieve minimum standards of health care quality and balanced development in all areas of the Republic of Croatia"<sup>12</sup> (The Official Gazette, Narodne novine 95/10).

Hospitals are categorized according to:

- Health care activities and the number of activities,
- Level of qualification of health care workers,
- Levels of health services,
- Scope of the provision of health services,
- Bed capacity,
- Area of providing health services to the population (The Official Gazette, Narodne novine, 95/10).

Categorization is important for standardization for the rational use of existing capacity and rational planning of development activities. This procedure is the minimum standard of the profession and the availability of standard medical services. The category of individual hospitals is exclusively affected by professional work and performance. The awarded category is not the abolition but a plan for the future while respecting the past work and development.

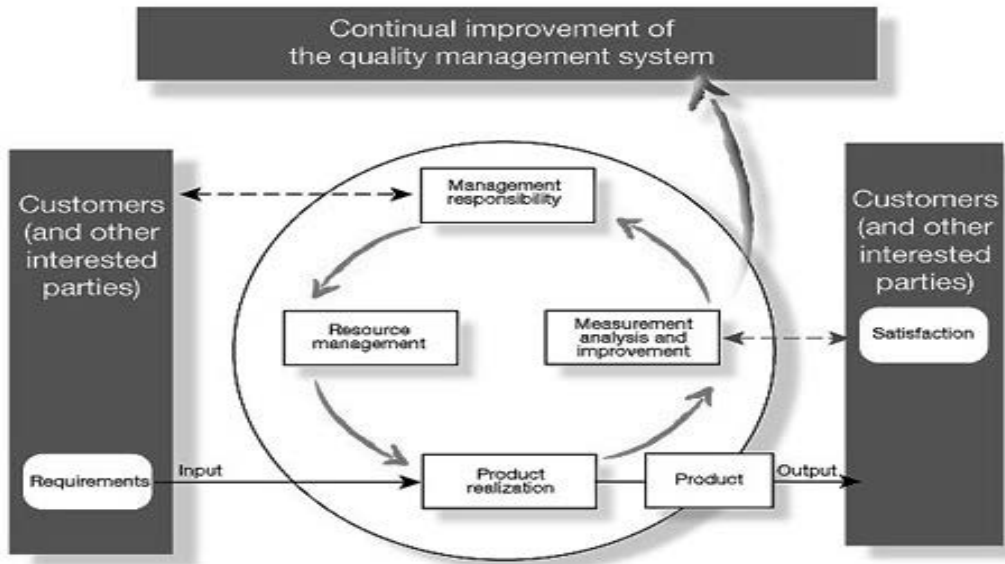
### 5. Certification

The patient is the focus of the concept of quality, and the basic model of quality management of health care is ISO 9001: 2000.

In the field of medicine quality management systems are increasingly being introduced care. Health care facilities are certified according to DIN EN ISO 9001: 2009, which proves that they have established a quality management system. Medical laboratories are accredited according to EN ISO 15189: 2006, which proves that they meet the requirements of the quality and competence of medical laboratories (Ančić et al., 2013).

Application of the system consisting of processes within the organization, their identification and mutual interaction of process and their management can be interpreted using<sup>13</sup> the Deming’s process approach (Figure 2) (Varga, 2012).

Figure 2 Deming’s process approach

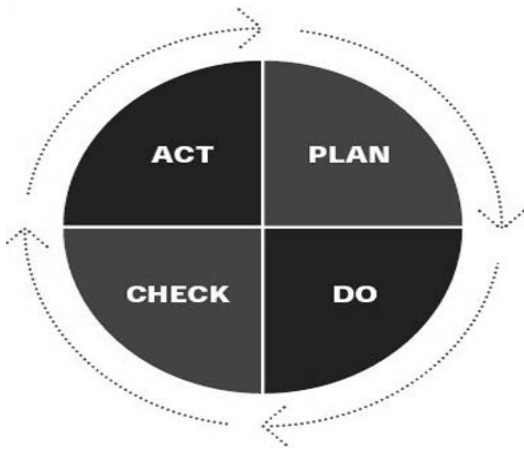


Source: Varga (2012), available at: [http://www.zzjzfbih.ba/wp-content/uploads/2012/11/Varga\\_Sinisa.pdf](http://www.zzjzfbih.ba/wp-content/uploads/2012/11/Varga_Sinisa.pdf) (Accessed on: July 27, 2016)

“By continually repeating actions of planning, doing, checking and acting for each identified business process or sub-process of an organization creates the prerequisites for achieving the final goal,

and that is continuously improving the overall efficiency of the established system”<sup>14</sup> (Figure 3) (Svijet kvalitete, 2013).

Figure 3 Deming's Cycle



Source: Svijet kvalitete (2013), available at: <http://www.svijet-kvalitete.com/index.php/upravljanje-kvalitetom/948-pdca-krug%20> (Accessed on: July 27, 2016)

Health institutions and other interested parties can expect the following benefits from certification and maintenance of ISO 9001 system:

- business / process / patient oriented management system
- ability to select and change the certification company
- better compliance (audit at least once a year)
- early detection of problems
- the foundation for the introduction of other standards (environmental protection, work safety etc.)
- internationally compatible and recognized standard<sup>15</sup> (Michoux, 2005).

Certified European hospitals cite the following advantages:

- positive attitude of staff towards quality
- less variation in working practices, methods of treatment and services
- fewer lawsuits for malpractice
- improved statistical indicators of quality indicators
- better control and calibration of measuring instruments (Frost, 2006).

Benefits have already been shown during the construction and initial application of the system in the following:

- standardization of procedures - the existence of operating instructions,
- mechanism for detecting deviations and their correction (unspoken but present problems),
- better communication and understanding of the entire process,
- better maintenance and calibration of equipment,
- medical documentation is complete and properly maintained,
- imposed obligation of continuous monitoring of results<sup>16</sup> (Ančić et al., 2013).

Barković states that “improving quality is achieved through a combination of better processes, better approaches / techniques and the efforts of those who create products / services” (Barković, 2011: 192).

## 6. Conclusion

Quality is improving medical procedures by establishing a secure, affordable and quality health care system in order to achieve better efficiency. Standards, which are focused on users, ensure effectiveness and are indicators of the means of measuring the performance of the procedures. Standards and indicators will provide the results of the quality of work in the health care system. Accepted standards are called good clinical practice. Quality Act teaches us that the patient is entitled to the same quality health care, equal access and quality of health services. Medical institution management must ensure consistent quality at all levels and balance business operations with the available resources. Diagnosis related groups DRG is a system of financing and paying for health care in hospitals. But a question arises: does DRG system recognize quality? Does DRG system provide a stimulating financing structure for quality health care? These are the questions that will demand answers from all of us in the near future.

## REFERENCES

1. Barković, D. (2011). Operacijski management. Osijek: Grafika.
2. Camillo, N. R. S., Oliveira, J. L., Bellucci Junior, J. A., Cervilheri, A. H., Haddad Mdo, C., Matsuda, L. M. (2016), "Accreditation in a public hospital: perceptions of a multidisciplinary team", *Revista Brasileira De Enfermagem*, Vol. 69, No. 3, pp. 451-459.
3. Frost, R. (2006), "New, improved ISO 9000 guidelines for health sector", *ISO Management Systems*, Vol. 6, No. 1, pp. 21-23.
4. Greenfield, D., Pawsey, M., Hinchcliff, R., Moldovan, M., Braithwaite, J. (2012), "The standard of health-care accreditation standards: a review of empirical research underpinning their development and impact", *BMC Health Services Research*, Vol. 12, No. 1, pp. 329-342.
5. Juran, J. M., Gryna, F. M. (1993). *Quality Planning and Analysis*. 3rd edition. New York: McGraw-Hill.
6. Lukovnjak, I. (2008), "Utjecaj primjene zakona o kvaliteti na prihode i rashode zdravstvenih ustanova", in Mesarić, J., Mustajbegović, J. (Eds.), *Indikatori kvalitete u zdravstvenoj zaštiti*, Zagreb, February 15, 2008, Croatian Medical Association, Zagreb, pp. 34-40.
7. McPhail, R., Avery, M., Fisher, R., Fitzgerald, A., Fulop, L. (2015), "The Changing Face of Health-care Accreditation in Australia", *Asia Pacific Journal of Health Management*, Vol. 10, No. 2, pp. 58-64.
8. Mittermayer, R., Huić, M., Meštrović, J. (2010), "Kvaliteta zdravstvene zaštite, akreditacija nositelja zdravstvene djelatnosti i procjena zdravstvenih tehnologija u Hrvatskoj: uloga agencije za kvalitetu i akreditaciju u zdravstvu", *Acta Medica Croatica*, Vol. 64, No. 5, pp. 425-434.
9. Ostojčić, R., Bilas, V., Franc, S. (2012), "Unapređenje kvalitete zdravstvenih sustava zemalja članica Europske unije i Republike Hrvatske", *Poslovna izvrsnost*, Vol. 6, No. 2, pp. 109-125.
10. Rooney, A. L., Van Oostenberg, P. R. (1999). *Licensure, Accreditation, and Certification: Approaches to Health Services Quality*. Bethesda: USAID.
11. Salles, R. S., Corvino, M. P. F., Gouvêa, M. V. (2015), "Continuing education and quality in a public hospital: a descriptive study", *Online Brazilian Journal of Nursing*, Vol. 14, No. 3, pp. 248-254.
12. Salehian, M., Riahi, L., Biglarin, A. (2015), "The impact of accreditation on productivity indexes in Firoozgar hospital in Tehran", *Journal of Health Administration*, Vol. 18, No. 60, pp. 79-88.
13. Stavljenić Rukavina, A., Kalanj, K. (2010), "Mjere za poboljšanje kvalitete zdravstvene skrbi", *Medix*, Vol. 16, No. 86, pp. 134-138.

## (ENDNOTES)

1. Shaw, C. D. (2004), "Developing Hospital Accreditation in Europe", WHO Regional Office for Europe, available at: [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0018/240318/E88038.pdf](http://www.euro.who.int/__data/assets/pdf_file/0018/240318/E88038.pdf) (Accessed on: July 21, 2016)
2. World Health Organization (2006) "Quality of care", available at: [http://www.who.int/management/quality/assurance/QualityCare\\_B.Def.pdf](http://www.who.int/management/quality/assurance/QualityCare_B.Def.pdf) (Accessed on: July 25, 2016)
3. Econex (2010), "Accreditation of Healthcare Providers", available at: [http://econex.co.za/wp-content/uploads/2015/04/econex\\_health-reform-note\\_2.pdf](http://econex.co.za/wp-content/uploads/2015/04/econex_health-reform-note_2.pdf) (Accessed on: July 21, 2016)
4. Vlada RH, Ministarstvo zdravlja (2012), "Nacionalna strategija razvoja zdravstva 2012-2020", available at: [http://narodne-novine.nn.hr/clanci/sluzbeni/2012\\_10\\_116\\_2519.html](http://narodne-novine.nn.hr/clanci/sluzbeni/2012_10_116_2519.html) (Accessed on: July 21, 2016)
5. Agencija za kvalitet i akreditaciju u zdravstvu u Federaciji Bosne i Hercegovine (AKAZ), "Šta je kvalitet u zdravstvu", available at: [http://www.akaz.ba/Index/Sta\\_je\\_kvalitet.htm](http://www.akaz.ba/Index/Sta_je_kvalitet.htm) (Accessed on: July 25, 2016)
6. Zakon o kvaliteti zdravstvene zaštite i socijalne skrbi (2011), available at: [http://narodne-novine.nn.hr/clanci/sluzbeni/2011\\_11\\_124\\_2472.html](http://narodne-novine.nn.hr/clanci/sluzbeni/2011_11_124_2472.html) (Accessed on: August 1, 2016)

- 7 Narodne novine (2011), "Pravilnik o standardima kvalitete zdravstvene zaštite i načinu njihove primjene", available at: [http://narodne-novine.nn.hr/clanci/sluzbeni/2011\\_07\\_79\\_1693.html](http://narodne-novine.nn.hr/clanci/sluzbeni/2011_07_79_1693.html) (Accessed on: August 1, 2016)
- 8 Mesarić, J., Mandelsamen Perica, M., Hadžić Kostrenčić, K. (2016), "Sustav prikupljanja podataka za pokazatelje sigurnosti pacijenata (ostali neželjeni događaji) i neočekivane neželjene događaje u 2015. godini", available at: <http://www.aaz.hr> (Accessed on: July 20, 2016)
- 9 Mesarić, J., Šimić, D., Hadžić Kostrenčić, C. (2014), "Zbirno izvješće o pokazateljima sigurnosti pacijenta: siječanj – prosinac 2013.", available at: [http://aaz.hr/hr/kvaliteta/pokazatelji?fo=field\\_nositelj\\_zdravstvene\\_djela%3A162](http://aaz.hr/hr/kvaliteta/pokazatelji?fo=field_nositelj_zdravstvene_djela%3A162) (Accessed on: July 20, 2016)
- 10 Agencija za kvalitetu i akreditaciju u zdravstvu i socijalnoj skrbi (AAZ), "Sustav za praćenje pokazatelja kvalitete zdravstvene zaštite", available at: <http://aaz.hr/> (Accessed on July 27, 2016)
- 11 Narodne novine (2011), "Pravilnik o akreditacijskim standardima za bolničke zdravstvene ustanove", available at: [http://narodne-novine.nn.hr/clanci/sluzbeni/2011\\_03\\_31\\_704.html](http://narodne-novine.nn.hr/clanci/sluzbeni/2011_03_31_704.html) (Accessed on: August 1, 2016)
- 12 Narodne novine (2010), "Pravilnik o uvjetima za razvrstavanje bolničkih zdravstvenih ustanova u kategorije", available at: [http://narodne-novine.nn.hr/clanci/sluzbeni/2010\\_08\\_95\\_2660.html](http://narodne-novine.nn.hr/clanci/sluzbeni/2010_08_95_2660.html) (Accessed on: August 1, 2016)
- 13 Varga, S. (2012), "Sustav kvalitete u zdravstvu", available at: [http://www.zzjzfbih.ba/wp-content/uploads/2012/11/Varga\\_Sinisa.pdf](http://www.zzjzfbih.ba/wp-content/uploads/2012/11/Varga_Sinisa.pdf) (Accessed on: July 27, 2016)
- 14 Svijet kvalitete (2013), "PDCA (Demingov krug)", available at: <http://www.svijet-kvalitete.com/index.php/upravljanje-kvalitetom/948-pdca-krug> (Accessed on: July 25, 2016)
- 15 Michoux, H. (2005), "Risk based ISO 9001 model for Hospitals and Day Surgeries", available at: <http://www.aoq.org.au/PDF/Michoux.pdf> (Accessed on: July 27, 2016)
- 16 Ančić, M., Orlandini, R., Martinović-Mikulandra, J., Vidić, R. (2013), "Sustav upravljanja kvalitetom u zdravstvu", available at: <http://www.hcjz.hr/index.php/hcjz/article/viewFile/183/156> (Accessed on: July 27, 2016)

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## KONCEPT KVALITETE U FUNKCIJI SEKUNDARNE ZDRAVSTVENE ZAŠTITE

### SAŽETAK

Rad daje pregled osnovnih pristupa konceptu kvalitete i upravljanju kvalitetom s ciljem unaprjeđenja sekundarne zdravstvene zaštite. Koncept kvalitete gledamo iz perspektive akreditacije, kategorizacije i certifikacije zdravstvenih ustanova u sekundarnoj zdravstvenoj zaštiti. Kvalitetna zdravstvena zaštita je ona koja zadovoljava potrebe korisnika, profesionalne potrebe i postiže zadane ciljeve, a resurse koristi na najučinkovitiji način. Kvaliteta u zdravstvu je primjer dobre prakse usvajanja i unaprjeđenja standarda, procesa i ishoda. Za kvalitetu su odgovorni svi unutar organizacije, loša kvaliteta je skupa zbog nedjelovanja ljudi unutar sustava. Zakon o kvaliteti zdravstvene zaštite određuje načela te sustav mjera za ostvarivanje i unaprjeđenje kvalitete. To su mjere za ostvarivanje kvalitete zdravstvene zaštite te provedbu načela učinkovitosti i djelotvornosti sustava kvalitete zdravstvenih postupaka na svim razinama zdravstvene zaštite, načela orijentiranosti prema pacijentu te načela sigurnosti pacijenata. Implementacija sustava kvalitete rezultira nekim novim rashodima, a svaki nastali rashod je u funkciji stvaranja i proizvodnje roba i usluga. U zdravstvenim ustanovama proizvodimo zdravstvene usluge i na taj način ostvarujemo prihod. Rashode moramo ukalkulirati u cijenu ako želimo pozitivno poslovati.

**Ključne riječi:** sekundarna zdravstvena zaštita, koncept kvalitete, unaprjeđenje kvalitete