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The concept of quality in the field of healthcare

Abstract: In this paper, on the basis of the analysis of the definition of "quality", a literature review was conducted with the aim of improving the medical care quality, as well as optimizing costs in the healthcare field. The purpose of this article is to clarify the concept of quality, therefore, the analysis of the concept of "quality" in dynamics is carried out to determine ways to improve the quality management system in the healthcare field, the detection of critical attributes is important for clarification, further development of tools and the design of a new methodological base. This article can be used in healthcare organizations, politics and economics to improve performance indicators. The presented theoretical and practical data contribute to a more complete and consistent understanding of the components necessary to improve the performance of organizations in the healthcare field as well as increase public affiance.

Key words: quality, healthcare, innovation management, enterprise, medical service, management quality system, service.

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Introduction. The state of human health has an unconditional socio-political relevance, also it is a key factor of production activities and can be evaluated in economic (cost) equivalents, for instance, in lost profit and additional expenses related with the maintenance of citizens health as it was highlighted above.

The labor activity efficiency and duration of every human depends on the health state.

The condition of population health is in the zone of state strategic interests in this regard.

Ensuring the proper quality of medical care while optimizing costs is a fundamental goal of healthcare organizations, it is impossible to achieve positive outcomes without increasing the efficiency of managing these organizations.

Developed countries, in order to maintain competitiveness, carry out decisive actions in the following areas: science and technology, education, healthcare.

Task. The concept of quality has changed over the time, so in the 50th of the 21st century, products and services that corresponded to the standard were qualitative, but market relations did not show the viability of this relationship, since compliance with the standard does not guarantee the demand for this product or service. The ratio expanded to correspond the requirements by the 60th, but as competition increased every year, it was necessary to supplement the quality aspect of cost-effectiveness by the 70th, it became necessary to produce products and provide services at the price category at which they could be sold. Further development of the concept and aspects of quality were identified along with the path of meeting and anticipating the needs of consumers.

Based on the definition, it is important to know to achieve which goal and what tasks it is necessary to form the quality of service and it is important to determine the potential of healthcare enterprises.

Goal. The strategic goal is to enter the top 30 developed countries of the world and the category of countries with an innovation-oriented economy, at the state level.

To achieve this goal, it is necessary to identify the ways to improve the system of management of quality in the healthcare organizations.

In our opinion, it is important to form innovation management in the healthcare field, since the innovative activity of healthcare enterprises is not high enough, therefore it is important to design innovative approaches and mechanisms by improving the quality characteristics of medical care.

History. Ensuring the proper quality of medical care while optimizing costs is a fundamental task of healthcare organizations, the achievement of which is impossible without increasing the efficiency of management of these organizations.

The scientific foundations of the healthcare economy formation, necessary for the procedures development of assessing the quality of medical care, as well as the effectiveness of medical organizations, are discovered by Adler Y.P., Aristova O. V., Andryushchenko O.E., Abramova A.Y., Ulumbekova G.E. and etc.

Theoretical and methodological issues related to the quality management of medical services are described in the works of Agalakov V.I., Kukovyakina S.A., Kukovyakina N.D., Adzhiev M.E., Arshinova N.A., Odnovolova O.T., Popova Z.F., Atsel E.A., Fomina A.V., Bykova J.E., Valid M.S., Zaitseva N.V. and others. Theoretical and applied aspects of process-oriented control are studied in the works of Kasatov A. D., Kunts G., Smagina M. N, Gerasimova B. I, Parkhomenko L. V., Yamshikova A., Tkach O., Ardasova O. and others.

A study conducted by McKinsey with the participation of employees from the London School of Economics, Harvard and Stanford Universities, showed the influence of management practices in healthcare organizations over the quality and effectiveness of medical care. According to the results obtained during the analysis of 1,200 medical organizations from seven countries, it was found that, through effective management, health organizations are able to maintain and enhance the quality of medical services even with limited funding conditions.

Process-oriented management and the system of quality management were first applied in practice of enterprises, therefore, many approaches and principles of process management in healthcare are well founded. However, there are various differences in worldwide practice of control methods, which apply in other economic activities and health protection of citizens due to their industry specifics. Nevertheless, the standardization of medical organizations activities, the implementation of automated information and analytical systems, the building of quality management system in medical organizations can be considered as the main reasons of methods convergence for evaluation the quality of services.

Research methods. The implementation of wide range of measures imply that the application of a science-based approach to the formation of increasing the economic efficiency of enterprises is required for satisfactory solution of the problems in the healthcare field. Conservative approach to the formation of strategic plans leads to accumulation of mistakes of past years and, as a result, they do not adequately reflect the ongoing and expected changes, in the internal and external environment, of healthcare enterprises.

Hence, it can be concluded that an effective quality management system in healthcare organizations is based on providing the population with quality services and is possible only if the organizational and economic tools for managing the healthcare sector are improved with the subsequent streamlining of business processes of medical activity.

Results / discussion. In the production of goods or provision of services, the priority aim is to determine the requirements and expectations of customers and the criteria for accurate evaluation, it activates the production of products or the provision of better services, to increase the range of products and the number of services and warranty obligations. Only by such methods can you prove yourself in the competition. All mentioned above can be summarized by the table of concepts of quality (table 1).

Table 1 **Development of the concept of quality**

Author	Definition of the «quality «concept	
Aristotle (3rd century BC)	The difference between the subjects. Differentiation on the basis of «good - bad.»	
Hegel (XIX century AD)	Quality is, first of all, certainty identical with being, so that something ceases to be what it is when it loses its quality.	
Chinese version	The hieroglyph denoting quality consists of two elements - "balance" and "money" (quality = balance + money), therefore, quality is similar to the concept of "high class", "expensive".	
Shuhart (1931)	Quality has two aspects: Objective physical characteristics; Subjective side: how good a thing is.	
Ishikawa (1950)	Quality is a property that really satisfies consumers.	
Juran (1979)	Suitability for use (intended use); Subjective side: quality is the degree of customer satisfaction (for realization of quality, the manufacturer must find out the requirements of the consumer and make his products so that they satisfy these requirements).	
GOST 154467-79	Product quality – is a set of product properties that determine its suitability to satisfy certain needs in accordance with its purpose.	
ISO 8402:1994p.2.1	Quality – is a set of an object characteristics related to its ability to satisfy the established and anticipated needs.	
ISO 9000	Quality-the level of characteristics conformity with the requirements.	

The ISO 9000 standard establishes that quality assurance is a part of the quality management, the actions of which are aimed to ensure that all requirements in terms of quality are performed.

Quality management is a coordinated set of activities, including development, management and planning - aimed at leadership, management in the aspect of quality.

The meaning of the concept - quality assurance - this is a process of directed, necessary measures in the aggregate to meet the quality requirements - in the process of production the steps stipulated by technology are gradually carried out.

The generalized experience of production leaders can be divided into a number of internal and external factors from which quality depends (table 2).

Table 2

Internal and external factors that affect quality

External factors	Internal factors
Quality requirements (consumers, progress,	Material base (infrastructure, equipment,
competitors	materials, finance)
Suppliers of capital, labor force, materials,	Use of advanced technologies
energy, services	
Legislation, state bodies	Effective management

The relationship is well illustrated by a cause-effect diagram presented in Figure 1 [16]

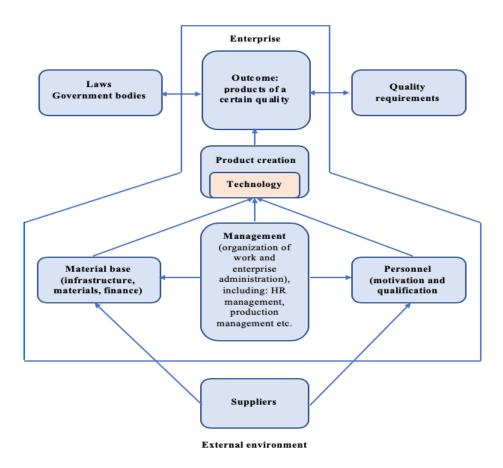


Figure 1 - Product Quality Assurance

This principle of interaction can be demonstrated by the diagram of the quality model (Figure 2).

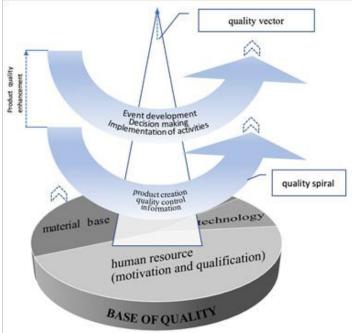


Figure 2 - Quality Model

The loop or spiral of quality shown in the figure above reveals managerial functions aimed to create a qualitative product. The quality vector demonstrates the influence of basic factors that depend on the material base, technologies, qualified and motivated personnel.

When the necessary elements are absent such as low material base, technologies, motivation and qualification, the quality vector becomes close to zero, the quality spiral remains flat without developing - It means that the quality management does not occur and products are produced without proper quality.

Quality management is different from the regular control, which is basically boils down to separating good products from bad ones. The quality of the product after completion of the production process cannot be changed as a result of control.

Quality management deals with the entire system of development, production, operation (consumption) and disposal of goods. The task of quality management is to establish the causes of defect, wherever it occurs, and then eliminate these causes and ensure the production of products of better quality.

The key factor in quality assurance is the human factor. An unmotivated employee will not perform well even on high-quality fancy equipment. Quality management should correctly organize the workflow without which it would be impossible to realize the material base and human resource [14].

Thus, the key principle in ensuring product quality is an effective management that takes into account external factors and manages internal ones with an emphasis on staff motivation [17].

The objects of product quality management are all elements forming a quality loop. In accordance with international ISO standards, the quality loop is understood to mean the product life cycle that has a ring shape(figure 3), including the following main stages: marketing; design and development of technical requirements, product development; material and technical supply; pre-production and development of technology and production processes; production; control, testing and inspection; packaging and storage; sales and distribution of products; installation; operation; technical assistance and service; disposal.

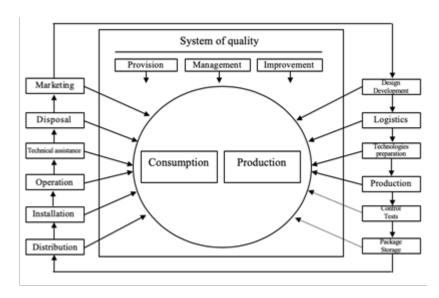


Figure 3 - Quality loop

It must be borne in mind that in practical activities for the purposes of planning, control, analysis, etc., these stages can be divided into components. The most important thing here is to ensure the integrity of quality management processes at all stages of the product life cycle.

Using the quality loop, the manufacturer interacts with the consumer and with all objects that provide solutions to product quality management problems [14].

Modern economic and scientific sources of both Kazakhstan authorship and foreign authors provide a variety of interpretations and definitions of "quality" as a concept.

So, American doctor of philosophy James Harrington, one of the leading gurus in the field of production quality, who is a management mentor, gives the following interpretation of the concept of quality - "quality – that is the consumer's expectations that the consumer can get for the price he can spend , when there is a need for this, and high quality is exceeded expectations at lower prices than he originally anticipated.

In order to understand the definitions, there several more interpretations are presented. The German philosopher Hegel characterized quality [18] as direct certainty identical with being, as something that is due to its inherent quality, and losing its quality ceases to be what it was. This definition can be attributed to the fundamental definition of quality. In other words, this definition can be retold as properties and characteristics that are inherent in any object, which define it and distinguish it from another, the loss of a part of properties or characteristics results in the disappearance of the very object to which these properties and characteristics belong.

But it should be taken into account that the definition of a value in an applied key must obey the hierarchical connection of concepts and should not conflict with the fundamental definition. So the definition of quality as special, essential properties - the nature of things and an integral feature of the property of things violates the position of terminological science, since the quality in them has not only a combination of properties, characteristics, but also compliance with the requirements, which in turn is a satisfaction of needs. Such definitions lead to confusion of terms. Since the terms associated with the satisfaction of needs in the scientific world are already exist, this is an economic concept of utility, a political and economic concept of consumer value.

Thus, the ability of items of quality to participate in meeting the needs is utility, not quality. In such concepts, the relationship of people to these properties comes to the first role, and not as such properties themselves. This can be illustrated by the example of the concept of utility related to drugs, each individually possessing it's quality, that is, the properties and characteristics inherent in a given remedy - may be useful, or it may be useless or even harmful depending on the situation.

In this regard, we can conclude that the relationship between utility and quality is expressed in a simple formula - utility is equal to quality plus satisfaction of needs. The understanding of quality in this form in its ratio with usefulness is constantly traced in everyday life, a certain level of quality is determined precisely by the attitude to it.

The confusion in the standards arose due to the discrepancy between the applied and fundamental definitions of quality as a term with the subsequent substitution of concepts. So the definition of utility, external properties is given in replacement of the internal properties of products - quality.

Such confusing moments are fraught with a logical trap, because following the logic, it can be concluded that quality is a power-law dependence of characteristics on requirements, and the product that does not fit the requirements is bad-quality, which is a mistake since there are no objects with lack of quality, with the lack of properties of any characteristics.

But the task is to figure out what constitutes an absolutely vague definition - quality, so that you can move on in the study. If you follow what is written in the standards, it turns out that at the same time, the same thing may or may not have quality, and this will depend only on customer satisfaction.

The result of this approach is that quality is a completely vague concept. This leads to the fact that a logical contradiction arises, because if an object exists, then it certainly has some characteristics, regardless of whether they are satisfied with anyone.

Therefore, it can be concluded that quality, taken out of context, is a neutral concept. Quality characterizes the subject, but does not affect either the bad or the good side. And only a consumer evaluation gives a positive or negative color in relation to the quality of the subject, depending on the level of its quality. The ambiguity of the quality formulations that are given in the standards is due to the fact that it is important for product manufacturers to emphasize the connection with the satisfaction of needs and thereby show compliance with the requirements of the sales market. But if to connect meeting the needs with the level and the required characteristics, then the applied definition of quality will correspond to the fundamental definition.

Factors that act and determine quality are divided into factors of external environment, which include the level of quality requirements from the side of consumers, the requirements imposed by the level of progress and the performance of competitors, the availability of capital and labor resources, as well as existing legislative acts in the field of quality. Internal factors include such indicators of the enterprise material base as finance, equipment, infrastructure, human resources, motivation of employees, the use of advanced technologies in both the preparatory and the executive phases. An important fact is the organization of work and management at the enterprise, a quality management system, including marketing, relationships with the consumer, quality control at each stage, prompt response to quality problems arising during production.

High-quality or low-quality products are terms for evaluating the level of quality of products in the context, but using such concepts it is necessary to be guided by the fact that qualitative product does not mean that it is good at the same time, but of such a thing as low-quality products, that is, if you literally understand the term is that production without any properties whatsoever, that is not possible.

Sometimes the term quality is used as individual characteristics of properties, and not as a combination of them, it occurs when it is necessary to indicate a high level of product quality that is distinguished by the set of some specific qualities that helps to gain a leadership in particular market segment.

To ensure the high quality of medical care, it is advisable that the provision of medical services to consumers is based on the principles of classical departmental medicine: *complexity, phasing, continuity and individual approach,* which, in the integrated medical care chain, meet all the basic human needs.

The priority in the activities of medical organizations is the primary provision of early diagnosis and prevention of morbidity, which includes:

- improving the quality of primary health care;
- organization of an early diagnosis and active disease prevention system (medical examinations and vaccinations);
 - ensuring the availability of modern medical technologies;
 - quality control of the treatment process;
 - increase the list of services provided;
- equipping organizations with modern medical equipment, with a phased replacement of morally and physically obsolete.

Conclusion. In general, ensuring the proper quality of the medical services provided while optimizing costs is one of the main tasks of the healthcare organization, which is achieved, in particular, by increasing the efficiency of managing medical organizations. It should be noted that every human being has a definition of personal view of high quality healthcare, for instance, such a definition revolves around the ability to go to the provider or hospital of their choice; for others, access to specific types of treatment is paramount. Future research using this analysis of a theoretical data, integrated with an additional concepts, may yield vital cognition development in procuring of evidence-based decisions in the field of healthcare.

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Понятие качества в системе здравоохранения

Аннотация. В данной статье на основе анализа определений понятия «качество» был проведён литературный обзор с целью повышения качества медицинской помощи, а также оптимизации издержек в сфере здравоохранения. Целью данной статьи является уточнение понятия качества, следовательно произведён анализ данного понятия в динамике для определения пути совершенствования системы менеджмента качества в сфере здравоохранения. Определение критических атрибутов имеет важное значение для внесения ясности, дальнейшего развития инструментов и построения новой методологической базы. Данная статья может быть использована для повышения показателей эффективности в организациях здравоохранения. Представленные теоретические и практические данные способствуют более полному и последовательному пониманию компонентов, необходимых для улучшения показателей организаций в сфере здравоохранения, а также повышению доверия со стороны населения.

Ключевые слова: качество, здравоохранение, инновационный менеджмент, предприятие, медицинские услуги, система менеджмента качества, услуги.

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Денсаулық сақтау жүйесіндегі сапа түсінігі

Андатпа: Бұл мақалада «сапаны» анықтауды талдау негізінде медициналық көмектің сапасын арттыру, сондай-ақ денсаулық сақтау саласындағы шығындарды оңтайландыру мақсатында әдеби шолу өткізілді. Осы мақаланың мақсаты сапа ұғымын нақтылау болып табылады, демек денсаулық сақтау саласындағы сапа менеджменті жүйесін жетілдіру жолдарын анықтау үшін динамикада «сапа» ұғымына талдау жүргізілді, сыни атрибуттарды анықтау айқындылықты енгізу, құралдардың одан әрі дамуы және жаңа әдіснамалық базаны құру үшін маңызды мәнге ие. Бұл мақалада денсаулық сақтау ұйымдарында, саясатта және экономикада тиімділік көрсеткіштерін арттыру үшін пайдаланылуы мүмкін. Ұсынылған теориялық және практикалық деректер денсаулық сақтау саласындағы ұйымдардың көрсеткіштерін жақсарту үшін қажетті компоненттерді толық және дәйекті түсінуге, сондай-ақ халық тарапынан сенімді арттыруға ықпал етеді.

Түйін сөздер: сапа, денсаулық сақтау, инновациялық менеджмент, кәсіпорын, медициналық қызметтер, сапа менеджменті жүйесі, қызмет көрсету.

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