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Poprawa jakości kapitału ludzkiego jako element rozwoju gospodarki opartej na wiedzy – wybrane projekty z zakresu ochrony zdrowia realizowane w ramach Programu Operacyjnego Kapitał Ludzki**Streszczenie**

W gospodarce opartej na wiedzy rośnie zapotrzebowanie na wiedzę i wykwalifikowanych pracowników, tym samym coraz ważniejszy staje się kapitał ludzki i wszelkie działania podnoszące jego poziom. Szczególnie widoczne jest to w obszarze ochrony zdrowia, który z uwagi na dynamiczny rozwój nauk medycznych, jak również zachodzące zmiany demograficzne w społeczeństwie wymaga przemyślanego inwestowania w kapitał ludzki. Jednocześnie należy pamiętać, że wysoka jakość usług sektora ochrony zdrowia jest jednym z podstawowych czynników wzmacniających kapitał ludzki całego społeczeństwa.

Celem artykułu jest przedstawienie wybranych projektów, związanych z poprawą jakości zarządzania w ochronie zdrowia, których realizacja prowadzona jest w ramach Programu Operacyjnego Kapitał Ludzki.

Improving the quality of human capital as part of the development of the knowledge based economy – selected projects in the field of health care implemented under the Human Capital Operational Program**Abstract**

In the economy based on knowledge, the demand for the knowledge and qualified employees is constantly growing and consequently the human capital and all of the processes aiming at raising the level of the human capital are becoming more and more important. It is particularly visible in the area of health care which due to the rapid development of medical sciences as well as demographic changes in the society requires making thought over investments in human capital. Simultaneously, one should remember that the high quality in health care sector service is one of the basic factors strengthening human capital of the entire society.

The aim of the article is to introduce the projects connected with the improvement in the quality of human capital in health care system, which are carried out as part of The Human Capital Operational Programme.

Słowa kluczowe: gospodarka oparta na wiedzy, program operacyjny kapitał ludzki, jakość zarządzania w ochronie zdrowia.

Keywords: knowledge-based economy, human capital operational program, quality of management in health care system.

INTRODUCTION

The knowledge economy creates a growing demand for knowledge and skilled white-collar workers, thus the human capital and any measures to improve its level are becoming increasingly important. Human capital in the modern world is one of the basic factors of development.

Improving human capital in health care is extremely important in shaping the quality of medical services in the field of direct relationship between a patient and a health professional. It also has important implications for the macro level, where the quality of the health care sector is seen as one of the key factors enhancing human capital.

The purpose of this article is to introduce the concept of knowledge-based economy in the context of the development of human resources in the health sector and to present a selection of projects to improve the quality of human capital in the health care system as an important element shaping the quality of medical services.

Knowledge-based economy

In the literature on knowledge-based economy (KBE) it is assumed that the skills are one of the kinds of knowledge, the so-called silent knowledge, which is hidden, because knowledge is not only synonymous with knowledge of the facts. This is shown even in one of the divisions of knowledge, according to which knowledge is divided into two broad categories: codified knowledge and silent knowledge. Codified knowledge, or organized, structured, stored knowledge, which can be stored and transmitted in various ways such as books, reports, patents, on the Internet. Knowledge silent by nature is inherent in the people and is the result of their talent, skills and experience, it is the good of a special type that is difficult to measure [1].

According to the definition of the Organization for Economic Cooperation and Development, the knowledge-based economy (KBE) is based directly on the development, manufacture and is treated as a further transmission or distribution and the practical use of knowledge and information. Knowledge is a specific product (an independent entity) that drives development. In major development programs of the European Union, which is the Lisbon Strategy, the knowledge economy has the fundamental meaning. The knowledge economy is also an economy that is characterized by rapid development of areas related to the processing of information and the development of science, mainly industrial sectors so-called high technology, as well as techniques and services of the information society. The World Bank has identified four pillars of knowledge-based economy: institutional – legal environment, innovation, information infrastructure and education and training, as a source of skilled workers. Nowadays, the fifth pillar, which is the life-long learning is being more often observed [2].

Investing in human capital as an important element in the development of the knowledge economy

In the knowledge economy, it can be observed that there is a growing demand for knowledge and skilled white-collar workers. It means that human capital becomes more and more important and therefore any action (at various levels) raising its level is also crucial. The growing competition,

which consists of the developing and introducing innovations on the market requires people to constantly improve the level of education, skills and the creation and acquisition of new knowledge.

The concept of human capital appeared for the first time in 1975, thanks to Nobel Prize winner in economics Gary S. Becker. In Polish literature, it functioned first as the social cost of human labor, and was used for the first time in 1990 in the work of SR Domanski, entitled "Human Capital and Economic Growth", and defined as "knowledge resources, skills, health and vital energy contained in a given society/nation [...]. The distinctive feature of human capital is that it is as if a part of a human being [...]. You cannot separate yourself from your human capital – or in other words: a person is always accompanied by human capital" [3].

As a general definition, it can be concluded that human capital is the knowledge, skills and capabilities of individuals having an economic value to the organization. Human capital is becoming one of the key factors of the development of the modern world. The main factors reinforcing human capital include the amount of time investing in yourself, circulation of money and the effort of specialist sectors: education, scientific research but also health care, the quality of which depends on the effort focused at those sectors [4].

In a broad sense, human capital is defined as a result of investments not only in education and training, but also other investments that affect the improvement of the quality characteristics of human resources, such as investment in health, the environment and the culture [5].

Human capital, like every capital has a quantitative (financial) and qualitative side, and like any capital it requires investment. The directions of these investments are as follows:

- education (educational system is a form of investment in human capital at the macro level);
- education and professional development at work;
- services and facilities related to health care and affecting the life, vitality, strength and vigor;
- migration, information gathering and research (which affect the health of human capital) [6].

The Human Capital Operational Program and health care

The development of science, technology and developments taking place in the global, regional and local level, require a man to continue to grow, expand their knowledge, skills and gain new qualifications. In the face of changing living and working conditions of people, it is necessary to adapt to these changes through appropriate education, training and improving their skills.

One of the pillars of the knowledge economy is lifelong learning, which is the process of continuous renewal, improvement and development of generic skills and professional unit, lasting throughout their lives [7].

Continuing education of medical staff taking into consideration the rapid progress of medical science and technology has become a requirement these days. Development of human capital and improvement in health care are extremely important, both at the individual person level as well as at a macro level. The health care workers improving their intellectual capital influence the improvement of the quality

of medical services provided. At a macro level human capital is defined as a resource of knowledge skills, health and vital energy contained in a given society or nation. The quality of human capital at the macro level (social) is influenced by, among other things, health care services the quality of which affects the longevity of citizens.

Human capital requires investment - therefore the support in this area from EU funds available to EU Member States through the European Social Fund (ESF) is valuable. The European Social Fund is one of the EU structural funds, which aims to increase social cohesion and prosperity in all regions of the Union. The European Social Fund allocates its resources, in particular, on the creation of new and better jobs in the EU. This is accomplished by co-financing of national, regional and local projects that contribute to the increase in the employment rate, improve the quality of jobs and improve the integration of the labor market at national and regional levels.

Current ESF programming period, covering the period 2007-2013, is held with the motto "Investing in human capital". During this period, The European Social Fund will invest about 75 billion euros, or nearly 10% of the EU budget, in projects aimed at increasing employment. The funds are granted in accordance with the six priorities, one of which is improving the quality of human capital (34% of the total).

As a part of the Polish Human Capital Operational Program (HC OP) in Priority II: Development of human resources and potential adaptation of enterprises as well as improving the health of working people, Measure 2.3, strengthening the capacity of the worker's health and improvement of the health care system is provided with the opportunity to finance projects, relating in particular to the development of comprehensive health programs, training of medical staff and improving the quality of management in health care.

Improvement of the quality of management in health care – projects in progress

In the face of high debt of the health care institutions and the changes of ownership (an increasing role of the private sector), it is reasonable to strive to increase the efficiency of health care institutions management and, at the same time, increasing the quality of services provided. In order to do so, the Human Capital Operational Program supports the development of competencies of managers and administrators of public funds and carrying out the accreditation and certification of health care institutions. It is assumed that this will affect positively the efficiency of the health care facilities, particularly in the aspect of the management of financial resources.

A significant project in this area was conducted by the National Health Fund, benefiting from the system of the "Training hospital managers who have contracts for the provision of healthcare services to the provincial branch of the National Health Fund or providing health care services financed from public funds under other titles and state funds in the health sector, such as the National Health Fund managers" (the project budget: 3,717,966.60 PLN). Duration of the project covered the period from 31 July 2008 to 31 December 2010. The aim of the project was to prepare staff,

administering the scheme of diagnosis-related groups of patients (DRG) in the operation and use of the system to improve the efficiency of health care. The project has enabled training of 1592 people, including executives and officers of public funds in the health sector in the principles of operation, maintenance and application of the DRG.

In addition, the project has developed training programs for related groups of patients and involved two extensive publications on this subject as well as three conferences that were organized in order to facilitate the exchange of experiences among health workers, as well as a collaboration in the field of DRGs in Europe [8,9].

The DRG system includes an assumption that it is possible to register and describe the treatment process, both in the clinical aspect and in terms of costs. At the core of the system there is a notion of exploration designed to lead to the development of new methods of financing hospitals, which on the one hand would stimulate the individual to productive and efficient work, on the other hand the methods would be safe for the payer. In view of the purpose of a case-mix tool being applied, as indicators of productivity and quality of hospital care, it is important to place emphasis on the training of managerial staff on the side of the payer and hospital management in the subject of using these indicators to assess the productivity and quality of care.

The DRG system is oriented towards the funding of the treatment outcome, bringing the patient to recovery or, more often, leading to a state in which the treatment can be resumed in outpatient conditions. The DRG system assumes funding benefits in the form of a reimbursement system where flat rates are assigned due to the established diagnosis or medical procedure done, homogeneous cases of disease.

Another project concerns cost accounting, which is one of the instruments of proper and thought over restructuring of health care units. It gives a picture not only of the total cost of the entity, but it also carries information on the unit costs of medical services. Cost accounting is the foundation of effective management of units, which allows for the smooth and efficient functioning in the market conditions. Cost Accounting indicates the reasons and instances of the deviations of the real cost from the intended level. It also acts as a controlling tool, showing that health care resources are consumed reasonably or whether there are losses resulting from undue expenses.

Information Management, which is a set of information about the functioning of the company, is another issue that will be exemplified in the project. Its primary objective is to assist managers in making decisions concerning current and strategic issues and indicating issues, which require attention in the aspect of operations.

The project also addresses the issue of modern tools of restructuring and consolidation models (vertical integration) of health care units. Vertical integration relates to the reference systems namely the upward movement of the patient in a system depending on the complexity of expertise. This applies to diagnostic measures as well as treatment and rehabilitation. In fulfilling vertical integration, health care units depending on each other by ties of subordination (subordinated to a hierarchical system) or informally linked by agreements, contracts, etc. shall pass patients in an organized and smooth

manner. The benefits of vertical integration include greater resource productivity, improving quality of service in every cell of the system and the complexity and continuity of care.

The discussed project – “Modern management in health care facilities – training in cost accounting and management information and tools for restructuring and consolidation of health care facilities” (project budget: 8,751,471.50 PLN), was developed by the Health Insurance Department of the Ministry of Health in partnership with the Warsaw School of Economics. The main objective of the project provided for the years 2009-2013, is training people who work in the management of health care (health care facilities) in the possibilities of using management accounting tools and methodologies for the collection, processing and reporting information about the cost of health benefits. Another objective of the project is to disseminate knowledge of modern tools of restructuring health care institutions and patterns of consolidation (vertical integration) of health care providers, both among those representing health care facilities management staff, as well as among representatives of the founding body of health care facilities. The planned results of the project are:

- training of approximately 5955 employees of health care facilities, including leaders who will coordinate the work on the implementation of modern management accounting tools to improve the management process,
- training of 740 employees representing the founding bodies of health care facilities,
- management awareness of the need for modern management accounting tools implementation in health care facilities,
- increase in the competence of the management and opportunities and ways to use management accounting tools that provide the increase in management efficiency of health care facilities [10].

Under the measure entitled “Improvement of the quality management in health care” there is also implemented a project on accreditation of health care, which is external quality assessment system designed for the needs of health care, which initiates and stimulates the inner workings of continuous quality improvement. It applies to health care facilities which voluntarily agreed for the assessment according to particular standards. The accreditation evaluation is based on a comparison of actual practice patterns with the accreditation standards, establishing evaluation criteria in areas which have the greatest impact on the level of benefits and safety of patients.

Since 2008 the project entitled “Support for the process of accreditation of health care facilities”, (project budget: 7,839,468.00 PLN), has been implemented by The Center for Quality Monitoring in Health Care in Krakow. The project, the implementation of which is planned for the period 2008-2014, is addressed to health care facilities, especially hospitals which have contracts to provide health care services from the National Health Fund or the providers of medical services financed from public funds under other titles. A total of 220 health care facilities will be supported, of which at least 188 must obtain an accreditation certificate. The project aims to improve the quality of management in health by supporting the accreditation process and lead to an increase

in the number of accredited hospitals. The main activities of the project include, among others:

- an information campaign about the accreditation system,
- publication of accreditation standards, which should result in increasing the knowledge and dissemination of information relating to the procedure of accreditation,
- conducting courses concerning obtaining certificates of accreditation and taking action supporting the conduct of accreditation procedures,
- carrying out the accreditation procedure by the CMJ in health care facilities properly prepared for this process,
- development of indicators for measuring the accreditation process,
- training of 360 people on courses concerning the accreditation of certification,
- preparation of a set of quality indicators and policy monitoring in hospitals,
- improvement of the quality of services in hospitals with the CMJ certificate of accreditation.

Out of 103 hospitals that were certified, 77 received it as part of this project (as of 02.09.2011). The project has been very popular, according to the information center for Quality the willingness to join the accreditation process and undergo an external evaluation were reported by more than 300 hospitals (as at 30.06.2011), which is much more than planned to be supported in the 2008-2014, that is 220 hospitals [11].

Despite the smooth implementation of the project, there is still not enough information about the benefits the health care institutions gained after accreditation resulting from the project. The team investigating the project, noted that the messages generated at this stage of the project should have included information on accreditation visits conducted and the benefits gained by the hospitals where the visit took place.

The promotion of the accreditation among public opinion is also insufficient, which weakens the impact on improving the quality of medical services. The investigation team pointed to the need of increasing the amount of remittances acknowledging people unrelated to the medical community of the importance and many benefits of ownership of the accreditation by the hospital. Thanks to that, CMJ would implement a public awareness campaign with an objective of informing about the role of accreditation in the process of improving the quality and safety of health care.

However, according to the report entitled “The process of accreditation of hospitals – survey on the opinion of hospitals executives”, developed in 2008 by CMJ, among the advantages of the preparation of hospitals for accreditation visits, hospital managers indicated an increase in the safety of hospitalization, improvement in the flow of information between departments and the consolidation of the crew around a common goal. Among the benefits from obtaining a certificate of accreditation, managers pointed to improving the quality of health services provided in the hospital, raising the profile of the hospital and sense of pride in its success among the staff.

CONCLUSION

The financial resources from the EU funds are an invaluable source of support for the implementation of projects in Poland related to investment in human capital. These projects concern activities aimed at the improvement of human resources in the health sector and relate to improvement of the quality of the health care system. The achievement of the targets set in the project will bring many benefits both in terms of individuals who are both direct and indirect recipients of medical services as well as the health care system as a whole.

Investing in human capital in the health care system, including the development of skills and high level of competence of health professionals, plays an important role in providing high quality of health care and also contributes to enhancing human capital of the entire society.

An important role in the ongoing projects is played by the improvement of the quality of human capital in the context of improving the quality of management which is promoted by the program of health care facilities accreditation. The management has an interest in the program perceiving it as an opportunity to enhance the security of hospitalization as well as the opportunity to improve the quality of services provided. This may prove a growing interest in quality management issues in modern terms among the Polish health care institutions.

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