

HUMAN RESOURCES MANAGEMENT IN THE NETWORK ORGANIZATION IN THE CONDITIONS OF THE REFORM OF HEALTH SERVICE ON THE EXAMPLE OF PUBLIC HOSPITALS

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Abstract

The present paper brings closer the concept of the network of public hospital as a response to the turbulence of the environment. The implementation of the principles of creating the network organization enables effective use of rare resources in the process of providing hospital services and the advanced ICT technologies. The success of the network is determined by specialization, mutual trust, work culture, complex cost management and rapidity and effectiveness of exchange of resources within the network. The common feature is the cooperation of various autonomic organizational units, the established principles of formalization and coordination of tasks in the diagnostic and therapeutic processes.

Important idea of the paper is Charles Darwin's statement: „It is not the strongest of the species that survives, not the most intelligent that survives. It is the one that is the most adaptable to change.” On the basis of the conducted research and the analysis of the documentation of the surveyed entities, are (at the conclusion part of paper) formulated a lot of conclusions, which indicate that the presented aspects of the complex human resources management and the functioning of the network organization requires significant attention from the management and medical staff, authorized to take adequate decisions.

Keywords: human resources management, network structure, public hospitals, organizational forms, health care crisis.

Classification JEL: M12 – Personnel Management; I15 – Health and Economic Development.

1. Introduction

The beginning of the 21st century is the period of important changes in health care – the management of public hospitals, human resources and the dominating role of information, the essential element of social life, and for public entities – the strategic resource, providing new diagnostic and therapeutic opportunities and establishing new organizational forms. The efficient management of the contemporary public entities significantly depends on the quality of human resources management. While analyzing the experiences of organizations functioning in different sectors of the economy, it is possible to observe a range of practical examples of organizations, which efficiently introduced the concepts of the network organization, based on the complex human resources management. It is particularly important in the era of globalization, forcing public hospitals to search for new, significant sources of competitive advantage. The issue of the appropriate allocation is increasingly important since the scarcity of these resources should satisfy some sensitive social needs – hospital services, whose service quality determines the quality of the possessed medical staff.

Public hospitals satisfy health requirements of the environment and the environment – the needs of the entity. This principle implies the flexibility and changeability of organizational systems, which must adjust to the changing needs and requirements of the environment and the operating conditions it creates. Functioning in the turbulent environment requires the incorporation of changeability into the operating strategy by public hospitals. Network cooperation is a possibility of using the resource and competence potential of partners and complex management of the process of providing hospital services meeting pro-qualitative expectations of the patient. The evolution of scientific development, whose final direction was dominated by the research on the conditions of network organizations and the

essential resource, which medical staff is in the process of complex management of public hospitals, results not only from the perception of the existing gap in the field of professionalization of management of these entities and the specificity connected with the above, but it also is the effect of the conviction of the essential role in the area of the performed functions and pro-health expectations of the society. Thus, there occurs the conviction of the need for further research in this area, deriving from the already existing achievements, and creating solutions, whose application will allow for more effective management of public hospitals.

Network structures, being the advanced form of organizational solutions, meet the requirements of globalization, and the possessed staff specifies the directions of organizational and functional changes in public hospitals. On the other hand, the development of the information and IT structures provides the opportunities to transform an increasing number of elements from the material into the virtual area. This concerns, e.g. the projected scenarios of hospital services, in which almost every element may be the subject to transformation – deprived of physical dimension, it takes the shape of information, stored and processed in hospital databases, systems of supporting decisions – *SWD (Bober, 2013, p. 128)*. As a result, in the process of the cooperation with the patient, the individualized hospital service comes into being, the one of individual, unique nature, directed towards the realization of pro-health needs of the patient, of the real costs.

2. The conditions of the process of human resources management in the network of public hospitals

Human resources are one of important determinants of the process of effective functioning of the network of public entities, since hospital services of repetitive quality may be provided by combining different resources efficiently, including human resources, right next to financial and material and technical ones. For the purposes of the present discussion, it was assumed that the human resources of the network organization, are understood as the resource of qualifications, conditioned considerably by knowledge, skills and motivation. Moreover, the competences in the area of public hospitals (medical service) are difficult to establish and define; they are determined by the impact of technological, organizational, cultural and demographic factors, changing in time. On the other hand, the factor of effectiveness and efficiency, in its development, includes the essential role, which is played by human resources management in network structures. It, among others, assumes that the ability of complex management of the network of public entities is conditioned by the factors such as rotation of management and medical staff, quality of training, qualifications, individual path of development. The process of implementation capabilities is measured by the quality of management of human and financial resources (*Kister, 2005, p. 33*), whose aim is providing medical services of repetitive quality, satisfying *stakeholders*.

According M. Buckingham and D. O. Clifton: “The organization (public hospital) not only must acknowledge the fact that each individual is different, but also it must benefit from this fact. It must aim at reaching the natural talents of each employee, but then, it must ensure them to develop at their post and make their talents transform into strengths. While changing the way of the selection, assessment and development of their employees, the organization must build its activity, while being based on strengths of each individual person,” (*2003, p. 124*). Summing up, the complex system of human resources management is developed not only to integrate personal and economic strategies, but it also serves the purpose of integrating the principles of the complex management of the network of public hospitals.

3. The concepts and the historical background of the network concept of public hospitals

The issues connected with the organizational structure of enterprises have been the subject of interest of numerous researchers since the beginning of the existence of the organization and management science. The query of the literature (*Frączkiewicz-Wronka, 2006, p. 84*) indicates that the concept of the network organization in the literature is an unambiguous concept, understood e.g. as a system of links between people or organizations, created to exchange information, ideas and resources. On the other hand, *IMP Group – Industrial Marketing and Purchasing Group* indicates that: “Business network is a set of long-term ties (relationships, formal and informal (direct and indirect), which appear between two and more entities. The network comes into being as a result of a longer process of development of relationships and interactions taking place in the framework of the above,” (*Ratajczak-Mrozek, 2010, pp. 9–10*). It is also possible to define it by means of the transfer of resources, including the human ones, between units, diversity of links between entities, the limited integration of entities resulting from dissimilarity of sub-goals. The characteristic feature is creating and strengthening information channels in horizontal and vertical systems (*Staszewska, 2009, p. 22*), whereas so called *network capability* (*Daszkiewicz, 2004, p. 83*) means the ability to build up network – relationships and contacts between people and entities.

Nowadays, the individual performance of all the functions inside an individual public hospital becomes practically impossible, and in such a turbulent reality, classical methods and management techniques are no longer useful. Therefore, the need for new complex ways of management arises, the ones which could help the management staff in important decision-making processes, conditioned by pro-health requirements of patients, gaining specialized medical staff, high risk and uncertainty. Therefore, new organizational forms defined as network organizations take on particular importance. They constitute a specific form of relations between entities functioning in the same industry and on a similar basis, running, among others, a coherent policy of human resources management. The network economy places the patient in the center, and while blurring the spatial distance and time differences, creates new social roles, identities and organizational cultures and requires innovative and flexible strategies. While determining the effectiveness of the entities included in networks, it allows for building up a positive potential, constituting the source of innovative diagnostic and therapeutic solutions determining health satisfaction of the patient, reduction of information asymmetry and risk in the decision-making process.

Public hospitals, as the economic entities, while taking key decisions, must choose the appropriate direction of development – network structure, enabling, among others: *cooperation with other entities* (allowing for the provision of complex hospital services), *opportunities for developing standards in consultation with other (hospital) entities* (*Wit & Meyer, 2007, pp. 232–233*). They can also be defined as a cluster or a circle of mutually related entities or specialized units, coordinated by market mechanisms and mutually acknowledged standards. The query of literature allows for the diagnosis of, among others:

- Organizational network (*Phillips, 2010*), and
- Network organization or network structure (*Mukherjee, 2009, p. 23*), and also
- Inter-organizational network (*Baker & Faulkne, 2002, p. 520*).

Network connections have changed the economic reality– *so that, in the era of the domination of the network cooperation only them are found to be effective* (*Niemczyk, 2010, p. 209*). The essence of the network organization is achieving synergy, though this effect is achieved by the adjustment of the operational activity of the selected entities to the strategy of the networks, which, being related to different forms of bilateral and multidirectional

dependencies, participate in the process of exchange of rare resources. For the purposes of the present paper, the network organization is understood as the community of public hospitals and patients.

The common feature of the network of public hospitals is the cooperation of different autonomic entities, conditioned by the established principles of formalization and coordination of the implemented diagnostic and therapeutic sub-processes. The complex management of the process of providing hospital services is determined by very high specialization of human resources, mutual trust of partners, culture of work, strict cost management and rapidity, and the effectiveness of the exchange processes in the framework of the network of entities. While concentrating on the network of public hospitals in the further part of the paper, the terms 'network organization' or 'network structure', which already have a well-established position in the literature, will be used.

4. The goal and method of the research

The aim of the paper is the assessment of the implementation of network structures and the principles of the complex human resources management in the process of reduction of threats resulting from the reform of health service on the basis of the results of the research carried out in 104 public hospitals (Figure 1) of Warmia and Mazury Voivodeship, Pomeranian Voivodeship and Greater Poland Voivodeship (*A*, *B* and *C*). The main goal was realized at two levels. The first one referred to the assessment of the implementation of network structures in public hospitals, whereas the second one was focused on the individual subjects connected with the processes of human resources management. The first one concerned the examination of the opinion on essential factors of threats resulting from the realization of personal policy and learning the opinion on the ways of the selection of the strategy of core competences, abilities and their ties with the strategy of the network organization. Another specific objective was to examine the opinion and collect information about the strategies applied in the development of staff of the network of public hospitals in reduction of important threats resulting from the processes of transformation.

The basis for the considerations on the analyzed subject represents the results of the author's research, obtained from January 2007 to December 2011. Additionally, the pilot research was conducted on the group of 50 (29 women and 21 men) randomly selected participants of medical staff in five hospital wards (of the hospital in Voivodeship *A*, Table 1). This enabled the validation of the correctness of the assumptions and considering the respondents' suggestions with reference to the questions. The anonymous questionnaires were delivered to 104 public hospitals (20.43% of the total number) in Voivodeships *A*, *B* and *C*. 203 correctly completed questionnaires 81.20% (250) were accepted for the further analysis. The population, selected randomly, amounted to 8975 participants (7.33% of all the doctors) of the analyzed entities: *fulfilling the criteria of a certain kind* (Soloma, 2002, p. 53). To collect the data the author's own questionnaire was used, including mainly close-ended questions, and so the ones connected with the appropriate response propositions. The application of the highly standardized questionnaire was inspired by the previous experience of the author in the research into this type of community. Medical staff is very reluctant to spare their time on matters not referring to the process of providing a hospital service. Moreover, using this research tool shortened the time essential for conducting an interview. On the other hand, it allowed for obtaining the responses strictly connected with the research problem.

The research problem was formulated in the form of the following general question: To what extent, the knowledge of factors (by medical staff), determining the implementation of network structures and complex human resources management, influences the effectiveness of

its functioning? The analysis of the respondents' responses allowed for the formulation of the following thesis: The knowledge of medical staff in the field of the impact of the network organization on the effectiveness of the diagnostic and therapeutic processes, determined by the possessed human resources in the process of reduction of threats, resulting from the reform of health service and the decision-making risk and information asymmetry, is relatively high (Figure 2).

Table 1: Detailed structure of the surveyed population – medical staff of public hospitals (own study)

No	Wards	Years of service at wards					Education				Gender		
		up to 5	6–10	1–15	6–20	more than 20	with no specialty	I ⁰	II ⁰	Ph.D.	Prof	W	M
1.	Internal medicine	2051	174	294	429	318	2051	397	686	657	74	2555	973
2.	Gynecology and obstetrics	421	139	245	385	213	421	113	134	153	26	1058	331
3.	Neurology	249	198	209	184	167	249	299	354	398	56	1020	503
4.	Orthopedics	583	193	229	294	174	583	322	374	429	31	199	767
5.	Cardiology	271	231	299	309	216	271	250	264	342	41	1076	493
Total		3575	935	1276	1601	1588	3575	1381	1812	1979	228	5908	3067

In the present paper, apart from professional categorization, there was introduced the division of people depending on their years of service, education and gender of those questioned. While taking into consideration the criterion of years of service, the majority of the respondents are the people working up to 5 years, 39.84% (3575). As for the number, the further position is occupied by the people with the years of service ranging from 6 – 10 years, 10.42% (935) of those questioned, then 11 – 15, 14.22% (1276), 16 – 20, 17.82% (1601). The number of people working more than 20 years amounted to 17.70% (1588) of the population under research (Table 3). Another criterion of the division, taken into account in the paper, is the gender of those questioned. Public hospitals are highly feminized entities what was confirmed also in this case. In the examined entities females amounted to 65.83% (5907) of the medical staff whereas men – 34.17% (3067). The research indicated that 39.83% is characterized by lack of relevant experience (years of service: 1 – 5 years). 35.57% (3193) have the specialty of I⁰ and II⁰, 22.06% (1979) of the respondents have Ph.D. degree 2.54% (228) possess degree of professor, M.D., Ph.D.

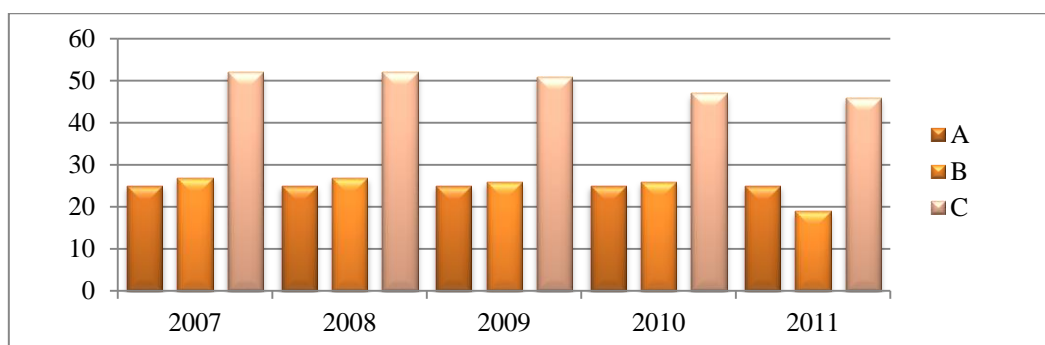


Figure 1: The number of public hospitals in the analyzed period (own study)

Both preparing the research problem and interpreting the results of the empirical research required the query of the literature. The respondents were asked to indicate some essential reasons for the introduction of network structures and their assessment on the scale 1 – 5, where 1 means that it is of very little importance and 5 means that it is very important. The results of the obtained responses are presented in Table 2. The most significant advantages resulting from the functioning in the network structure concern, above all:

- Possibilities of cooperation with some complex scenarios of hospital services – 78% of indications;
- Possibility of exchanging ideas between partners – 66%;
- Better position in processes of negotiation with external partners – 74%;
- Better opportunities for market expansion – 62% of the responses;
- Transfer of innovation and increase in the attractiveness of individual entities (e.g. the center of burn treatment) on the market due to using logo and brand 78%;
- Effective use of human resources 66%;
- Cooperation among entities 77% of the respondents were in favor of the above.

The respondents expressed a similar opinion towards the possibilities of using a higher technological and economic potential and giving up competition for the benefit of the processes of cooperation to use the effect of synergy.

Table 2: The advantages of the functioning of public hospitals in network structures (own study)

No	Advantages	Order of importance
1.	Possibilities of exchange of solutions inside the network organization	4
2.	Cooperation in the framework of common, complex scenarios of services	4
3.	Financial help in a current activity	3
4.	Help in the personnel area	4
5.	Increase in attractiveness (logo, brand etc.)	5
6.	Possibilities of using the increased potential	4
7.	Giving up competition for the benefit of cooperation	3
8.	Flow of resources between branches	4
9.	Higher impact in contacts with suppliers	5
10.	Effectiveness of negotiation processes with the Ministry of Health and NFZ (National Health Fund)	5

Moreover, the conducted research indicated that the main advantages of the network organization, reducing threats, resulting from the turbulence of the environment, is mutual help, better possibility of the market expansion. Diffusion of important resources, including the human ones, determines the position in relationships with the economic environment and administration. The most frequently indicated issues, given to the question concerning the weaknesses (drawbacks) of the functioning in network structures were¹:

- Unwillingness of network partners to cooperate – 58% of the respondents;
- Autonomy thinking – excessive pursue of operational independence, oriented only towards the interests of own unit – 56%;
- Conflicts between partner entities – 59%;

¹ The respondents were able to indicate a few weaknesses resulting from the functioning in the network structure, therefore individual percentages do not amount to 100.

- Unwillingness to transfer innovation, ideas and competences – 64%;
- Coordination difficulties against too significant growth of the network – 58%.

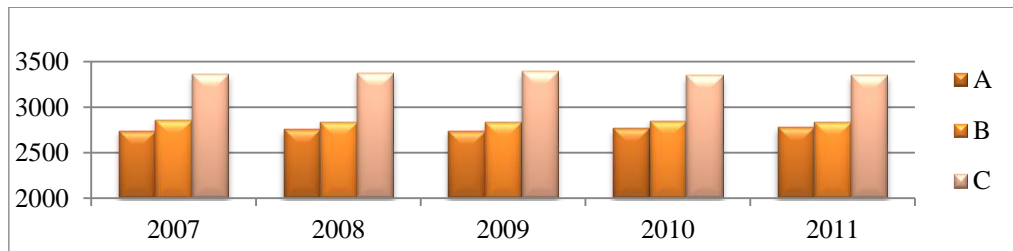


Figure 2: The increase in the significance of network structures in public hospitals (own study)

The above disadvantages may relatively reduce the effectiveness of the functioning of the whole network and the process of gaining important medical staff and be more exposed more on the impact of crisis phenomena. However, generally, there predominated a positive attitude towards further functioning in the framework of this structure among the respondents. On the other hand, in the field of human resources, the respondents specified the range of essential capabilities and desirable competences in management of the process of providing services in the network of public hospitals. The presented listing, including the research period from January 2007 to December 2011 (Figure 3 – 7), define the role and the importance of human resources (medical staff) and the network of public hospitals, as, among others, consulting and advisory centers in the field of desirable patterns of pro-health behavior. Moreover, they indicate the directions of desirable changes in health service, human resources management in the network organization and the diagnostic and therapeutic process.

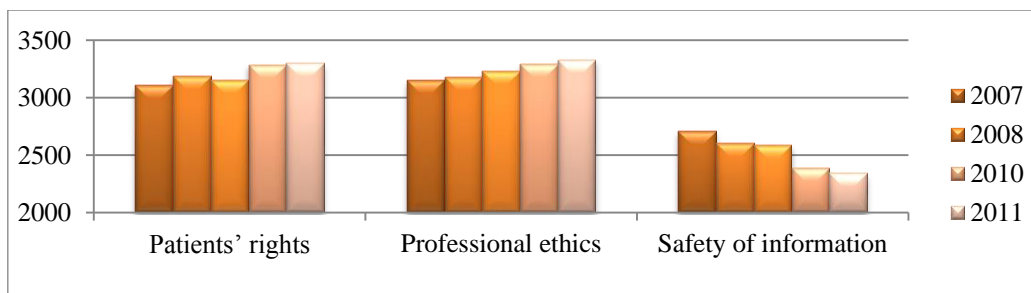


Figure 3: Knowledge of legal requirements by medical staff (own study)

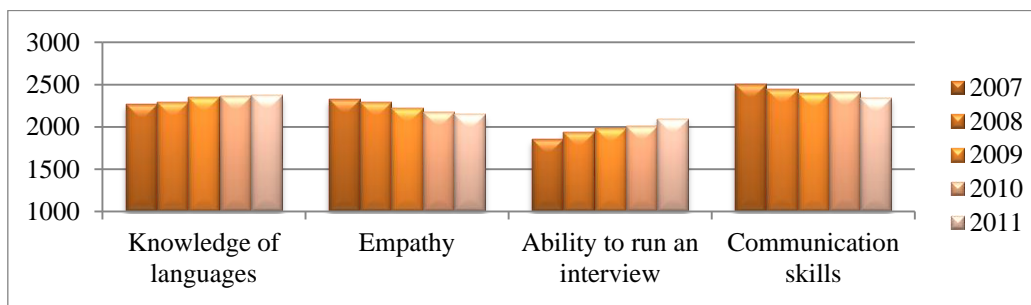


Figure 4: The competences of medical staff in the process of providing hospital services (own study)

The analysis of the responses proves the lack of stability and coherence of the legal requirements in force: 3111 in 2007 to 3299 in 2011, there was an increase in the significance of ethics in the process of providing services from 3151 in 2007 to 3331 in 2011. On the other hand, there was a decrease in a sense of safety of sensitive data: from 2713 in 2007 to 2345 in 2011, which is an alarming phenomenon.

The importance of broadening competences was appreciated by only 2272 of the respondents in 2007, whereas in 2011 there was an increase up to 2379 of the responses. The correctness of the internal communication process was appreciated by 1858, and in 2011 there was an increase up to 2099 of those questioned. It is positive manifestation of an increase in trust towards a doctor, but an alarming phenomenon is an increase in processing the information in a way which is unclear for the patient: in 2007 there were 2514 of the responses, and in 2011 the number dropped to 2346.

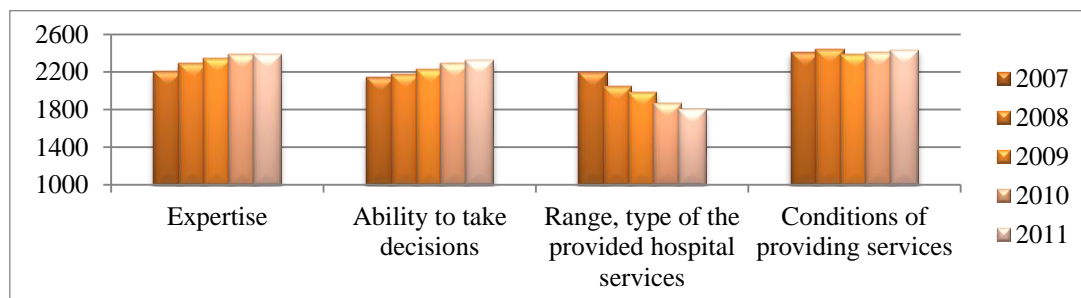


Figure 5: The factors of the process of providing hospital services (own study)

While analyzing the data included in (Figure 5), an alarming phenomenon is a decrease in the range and type of the provided services: 2199 in 2007 responses, and in 2011, there was a drop to 1806. Positive manifestation is an increase in the conditions of the process of providing services from 2414 in 2007 to 2439 in 2011.

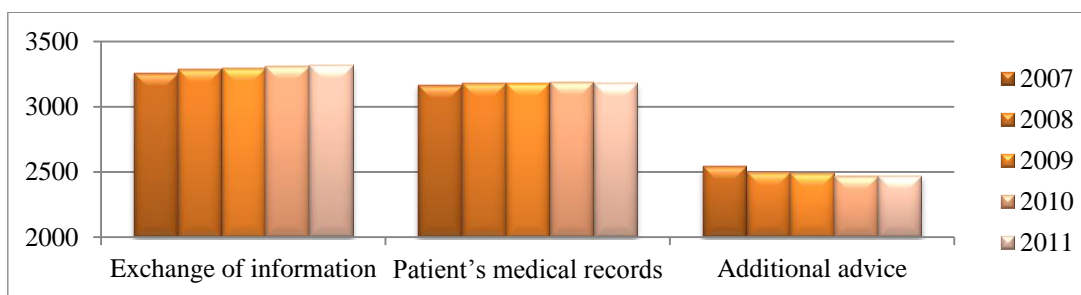


Figure 6: Determinants of the cooperation between medical staff and the patient (own study)

The process of cooperation includes the results where the exchange of information was supported by only 3261 of the respondents in 2007, but 3319 in 2011 of those questioned. It is positive manifestation of mutual interpersonal communication and, on the other hand, the phenomenon of information asymmetry increases (Figure 4). Access to medical records was appreciated by 3171 of the respondents in 2007, but in 2011 there were barely 2473; additional advice: 2543 in 2007, 2473 in 2011. There occurred a slight drop, according to the author, caused by instability of law and organizational and functional solutions in medical service.

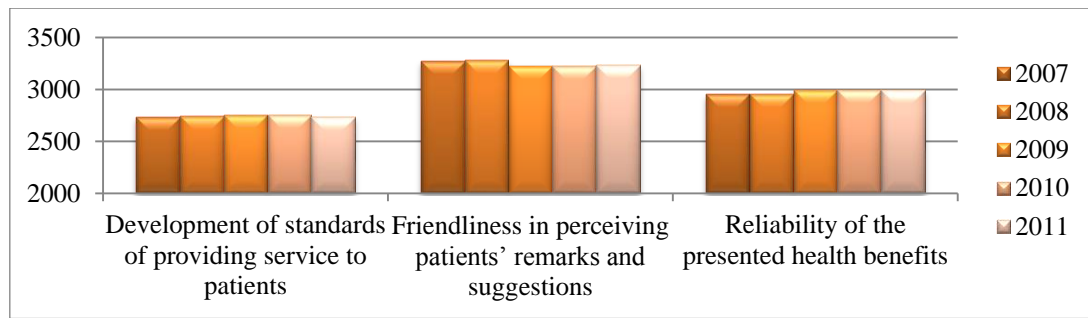


Figure 7: The role medical staff in the process of providing hospital services (own study)

Summing up, it is necessary to underline that interdisciplinary nature of the possessed human resources takes on important meaning in the process of reduction of the decision-making risk, information asymmetry and an increase in the prosumer's health satisfaction. The effectiveness of the diagnostic and therapeutic processes is conditioned by the ability of medical staff to adjust to the current market conditions (Bober, 2012, pp. 473–491). Therefore, while analyzing the respondents' responses, it is possible to notice the growing tendency for the implementation of network structures in public hospitals and an increase in the role of complex human resources management. This is the result of the intensity of the environment changes and its uncertainty, growing health needs and pro-qualitative requirements of prosumers.

The network of public hospitals may be created by an unlimited number of entities, which are different as for the size or the structure of management. The respondents also confirm that network solutions are regarded as the modern form of the organization of public service entities of the information era and the mutual communication. As it results from the conducted research, the basic goal is achieving the synergy effect, which may be obtained by the cooperation of many entities. They are based on their core competences, providing the network with appropriate human resources (know-how, etc.), they gain repetitive quality of the provided hospital services. In the field of the attributes of the network organization, the responses of those questioned focused on:

- Taking decisions referring to resources, not only integrally by entities, but also collectively;
- Flow of the possesses human, physical and material resources between cooperating partners ought to be of repetitive nature, and not casual;
- Free flow of information;
- Form of coordination of activities between the cooperating parties by means of negotiations and agreements, and not competition; and
- The fact that there is flexibility in the framework of the entity or the hospital ward.

These strengths, in the conditions of the turbulence of the environment, enable controlling the technical and technological hospital sector – the management of the processes of providing services, promoting diagnostic and therapeutic standards, achieving the effects of economies of scale and experiences of medical staff.

In the management of the process of providing services in the network organization, the benefits coming from taking joint activities are, above all, shortening the time of reacting to threats, increasing the effectiveness of activities, using the possessed human resources, more efficient processes of coordination and mutual communication. However, the problem consists not only in the way of mobilizing individuals to cooperate since, among others, a range of organizational and legal solutions serve this purpose but the way of motivating

individual entities and individual people to establish and constantly strengthen inter-organizational relationships. The partnership of the component organizations is based on mutual trust, common ideology and reputation (*Hatch, 2002, pp. 196–197*), the factors which are very important in the management of the process of providing services in public hospitals. The effective functioning of the network of public hospitals is determined by the values appraised by the management staff (motivation, flexibility, cooperativeness). Organizational and functional culture (of the contemporary public hospitals) and the values of "new managers" (health care) mean being "harmonized" with the network organization (*Goold & Campbell, 2002, p. 339*).

5. The significance of the development of the public hospital network

In the present considerations it was assumed that the effectiveness of the diagnostic and therapeutic process ought to be a binder lessening the resource weaknesses of the public entities. Uncertainty and the turbulence of the environment determine the decision-making process, whose results extend over several stages, and the effectiveness of creating value increasingly rests with the competences of medical staff of the network of public hospitals. Narrowness of individual competences of the staff, the need for their protection as well as development and flexibility, are the reasons for the complex human resources management and creating the networks of public hospitals, which according to (*Stańczyk-Hugiet, 2012, p. 86*), are the organizations of a special kind, created mainly to obtain the specific type of strategic benefits, most frequently connected with the classical synergy of the systems of collective actions.

The network constitutes an intelligent organizational form, which provides an opportunity for increase in flexibility and allows for more effective control of the market of hospital services. The characteristics of the creative network – individual entities, become the natural carriers of the value added in the process of providing hospital services, whereas the possessed human resources are the carrier of standards and professional ethics. For the purposes of the paper, it is assumed that the value of the network is the sum of the gathered resources and competences concerning their use and the opportunities for their growth in the process of synergy. Learning and the selection of partners (participants) of the network, enable reduction of competitors, strengthening the position on the market and the efficient process of creating important benefits for stakeholders.

Due to the development of cooperation with the network partners, the participants gain the opportunity for contracting complementary services, while simultaneously offering a wider range of services. At the same time, they have an opportunity for concentrating on the selected specialized services in the framework of the network. Gaining new capabilities while developing the specialization of the possessed staff allows for providing patients with complex offer, increasing revenue with simultaneous lowering costs (using economies of scales e.g. in purchase processes) and strengthening the position of both one's own and the remaining participants of the network. In turn, from the point of view of the patient, due to the possibility of offering a range of hospital services, their better accessibility, continuity of treatment and free movement without internal barriers, the network becomes much more attractive for the prosumer than the individual entities since, as (*Peszko, 2011, p. 69*) stated, the network approach: "... belongs to one of the most inspiring ideas which shape the theory of sciences on organization and management in recent years and which perfectly reflect the characteristic features of the contemporary world: global character, free information flow, unambiguous hierarchical nature of relationships, liquidity and mobility," (*Peszko, 2011, p. 87*). The effects coming from the performance of actions in the framework of the network are, above all (*Kożuch, 2007, pp. 250–251; Perechuda, 2004, p. 67*) visible in:

- *The area of relationships:* information and knowledge transfer, increase in trust and partner relationships between the participants of the network.
- *In the field of the performance of activities:* reduction of the decision-making risk, improvement of effectiveness and flexibility of activities, more efficient flow of resources, faster mobilization due to increasing coordination and integration of human resources in the diagnostic and therapeutic process.
- *In the area of development:* innovativeness in the field of diagnostics, creating knowledge, strengthening the synergy effect, complementarity.

Multi-criteria analysis allows to identify the multilateral impact of factors, facilitates the assessment of the situation and making decisions, which in the management of the process of providing hospital services and human resources takes place in the conditions of uncertainty and continuous changes. The implementation of the network of public hospitals is inscribed in the process of changes taking place in the mentality of medical staff (health care), which, among others, enables:

- Strengthening the negotiation position by multilateral relationships of the cooperation;
- Concentrating on the core competences;
- Parallel use of resources and the potential of the cumulated knowledge;
- Expanding the opportunities for the strategic choice.

There is no doubt that the network organizations of public hospitals grow on the basis of a new approach towards competition identified not only with individual capabilities of entities, medical staff, *but with the capabilities resulting from the cooperation in the network of common values* (Suszyński, 2007, p. 84), and their essence is the shared control over the resources, which are specialized and harmonized with each other, frequently the ones of non-material nature. As (Antczak, 2004, pp. 74–75) indicates, the application of the solutions of this type, most of all, results from too high, in relation to the changeability of the environment, degree of formalization of the activities in public hospitals and it is also connected with the chaos and emergence of a kind of information gap, impeding effective management.

6. The assessment of the effectiveness of the network organization of public hospitals

In the world of unlimited resources, it would be unnecessary to develop methods allowing for their effective use. Unfortunately, the sources of financing of health protection, and especially the process of providing hospital services are limited. Globalization and competitiveness create some special social and economic determinants of the functioning of the network of public hospitals and complex human resources management, in which economic effectiveness was of the secondary importance only until recently. Marketization of hospital services determines the effectiveness of the functioning and managing of the possessed resources (Majchrzak-Lepczyk, 2013, pp. 2–6). The competition on the market enforces some actions adjusting the network organization to the turbulence of the environment. The multi-dimensional analysis of the effectiveness, apart from the financial dimension, ought to include the social aspect of the complex management of the network organization effectiveness, determining: Satisfying needs and expectations of stakeholders (...), which are of the key importance for survival and development (Bratnicki, 2009, pp. 100–101).

The effectiveness achieved due to the implementation of the principles of the network organization and human resources management, therefore, ought to depend on the level of

correctness and efficiency of the implemented solutions, moreover, the level of adjustment of the solutions of the management process to the characteristics of the diagnostic and therapeutic sub-processes, social and economic determinants and the continuity, regularity of the process of management of information safety. The process-based approach enables the achievement of the synergy effect by e.g. maintaining advantageous relationships with the local community, which amounts to good relationships with patients, reduction of the decision-making risk and the phenomenon of the information asymmetry. While discussing the effectiveness of the network of public entities, it is necessary to mention *balanced score-card* and cost accounting *ABC* (Bober, 2012, pp. 71–87).

Therefore, the effectiveness in the social aspect (varied group of *stakeholders*) amounts to the achievement of social goals, expressed by means of the quantitative and qualitative criteria (Bober & Olkiewicz, 2013, pp. 269–278). The duality of this assessment means the possibility of multi-criteria assessment, taking into consideration, on the one hand, the necessity of the functioning in accordance with the economic calculation (the network of public hospitals cannot generate loss), and on the other, the realization of social goals – management of the process of providing services on the repetitive quality level. In the analysis of costs and advantages there was also included the significance of the time horizon, in which the provided hospital services will influence the patient (the environment) and their scope. The adopted approach implies the necessity of considering all the essential costs and benefits to evaluate social effectiveness of the diagnostic and therapeutic processes. The achievement of the desired social and ecological effectiveness, integrated with the economic effectiveness, takes place with the optimum allocation of the available resources and with effective preservation of public entities in the framework of the network of public hospitals.

In the present discussion, it was assumed that the implementation of the proved management techniques in other sectors of the economic activity, may serve as a reference point while developing the principles of management of human resources in the network organization, taking into consideration the specificity of the process of providing hospital services. The result of the research conducted by the author confirmed the validity of the direction which should be taken into account, if the goal is the increase in the efficiency of the processes of providing hospital services and the allocation of the possessed resources. This also requires the reorientation of the pro-health policy, from the population-based approach (raising the average level of health) to the approach understood in the categories of economy, in which there is taken into consideration both the criterion of costs and the level of the health satisfaction of the patient.

The market becomes more and more common model of social organization, and public goods, which also hospital services are, are influenced by the market mechanism and the economic rationality (Majchrzak-Lepczyk, 2012, pp. 11–19). The implementation of the economic principles in the structures of the network of public hospitals, introduces the mechanisms of competitiveness described as *marketization* (Kozuch, 2004, p. 67). According to the author, it is not tantamount to the entire privatization of hospital services, but it significantly changes the principles of their provision. This process is mostly characterized by effectiveness, and therefore, searching for the solutions, taking into account, among others, market principles of recruitment of hospital staff, the rules of pharmacy-economics to use the possessed measures (e.g. drugs) as little as possible, while maintaining the effectiveness of the diagnostic and therapeutic processes. The implementation of the market solutions in the network of public hospitals should include the assumed goals and fulfill pro-health expectations of prosumers to make the principle of their fair division visible in the access to and use of hospital services, since as Margaret Thatcher stated: *There is no such thing as "public money". If the government say they "will give" something to somebody, it means they will take it from you, since the government has no money of their own*". Therefore, in the

Polish realities – the network of public hospitals, it is necessary to take strategic decisions, to take from the good and to give to the best in the framework of the effective management based on the economic calculation.

7. Conclusions and recommendations

Health care crisis carries numerous repercussions for public hospitals, both the economic and social ones. It is the seed of thinking of various projects limiting the possibility of its range. For the purposes of the present paper, it was assumed that, in the management of the process of providing hospital services in the network organization, not only the choice between the market allocation and the planning and administrative one is important, but the skillful combination, by the management staff managing the entities being part of the network, of their scale and scope in the proportions being the equivalent of social consensus.

The results of the conducted research indicate that the advantages resulting from the complex human resources management and the functioning of the network organization of public hospitals exceed barriers and drawbacks connected with the above. Great flexibility, effective exchange of resources and support from partnership in difficult situations are the main advantages of this organization form, indicated by the majority of those questioned. This constitutes an important recommendation for public hospitals, which have been to develop in this difficult period. The conducted research constitutes the supplement of the results of the research on the literature; they indicate the reasons of the observed phenomena that public hospitals face the necessity of networking to strengthen:

- The potential to identify challenges, beams of systemic risks and to analyze the changing environment; and
- Effective use of available staff due to improving their qualifications within planning strategic activities – building complex scenarios of hospital services;
- Standards of competences, qualifications of medical staff of the network of public hospitals;
- Providing the management staff with optimum conditions for the effective actions;
- Education processes, being a determinant of capabilities of the implementation of the pro-health policy;
- Monitoring and evaluating the impact and effectiveness of the conducted changes in the decision-making process.

The implementation of the concept of the network of public hospitals increases the numbers of mechanisms of self-regulation, reacting to the occurring disturbances within the possessed resources. On the other hand, the medical staff should also possess qualifications in the following areas:

- Responsibility for the complex diagnostic and therapeutic processes; and
- Management of the decision-making risk in the processes of providing hospital services; and
- Processes of communicating standards, procedures, recommendations, which are socially and ethically important;
- Presenting the staff the entities within the network, possibilities of bringing about some essential, positive changes at the time agreed upon on the established resources.

The characteristic feature of the network organization of public hospitals is access to resources offered by all the participants: “The network of processes develops as a response to the need for gaining more flexible access to the specialized potential on the global scale. Networks globalize highly specialized enterprises on more than one levels of the extended

business process,” (*Hagel & Brown 2006, p. 116*). Functional consistency within the network consists mostly in the choice of the diagnostic and therapeutic sub-processes, which are important in the subsequent stages of the patient’s health biography.

A particular attribute of the network of public hospitals is interoperability, which is the ability to cooperate effectively, cooperation by sharing norms and standards, which enable full integration, allowing for more efficient use of tangible and intangible resources. The binder combining human resources is the information system, open for the cooperating parties: *most of all, constituting the element of coordination of activities and mutual accounts* (*Lobos, 2000, p. 56*). Consequently, IT infrastructure of the network organization brings about the improvement of the effectiveness of the diagnostic and therapeutic processes, and in consequence, the improvement in the level of health of the society – the economic growth. A complementary issue is, in here, the development of human resources in the network organization and some essential investments in this area. The conducted research seems to be significant, especially when facing the existing health care crisis and constantly occurring new forms of organizations, and specifying the benefits and drawbacks of the functioning of the network of public hospitals in the conditions of the economic crisis determines its originality. The establishment of the network organization undoubtedly will enable the use of core competences of the entities being the part of the network structure.

On the basis of the conducted research and the analysis of the documentation of the surveyed entities, it is possible to formulate a **range of conclusions**, which indicate that the presented aspects of the complex human resources management and the functioning of the network organization requires significant attention from the management and medical staff, authorized to take decisions in the conditions of:

- Major constraints determining the possibility of a long-term, effective and innovative action; where
- There lacks effective strategies both at the level of the recruitment process of medical universities and public hospitals, indicating the core competences and capabilities which are important in the process of the complex providing hospital services; moreover, strengthening their role as the organizer of human resources;
- Lack of significant resources of knowledge, analytical tools for studying problems and challenges the contemporary public hospitals face; and
- Analysis of risk factors and threats in the diagnostic and therapeutic process, which are connected with the development of new services conditioned by the processes of the aging society.

The concept of public hospitals as the network organization – the one learning, in the light of the conducted research, may be acknowledged as actually a desirable solution, which, at the present stage of functioning, is not to be performed. Certainly, it deserves further studies and in-depth analysis of reasons, results and both external and internal conditions.

Summing up, the division of the diagnostic and therapeutic process in the framework of the network reduces the costs connected with the complex scenarios of the provided hospital services. Moreover, in case of hospital services, when an essential element becomes the application of the complicated medical technologies – gaining specialized knowledge of medical staff, providing services within the network is a way of gaining and implementing in the services satisfying the pro-qualitative requirements of patients. The contemporary patient – the process of providing hospital services requires highly-specialized staff, the application of new diagnostic methods and new technologies and IT techniques, connected with them, which allow for effective satisfying pro-health needs of the society, by means of using the network diagnostic and therapeutic forms. The presented contents refer to the important issues connected with the network form of the organization of public hospitals and the role of the

possessed staff in the process of reduction of disturbances resulting from the reform of health service. The structure of the paper, adopted by the author, allowed for the presentation of some practical knowledge on the human resources management and the network forms of the organization of public hospitals, since as R. T. Kiyosaki used to say: "If you want to be rich (healthy), you must be the business owner or the investor (...) The richest people in the world build networks, the remaining ones prepare for looking for a job," (*Kiyosaki & Lechter 2004, pp. 7–10*).

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