

Knowledge Based Management in the Health System

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Abstract

The current work paper treats the issue of management based on knowledge with direct application in the health domain. The work paper starts with the major importance that human resources have in this system; a fundamental resource in the health services. In the context of accentuated dynamic evolution of the domain under the influence of specific factors, it is more and more imposed the permanent preparation of human resources for the acquirement of knowledge. The knowledge based management stresses the knowledge permanently assigned by the organization members within the health system and its influence on the system efficiency. The following are analyzed within this paper: the concrete influences of knowledge and management orientation on the permanent development of human resources (in the dimension of knowledge) in the health system domain.

Keywords: *management based on knowledge, health system, health system management, human resource management, human resource development.*

JEL classification: D83, M10

The society we live in has seen a continuous development which requires constant adaptation of citizens and organizations to new trends. The last time recorded exponential growth of fields of activity entails continuous training for "tomorrow".

Moreover as time passes, human, material and financial information are lagging behind, in importance. The information takes on a special role in the decision now because it has importance in decisions that affect future activity.

In this context, particular emphasis is placed on the knowledge management field allowing predictable and timely adaptation of organizations to present and future reality.

In terms of the health system we can say that management needs more and more knowledge from the medical field, engineering and technology (which can be used in the health system) etc. (see figure 1). For this reason, knowledge management gains a vital role in today's society and thus in the health system.

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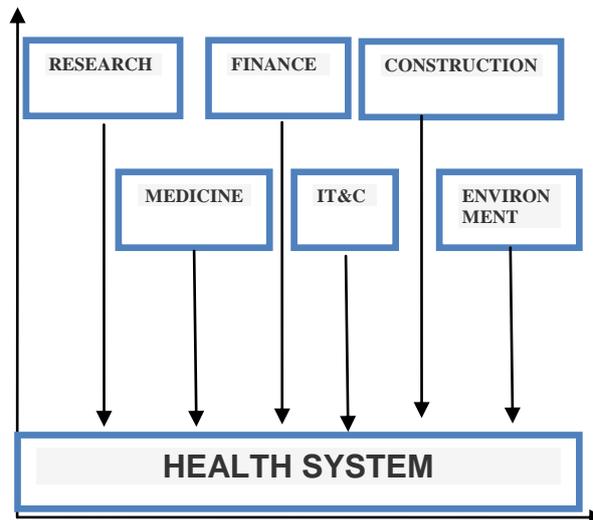


Figure 1 Areas of knowledge with impact on specific information of the health system

Development and adaptation in terms of sustainability of the health system requires orientation for the future to ensure certainty and identifying trends, which requires a large amount of knowledge and the best use of them.

1. Boundaries of knowledge management in the healthcare system

Knowledge Management in general experience a clear awareness. Opinions in the field however, are divided which does not provide a precise consensus of this fact within the context of the field analysis. Knowledge management in the healthcare system has been a specific need of a very dynamic field in which the evolution requires an accurate approach nowadays, adoption of relevant decisions for immediate actions with future outcomes as real and valuable.

This new type of management is based on knowledge, research and optimal utilization of the results. The new management system appears and develops only in the knowledge-based organization, defined as "a community of workers with work design, interconnected through a computer infrastructure" (Holsapple &Whinston, 1987).

In health, knowledge management can provide a superior capitalization of human potential and human resource by knowledge it holds ensuring the system interaction with the exterior. Today, knowledge is used in almost all health care in different ways and for different purposes.

The potential of management based on knowledge in the healthcare system was never used to its full potential. So far, only certain areas of the health sector have used the knowledge at a high level, and this especially at the level of medical research.

Many of the specific tools Knowledge Management in Health System are used only for a fraction of tasks that might take over and link with other areas of activity (specific knowledge and interest in the medical field) is very limited.

Also, investment in knowledge management systems is extremely expensive and should be adapted and improved continuously and not accompanied by the development of users' competencies. In addition, maintenance and operation costs of post-implementation were often underestimated.

The current limitations of the proper use of knowledge management in the healthcare system are:

- Problems with knowledge transfer;
- Difficulties with compiling and communicating knowledge to the health system components;
- Inability to quickly and easily take over new functions such as decision support in different flexible and modified systems;
- Lack of common interfaces from different fields of knowledge for users, making it difficult to use by medical staff;
- They are not developed for a cost-effective operation and management.

Efforts are needed to improve the use of the modern solutions and especially of a knowledge management system in the health system. For example, we need better processes for making decisions when placed or changed concepts occur at a new level of knowledge.

Necessary evolution of knowledge management in the health system must follow the flow shown in Figure 2

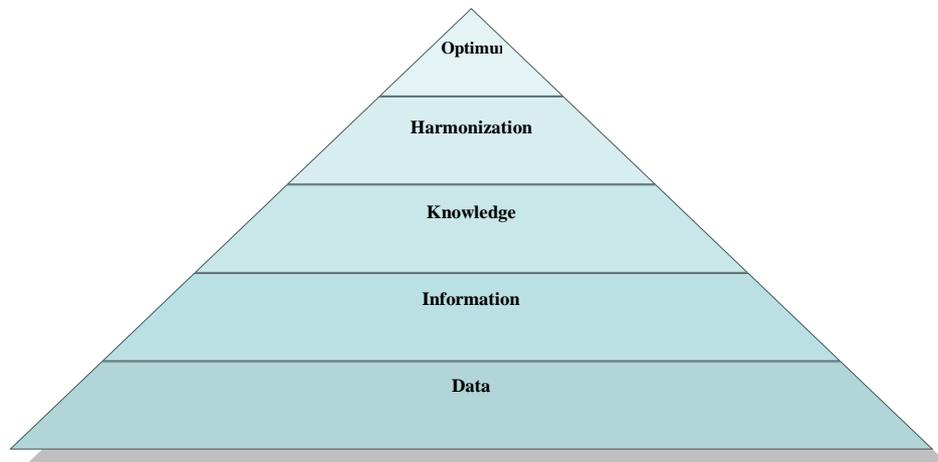


Figure 2. The flow required to be provided in knowledge management in health

As shown in Figure 2, at the base of the pyramid of Knowledge Management in the health system are data, they provide the starting point for the

system development. This base can be ensured through an open system of interaction with the outside world.

To reach the information, the data must pass through a filter system and highly efficient processing. This is required by the large volume of data that needs to be processed in a short time, especially since new data always appear that would influence the future evolution of the field.

The transition from information to knowledge requires understanding and assimilation of concepts. Based on these elements the evolution and trend phenomena can be understood very well. This entails the possibility of adopting decisions with greater efficiency in the future. Under these conditions the transition from information to knowledge requires much more effort and is more complex.

The transition from knowledge to harmonize intends to put the agreement of knowledge from different areas and ensure a greater synergy effect in the health system. More specifically it provide the most efficient exploitation of the knowledge of a different nature and from different backgrounds that converge in the health system.

Figure 3 shows the complex transition from the harmonization to the optimum level which involves ensuring the maximum level that can be achieved by growth of knowledge and health system management.

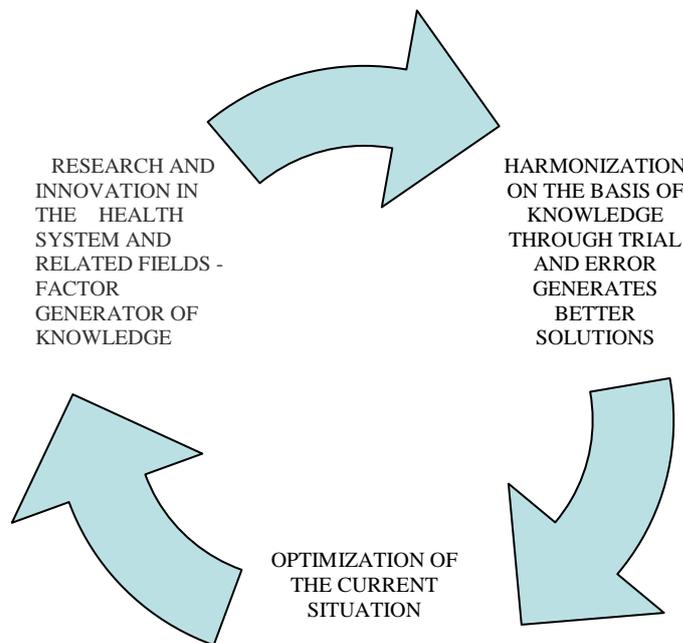


Figure 3 Maximize harmonization on the knowledge base and the transition to the optimal solution

2. Content and concepts

Knowledge Management in general experience a clear awareness. Opinions in the field however, are divided which does not provide a precise consensus of this fact within the context of the field analysis. Knowledge management in the healthcare system has been a specific need of a very dynamic field in which the evolution requires an accurate approach nowadays, adoption of relevant decisions for immediate actions with future outcomes as real and valuable.

The essential feature of knowledge management is the assimilation of knowledge of science and technology and through their use the transformation into a competitive advantage. It is an obvious fact that obtaining performance is not possible without new knowledge, without the intervention of permanent and substantial research, which is the basic support of scaffolding new type of management. In fact, even the European Commission argues that in the knowledge-based society "scientific research and technologies will be more than ever the motor of economic and social progress ". This manifests itself strongly in recent years in Europe through diversification of research and its orientation to tackle issues of complex management (harmonization of systems theory, management-oriented organizational culture, communication management in knowledge-based organization, intercultural management, impact of globalization on organization management etc.). Resolving these problems is imposed on the need to boost the volume of knowledge required by the new management system. In a knowledge-based organization management has a different invoice and method of application. We must emphasize also the fact that in the modern economy creation, communication and exploitation of knowledge require flexible management practice in which the line between informal and formal side visibly fade. There also appear new benchmarks for organizational culture related to creativity, communication, lifelong learning (life-long learning) and training.

Knowledge-based organizations structure new responsibilities regarding the creation, management and dissemination of knowledge. Managers of such organizations realize the great role and value of knowledge in market competition, being constantly concerned with the creation, attraction and use in the organization of knowledge and technologies. They must be able to adapt the organization to the requirements of a modern economy based on knowledge.

For a health system, knowledge management must always consider the following elements: know-how, human resources, research, needs and satisfaction of health service recipients, as shown in Figure 4.

The most important factor in figure 4 is know-how. This element actually provides the knowledge obtained through answers to questions like:

- Who?
- What?
- When?
- How?
- Where?
- Why?

These questions open up the desire to acquire new knowledge and are the motor in an area with hard quantifiable variables as is the health system.

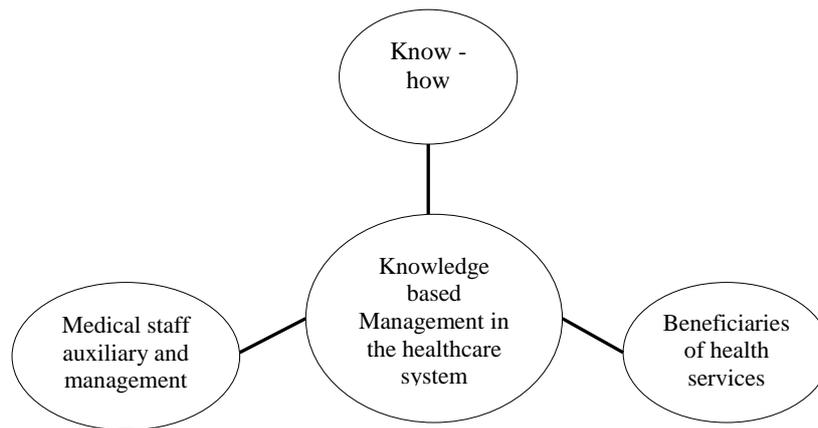


Figure 4 Defining elements for knowledge management in the healthcare system

3. Trends

There needs to be a new approach to knowledge management in health: a new strategic operational perspective. Modern information technology makes things possible that previously seemed impossible: organization, coordination and delivery of healthcare, clinical research in ways unimaginable in the past and at reasonable costs.

Citizens, patients play an active role in defining new ways of service provision according to their needs and requirements:

- Simple procedures for finding and contracting units providing different types of care;
- Access to information about care needs, symptoms, disease and treatment;
- Information on care options, availability and results until now;
- Health choices; information on the guarantees of care provided;
- Without any problems access to information stored in electronic format regarding diagnoses, test results, the measures adopted and prescribed medication;
- Access to the information on patients' rights.

From the viewpoint of health personnel, the benefits can be listed as follows:

- The information stored in a place of health care system can be used elsewhere, as appropriate, at any time without technical difficulties;
- Communication between patients and health providers can be held in some cases electronically by secure email, for example;
- Healthcare providers, care units, patients and their families will be able to communicate with each other through new media: videoconferencing and other means of communication;

- One can benefit from remote medical consultations;
- The information recorded about the care and treatment can be used for other purposes: for management for monitoring treatment, research, development, quality assurance.

Effective and interoperable solutions can reduce the number of hours spent on administrative tasks, which means more time dedicated to patients. They can also reduce the incidence of wrong treatment administered, can promote more active participation of patients and better accessibility.

Operational perspective involves more actions progressively established:

- strengthening the patient state and improving his participation to the Medical Act;
- providing health care services without operational, administrative or geographical limits;
- better working instruments for health personnel;
- efficient management of resources and economic efficiency in health services;
- creating conditions for the use of IT solutions in health care.

A common position should be adopted on the objectives for the continued development, renewal and improvement of efficiency of health services in Romania in order to harmonize with EU health systems. The areas of work could be:

1. Strengthening the patient's status and a better participation on the medical act Status of patients and of their families in the provision of health services must be strengthened; they must have better access to information about the medical act. Efforts should be made towards more active involvement and participation of patients and their families in the field of health which will impact on the increased use of IT solutions and on their access to various useful information.

2. Providing health care services without operational, administrative or geographical limits.

Population mobility has increased as a result of moving students to higher education, jobs and change of residence, etc. Health services must be able to operate without interruption even for people who move or live in more than one place. Also, support services care for specific needs must be provided in more than one health unit that is, for example, specialized for certain types of care.

3. Better working instruments for health staff

Use of information technologies in the Romanian health care is uneven and relatively low. Working tools must be not only easy to use, but must simplify common procedures in health work. The instruments must have a common interface for users common possibility of access, security features and common communication. Accessibility and services can be greatly improved with IT solutions. As well the skills and capabilities of health personnel, through systems specialized to knowledge-based decision support.

4. Efficient management of resources and economic efficiency in the health services IT solutions were used in planning, management and monitoring of health services. Development and continuous improvement of IT solutions in these

areas is essential. Reducing waiting times, patient care coordination and reducing administrative burdens of health staff are just some of the benefits of their use.

5. Creating conditions for the use of IT solutions in health care.

In order to create conditions for the use of IT solutions in health care several steps are required, namely:

- ✓ harmonization of legal framework with the needs of information technologies while ensuring data protection;
- ✓ technical infrastructure development in health care, aimed at creating a secure electronic communication system, able to make the connection between healthcare units and advanced medical devices;
- ✓ An intra-sectorial cooperation is essential. Operational perspective in the field of health requires close collaboration between different actors in the health sector. It is essential to adopt a common approach on information problems.

Figure 5 represents main components of knowledge management in the health system.

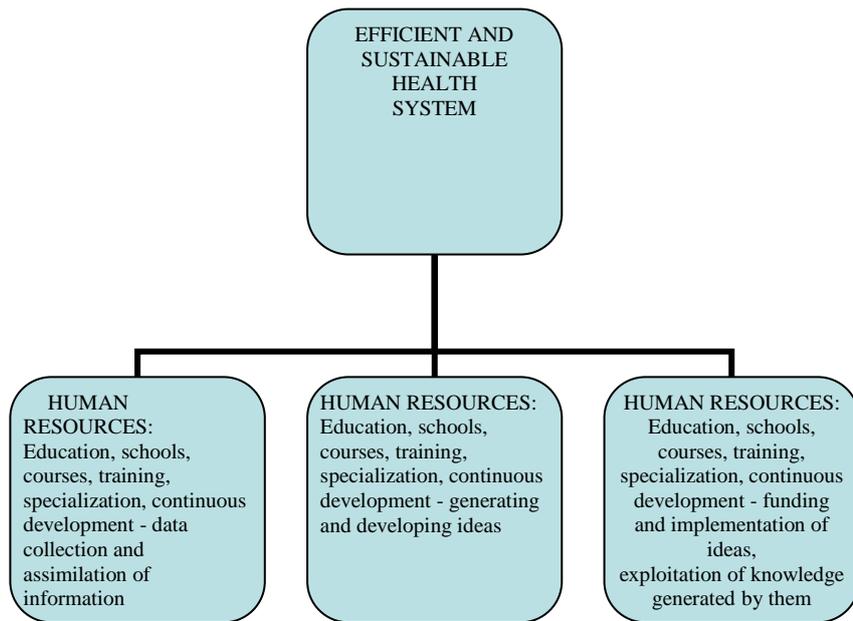


Figure 5 Components of Knowledge Management in the health system

Conclusions

Existing health systems, as part of a public and private social system, allow the promotion of new concepts regarding knowledge management in health. These concepts would determine the shaping of flexible models of management which allow permanent flexibility of the system and the sustainability and profitability in the short term but also long-term perspective.

The deep implementation of the Knowledge management in public and private health system is an absolute necessity, a requirement for any form of organization of human society, given the impact it has in the current health system.

In this sense, it must be given a higher attention in scientific research from all areas that affect the health care and enabling the appropriate development of areas of economic, medical, administrative impact and provide the appropriate synergy of the health system.

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