PalArch's Journal of Archaeology of Egypt / Egyptology

KNOWLEDGE MANAGEMENT IN HEALTHCARE SECTOR

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Priyabrata Pattanaik, Bibhuti B Pradhan: Knowledge Management in Healthcare Sector -- Palarch's Journal Of Archaeology Of Egypt/Egyptology 17(6). ISSN 1567-214x

Keywords: Healthcare Sector, Knowledge Management, Knowledge-based value Creation, Medical Practices.

ABSTRACT

Nowadays, many healthcare sector poses several significant obstacles. In order to deal with aging population with chronic illnesses, it also faces problems related to uncoordinated care, IT integration, and waste of valuable resources. Health care providers are now under pressure to minimize expenses while increasing the efficiency of patient facilities. As healthcare is a knowledge-intensive industry, proper knowledge management and use can lead to improved service delivery methods efficiency. If effectively implemented, a good knowledge management program will empower clinicians, streamline procedures, and cross service differences, while generating and maintaining reliable, cost-effective and high-quality results in health care. The aim of the research is to improve awareness of the role of knowledge and data in healthcare systems and thereby establish a framework for policies that will help the real delivery of services better. The paper addresses the handling of health knowledge from the viewpoint of discourse on information management and emphasize the significance of knowledge-based value development. The paper emphasizes the knowledge-in-use viewpoint rather than pure transmission or distribution of information. Given the crucial position of information properties, the implementation efforts mainly have focused on local problem solving and context-specific technological approaches. The paper exemplifies a research that offers a structured framework for examining multiple facets of information management of systems of healthcare. The research offers useful perspectives for the study of knowledge-based health care structures and this research is intended to support and elaborate the systems and operational awareness in health care service

1. Introduction

The healthcare industry has been facing major issues such as increasing numbers of elderly people and lobbying to cut costs. More generally, a major problem in many countries is the need for efficiency improvements. It includes, among many other aspects, the effective utilization of information tools and the constructive exchange of expertise from the point of view of corporate and administrative activities. Healthcare professionals' knowledge demand has been increasing and regenerated-new types of knowledge are needed, for example, because professionals are increasingly acting both as experts in medicine and managers. Healthcare effectiveness and efficiency require seamless processes of knowledge that allow and support decision-making and relationships with different actors within a healthcare networks. Given the broad recognition of program reliability and efficacy, affordability in access, performance in diagnosis or care, and improved satisfaction experienced by patients, both in policy debates and scholarly studies, there appears to be a study void on inter-organizational decision-making processes in the field of health care [1].

In literature of healthcare sector, very less attention is paid to the sharing of knowledge that takes place through informal means or sophisticated information systems. Healthcare organizations record large amounts of operational data but have no means of analysing and processing it to create and manage their functions. The literature highlights the need for comprehensive knowledge management initiatives, rather than mere transferring information.

There are many approaches being placed in motion to tackle the difference between supply and demand at the primary care stage. Strategies for reforming primary care involve health promotion, disease prevention, and the use of interdisciplinary teams in healthcare provision, a change toward coordinated and integrated care, including the use of the use of ICT in primary care. “Knowledge management” (KM) is a term used in many contexts to describe individual output disparities and boost results [2].

Evolved from experience relevant to re-engineering and efficiency campaigns, but focused on social science principles, KM can be a clinical innovation that will help primary care face the demands of a constantly evolving healthcare environment. A KM system is generally understood to be a set of disciplined actions that align people, data, processes, and technologies to drive performance in the organization. It can be described as systemic, modelling, exchanging, operationalizing, and integration of healthcare information in the sense of healthcare to enhance the quality of patient care. The underlying goal here is to bring the right information at the right time to the right individual so that he or she can make better informed decisions and improve patient care. A healthcare organizations’ KM initiative entails a range of social and technology-oriented initiatives including, but not limited to, developing an information network that can connect clients, providers and payers through the spectrum of treatment, informing and preparing physicians, patients and staff,

enabling various knowledge sharing platforms for multiple stakeholders, streamlining [3].

An efficient KM system has the potential to decrease duplication of medical tests, which in healthcare sector is a major problem, thus reducing costs. It also helps us to leverage the power of expertise and then apply it to decision-makers, producing and maintaining healthcare results of maximum and high quality. KM literature, though, reveals that some KM programs culminated in disappointment or unintentional effects of implementation. The literature frequently offers proof of delays in execution owing to lack of consumer recognition and complex social and technological influences. In healthcare, a growing focus is put on the expertise, abilities and attitudes of physicians required for patient treatment which are deemed to be key business competences. Since doctors are the main players in the healthcare industry, physicians' implementation of the KM program would decide its ultimate effectiveness [4].

2. Discussion

1. Knowledge:

Information is an abstract term linked both to human learning and to the social and cultural context. It is human mind, and capabilities. That is what the people think and are willing to do. Definitions of expertise cover challenges, problem solving techniques, scientific theory, application, technical projects, issues, managerial capabilities, job procedures, and operational and ethical standards. Awareness is supposed to yield potential gains in companies, such as economic gain or change in efficiency [5].

2. **Knowledge Hierarchy**:

Hierarchy of knowledge describes supposed hierarchical and/or functional relationships between data, details, and knowledge. To get a full image of the meaning of intelligence, a grasp of data and facts is necessary. Data is a raw collection of information regarding a case, pictures, and sounds. Data are no-significant trends. They are input into an interpretation process, that is to say, into the initial decision-making step. Information is formatted, filtered and the data are summarized. This is knowledge as data becomes contextualised, has significance and may be shared. Knowledge will provide information. It is the output of data interpretation and input to the decision-making process based on knowledge. An interpreter is needed for the data to become accurate. In the course of data analysis, a human decision-maker usually utilizes his cultural experience, implicit intuitions, explicit memory of specific past experiences, assumptions caused by the present context, as well as awareness of textbooks and domain-dependent heuristic principles to evaluate the qualitative value of data. Once the data is interpreted as information, it is elaborated for better understanding and for new information to be derived [6].

The process of elaboration is the actual process of problem-solving, that is, where the core decision-making takes place. Learning is the incorporation of fresh ideas into an established knowledge structure, which creates new insight in a way that makes it more valuable for subsequent decision taking. Human

intelligence has the power to change human behaviour. Fig 1 illustrates this entire process of transforming data into information, and then into knowledge.

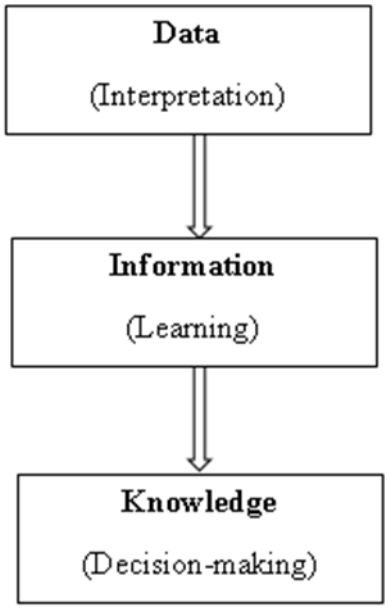

Fig 1: Knowledge Hierarchy

3. Types of Knowledge:

Information may be classified as implicit and clear, based on how it is produced and the different forms of communicating it. Tacit knowledge includes both the people's experiences and understanding within the organization. This is rooted in the human psyche and the "know-how" is also named. Experts display this type of knowledge which usually makes judgments without referring directly to a framework which can explain what they're doing. It cannot be expressed in words, formulae or otherwise and therefore cannot be exchanged easily via formal processes.

It is a significant and relevant information source in a healthcare setting which influences physicians and surgeons' decisions and actions. On the other hand, specific intelligence consists of material artefacts such as documentation and records accessible inside the organisation and outside world. This knowledge can be described as "know-what" and can be expressed, marked, and preserved in certain newspapers. It can be quickly interpreted, stored, or electronically distributed by a device. Examples of this type of knowledge are repositories, medical databases, online, and printed journals. Taking into account the respective characteristics of both knowledge types, organizations generally adopt two distinct strategies for managing them: codification and personalization. Personalization is knowledge sharing with the help of the interpersonal communication, whereas codification is the storage and archiving of knowledge in databases to be retrieved and used later. Unlike codification, the depth of tacit knowledge cannot be fully formalized through the personalization process, since it is embedded in actions that are not easily communicated.

3.1 Tacit to Tacit Knowledge:

Socialization happens as tacit knowledge is passed from one person to another. This is done by sharing experiences, chatting, brain storming and debate sessions. Training competencies through assessment is an indicator of tacit-to-tacit transfer [7].

3.2 Tacit to Explicit Knowledge:

The tacit knowledge becomes explicit when it is articulated and expressed. Metaphors, models and analogies are useful if knowledge is to be transferred from tacit to explicit. People communicate their information in a different way through this phase, and thereby convey what they cannot tell. When an individual discovers a fresh, creative method focus on his / her implicit expertise acquired from years of practice, overt conversion is an indication of tacitness [8].

3.3 Explicit to Explicit Knowledge:

Explicit knowledge can be explicitly converted by accumulating existing knowledge and categorizing it. The exchange may take place in an organisational structure via transcripts or digital communication. It is an illustration of explicit knowledge conversion when a manager gathers data from across an organization and ends up putting it into a financial report [9].

3.4 Explicit to Tacit Knowledge:

If expressed, an individual may use information more, so it is implicit once again. This awareness transfer happens by "learning through doing" When an employee uses an innovation by other members of the organization as a feature or resource for doing their job, internalization or explicit transformation takes place [10].

4. Significance of Knowledge Management in Healthcare Sector:

Knowledge and resources based strategies aim at identifying and illustrating how the internal expertise tools relate to the sustainable competitive advantage of companies. The "Knowledge-based view" (KBV) differs from the resource-based view of the organization (RBV) and stresses expertise capital and conceptualizes the business as an agency for knowledge incorporation. On the theoretical foundation, the much more realistic disciplines of information management were developed.

While RBV and KBV seek to clarify the theory of value development of companies at a rather abstract point, information management suggests that the know-how (i.e. expertise) of businesses decide their capacity to integrate and implement certain (tangible or intangible) tools. Information management seeks to increase the productivity and success of companies by stressing the value of information formation, growth, organisation and, ultimately, leveraging. Experts categorize essential information categories for informative-intensive organisations such as hospitals and other healthcare entities as follows: patient details; management information including information

regarding the organization's procedures and outcomes; and the technical skills required to handle the patients optimally. The job of addressing healthcare organizations' knowledge needs, including the ones listed above, is called managing health records. Public information processing, according to experts, addresses the problem of incorporating patient information services with health care practice [11].

Many concepts have been learned regarding this challenge, the positions of communication technology and information systems in the decision-making of the supporting organizations. Within this paper the emphasis is more broadly on systems of information and awareness. Here, as in literature on knowledge-based management in general, expertise is focused on facts and observations. This is derived from knowledge and evidence according to experts, and is thus more useful to decision-makers. In comparison, knowledge is data in a standardized manner. Information are unstructured data and have the least impact on managers [12].

Researcher-based knowledge management as a term for understanding, defining and using available knowledge provides the decision-makers with a helpful method to handle their organisations. The information requirements of the main players will also be a starting point for the knowledge management activities. Researchers note that good decision-making requires both quantitative and qualitative knowledge irrespective of the stage of the company (e.g., political, tactical or operational); However, operational management is more focused on comprehensive and mostly internal knowledge while strategic management is more far-reaching and thus the requirement for knowledge is more condensed and more external. The flow of information inside an organisation has to be assured to adapt to the awareness of the decision-makers requires. Flows of awareness across organisations often play a significant role in contemporary healthcare systems. A thorough study of the information processes may also offer a way forward in recognizing the complexities of the healthcare system. As a concept the diffusion of information is challenging to describe directly. According to scholars, the knowledge flow is the collection of procedures, events and actions that move data, information and expertise from one individual to another. At the other side, analysts concentrate on the information exchange as the transition of competitive interest from either experience or external business info [13].

The type of expertise referred to in the latter definition is transferred through purchasing skills, process, product, and packaging designs, or through sharing of marketing know-how. It has been proposed that the information flow includes a unit of study when addressing the mechanisms of awareness and fulfilling the knowledge needs of the decision-makers. From this viewpoint, corporate information exchange management represents a significant success factor for organisations that operate in a competitive setting, and whose value development is directly connected to their capacity to move information. Information flows represent awareness mediators for a health institution or healthcare program, and therefore, a tool for addressing their knowledge systems and, thus, knowledge-based value formation. Primary treatment is

where people join their health-care program in most of the countries. Primary care presents patients with their initial and continuing regular interaction with professional providers and also represents the health care network as a gatekeeper. It's the treatment environment where more patients are diagnosed than in any other healthcare setting. Primary care doctors, commonly known as family physicians (FPs) or general practitioners (GPs), need thorough awareness of the medication required to cope with the broad variety of health problems that their patients encounter every day [14].

Provincial and territorial governments have identified the need for better quality of their health care system, particularly primary care, as a greater focus has been placed on improving quality through a wide variety of strategies. The IOM identifies ten principles or standards which should be taken into consideration in order to increase the efficiency of health care. These are: treatment is focused on constant caring partnerships, treatment is personalized to the desires and beliefs of individuals, individuals will be presented with the required details and ability to exert power over health care choices that concern them, knowledge exchange and information flows openly, decision taking is evidence-based, protection is a property of the system. Transparency is required, the needs are expected, waste is continuously reduced and Clinicians and organizations will regularly cooperate and interact with each other to ensure effective knowledge sharing and treatment management [15].

If KM is consistent with the strategic goal of enhancing efficiency of the healthcare institution, it meets more than 50 percent of the above-mentioned laws. For starters, a good KM program promotes encouraging patients and supplying patients with information so they can take control of their wellbeing and be willing to make better decisions. The goal of the KM program is the free flow of information and knowledge. Likewise, providers' decision-making will only be focused on facts if the existing research is accessible and utilized by providers. Additionally, careful handling of patient-specific details helps minimize risk by reducing diagnostic examination replication. The last consistency criterion may be achieved through the help of KM's infrastructure and social processes. An effective KM structure offers three forms of convergence to support the healthcare sector in this journey [4].

4.1 Functional Integration:

It co-ordinates core support roles like human resources, financial administration, business strategy, communications and enhancing productivity. This is accomplished by promoting the sharing of certain functions of specific policies and practices.

4.2 Physician integration:

It is the cooperation between physicians when they are linked to a shared network and engage effectively in its management and governance. It is accomplished by establishing a shared forum for doctors who are geographically scattered, where they can easily exchange knowledge and access user-friendly professional practice guidance.

4.3 Clinical integration:

It is the continuity of coordination and care. It is achieved through facilitating good communication between caregivers, smooth transmission of information and records, and elimination of duplicate procedures and testing.

Medical errors should be viewed as a weakness of the health care network not to offer enough knowledge to physicians as they need it. An effective KM system allows clinicians to apply evidence-based medicine more easily by allowing to have an access to databases and other evidence-based resources right at the point of care, by training physicians to enhance their ability to retrieve information, and by making better use of clinical libraries. KM resources such as lessons learned libraries and repositories of specialists can help make the best knowledge accessible to the right people at the right moment and can play a significant role in reducing medical errors. Accordingly, the implementation of KM systems that facilitate decision-making in medication administration and clinical treatment procedures will have a beneficial influence on health care delivery as it enables for the decrease, though not removal, of harmful drug outcomes and medical mistakes induced by human oversight. It also helps with growing health-care expenses arising from medical mistakes, providing financial services administration a hand to health-care [16].

3. Conclusion

Knowledge management inside an enterprise can help drive improved market results. This is because good information management results in the non-repetition of the same processes, the standardization of paperwork allowing it simpler to handle and the utilization of expertise already accessible to patients, thereby saving precious resources such as time and money. However, KM can be seen as the core competence of healthcare organisations because it will theoretically allow them to meet the many challenges. However, to produce anticipated performance, the Knowledge Management structure should be configured in a suitable way, with operational supporting variables that include at least specific requirements for efficient execution, and eventually productive processes contributing to target goals. While there is comprehensive literature on KM in general, little work concentrating on the impact of physicians' person and practice characteristics on KM adoption has been performed. Thus, this research focuses on the doctors and clinics taking up Knowledge Management.

The paper aimed at connecting knowledge-based value development and controlling health care. The approach's key value rests in understanding the significance of a broad set of knowledge tools that are utilized in health care systems. The paper found out that knowledge management can now be regarded as a strategic strategy in healthcare organisations, instead of an individual and distinct task. Processes of knowledge and their technology strategies will also be strongly related to the delivery of service and to value generation. Without this relation would result in fractured and inconsistent information structures and processes.

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