# KNOWLEDGE MANAGEMENT IN THE HEALTHCARE SYSTEM

## MARIJA LUGONJIĆ, TATJANA JOVANOVIĆ & VERA KRMPOT

Faculty of Business Studies and Law, Union - Nikola Tesla University, Belgrade, Serbia, e-mail: marija.lugonjic@gmail.com, tanjabajalovic@hotmail.com, vera.krmpot@fpsp.edu.rs

Abstract Knowledge management refers to all management activities necessary for the effective creation, capture, exchange and management of knowledge. Knowledge management has always been the most important issue in human societies. Knowledge management became a discipline during the 80s, and the growing role of information technology has enabled the development of efficient KM tools using databases and common software. The current concept of knowledge management emerged, however, in the early 1990s and covered various fields such as business administration, public policy, information systems management, libraries, and information science. In health care, KM is developed mainly in the field of electronic health record management and management of the health organization. In this context, previous research in the business domain has been adapted and applied to health knowledge management. But health care poses different challenges and questions to KM because of its own nature). For the WHO, the main purpose of knowledge management is to bridge knowledge gaps between and within countries. Knowledge management deals with the development of systems and processes used to promote originality, creativity, intelligence and learning. The discipline of knowledge management has three main components (WHO): • People: who create, share and use knowledge and who collectively form an organizational culture that nurtures and encourages the exchange of knowledge; . Processes: methods for acquiring, creating, organizing, exchanging and transferring knowledge; • Technology: mechanisms that store and enable access to data, information and knowledge created by people in various locations.

knowledge management, km in health care, tools, medical practice, informed decision making.

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#### 1 Introduction

Healthcare is a knowledge-based process, so knowledge management (KM) and knowledge management tools in the healthcare sector are gaining attention (Bordoloi, 2012). According to Hongsermeier et al (2011), technology plays a vital role in KM in facilitating the flow of knowledge through its life cycle, achieved through the application of a knowledge management system (KMS). Information technology (IT) provides a technical basis that facilitates the application of KMS. It also provides a means by which a strong theoretical basis for KM can be applied, as it is used at all stages of the KM life cycle. According to Butler and Murphy (Butler, Murphy, 2007) and references in them, mixed findings on successful implementation of IT for KM have been recorded. The difficulty is in the use of management techniques, concepts for the design and development of KM tools, the availability of multiple KM technologies, as well as their application and use. There are a large number of IT artifacts known to support the creation, storage, retrieval, transfer, and application of knowledge that include data management and learning tools; knowledge repositories; database; electronic bulletin boards, etc. (Butler, Murphy, 2007). These KM technologies are important components of the healthcare knowledge management system.

The role of KM in decision-making to improve the quality of health care provision refers to the adoption of the right knowledge management strategy for informed clinical decision-making (Shahmoradi, Safadari, Jimma, 2017). The aim of this paper was to answer the following key questions: How does the provision of knowledge management related to information-based decision-making affect the provision of health services? What tools are currently used to manage knowledge to facilitate and improve health services? What are the challenges that limit the use of KM in healthcare? The main objective of this review is therefore to explore the application of knowledge management and the tools used to manage health knowledge to make evidence-based decisions and thus improve the quality of health services. The best approach to achieving the set goal, as well as answering research questions, is to conduct a systematic review of previous research work in this area, as well as to analyze a specific case study, in order to establish a link between theory and practice. Accordingly, the literature review was conducted with an extensive analysis and review of research papers

conducted over a period of ten years. The reviewed articles showed strong evidence that the application of KM in health care is encouraging, and a number of KM tools are available that can influence decision-making. It can be said that the application of KM in health care by taking advantage of available opportunities, such as advances in health information and communication technology, clinical decision support systems, electronic health record systems, communities of practice and advanced care planning, is a way to improve patient care quality. and the ultimate goal of health care.

# 2 Implementation of knowledge management in the healthcare system

KM has received attention in health care only recently due to the increasing amount of data and information, and therefore the concept of KM is beginning to appear (Kothari, Hovanec, Hastie, Sibbald, 2011). Some of the reasons for the use of KM in health care, such as the business sector, include preventing possible knowledge loss due to retirement and staff turnover; gaining a competitive advantage; continuous learning; preventing the spread of knowledge and / or isolation of the organization or department or individuals and the need to meet the needs of users (Lugonjić, 2020). Vital aspects of KM implementation include the use, transfer and translation of knowledge. The use of knowledge is the process of translating knowledge, such as evidence-based guidelines, into practice, while translating knowledge moves scientific knowledge from basic discovery to technical efficiency testing and then to acceptability for adoption in practice, indicating that this aspect of KM has two phases. The third important aspect of KM, knowledge transfer, is the dissemination of knowledge that is managed and managed through various strategies (Arsenijević, Lugonjić, 2020; McCormac, Sheridian, Lewis, Boudwyns, Melvin, Kistler, 2013).

Knowledge transfer has three components: people, process and technology. However, the right balance of these three components needs to be maintained for its successful application (Shahmoradi, Safadari, Jimma, 2017). It should be noted that of these three components, the most important are the pillar for the process of exchanging people's knowledge. The process component provides support for the implementation of KM in general, and the technology component provides a knowledge portal that connects people through various means such as email and knowledge repositories. Therefore, the adoption of a good strategy is unquestionable for the application of KM in health care (Shahmoradi, Safadari, Jimma, 2017). Under this section, factors like us, knowledge exchange; virtual communication and knowledge flow; evidence-based decision-making to improve the quality of patient care is presented.

Knowledge exchange is one of the basic steps in knowledge management processes. An inter-organizational knowledge exchange system can serve as a strategic system for knowledge-intensive sectors such as health. The benefits of inter-organizational knowledge sharing have been found to be enormous, of which the first 20 identified benefits related to individual benefits, the knowledge-sharing process, user benefits, organizational benefits, and sectoral benefits (Al-Busaidi, 2013). Individual benefits include improved learning, decision making, problem solving, productivity and job satisfaction, while the benefits of the knowledge sharing process are related to improved staff collaboration, faster information flow, availability of information, quality of information, new knowledge creation and social networks. Customer benefits include faster service, reduced error / quality problems, and organizational benefits include saving organization time, improving organizational learning, reducing duplicate work, and saving staff time. Moreover, there are sectoral benefits, such as improved standardization (Butler, Ranter, McCreedy, Shippee, Kane, 2014; Siemsen, Balasubramanian, 2018). Another study conducted in multinational health companies; namely, pharmaceutical companies in Greece (Azan, Huber Sutter, 2010) on the assessment of stakeholders with associates and managers as participants researched knowledge and insights about what knowledge is transferred and how. Another study found that the African Medical and Research Foundation (AMREF), Africa's leading knowledge center in health care, has developed a KM strategy that focuses on the creation, collection and application of health knowledge. The vast knowledge produced by this foundation can be accessed via the Internet, and stakeholders are provided with the right information at the right time. The platforms include the AMREF website and intranet, the digital library, the ART knowledge hub network platform and the AMREF library e-newsletter (Shahmoradi, Safadari, Jimma, 2017).

Virtual communication and knowledge flow. Another setting in which data and knowledge of medical interest can be stored, processed, and made available to stakeholders in a distributed system is known as the Home Hospital (HHU). There is a similar setting called home health rehabilitation via a virtual network (Shahmoradi, Safadari, Jimma, 2017). Such settings allow patients who are geographically distributed to receive the services they need through a virtual platform that offers communication and shared knowledge with physicians and other healthcare professionals. Diversity and intensity of knowledge flow among stakeholders, also known as the knowledge ecosystem, are the most important feature of a virtual health network and help communities develop faster (Shahmoradi, Safadari, Jimma, 2017), but the entire technology supporting the network needs to be user it must meet the requirements of the health process in order to encourage dialogue between ecosystem actors. Moreover, such a network helps people with disabilities to achieve a better quality of life, as well as to reduce the cost of health services by solving the right problem in the right way (Shahmoradi, Safadari, Jimma, 2017). Examples of such a network are the virtual hospital in Finland (ATULINE); the Enchede Stroke Center in the Netherlands and the SISCO Health System in the United States (8). ICT-based services and systems, such as smart home, which is a continuous real-time activity supported by ICT technology, are new in healthcare (Shahmoradi, Safadari, Jimma, 2017). To nurture networking or virtual deployment technologies, such as telemedicine technology, HHU needs to provide and support research activities, and knowledge exploitation plays a major role in enabling such technologies (Shahmoradi, Safadari, Jimma, 2017). This study found that there is a link between telemedicine technology and patient e-knowledge. Researching knowledge about the use of telemedicine technology is very important (Shahmoradi, Safadari, Jimma, 2017).

Evidence-based decision making to improve the quality of patient care. The evidence-based decision-making model originated in Canada, in the Department of Clinical Epidemiology and Biostatics, McMaster University in 1981. The rationale for such practices is largely derived from the needs of caregivers to be more accountable to their patients (8). It plays a significant role in patient care, such as improving the quality of care, providing the individual with the most up-to-date evidence, ensuring that physicians maximize the likelihood of positive outcomes, and minimizing the existing gap between research and practice. Thus,

it has influenced decision-making and actions taken in the healthcare industry for more than two decades (Shahmoradi, Safadari, Jimma, 2017). According to these authors and the references in them, the practice follows four steps: i) formulating a clear clinical question related to the patient's problem; ii) literature search of relevant clinical practices; iii) an assessment of the available evidence for its usability; iv) application of evidence in clinical practice. The EBMP answers "why-what-how" questions for health leaders. These days, the concepts of knowledge and evidence of "why" have attracted attention due to the increasing aging population, the increasing complexity of biomedical research, great advances in knowledge and technology research (Shahmoradi, Safadari, Jimma, 2017).

In order to promote the development of local and global evidence-based decision-making strategies, knowledge sharing is a major issue to be addressed and is at the crossroads of the KM model in the 21st century. Therefore, in today's health care system, competence is essential at all levels, and as a result of the EBMP movement, all health care professionals can no longer be sufficiently competent without continuous knowledge and learning. The requirement for the "what" competence level is the dimension of knowledge and the type of evidence required, such as storage media, accessibility, typology and hierarchy, while the "how" level is the application of evidence (Shahmoradi, Safadari, Jimma, 2017). Therefore, resources are urgently needed for EBMPs who are constantly searching, evaluating and summarizing the literature for physicians. Automated semantic word processing in the medical domain is another tool that provides a unique opportunity to explore complex answers to questions in the clinical medical domain as a systematic design that meets the need for information by evidence-based physicians (Shahmoradi, Safadari, Jimma, 2017), unlike traditional medical knowledge that is acquired by studying written or published materials (Cabitza, Simone, 2012).

The findings of Boateng's research showed that the doctors interviewed strongly agreed that EBMP was the best way to ensure efficient health care delivery and believed in the involvement of patients in clinical decision-making. Joint decision-making could potentially improve health care delivery, as it involves putting the patient at the center of health care (Shahmoradi, Safadari, Jimma, 2017). However, the creation of awareness in joint decision-making in the case

of a sensitive decision, ie the "no best choice" case is the most important step. In such a case, decision-making techniques and tools such as brochures, videos, and online-based tools should be used to highlight the benefits and harms of available options for the patient. The discussion of the benefits and harms of each option should be well considered, listening to the ideas, concerns and expectations of patients regarding the options, and above all, it is very important to help the patient in the process (Stiggelbout, Van der Weijden et al. 2020). It is emphasized that collective counseling provided by the online platform can be seen as an extreme application of the common practice of patients to consult with multiple physicians to get a second or even third word regarding their conditions (Shahmoradi, Safadari, Jimma, 2017), and The online tool for this purpose is seen by both physicians and ICT researchers as a positive step as it allows the patient to be involved in decision making. This indicates that clear communication and active dissemination of evidence to all relevant stakeholders in easily understandable formats are vital to raising awareness, consideration, adoption and facilitation of their use (Shahmoradi, Safadari, Jimma, 2017).

The quality of health care provision has been largely adopted by adopting the right KM strategy for informed clinical decision making. When both doctors and patients use both explicit and tacit knowledge, EBMP flourishes. Moreover, KM policy is crucial for well addressing the goal of EBMP concepts and KM patterns, strategies and practices to be adopted (Shahmoradi, Safadari, Jimma, 2017). The author expressed the opinion that the adoption of the EBMP strategy of KM in health care has great potential for improving the provision of health care, especially in developing countries. A similar study by Clark et al reported that high-quality decision-making with related aspects such as informed consent, effective communication, and the patient environment are very important aspects of inserting and deactivating electronic cardiac devices, a specific decision-making example.

Today, significant attention is paid to the EBMP and the creation of policies for the use of research knowledge in the health system. Knowledge translation, a process involving activities such as the synthesis, dissemination, exchange and application of knowledge to improve health services and products, is another aspect to consider. This is seen from the perspective of decision makers or policy makers, as its ultimate goal is to facilitate the incorporation of research knowledge into program and policy development decision making (Shahmoradi, Safadari, Jimma, 2017). A tool for self-assessment of knowledge translation has been developed in Iran, and the main facilitator of knowledge translation is a large scientific publication in healthcare (Nedjat, Hholami, Yazdizadeg, Maleki, Majdzadeh, 2014). The authors suggested that the translation of knowledge should be strengthened, and that researchers and policy makers should pay attention at all levels. Moreover, it was emphasized that there is a need to establish a network, set priorities and build trust among policy makers and researchers. Currently, biomedical discoveries are emerging more rapidly, but the transition to health care usually occurs due to the lack of a sufficient system to identify, clarify, and submit this evidence to relevant physicians (Cases, Furlong, Almanell, Altman, Bellazzi, Boyer, 2013).

## 3 Knowledge management tools in healthcare system

The amount of requests for processing information and knowledge in today's medicine is huge. In this paper, the tools covered focused on IT tools that support knowledge management, as tools that facilitate the collection and distribution of clinical knowledge become vital (Hulse, Galland, Borsato, 2012). Various IT artifacts known to support the creation, storage, retrieval, transfer, and application of knowledge include data management and learning tools; knowledge repositories; database; electronic bulletin boards and email services (Shahmoradi, Safadari, Jimma, 2017). These KM technologies are important components of the knowledge management system and have become crucial for health care. They are considered one of the strategies for improving service quality, patient management, research work and identifying effective interventions (Lugonjić, 2020; Arsenijević, 2018). For example, the practice of knowledge sharing in the United Nations Population Fund (UNFPA), through the Knowledge Asset Development System (KADS), which is a pilot project that UNFPA has experimented with on knowledge transfer and capture, is a good strategy to adopt. Technology plays a key role in KM in enabling the flow of knowledge throughout its life cycle, and is achieved through the application of a knowledge management system (KMS) because it provides a technical basis that facilitates the application of KMS (Shahmoradi, Safadari, Jimma, 2017). The contribution of technology in medical science to the development of health care is multiple, of which we can mention the tools used to diagnose the normal and

diseased condition of the patient (Shahmoradi, Safadari, Jimma, 2017) due to the fact that in modern health care the central principle is treatment and planning on the best available knowledge, research and evidence to improve the quality of care. The technology is so many, some of which are knowledge base database, Internet, Intranet, extranet, data warehousing, document / content management, decision support system and artificial intelligence. A study by Finkelstein et al (Shahmoradi, Safadari, Jimma, 2017) focused on the impact of health IT application on improving joint decision making, clinical decision aids, common decision tools, tele-surveillance system by measuring outcomes such as health care choices, satisfaction decisions, conflict of decisions and satisfaction of service providers. The findings of a study by these authors showed that the overall health IT application improved patient communication with service providers and the level of patient knowledge. Technological solutions improve efficient and effective knowledge retrieval. Codification improves the interaction of individual knowledge. However, the bulkiness of the published materials makes access difficult (Shahmoradi, Safadari, Jimma, 2017; Arsenijević, 2018). The solution is to build a centralized repository of knowledge (Shahmoradi, Safadari, Jimma, 2017). Knowledge sharing portals are new tools that facilitate KM in public health and a platform for integrated access to relevant content and resources. Such portals can be in one place for access to public health programs, interventions and policies (Quinn, Huckel-Schneider, Campbell, Seale, Milat, 2014). Moreover, the portals support access to knowledge by providing an online register of tools and methods for translating knowledge, as well as demographic data for information-based decision making (Shahmoradi, Safadari, Jimma, 2017). These portals can have design features that allow integrated access to relevant content and resources in one place, sharing and distributing the necessary information, and gathering people to share knowledge. The expected characteristics of the next generation KM are multiple presentation of the same knowledge, associative presentation strategy and reusable components (Shahmoradi, Safadari, Jimma, 2017).

KM tools for public health are systematic reviews and meta-analyzes and can be powerful tools for informing and influencing public policies and decisions in practice (Shahmoradi, Safadari, Jimma, 2017). A good example is a website developed for evidence-based medical practice to provide decision makers with an easily accessible source of published, reliable, and up-to-date reviews with opportunities to improve their critical appraisal skills. A question-and-answer system developed to support EBMP, a widely accepted paradigm for medical practice built on knowledge extractors, can automatically identify these elements in MEDLINE summaries (Shahmoradi, Safadari, Jimma, 2017). Knowledge-rich system characteristics can be combined with simple statistically derived characteristics to build a good outcome classifier. In addition, the paper showed that the EBMP principle can be computer-captured and applied.

# 4 Possibilities and barriers of application of km and tools in healthcare

Today's dynamic changes and the invention of technologies in ICT are a great opportunity to improve the quality of patient care if it is fully utilized. However, there are a number of barriers that hinder or limit health information-based decision-making, and therefore unprecedented strategies and approaches are needed to overcome them. Some of these obstacles are presented below.

# Barriers

Some of the challenges noted in many studies reviewed in this paper are infrastructural (technological) constraints, lack of motivation of employees to share knowledge (Shahmoradi, Safadari, Jimma, 2017; Arsenijević, 2018), system unreliability, lack of senior management support, privacy issues patients in organizational policy (Shahmoradi, Safadari, Jimma, 2017), reluctance of clinicians to use ICT tools on a daily basis - mainly due to lack of time, lack of attention to results and use of evidence, lack of incentives for documentation and dissemination, limited document and use of good practices, inadequate awareness of KM systems (Arsenijević, 2018), expensive initial investment, poor quality of patient data or information (Shahmoradi, Safadari, Jimma, 2017), inequality in status among physicians (ie knowledge inhibitor sharing), organizational culture, lack of centralized system knowledge bases and lack of trust (Shahmoradi, Safadari, Jimma, 2017). As for the EBMP, existing challenges include lack of funds for the application of evidence-based medicine, limited access to modern technologies and modern medical research, complexity of joint decision-making (Shahmoradi, Safadari, Jimma, 2017), perception of low expectations of change in target audience, lack of communication between

researchers and policy makers, lack of applied research, difficulties in finding certain information, poor usability of the interface and problems with access to health IT applications (Shahmoradi, Safadari, Jimma, 2017).

**Possibilities:** Although there are a number of challenges that limit the use of KM in health care, as mentioned above, there are opportunities that can transform health care by improving the quality of care for patients if used. The vital possibilities that most of the reviewed papers dealt with are presented as follows.

## Advances in healthcare information and communication technologies

Knowledge of how to motivate employees to share the knowledge they possess, ie tacit knowledge is vital, because it is very difficult to externalize and share this type of knowledge. Today, there are interactive KM technologies and their importance for knowledge exchange is emphasized. The latest are blogs, wikis and social media, known as Web 2.0 technologies (Shahmoradi, Safadari, Jimma, 2017). Some of the reasons health professionals are willing to share their knowledge include effective communication, managing personal knowledge, generating discussion about new concepts or ideas, finding answers to specific problems, informing about the latest news and activities of colleagues, getting desired help and feedback, increasing one's social networks, building credibility levels (Shahmoradi, Safadari, Jimma, 2017), satisfaction in helping others and passion regarding certain topics.

On the other hand, organizational culture is reported to influence the adoption of new tools seen in favor of the use of Web 2.0 technologies (Shahmoradi, Safadari, Jimma, 2017). These authors consider that rewards or incentives are of a very psychological nature and are not tangible or monetary. This study also indicated that the key determinants identified were expected outcomes, perceived organizational or managerial support, and trust. It is argued that top management should take an active leadership role in the introduction of Web 2.0 technologies. Moreover, there should be training and an appropriate reward system, such as recognition and praise. informal techniques as part of its knowledge sharing strategy, including Web 2.0 technology. The traditional approach has been used to manage knowledge. In general, advances in technology now, and inevitably in the future, can bring about the best settings in which patients can receive the best possible healthcare services.

Clinical decision-making system support: Efforts to improve the quality and value of health care play a crucial role in the meaningful use of clinical decision making systems (CDSS) and knowledge management systems (KMS), tools that selectively provide relevant information according to circumstances but require human interpretation ( Lugonjic, 2019). Examples of such tools are "Infobutton", an information retrieval tool that helps clinicians search and find specific knowledge, and these are online sources of health knowledge that are integrated into the electronic health record system (HER) (Aziz, 2015). KMS supports decision making in any nursing situation by providing a range of strategies and resources to create a representation and distribution of knowledge that people will engage in. In addition to improving health care, CDSS and KMS reduce the necessary costs. Factors associated with the successful implementation of CDSS / KMS are, among other things, automatic decision support as part of the clinical workflow, on-site decision support, recommendations instead of fair assessment, integration with graphical display or workflow integration order entry system, justify decision support by providing research evidence for EBMP, involving users in the development process, and providing decision support results to patients and service providers. Supporting the clinical decision can significantly improve the quality and safety of health care, especially when provided at the place of care, with the help of the EHR system. Electronic health record systems: The development of electronic health record (EHR) systems focuses on providing data for research and patient care, as well as prioritizing health service sources. The primary goal of EHR systems and related technologies should be to facilitate KM to improve the health of individuals and communities. KM in public health has recently become quite interesting to public health officials because of its ability to gather knowledge to ensure public health readiness, more efficient information management, enabling public health associates to collaborate in a virtual environment, and improving resource efficiency. The fact that EHR systems, which are a key instrument in integrating clinical and health data systems, should be known so that public health authorities have reliable real-time data that supports a health policy decision for better and safer care. Moreover, these authors argued that the EHR system is a mandatory tool for public health to improve the treatment, care, and

prevention of diseases such as HIV / AIDS and its diagnosis. (Shahmoradi, Safadari, Jimma, 2017)

A similar study showed that if there is a well-designed system combined with key socio-technical concepts needed for the safe and efficient application and use of EHR, the envisaged health care delivery process is not far from reality. In the past, the needs and use of collaborative clinical tools and techniques for managing the content of clinical decision support have often been overlooked (Aziz, 2015). However, the need to develop a high-quality evidence-based intervention makes the use of Internet common clinical tools for KM mandatory. Accordingly, four have been identified (Shahmoradi, Safadari, Jimma, 2017). These are: i) External repository of clinical content with Internet browsing, ii) Network, collaborative, interactive, intranet-based tool to facilitate content development (use of Web 2.0); iii) Enterprise-wide tools for maintaining controlled clinical terminology (such as SNOMED for problem, LOINC for laboratory tests, and ICD-9 for calculation); iv) Tools for CDS users to provide feedback on specific CDS interventions, a simple method of collecting feedback online. These authors believe that there is a need to develop and improve the understanding, application and use of advanced clinical capabilities of KM to accelerate programs in the field of CDS.

Communities of Practice: Communities of Practice (CoPs) have become popular in the health sector since they were identified as a concept for understanding the exchange, management and creation of knowledge. CoP is used as a means to translate new health knowledge in a timely manner by connecting researchers, practitioners, policy makers and consumers. It also enables timely and relevant exchange of information and / or knowledge. One of the challenges for integrating research evidence into practice is that it involves the complex nature of acquiring, transforming, and applying a mixture of tacit knowledge and explicit knowledge in critical activities. CoP is used in the health sector to help practitioners understand specific information, such as practice guidelines (Arsenijević, 2016; Shahmoradi, Safadari, Jimma, 2017).

The need for timely translation of new health knowledge into practice is becoming increasingly important. Online strategies for translating health knowledge can act as a means of connecting researchers, practitioners, policy makers and consumers, thus enabling the timely and relevant exchange of information, and they also show a knowledge gap (37). CoPs (virtual communities) are effective and pragmatic ways for health professionals, the general public and other key stakeholders to interact and share knowledge. Due to expensive initial investments for the development of full-fledged KM and its implementation, KM network strategies help to facilitate the translation of knowledge in health care, because it is seen as a cheap, efficient and affordable tool to support not only health professionals but also patients. It should be emphasized that such online forums are marked by a high degree of collegiality, sharing of time and resources, interactive and progressive problem solving. CoPs are a key component of KM. There is a growing need for healthcare decisions based on the best possible evidence, as it provides efficiency and effectiveness. Therefore, the distribution of knowledge, ie providing the right knowledge at the right time is not an option but it is mandatory (Shahmoradi, Safadari, Jimma, 2017; Arsenijević, Lugonjić, 2020). Therefore, it should be properly maintained and applied for informed decision making.

Advanced Care Planning: Advanced Care Planning (ACP) is a preferred setting for future patient care when illness or injury prevents proper communication, as it helps patients assess different care options (Shahmoradi, Safadari, Jimma, 2017). There are a number of decision-making aids for this purpose, although most are not open sources. Decision-making aids tend to be developed for specific diseases, as the shortlist of decisions has great potential to stick and popularize to transform health care delivery. Well-communicated performance using advanced tools helps physicians feel safe and comfortable about the ethics of providing or retaining treatments that affect survival. In general, the current situation of limited application due to the aforementioned barriers, reflection and expansion of borders is encouraged to optimize the best strategy of adaptability and flexibility in the application of KM, because borders enable cooperation that helps reduce risk by bringing individuals with different knowledge and expertise together, therefore the quality of the product gets better and better (Karami, Rahimi, 2019)

# 5 Conclusion

If we take into account that every organization has knowledge, skills and values that can be turned into value in the market. Managing this resource contributes to competitive advantage, raises productivity, motivation and market value. Knowledge management is not simple because it represents the concept of a fluid mix of experience, expert insights, and incorporating information.

Knowledge represents all the facts, information and skills that a person has adopted and kept in his consciousness. Knowledge also represents all the facts, information and skills that a person has acquired through education.

The purpose of knowledge management is to increase the hospital's value creation capacity through the effective use of knowledge.

The task of management is to form and implement a strategy for developing, acquiring and applying knowledge to improve jobs and improve them through the application of knowledge. The goals are the transfer and dissemination of knowledge. The purpose of knowledge management is to maximize the effectiveness of the organization.

Knowledge management focuses on organizational goals and the competitive benefits of continuous organizational improvement. The transfer of tacit knowledge is paramount to the efficiency and competitiveness of any organization.

The knowledge management process also represents the creation of a database of the latest knowledge that is constantly innovated and is available to all decision makers.

The creation of new knowledge is performed on a personal and team level, through education and learning through work. We need to start from the existing explicit and implicit knowledge and create new knowledge. Knowledge transfer means that this knowledge is transferred to the right place, at the right time and with the right quality. Knowledge is transferred through documents, personal contacts and through workshops.

The use of knowledge is a phase in which value is added only when knowledge is used. We must learn to use knowledge because it is often poorly used because routine prevents the use of new knowledge.

Advances in ICT have greatly contributed to the exchange of knowledge, because knowledge can reach the recipient immediately, without the need to travel to acquire it, but in just one click if the technological infrastructure is provided. The portal for the transfer or exchange of knowledge via the Internet is a key driver of efficient and timely exchange of knowledge, as well as the generation and dissemination of knowledge.

Such practices are used as a means to translate new health knowledge in a timely manner by connecting researchers, practitioners, policy makers and consumers. It also facilitates the timely and relevant exchange of information and knowledge. The community of practice also gains attention due to its nature, ie. free will to share knowledge with a given group, motivates participants to know more so they can share more. Accordingly, it is possible to predict that it will be one of the best and widely used KM tools in the future that will bring all stakeholders in the knowledge-intensive sectors, including health.

In today's health care, the need for the amount of information and knowledge processing is so great, because huge data and information are collected every day from every health care provider. Hence, KM tools that facilitate the collection and distribution of clinical knowledge become vital, especially for health organizations that support the distribution of their best practices in the care of their patients.

Providing the right knowledge at the right time, ie. at the moment of making decisions by applying knowledge management in healthcare is the most important. To do this, it is very important to use appropriate knowledge management tools and a user-friendly system, because they can significantly

improve the quality and safety of care provided to patients in the hospital and at home.

In order to materialize this, it is vital to take advantage of available opportunities such as advances in ICT, clinical decision support systems, electronic health record systems, and communities of practice.

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