Non IT based tools and Healthcare Knowledge Management

Computer Science

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ABSTRACT   The goal of knowledge management is to provide the decision maker with appropriate tools, technologies, strategies and processes to turn data and information into valuable knowledge assets. The following discusses the benefits of incorporating these tools and techniques to the healthcare area in order to make healthcare delivery more effective and efficient, and thereby maximize the full potential of all healthcare knowledge assets.

What is Knowledge Management?

KM is about making the right knowledge available to the right people. It is about making sure that an organization can learn, and that it will be able to retrieve and use its knowledge assets in current applications as they are needed. According to Peter Drucker, it is "the coordination and exploitation of organizational knowledge resources, in order to create benefit and competitive advantage" (Drucker 1999).

I present an overview of the IT-based tools and systems and Non IT-based tools that can help knowledge management (KM) fulfill its goals.

Some IT based tools in following categories are:

- Groupware systems & KM 2.0
- The intranet and extranet
- Data warehousing, data mining, & OLAP
- Decision Support Systems
- Content management systems
- Document management systems
- Artificial intelligence tools
- Simulation tools
- Semantic networks

Some Non IT based tools are in following categories are:

- **Cross-functional project teams**

This basically refers to the practice of assembling project teams using members of the organization from different functions. Typically, this would involve selecting a number of specialists under a generalist project manager.

The role of project manager can be particularly demanding when using cross-functional project teams. Apart from being an expert at project management, the project manager must also have enough general knowledge to understand what his specialists know and how it can be used. The project manager must also be skilled at conflict resolution, which is more likely to happen within a diverse group.

- **KM training & education**

1. Online and offline courses: In this day and age it seems that online certifications are a dime a dozen, and not just for knowledge management (KM). Try to make sure that the course/institution has a good reputation, and/or that it is accredited by a recognized body. Beware of very cheap alternatives since they may contain old or even blatantly incorrect information.
2. University degrees: KM is sometimes taught as its own discipline, or as part of other business lines - particularly those dealing with innovation, technology management, and organizational learning.
3. KM workshops & conferences: These should be researched depending on the region one is in. There are numerous options all over the world, and seemingly very many in Europe and Asia.
4. Knowledge management books and journals: There are several journals that deal specifically with knowledge management. Regarding books I recommend Botha et al 2008, "Coping with Continuous Change in the Business Environment: Knowledge management and knowledge manage-

ment systems" The book is in two parts, providing a good overview of the KM process and a very comprehensive overview of knowledge management systems.
5. Knowledge management games: There are several such options out there and they can provide a lighter, quicker, and more interactive way to teach the basics of KM to groups of people. Although they may not be as comprehensive as other options, in many ways such approaches stay true to the notion of less formal, interactive work environments that KM so often preaches.

- **Storytelling**

Storytelling is regarded as one of the most effective and influential techniques, and has been documented extensively in numerous fields. Sole & Wilson (2002) identify the role of storytelling as follows:

1. **Share norms and values:** Stories act as a medium for passing on values and creating vision.
2. **Develop trust and commitment:** Personal stories can communicate one's own ability and commitment, as well as conveying openness by sharing something personal. Organizational stories influence the perceived trustworthiness of the firm and its management (either positively or negatively).
3. **Share tacit knowledge:** Enables the users to articulate tacit knowledge and communicate with feeling, which helps them convey more than they realize that they know (Weaver 2005 in Bali et al 2009).
4. **Facilitate unlearning:** Unlearning often requires more than rational arguments. It needs an intuitive and emotional anchor, which stories can provide.
5. **Generate emotional connection:** We connect with stories emotionally and a story that has had an impact on us will be easily recalled long into the future.

- **Mentoring**

Mentoring is one of the most effective ways of passing down tacit know-how from an expert to an aspiring expert. This practice dates back throughout human history, and is just as relevant today.

Mentoring is about practice under the guidance of an expert. Unlike classroom learning, the apprentice or mentee is given practical tasks, under the supervision and guidance of his mentor.

Health Care Knowledge Management

Knowledge management offers organizations many tools, techniques and strategies to apply to their existing business processes. Healthcare is an information rich industry that offers a unique opportunity to analyze extremely large and complex data sets. The collection of data permeates all areas of the healthcare industry and when coupled with the new trends in evidence-based medicine and electronic medical record systems, it is imperative that the healthcare industry embraces the tools, technologies, strategies and processes of knowledge management if it is to fully realize the benefits from all these data assets.

Healthcare is an industry currently facing major challenges at a global level. This industry has yet to embrace knowledge management. Yet, KM appears to provide several viable possibilities to address the current crisis faced by global healthcare in the areas of access, quality and value. In healthcare, one of the most critical knowledge transformations to effect is that of tacit to explicit; i.e., externalization so that the healthcare organization can best leverage its knowledge potential to realize the healthcare value proposition. Integral to such a process is the establishment of a robust knowledge management infrastructure and the adoption of key tools and techniques. This is achieved by the application of the KMI and IC models.

Case study

This case study focuses on a well renowned Spine Unit in the Mid-west of the US. It is possible to define this environment as a cure environment since the primary goal of this Spine Unit is to return patients to normal life activities. The following serves to furnish the key elements from this environment as they pertain to knowledge management, its benefits and applications in this setting. Exploratory case study research was adopted to enable the generation of rich data in a non restrictive manner.
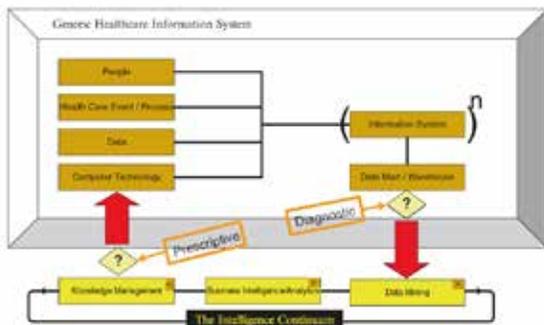
Information was gathered from several sources including semi-

structured interviews, the collecting of germane documents and memos, numerous site visits and the direct observation of vari-

ous procedures; thus enabling the triangulation among different data sources. Rigorous coding and extensive thematic analysis was conducted to analyze the qualitative data gathered (Kavale 1996; Boyatzis 1998). Each of the points listed was confirmed by multiple interviews, written documentation and passive observation; thus ensuring the highest level of reliability possible for qualitative research (Boyatzis 1998).

Conclusion

Healthcare globally is facing many challenges including escalating costs and more pressures to deliver high quality, effective and efficient care. By nurturing knowledge management and making their knowledge assets explicit, healthcare organizations will be more suitably equipped to meet these challenges; since knowledge holds the key to developing better practice management techniques, while data and information are so necessary in disease management and evidence-based medicine.

The case study data presented depicted the complexity of the service delivery process, driven by the complexity of the issues being dealt with by the teams, which in turn requires that many disciplines create and share knowledge to enable the delivery of a high quality of care. Thus the need for shared knowledge is a fundamental requirement.

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