

# KIIPF - An Integrated Inter-Operable Knowledge Management Process Framework for Healthcare: Implementation in Pakistani Healthcare Industry

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## ABSTRACT

Being complex systematically, Knowledge Management (KM) has always been challenging in the healthcare industry (HCI) of developing countries like Pakistan due to gap in acquiring and implementing KM processes. Despite the fact that extensive data and related information is available, the Pakistani HCI has been facing a major challenge due to the absence of a sound and solid KM process framework. Hence, the existing healthcare information systems in Pakistan lack the ability to control and cater the diversified nature of new knowledge creation and innovation. Consequentially, it results in inefficient and ineffective organization of knowledge along with inability to properly utilize important resources that are used for decision making activities. In this study, the researchers present and suggest an integrated and inter-operable KM process framework that helps to streamline and integrate a KM process in a phased compartment that identifies, defines, analyzes, collects and manages knowledge along with its innovation, dissemination, sharing and storage in an appropriate way.

## KEYWORDS

Decision Making, Healthcare Industry, Healthcare Information System, Integrated Knowledge, Knowledge Creation, Knowledge Management, Process Framework

## INTRODUCTION

“A health system consists of all organizations, people and actions whose primary intent is to promote, restore or maintain health” according to the World Health Organization (WHO). Healthcare organizations are composed of health care professionals from multiple disciplines forming several interconnected care teams that strive to provide safe and consistent care. (Ratnapalan & Uleryk, 2014).

The need for an integrated and reliable Knowledge Management process framework in the healthcare industry of Pakistan has become evident due to evolution and innovation of Knowledge Management practices over the past couple of decades. A Knowledge Management Process Framework ensures that all necessary KM elements (Accountabilities, Processes, Technologies and Governance) are in place, and interconnected (Alavi & Leidner, 2001). With a Management Process Framework,

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KM can take on the aspects of other management systems, and be made part of normal business, rather than relying on an incongruent set of tools (Akhavan, Jafari, & Fathian, 2005). This ensures that there are no gaps in the system, and that knowledge flows freely through the organization.

Health care organizations have to be able to modify their activities based on sudden changes in the condition of their patients or sudden demands due to public health disasters, without compromising patient safety or quality of care. New knowledge creation, technology advances and other market changes can add new and unexpected demands in health care delivery. Health care organizations have to maintain stability following institutional protocols but have to assess their performance and evaluate protocols to create and incorporate new knowledge (Ratnapalan & Uleryk, 2015).

Knowledge management involves the strategies and processes for identifying, capturing, structuring, sharing and applying an individual's or an organization's knowledge to extract competitive advantage and create sources of sustainable growth (Mahmood, Burney, Abbas, & Rizwan, 2012). All the participants of this community create, share and use knowledge to improve the health care service quality and reduce cost. The success of a medical care depends on how effectively and intelligently knowledge is being used to improve the health care process (Mahmood, Burney, Abbas, & Rizwan, 2012).

The importance of Knowledge Management in Healthcare and Medical industry is evident and pertinent (Mahmood, Burney, Abbas, & Rizwan, 2012). Correct and accurate knowledge for the correct and effective treatment of patients is a matter of life and death. The purpose of this research is to propose an outline and present the stages of KM strategy implementation. In addition, it presents the actions necessary at each stage of development of an integrated and interoperable process framework that combines and interrelates KM process steps. This is done while dealing with knowledge effectively and efficiently in any form it exists in the healthcare organization.

## **BACKGROUND - DEFINING DATA, INFORMATION AND KNOWLEDGE**

Knowledge Management (KM) is a term difficult to understand without knowing and understanding the meaning of the word "knowledge". Further, it is also important to clearly differentiate between knowledge, information and data (Botha, Kourie & Snyman, 2008).

### **Perspective on Knowledge, Information and Data – An Overview**

In disciplines like information systems the term "knowledge" is frequently used analogously as information. It is understood as something that can be categorized, classified, organized and communicated as shared knowledge by the help of Information Technology (Jones, 2006). For instance, the encyclopedia at "[www.fact-archive.com](http://www.fact-archive.com)" defines it as: "information that has a purpose or use."

For understanding, a clear distinction between data and information could be done by using narrative that "Data are raw facts and figures that contain bits of information rather than information itself". These bits of information are not useful until they are processed, organized, interpreted, structured and converted into meaningful and useful form. The processed form of data which is converted into meaningful and useful form is known as "Information". The application of data and information is known as Knowledge that extends to appropriate collection of useful information. (Definition of Terms, 2002).

The term "knowledge" is part of our everyday language. It is used interchangeably in between knowhow and wisdom (Altaher, 2011; Davenport, Long & Beer, 1998). At one time, it is used as simple as know-how about anything and at other time is used at its highest level as wisdom. Many times, it is identically used as "information" also, but actually there is a great amount of difference between them (Gamble & Blackwell, 2001). The perspective on data, information and knowledge is elaborated in Figure 1.

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