



## Knowledge Management Systems in Healthcare Using Mobile Applications

**R.SUBRAMANIAN**

RESEARCH SCHOLAR BHARTHIYAR UNIVERSITY COIMBATORE

**DR. A.M.SURESH**

RESEARCH SUPERVISOR AND GUIDE BHARTHIYAR UNIVERSITY COIMBATORE

**ABSTRACT**

In the modern world of computing, mobile devices have found a lot of prominence in helping people and medical professionals to deliver better healthcare. This is not just a simple revolution to talk about but more from a strategic standpoint which has been able to create an edge in terms of information and accurate decision making. In the long run we see that people are more addicted to hand held devices rather going through complicated software and technologies. Every app that is being created and launched in our country has got profound meaning and business purpose. The field of health care is experiencing huge turnover in terms of packages, treatments and providing better patient care. Through paper we discuss the probable growth of applications and their benefits which would help the patients in the long run.

**KEYWORDS**

Mobile, applications, technology, platform, healthcare, patients and professionals

### Introduction

The role of mobile computing has changed the dynamics of healthcare industry with lot of applications coming in to spearhead the needs of the customer. The role of the devices in promoting faster and better growth platforms have always been looked as a positive edge to communicate with the customer and get an instant feedback. The era of knowledge management systems in healthcare industry has been quite new to the Indian sector and we have been trying to bring in services closer to the medics as well as the patient so that we are able to deliver better quality in the long run. The need for gathering information and processing at different access locations makes the system much more interesting as this would lead to a better formation in the long run. Intelligent databases, cloud computing have all been a platform for creating simple and convenient software modules through which the organizations can gather lot of benefits and get an integrated view of database in a single view. Today the concept of medical apps can also be used for training and development through which lot of knowledge transfer could also be enabled. The development of apps could also stand as a vital point of emergency and rehabilitation where the hospitals could get critical data.

### The need for applications

When we go down the history of healthcare management we start understanding that the need for good medical care facilities went to the top most priority. Mobile phones were initially were a device for communication, but today it has become a trading point through which people and business get connected. Healthcare organizations started seeking technology as a platform through which they could expand their services and reach millions of people. The beginning of PRACTO a medical app which connects thousands of doctors for the needy patients and bring in integrated analysis. Applications today have varied impact on people where it creates lot of enthusiasm in terms of knowledge and connectivity. Every single app is created with a vision that would encompass the maximum possibilities and bring in a platform for everybody to participate. In world of healthcare the need for bringing in composite knowledge for cutting edge makes a difference, for physicians to deliver better. The first hand information about a particular disease or incident would matter a lot in his complicated world. The world of apps started with IOS where they came with an app store trying to promote all kinds of applications starting from simple games to utility purpose. Android started to join the race by bringing in more free apps which would

get a larger customer base and bring more acceptances to the creation all together.

Following which Microsoft started coming with common apps which would cover almost verticals of commercial aspect. In this entire lot, the need for medical apps started with fitness world where people could check in their heart rate or calories burnt or look for some benchmark in terms of fitness gain. But the actual need came in from identifying those complex cases where you need a specialist to solve the case. The point of contact where you get tips with respect to your problem was missing. This led to the chance of creating bigger apps in the field of healthcare.

### Connectivity and storage

When we look at the medical field the data usage goes to very high level and most of the time the hospital management does not look into investment as the main criteria and they are worried with the fact of usage of technological tools. With the advent of cloud computing and high end storage facilities coming up it became quite relevant that flexibility and usage of data is of great ease and we can use the data at our disposal. Google and drop box becoming more relevant in terms of understanding the trade patterns has helped the organization to deliver more than the required. Clinical communication is also of great importance for all as this would set the tone right in terms of providing micro inputs to the doctors and consultants who take depend on these vital statistics. Social networking sites have indeed proved to be a boon for the doctors through which lot of information can be shared and information acquisition could be done. Clinical decisions have gone to the next level which has helped to achieve better conclusions.

### Knowledge integration in apps

Every system that is being built across diverse platforms tries to understand the customer needs by creating a user friendly platform. In the field of medicine we have seen that with the invention of robotics and artificial intelligence we have seen a tremendous growth and achieving higher possibilities in building better patient care. For instance today Narayana Hirudalaya hospitals have conducted high level research and most advance treatments in cardiac as well neurosurgery. Today the integration of knowledge with application can help the doctor to spread knowledge and gather strength in terms of delivering more crucial decisions at various levels. Hospitals roughly spend about 2/3<sup>rd</sup> of their income in training and research to

understand and train their professionals to next level. In that case knowledge based apps can level to reduce cost and time which would enable the flexible learning mode and would be helpful to generate self learning process. The combination of technology with science has seen a great fusion coming with numerous possibilities to define better treatment methods. Knowledge remains abstract unless and until it is put to practice, hence the combination of theory and practice has to come with more vigor to make the seamless integration work. Today's healthcare startups also have a great role in bringing up greater values of seeing business integration with customer service. Going online was a option years back but today trying to become proactive and objective has been the success formula. The reasons are quite simple here. At a ground level every app is trying to build a network which will connect their business to prospective customers and secondly try to retain customers by extending services to all ranges. In the case of medplus , a leading pharma chain in India their objective has been quite simple in promoting medical products at a cheaper rate with accessibility across every corner of the city and district with large number of options and membership cards. Today they have entered to online with medicated footwear , cosmetics and food products which can be delivered at your doorsteps. Similarly medicare another online service which provides the customers with physical support and nursing services have tried to build in all their knowledge integration with lot efforts in building a good app.

### Conclusion

The next generation is going to see a huge growth in terms of extended medical application and services where we might the healing process to be on the higher side. The need for app has to be understood more from a need standpoint rather than just a technology extension. Right from learning to implementation we need to bring the thought process for better decision process. The era of convenience with better life style and enhanced accuracy has made us search of improvement of apps. Hence I feel that the beginning of harnessing of technology has just begun and we can going to rapid strides of understanding medical as more friendly process through which one can build a closer rapport to the medical professionals and understand the root cause of every disease and disorder that exist in the society.

### References

- Wallace S, Clark M, White J. 'It's on my iPhone': attitudes to the use of mobile computing devices in medical education, a mixed-methods study. *BMC Open*. 2012 Aug;2:e001099.
- Aungst TD. Medical applications for pharmacists using mobile devices. *Ann Pharmacother*. 2013;47(7-8):1088-1095
- Kiser K. 25 ways to use your smartphone. Physicians share their favorite uses and apps. *Minn Med*.2011;94(4):22-29.
- Ozdalga E, Ozdalga A, Ahuja N. The smartphone in medicine: a review of current and potential use among physicians and students. *J Med Internet Res*. 2012;14(5):e128.
- Yoo JH. The meaning of information technology (IT) mobile devices to me, the infectious disease physician. *Infect Chemother*. 2013;45(2):244-251.
- O'Neill KM, Holmer H, Greenberg SL, Meara JG. Applying surgical apps: Smartphone and tablet apps prove useful in clinical practice. *Bull Am Coll Surg*. 2013;98(11):10-18.
- Mosa AS, Yoo I, Sheets L. A systematic review of health care apps for smartphones. *BMC Med Inform Dec Mak*. 2012 Jul;12:67.
- Divali P, Camosso-Stefinovic J, Baker R. Use of personal digital assistants in clinical decision making by health care professionals: a systematic review. *Health Informatics J*. 2013;19(1):16-28.
- Murfin M. Know your apps: an evidence-based approach to the evaluation of mobile clinical applications. *J Physician Assist Educ*. 2013;24(3):38-40.
- Mickan S, Tilson JK, Atherton H, et al. Evidence of effectiveness of health care professionals using handheld computers; a scoping review of systematic reviews. *J Med Internet Res*. 2013;15(10):e212