

## Chapter 6

# Providing Healthcare Services in the Virtual Environment

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### **ABSTRACT**

*The concept of cloud computing provides a good scope for making use of information for knowledge updating among the medical fraternity. Large data are generated and available for analysis. One should know how well the data can be used for analysis and taking care of the patients. Medical fraternity needs to update with the latest knowledge to provide good healthcare services to patients. Software tools along with the concepts of collaborative technology are required to make use of the data and information stored in the cloud computing environment by the healthcare service institutions. Medical research group and software professionals can form a team to develop business models useful to the healthcare sector. This chapter explains with case illustrations designing and developing business models under the cloud computing environment with the concepts of collaborative technology.*

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## **INTRODUCTION**

Health has been a concern of major importance across the world. The kind and amount of resources available now are increasing day by day. Technology has become the most important new resource in the present century. Emergence of new tools and devices has been helping the medical profession. Further, it is enhancing the medical professionals to provide better service to their patients. Advancements in information and communication technology have been making medicine and medical information systems integrated (Sunitha C, Vasantha Kokilam K, and Meena Preeti B, 2013). Electronic health or e-health is the result of the above integration. Most of the hospitals in the world have reasonably good information systems to manage the internal administrative and clinical processes for their patients (Vijayrani S, 2013). Exchange of information in the above infrastructure is mostly confined to their hospital and the hospitals attached to them.

Now it has become a necessity to integrate geographically distributed and organizationally independent organizations for medical information system. This integration gives a scope for designing a knowledge based system for health care sector. The present information and communication technology provides several concepts that enable to develop a health care information system more effectively.

Cloud Computing, Pervasive computing, Virtual Reality and other collaborative technologies are among a number of other concepts provided by information and communication technology. There are two types of approaches prevalent in the health care sector. They are 'Conservative approach' and 'Adaptive Change Approach'. The elements in the latter approach are reasoning, knowledge based understanding and enlightened creative wisdom blended with professional values. Implementation of emerging concepts in information and communication technology along with the elements in the first approach is possible under the latter approach.

## **NEED FOR KNOWLEDGE BASED SYSTEM**

Due to the change in the life style of the people across the Globe, the nuclear family has become the order of the day. There used to be a doctor for each family when the joint family was prevalent. Most of these doctors knew the entire medical history of all the members of the family. These doctors used to organize all the medical services through their professional contacts whenever the family needed their services. The family doctor was considered as a part of the family, philosopher, and guide. The concept of 'Family Doctor' has disappeared today. In the present scenario,

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