

Healthcare Information Technology Service Assessment: A Healthcare Leader Prospective

Syed Murtuza Hussain Bakshi

Abstract:

Information technology has evolved over the years and comply its presence in all the industrial sectors and healthcare is not an exception. It has become more and more necessary for every health care professional to use a computer terminal at almost everyday's works. Information Technology is expected to provide the staffs with various sets of information for decision making, reducing medical errors and process time, cost advantage with better communication. As the healthcare market is getting more competitive and complex the hospital are taking help of Information Technology as a prime tool to compete. The present study focuses on the way healthcare decision makers think and sense about Information Technology enabled services at their setup. The Participants in the research were senior management professionals who offer their full time services. The data was collected through face to face interview and was analyzed through Interpretative Phenomenological

Analysis. The study revealed the basic outline about proper planning, justifiable investments and training required to make Information Technology successful in the advanced healthcare setup. Information Technology enables its services especially in patient care, administrative, operational areas and brought positive attitude, employee satisfaction. The healthcare leader should take initiatives, facilitate for smooth progress and proper functioning of Information Technology enabled services in the hospital. The Information Technology cannot bring its own results unless teamwork is needed. There are some sensitive areas like data privacy and Confidentiality, online information and electronic medical record which are important and has to be kept confidential

Key words: - Computers, Healthcare, Information Technology.

Introduction:

Information and communication technology tools are arguably the most rapidly growing segment of the world ecosystem. The development in the sector permeates every human activity; social, economic, cultural, religious, political and healthcare (Idowu P et al, 2008). Information technology has radically changed the way that many people work and think. Over the years, technology has touched a new pinnacle and now it is not confined to developed countries. Developing countries such as India have kept pace with the world in modern technology. Healthcare professionals can no longer ignore the application of information technology in a broader spectrum (Neeraj Gour & Dhiraj Srivastava, 2010). Information and Communication technology has revolutionized the way medicine is practiced and how healthcare information is documented, archived and retrieved at the point of care. While information technology is facing challenges of adoption, communication technology is striving to create health information exchanges for connecting providers within multi-organization environments and across disparate geographical boundaries, using secure and fail-safe internet connectivity for high speed data, voice and video communication (Dr. Ajit K. Nagpal , 2011) .

Over the past two decades, there has been a dramatic increase in the use of information technology in service organizations. As this phenomenon is often cited as a driver of both economy-wide productivity growth, changes in wage and salary prospective (Susan Athey and Scott Stern, 2002). In many industrialized countries of the world, there is a huge investment of resources into information technology in health care as a commitment to providing the most efficient and effective health care services to their teeming population (Griliches, Z., 1994). In the past decade, the risk of medical errors has received increasing scrutiny. The growing sophistication of computers and software should allow information technology to play a vital part in reducing that risk — by streamlining care, catching and correcting errors, assisting with decisions, and providing feedback on performance (Ganapati Mudur, 2003).

The benefits of IT applications are First, IT often provides benefits through improvements in timeliness (for example, IT provides quick access to individual information as well as information about products offered by an organization) and precision (products or information provided by the organization may be customized to individuals). While such quality

improvements may be reflected indirectly in economic quantities such as rising wages or increased willingness-to-pay for services (factors which may be confounded with price inflation in the context of productivity measurement), few studies provide direct evidence about the role of IT in increasing service sector productivity. Second, IT is a “general purpose” technology, and the productivity benefits from IT vary enormously, according to the specific application and the characteristics of the adopting organization (David, Paul, 1990)

Information technology has the potential to improve the quality, safety, and efficiency of health care. Diffusion of IT in health care is generally low (varying, however, with the application and setting) but surveys indicate that providers plan to increase their investments. Drivers of investment in IT include the promise of quality and efficiency gains. Barriers include the cost and complexity of IT implementation, which often necessitates significant work process and cultural changes. Certain characteristics of the health care market—including payment policies that reward volume rather than quality, and a fragmented delivery system—can also pose barriers to IT adoption. Given IT potential, both the private and public sectors have engaged in numerous efforts to promote its use within and across health care

settings. Additional steps could include financial incentives (e.g., payment policy or loans) and expanded efforts to standardize records formats, nomenclature, and communication protocols to enhance interoperability. However, any policy to stimulate further investment must be carefully considered because of the possibility of unintended consequences. Use of Information Technology in Healthcare, especially Electronic Health Records can potentially improve healthcare. However, worldwide the usage of EHRs is limited and studies in developed countries like United States have shown that electronic records systems have been slow to become part of the practices of the physicians. To gain insight into the functioning of the healthcare centers in rural India with respect to use of information technology and their fictiveness in healthcare delivery a survey was done (Anant R Koppar, 2009 & Medpac Congressional report).

The enormous investments in Information Technology, the question of payoffs from IT has become increasingly important. Organizations continue to question the benefits from IT investments especially in conjunction with corporate initiatives such as business process reengineering (BPR). Furthermore, the impact of technology on nonfinancial outcomes such as

customer satisfaction and quality is gaining interest (Sarv Devraj & Rajiv Kohli, 2000).

Methods

The study is exploratory and qualitative in nature as it focuses on the way healthcare decision makers think and sense about Information Technology enabled services in their healthcare setup. A structured interview was conducted for a sample of 50 which was taken using convenient sampling. The sample was taken from 30 hospitals that have bed strength more than 100 and corporate in nature

The Participants were senior management professionals like Vice President, Chief Executive Officer, Chief Operating Officers, General Managers, Medical Superintendents and Senior Administrator, who offer their full time services within the hospitals and also involve in decision making in terms of IT planning, infrastructure development. A prior appointment was taken from the participants; they were briefed about the study and encouraged to expel information relating to IT services assessment and their future areas of expansion, growth, investment and improvement.

The data was collected by face to face interview; the facts of assessment on IT services were recorded manually. After the recording from the entire 50 participant data was analyzed through Interpretative Phenomenological

Analysis. The study is restricted to hospital of Hyderabad and Secunderabad.

Discussion

The study revealed the following

- All the respondents confirm a significant impact of IT service in both personal and professional life, they inveterate that Information Technology has made a major difference to the Quality and Standards of living. Educating our self's with some of the common IT applications can make an individual carry out any activity of your work life simpler and easier.
- The respondents when asked about the healthcare systems, competition and information technology raveled the following statements. There is a rising awareness about the need for better healthcare in all the major cities of India. The demand for healthcare services is growing with the increasing affordability of Indian middle class, new breed of patients with enhanced expectations for better quality of healthcare are encountered, both patients and doctors are now exposed to international healthcare setting, insurance playing a

key role, net savvy population, more number of independent hospitals have made the healthcare market more competent, complex and accessible. The major component that can give an edge in market and provide a better solution is sound IT support. Today's corporate hospitals compete on the basis of the technology with investment in it being the major benchmark. Technology in healthcare has brought better therapeutic & diagnostics delivery of services, integration to various components of large healthcare providing entity very similar to that of any other sector like manufacturing and banking sectors. Healthcare IT has huge potential as the hospital are emerging, growing up and healthcare workers want to upgrade.

- The respondents when asked about the current hospital management systems revealed a mixed response. The cooperate hospital that were taken as sample showed that the IT application systems used at the hospital some of were as switch for the past 3 to 5 years before that the operations were mainly manual, while others were using it for last 7 years and all of them were having backend support by the vendors.
- The respondents when asked about operational integration at various department levels showed a varied response (fully integrated system) some of the hospital had a fully integrated system while others were not having a fully integrated system. But the hospital leaders believed that the IT applications were user friendly and helpful.
- The respondents when asked about prime goals of IT application in a hospital they revealed it to be Work process improvement, on time decision making efficiency, Shortening process time, reducing cost of transaction, Provide correct up-to-date and relevant information about patient & Doctors schedule, better healthcare delivery, employee satisfaction, patient satisfaction, Effective management of resources, reducing medical errors and better performance for competitive advantage were some of the prime goals.
- The respondents when asked about what can be the success factors behind IT applications they said that to successfully implement IT in a hospital proper planning, justifiable investments,

training, operational budget, oneness in vision and effective team work is needed.

- The respondents when asked about impact of IT applications they revealed that IT system has a positive impact on patient care services, administrative and management services. The IT system was serving efficiently in the areas like patient billing, appointment scheduling , hospital claims, pharmacy management, medical records, inventory management , vendor management, online support, interdepartmental communication and payroll
- When the sample was asked about the emerging areas apart from services of EMR, PACS the other emerging and thrust areas are Web based services ,E-health, M-health, operational efficiency software integration, Clinical integration, wireless technology, personal health records and telemedicine support for ruler India
- The respondent's revealed that the success of IT in a corporate hospital deepens on various factors like patient, top management involvement,

organizational vision and healthcare participants who are associated at different points of patient care. It is more of a team work.

- The respondents when asked about awareness and training programs it was said that hospital promotes training for the existing employees as well as fresher's .The training programs are provided by the software vendors, the individuals who assist in tanning are called as Application Specialist. Generally the training depends on various factors like the previous exposure of fresher to the technology, the operational knowledge of individual in the domain area, the kind of software interface and for the existing employees the training can be provided for enhanced or new application as well as online support.
- The healthcare leaders believe they act as prime decision makers and are responsible for facilitating , acting as a change agents in healthcare IT setting. The cost that is associated after the implementation is training cost and operational cost which cannot be compared with intangible benefits the IT

offers in operational efficiency and patient care.

- The healthcare leaders gave much importance to sensitive areas like Data privacy and Confidentiality, e-health solutions, data integration and web enabled services.
- When the sample was asked about healthcare IT demerits they listed it as ever changing technology, no common platform between various business partners, threats from web based hackers, data loss, system failures, more dependency on computers than individual, training complications and investment cost.

Conclusions

The interview of healthcare leaders reveals that IT is considered as an important and core component in providing services in both the professional and personal areas. As the market is becoming more complex and competent the healthcare leaders believe that IT is going to play an important role in competitive edge. The IT applications have a positive impact in patient care, administrative and decision support. The success of IT in a healthcare setup depends on the involvement of healthcare participants and management initiative. The training and online

support helps the employees learn more and become more confident and helps in employee satisfaction. There are various critical areas that cannot be ignored and special attention should be given to data privacy and confidentiality issues .Over all the healthcare IT is taking a new shape in a non metro twin city of Hyderabad and Secunderabad with intense competition from healthcare vendors and hospital.

List of Abbreviations

BPR -	Business Process Engineering
E-Health-	Electronic Health
EHR-	Electronic Health Record
IT -	Information Technology
IS-	Information Systems
M- Health-	Mobile Health
PHR-	Patient health record
PACS -	Picture Archiving and Communication Systems

sional_reports%5CJune04_ch7.pdf (accessed during 10th February 2011)

References

1. Anant R Koppar,2009,” A Workflow Solution for Electronic Health Records to Improve Healthcare Delivery in Rural India, hospital and health management
<http://www.hhmglobal.com/knowledge-bank/articles/a-workflow-solution-for-electronic-health-records-to-improve-healthcare-delivery-in-rural-india> (accessed on 17th February 2011).
2. David, Paul (1990), “The Dynamo and the Computer: An Historical Perspective on the Modern Productivity Paradox,” *American Economic Review* 80(2): 355-361
3. Ganapati Mudur (2003). India plans to expand private sector in healthcare review, *British Medical Journal (BMJ)*, 326(7388): 520
4. Griliches, Z., 1994, “Productivity, R&D, and the data constraint,” *American Economic Review* 84(1): 1-23
5. Idowu P., Cornford D., Bastin L. (2008). Health informatics deployment in Nigeria. *Journal of Health Informatics in Developing Countries*, 2(1), 15-23
6. Medpac congressional report
<http://www.medpac.gov/publications%5Ccongres>
7. Neeraj Gour, Dhiraj Srivastava (2010). Knowledge of Computer among Healthcare Professionals of India: A Key toward e-Health. *Telemedicine and e-Health*, 16(9): 957-962.
8. National IT Backbone for Healthcare by Dr. Ajit K. Nagpal Chairman Executive Council ,Batra Hospital & Medical Research Center, New Delhi
<http://www.ehealthonline.org/articles/article-details.asp>
Title=National20IT20Backbone20for20Healthcare&ArticalID=2355&Type=COLUMNS (accessed on 11th January 2011)
9. Sarv Devraj, Rajiv Kohli (2000), “Information Technology Payoff In The Health-Care Industry: A Longitudinal Study” *Journal of Management Information Systems - Special issue: Impacts of information technology investment on organizational performance*, Volume 16 Issue 4
10. Susan Athey and Scott Stern (2002), "The Impact Of Information Technology On Emergency Health Care Outcomes," *Rand Journal of Economics*, v33(3,Autumn), 399-432

Correspondence:

Syed Murtuza Hussain Bakshi

Vice Principal & Associate Professor

Address: Deccan School of Management

Department of hospital management,

Owaisi Hospital and Research Center,

DMRL cross road,

Kanchan bagh

Hyderabad, 500058

Email: murtuzain21@gmail.com