

Challenges in Implementing E-Health Services in India: A Study

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Abstract – As the world is going through the phase of transformation from the conventional services delivery system to the Information and Communication Technology based services delivery system which ensure the efficiency and effectiveness of the services with low cost. In this context, an attempt has been made in this paper to build up the concept of E-Health in general which is a part of this new way of services delivery system to the public. It is a study based on available literature to find out the challenges in implementing the Information and Communication Technology based health care services in India.

Keywords: Information, Communication, Technology, E-Health, Efficiency, Effectiveness, Low Cost

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INTRODUCTION

As the governments globally going towards the efficiency, effectiveness, accuracy and cost reduction of the public services delivery system; the health sector is also not untouchable of it. That is why, concept of e-health emerged globally with e-governance, primarily in the developed nations and then in the developing or transforming nations. E-Health is the part of e-governance and grows simultaneously with it. 'E' in e-health stands for electronic which means the electronic medium to convey and receive messages related with the health of a citizen or patient anywhere in the world. Health for all is one of the primary goals of the state as that determines the progress of the particular nation worldwide. As we all know that the Information and Communication Technology proven itself as a very good mean to provide best services to the citizens that is why it has been introduced into health care. The World Health Assembly in 2005 recognized the scope of e-health to strengthen health systems and improve quality, safety and access to care, and encourage member states to take action to incorporate e-health into health systems and services (58th World Health Assembly, 2005; Geneva).

World Health Organization defined E-Health as, "the cost-effective and secure use of information and communication technologies in support of health and health related fields, including health care services, health surveillance, health literature, and health education, knowledge and research (WHO: 2005)."

An another scholar defined e-health as, "It is the combined use of electronic information and communication technology in the health sector for

clinical, educational, research and administrative purposes, both at local site and across wide geographical regions (Mukherjee and McGinnis: 2007)."

E-Health defined by the European Commission as, "the use ICT in health products, services and processes combined with organizational change in health care systems and new skills in order to improve health of citizens, efficiency and productivity in health care delivery, and the economic and social value of health (European Commission:2012; e Health Action Plan 2012-2020)."

The term E-Health refers generally to incorporating information and communication technology (ICT) into health care products, services and processes and into organizational and governmental infrastructures. That can improve patient-citizens' health and well being, increasing efficiency and productivity in health care deliver, and enhance health care as an economic and social value.

REVIEW OF LITERATURE

Eysenbach (2001) in his paper "what is e-health?" depicts that meaning of e-health in terms of an emerging field in the intersection of medical informatics, public health and business, referring to health services and information delivered or enhanced through the internet and related technologies. Further the author defined that e-health does not only mean electronic rather it represents the efficiency, enhancing quality of care, evidence based e-health services, empowerment of consumers and patients, encouragement of relationship between a doctor and patient,

education of physicians and consumers as well, enabling information exchange and communication in a standardized way, extending the scope of health care, ethics while practicing e-health and to make health care more equitable.

Akerkar and Bichile (2004) in the paper “Health Information on the Internet: Patient Empowerment or Patient Deceit?” explained that internet is the biggest medical library in the world where many people find the information what they seeking for. They add on that health information is the third most popular activity on the search engine of internet. Further in this they showed that when a person searches anything on internet related health the search engine show many results on the screen. So now the question arises that is such type of system taking the person in the right direction or in the wrong one. Because the person who is seeking some information regarding health issues do not know the information provided by the internet is authenticated or not. Further in this regard they suggest that there must be a prescription of reliable sites and besides this a quality assessment tool must be there for regular check on these sites for the secure and healthy future of the nation.

Dixon (2007) in the paper “A Roadmap for the Adoption of e-Health” defined e-health as the delivery of health care with support from various information and communication technologies like electronic health records, telemedicine and clinical decision support. E-Health is considered as a primary method of improving quality, safety and costs associated with the delivery of health care. Further he elaborates the roadmaps for the growth E-Health where he includes sustainable resources for those seeking to adopt E-Health, strong E-Health workforce and implication of best practices in E-Health. In concluding lines he advocates that these road maps are just the initiators. If we want to grow this as health care tool then government, academic and private industry leaders have to work together to achieve the goal of widespread adoption of E-Health.

Srivastava, Agarwal and Agarwal (2013) in the paper “Authenticating Indian E-Health System Through ‘Aadhaar’ A Unique Identification” explore that use of information and communication technology give new heights to the health care services but to give secure and reliable health information is a major concern in today’s scenario in the whole world. In this context it is the major issue for India to think over it because India is a big country with number of states and union territories. To solve such problem they proposed an authenticated model based on Aadhaar a twelve digit unique identification number for e-health services in the country. According to them every stakeholder register themselves on the Indian portal with the unique identification number who are associated with e-health services; whether the user is a general physician, nurse, specialist or a patient. In conclusion they said that it is a secure and reliable

model to provide e-health services to the Indian public.

Jaroslawski and Saberwal (2014) in their paper “In eHealth in India today, the nature of work, the challenges and the finances: an interview-based study” depicts that ehealth has a capacity to enhance the quality of healthcare and reach the unreached. They have conducted a study to find out the concerns related with e-health in India in present context. They interviewed 30 individuals who represent 28 organizations involved in the implication and adoption e-health in India. They found that India is dealing in the point of care, data collection and surveillance, treatment compliance and distant medical education on the name of e-health services. The challenges in front of the success of e-health are: finance is a big problem as many programs are profit motive and that is why beyond the reach of common man, insufficient infrastructure to provide services efficiently and replacement of paper record into e-record is also a challenge. Later in the ending line they suggest some solutions like: fix nominal fee for the services and training program to enhance the workforce for efficient and effective practices of e-health.

Kumar and Ahmad (2015) in the paper “A Review on utilization of Telemedicine and e-Health services in Public Health” defined Telemedicine as the practice of medicine and health care services at a distance using electronic communication and information technology. Telemedicine uses wireless devices such as cell phones and personal digital assistance to exchange data. In this paper they have studied Telemedicine in context of India, because India using Telemedicine since early 2000 to provide health care in remote areas. Further they explained the Indian initiatives in the field of Telemedicine by government and non-government organisation. In the ending lines they sum up by saying that Telemedicine is the need of Indian society to make the e-health program successful as India is a big country with huge population.

Srivastava and Agrawal (2016) in their paper “Mobile Health for Elderly in India” depicts that the use of information and communication technology in the health sector is one of the rapidly growing area for health care. Further they write that Department of Information Technology, Indian Space Research Organisation, Apollo Hospitals, Asia Heart Foundation and State Governments supporting the E-Health program. Their study focus on providing comfortable health services to the elderly people. It is the need in India to focus on the health of elder people. In this context mobile place an important role to exchange data and voice from one place another without wired connections through microwaves. They give some reasons for wide acceptance of mobile services like the lowest cost communication medium, very easy to use by all age groups, it does not require any urgent

infrastructure and it can be use any time to provide medical care at any distance. To conclude they said that to extend better health services to the elderly population mobile health care system is the best way to match their needs.

Sharma, Shivaram and Sharma (2016) in the paper "A Methodical Review of E-Health Systems Developed for Indian Healthcare Sector" used nineteen studies as a sample to find challenges and gaps related with E-Health in India. They used the content based techniques to analyse the E-Health Systems. They found in their study that the Remote Consultancy, Teaching and Learning, Hospital and Record Management are providing services to the citizens but Mother and Child Care has a huge gap it need more attention to develop it in as acceptable model. In conclusion they said that E-Health emerged as an important tool with the aim of enhancing the communal health.

Malik (2016) in the paper "Impact of Telemedicine on Rural Women's Health" defined that Telehealth changes the communication channel between clinicians and patients to minimize geographic barriers and enhance delivery of service. She focused her study on women by adding a quote of Nehru that the status of women defines the status of a country. Further she describes the problems women have in India in healthcare like lake of knowledge, low quality of care, less workforce etc. In this study she found that the use of Telehealth bridges the gap between rural and urban especially in context of the women of the society. It removes all the barriers like communication gap, awareness and distance.

Singh, Arora and Others (2017) in the paper "Scope of E-Healthcare Services in Uttar Pradesh: A Case Study of Lucknow Urban Areas" introduced E-Health as Electronic Health and future of healthcare services in India. They write the initiatives of Uttar Pradesh in E-Health are: Uttar Pradesh HMIS, Hospital Information System, ASHA Mobile Application, M-Sehat, National Digital Literacy Mission and Pyarbitiya – PC and ANDT Website. They discussed the scope of E-Health in Lucknow in which they explained about the institutions and organisations providing the services in health care sector electronically, some hospitals are using E-Health care services. Further they named some major players in the field like CDAC, Wipro, and TCS in the domain of E-Health. In the ending lines they wrote that the main focus of government to provide health care is to develop the E-Health delivery system of health care.

CHALLENGES IN IMPLEMENTING E-HEALTH SERVICES IN INDIA

To take up digital India initiative ahead, Ministry of Health and Family Welfare has started various e-

Governance initiatives in health care sector in India; the division is named as E-Health divisions. The E-Health initiatives have a vision to delivery better health outcomes in terms of access, quality, affordability, lowering of disease burden and efficient monitoring of health entitlement to citizens. Indian government launched the National Health Portal to ensure the E-Health services in the country. But on the bases of literature which has been discussed very briefly we can include the following challenges in implementation of E-Health services in India:

- **Cost Effectiveness:** Providing health care in India is costly, and introducing ICT would require extra investment. There is a need to manage the costs in such a way that the overall cost of health care goes down.
- **Information Exchange:** Health information exchange with proper access and control mechanisms is needed. The challenge is to motivate and encourage stakeholders to pull as well as push the right kind of information from the system.
- **Adoption and Resistance:** In India and across the globe, there is reluctance on the part of patients and doctors in fully adopting E-Health. The right kind of technology must be utilized in the right way so patients as well doctors feel comfortable in adopting E-Health practices. Companies not only have to prepare the best technical systems but also make sure that they are easy to understand.
- **Human Resource:** E-Health is not just about having technology but it should also have an efficient and well-qualified human resource. So there is a need to hire the right workforce and train them properly so that they are well equipped to carry out the task of providing health care to remote areas.
- **Evaluation:** Evaluation of the processes needs to be done by an independent observer. There is a need to track progress after a regular interval of time to make it a success.
- **Power Sharing:** Power, responsibility, accountability, rewards and risks at the programme must be well defined to avoid the conflicts of interest between the center and the state governments.
- **Managing Information:** The recorded information should be properly archived, accessible, retrievable, secure, and readable from remote locations using different technology platforms to improve

the efficiency of services and to avoid duplication of information.

- Education: E-Health is not just about providing health care service when someone but it should also be used to promote preventive health care to improve the standard of living and reduce health care costs. This will this require bringing people into the system and educating them about the different preventive measures to avoid diseases.

CONCLUSION

Information and communication technology played a vital role to provide an efficient and effective health care system at low cost. It improves the quality of health care by improving the knowledge of medical practitioners by reaching the unreached. But in context of India technology is a challenging matter. There are many other challenges like the development of workforce, adoption and acceptance of technology based health services, insecurity of privacy, management of information and the capital investment to build up the infrastructure being a developing nation. Finally, information and communication technology is a powerful tool to develop a better health care services delivery system in general and particular in context of India if we overcome from the challenges facing to establish it.

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