



Volume 2, Issue 3, March 2012

ISSN: 2277 128X

International Journal of Advanced Research in Computer Science and Software Engineering

Research Paper

Available online at: www.ijarcsse.com

The Issues of Health-Informatics in The Changing Environment: Uttarakhand Scenario

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ABSTRACT-*The applications of e-health can disseminate the health Informatics across the globe. This paper raises the unidentified issues of e-health in Uttarakhand. In this paper we have projected the scope of health informatics in uneven geographical conditions. It refers to health services and information delivered or enhanced through the internet and related technologies. In general e-health is not a technical development but also a state of mind, a way of thinking an attitude, and a commitment for networked, global thinking, to improve health care locally, regionally and worldwide by using information and communication technology.*

INTRODUCTION

Health Informatics is the application of information technology or Computer Science which involves the facilitation and creation as well as the use of health related data, information and knowledge. In general Health informatics allows and supports all aspects of safe, efficient and effective health services for all Countries (e.g., planning, research, development, organization, provision, evolution of services, etc.). Health Informatics is use for development and deployment of information systems, as well as it provides the expert knowledge from fields such as computer science, information management, cognitive science, communications, epidemiology, management sciences and health sciences. Communication protocols for the secure transmission of healthcare data.

The first use of health informatics occurred in the 1950s with dental data collected by the National Bureau of Standards, now known as the National Institute of Standards and Technology (NIST). Usage accelerated in subsequent decades following the development of the Massachusetts General Hospital Utility Multi-Programming System (MUMPS), which provided a standard programming language for clinical applications. Today, the (International Association For Medical Informatics (IAMI) oversees member organizations involved in health informatics worldwide.[8]

In India a professional society has been established in 1993 which is named as IAMI [Indian Association for Medical Informatics]. The key objective behind the establishment of this society was enhancing the applications of Informatics in fields of health care, bio-sciences, and medicine in India.

The IAMI (International Association For Medical Informatics) helps the Indian medical community about the benefits of IT (Information Technology) it brings the awareness and ensures the enhancement of IT facilities across the country. The IAMI is also responsible to provide the necessary assistance and guidance to other organizations in implementing the benefits of IT for health care. It provides the introduction of computer literacy along with the medical education, development of computerized medical digital libraries which have the access to best medical information. IAMI laid emphasis on research and development of medical informatics as an independent module.

The health Informatics can also be disseminated by applications of e-health, it refers to health services and information delivered or enhanced through the internet and related technologies. In general e-health is not a technical development but also a state of mind, a way of thinking an attitude, and a commitment for networked, global thinking, to improve health care locally, regionally and worldwide by using information and communication technology.

ABOUT UTTARAKHAND

The state of Uttarakhand is bounded by Nepal in the east, the Tibet Autonomous Region of China in the north, Himachal Pradesh in the west and Uttar Pradesh in the south. The total geographical area of the state is about 53,483 sq. km. According to the Census, the State's population was 84.89 lakhs (8.5 million) in 2001. Uttarakhand was carved out of Uttar Pradesh and given an independent status as the tenth Himalayan state and the twenty-seventh state of the Indian Union on 9th November, 2000. Formation of this state was a long-standing aspiration of the people

of Garhwal and Kumaon as this would accelerate the pace of socio-economic and human development. The state has been created with the inclusion of 13 districts of undivided Uttar Pradesh. It is further divided into 49 sub-divisions and 95 development blocks in order to ensure rapid human development through effective administration. There are 15,638 inhabited villages and 86 urban settlements in the state. However, it is very tough to create policies based on health care conditions due to everly constrained hilly regions of this state as well as due to various physical, geographical and environmental problems in Uttarakhand.

IMPORTANCE OF E-HEALTH IN UTTARAKHAND

E-health is important for remote and hilly areas of Uttarakhand because it provides us a way of using the electronic communication technologies to provide clinical care. Telemedicine is a major application for ehealth implementation, it enables a physician or specialist at one site to deliver e-health, diagnose patients as well as provide intra-operative assistance with another physician or paramedical personnel at a remote site. In remote and hilly areas of Uttarakhand it is not possible, due to geographical condition, to have a face to face interaction between a doctor and a patient on regular basis so the applications like Teleradiology, Telepathology, Teleconsultation, Teleconferencing and Telepsychiatry are very helpful as sometime they acts as a life saving technologies.

Now a day's Video conferencing is also available, which acts as a boon in success of e-health. Under this facility the patients and doctors can interact through videoconference to another doctors sitting at another side. Increasingly the use of information technology and its applications will allow much of the work currently being carried out in hospital, to be carried out in people's homes, this process can enhance the efficiency and standards of clinical care and at the same time it reduces the cost drastically. Thus the videoconferencing plays a vital role in increasing the health facilities among remote and hilly areas of Uttarakhand.

All the application comes under telemedicine will focus on the individual to provide greater access and increased knowledge in ehealth. Its application empowers an individual to manage his/her own personal ehealth records. It integrates all the information related with an individual's health, which allows the smooth functioning of services and products associated with the health care system. Telemedicine can benefit peoples of hilly and remote areas where access to specialized care is very difficult or near to impossible. In terms of attaining better health care in remote and hilly areas, telemedicine applications are helpful in several ways:

- The referral patient can be reduced by as much as by connecting primary health care centers physicians to specialists of higher centers to provide better health care.
- The telemedicine also improve access to specialty care in some areas, especially in rural and hilly areas.
- Through this one can improve the quality of care to patients through more timely delivery of medical services to the point of care.

ISSUES IN IMPLEMENTING EHEALTH IN UTTARAKHAND

The areas responsible for implementing the ehealth is the role of employers, patients, providers as well as the various health plans offered by different companies. The employers want to assess the healthcare cost and utilization by their employees. Patients required the information about their own health. Providers want to save time and money by streamlining communications, whereas the health plans of different companies want to strengthen the relationship among members and providers while reducing the cost of doing the business.

The major hindrances for e-Health implementation are the difficulty for consumers or patients to find the accurate and reliable information. The major grey areas of e-Health success are the quality of information and credibility of source as well as the information genuiness. Also according to various medical experts the information provided by the source is not credible so one cannot get the correct response about its health. Thus by all this we can say completeness on health information is considered the single most important criterion in health care decision making.

As Major population of Uttarakhand lies in hilly and remote areas. So the challenges in implementing ehealth and its application in Uttarakhand are difficult aspect. Some of the major issues in health are stated below.

- The success of ehealth is depends upon Overcoming geographical barriers to access health services in remote and rural areas.
- Most of the application of ehealth should incorporate of GPS Systems as it helps in providing the better health services to the

hilly and remote areas which lack of health services due to geographical conditions.

- Government should disseminate the use of e-learning though it can help in spreading the use of computer and IT enabled services among the large extent.
- The e-Health applications must be user friendly so that there access can be made easy for Doctors and other technocrats.
- Uttarakhand Government laid the policies which helps in improving the technological architecture because if we have good technological aspects e.g. Broad band, wiMax e.tc, then only we can spread the e-Health and its applications over the state.
- Most of the e-Health applications are to be incorporated of Video-Conferencing so that face to face interaction between a patient and doctor can be made easy.
- Implementing of Video Conferencing in e-Health can also save time and money.
- Better technological intervention in Uttarakhand remote areas allow the establishment of e-Health labs which save the long distance travel by patients for various tests and doctors suggestions on it.
- The regular training is required for persons associated with e-Health as due to the frequent change in Technology and Medical Sciences.

CONCLUSION

In Uttarakhand IT and e-Health are seen as the integral to transforming the way in which health care is delivered. We can use the advancement in electronics for potential benefits of health services in Uttarakhand. To improve the conditions of health services in Uttarakhand we have to equipped Sub centers and Primary Health Care centers with suitable e-Health Applications. In Uttarakhand we urgently require an e-Health culture to be established which was driven by specialists in Medical and Technological Sciences.

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