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Health Science Libraries in the 21st Century

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Intoduction

In the 20th century great changes took place as a result of experiments and development in broad range of human activities, in economics, politics, and science especially medical science. Medical science is a fast changing field. In fact, the whole concept of diagnosing and treating a patient is modifying rapidly and hospitals of the future will treat patients from all over the world without geographical limitations. It is well said that from the elite class to the general masses, the cultivation of the righteous life is the foundation for all [1].

The library plays a vital role in the teaching and learning environment. Technology is changing the very nature of libraries. This has resulted in digitization. Digital and virtual libraries, which play an important role in e-learning, are fast emerging as a result of integration of varied technologies [2].

The role of the health science library is to provide a learning center where practitioners and administrators can develop the skills and knowledge needed to enhance the quality of health care in diverse communities and dissemination of biomedical information. Health science libraries can provide a multidisciplinary approach, which incorporates discussion, lecture, and hands-on training. It also provides technical site assessment, installation and testing of equipment, product searches, and telecommunications planning and assessment.

Increased availability of information in digital format coupled with high cost of journals subscription compels health science libraries to convert the data to digital format. Technological advancement provides a platform for digital resource sharing and offers many opportunities for health science librarians and professionals. The digitized environment has made possible the use of libraries that is increasingly free of time and location constraints [2].

The use of communication technology in the practice of medicine may change the way health care is provided by improving access to medical information, diagnostic tools, and consultations. Increasing demands on practitioners' time and te increasing complexity of patients' education and management have created a demand for creative solutions. Telemedicine can answer some of those needs and not long ago it became an essential component in the delivery of modern medical care [3]. Furthermore, telemedicine has proven to be viable solution in addressing the health care needs of underserved populations. Although telecommunications and information technology have the power to overcome many disparities

in health care, they are not being used to their full potential. Telemedicine has become an integral part of healthcare services in western world but it is still in it infancy in developing countries including India.

Telemedicine is a method by which patients can be examined, investigated, monitored and treated, with the patient and the doctor located in different places. In short, the patient will be viewed thoroughly and managed by the team of experts without his/her physical presence [4]. Telemedicine means remote consultation for diagnosis, providing specialty clinical care, health education and home monitoring by using multimedia (voice, video and data) technology to deliver medical services [5-6]. Telemedicine encompasses teleconferencing, videoconferencing, and the transmission of medical images [7].

The role of telemedicine has been proved in various studies in controlling of hypertension and weight loss by obese persons [8] and also in some studies on teleradiology (reading still and full motion radiographic images especially for neurosurgical applications), telecardiology (transmission of echocardiographic images), telepathology (analysis of tissue histology samples and electronic transmission of pathologic or histopathologic slides and thereby analysis of a tissue sample from one location to another), telementoring (guiding surgical and other clinical procedures from a remote location), teledermatology, telemedicine, (acute physical examination of a patient), telemental health, and home telecare (medical examination and therapy where patients are located at home, communicating with health-care personnel via videoconferencing) [9].

The development of telemedicine assumes advantages for the individual patient in the interaction between primary and secondary care. In addition, general practitioners can gain educationally and hospital follow-up appointments may be reduced in number, because the general practitioner can handle more advanced medical problems. Economic savings for the health service are also a driving force [9].

The teaching and learning methodology has changed from classroom, lectures and seminars to videocassettes and compact discs (CDs) to web-based training and wireless communication [10]. In an e-learning environment the librarians provide access to online resources as well as serve as information literacy trainers.

A majority of the Indian population (70%) lives in villages and it is very difficult for them to gain access to quality education. There is also a serious shortage of infrastructure and human resource in the education sector throughout the country. Distance education can overcome the limitations of geography, economic status, gender discrimination, and age difference, and bring quality education to all through tele-education system [1]. Recently Indian Space Research Organization (ISRO) launched an educational satellite, "EDUSAT" for this purpose [11].

It is strongly recommended that health science libraries be incorporated with telemedicine that in turn offer the potential to make information more accessible to physicians especially in remote areas.

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