

Telemedicine – the simple route to Specialty Health Care

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“Health is wealth”—thus goes a famous saying. When there is health, everything else becomes healthy. It is therefore needless to emphasize the importance of health.

In a developing country like India, how many have the privilege of access to good health service. Answer is simple. Only those in the cities. When you talk of specialty health care, it is available only in metropolitan cities and not in all cities. The reason for this is that majority of the doctors are in cities whereas majority of the country’s population live in rural area. Further, this is compounded by inadequate medical facilities in the rural and inaccessible areas, problem of retaining doctors in rural areas both due to the non availability of adequate facilities and also due to the feeling among doctors that they become professionally isolated and obsolete over a period of time if they remain in rural areas.

The magnitude of this problem is enormous. However, the present day technology has the solution for this problem. The user-friendly equipments make the solution that much

simpler. The only requirement is that the concerned people must have a mind to adopt this.

A meaningful and economical integration of the communication technology, information technology and the medical technology into what is called Telemedicine can instantaneously bring to your doorstep the specialty healthcare – no matter where you are. Be it the islands, the hilly terrain, remote places or tribal areas. The technologies have been synergised. The concepts have been successfully demonstrated.

Telemedicine system consists of a computer (PC) with customized medical software connected to a few medical diagnostic instruments like ECG or an X-Ray Machine or an X-Ray Scanner for scanning the X-Ray photos. Through this computer which digitizes the medical images and information of the patients like X-Ray image, ECG or blood test report, the details are sent to the Specialist Hospital through the communication link which could be a satellite VSAT system or terrestrial links.

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This information is, in-turn, received at the specialist centre where the specialists examine the reports, diagnose, interact with the patients and suggest appropriate treatment during the video conferencing session through the Telemedicine system.

Telemedicine facility, thus enables the specialist doctor and the patient separated by thousands of kilometers of geographical distance to see each other visually and communicate. This enables the doctor to assess the physical and the psychological state of the patient. In this way, the systematic application of information and telecommunications technologies to the practice of healthcare rapidly expands the outreach of the healthcare system. The systems have been commissioned and effectively used to treat patients in remote areas. The concept is picking up like wild fire. Obviously the beneficiaries are the people in the remote and rural areas.

ISRO, with its primary policy of using Space Technology for the benefit of the common man, has taken up Telemedicine in a big way. Starting with pilot projects in the year 2002 with “Proof-of-concept” technology demonstration, ISRO has till today established the facility in nearly 100 hospitals. 20 of these are at the Super Specialty Hospitals and eighty of them in remote District / Taluk or Trust Hospitals.

The results are extremely encouraging. While obviously the utilisation and performance levels vary from place to place, some of the remote District / Trust Hospitals have maximally utilized this. In the case of District Hospital, Chamarajanagar in Karnataka – within a matter of three years, nearly 15000 patients have obtained consultation services from Super Specialty Hospitals without really traveling to the big cities. Lives have been saved in certain pilgrimage places with the help of this facility. Bullets have been removed from injured Jawans in remote places through instructions obtained from experts with the help of this facility, at far off Specialty Hospital.

During the recent Tsunami disaster, which struck the coast of India and the islands of Andaman and Nicobar, the SATCOM based Telemedicine and GRAMSAT Network provided by ISRO were pressed into service instantaneously. Also, a few communication systems which were affected during the disaster in some of the islands were restored in a short time and used extensively for providing medical consultations as well as relief related works. The advantages are innumerable.

It is also heartening to note that a number of other departments, hospitals and agencies are also actively involved in the use of Telemedicine with similar efforts. The Ministry of Information Technology

has its fruitful share in this. There have been noble contributions from Super Specialty Hospitals like Narayana Hrudayalaya in Bangalore, Amrita Institute of Medical Sciences in Kochi, Apollo Hospitals, Sri Ramachandra Medical College in Chennai, Sankara Nethralaya in Chennai, Asia Heart Foundation in Kolkata to name a few. A number of other enthusiastic and philanthropic institutions and hospitals are getting into this fray. The requests for establishing this facility have been pouring in from many states. People are realizing the efficacy and advantages of this system and are eager to extend this facility to all District Hospitals.

While these are the positive and encouraging aspects of Telemedicine, the next question is whether the implementation and use of this facility are smooth and flawless. There are the inevitable difficulties associated with the introduction of new systems and technologies. There are some who needlessly fear that they will lose their jobs. Although the systems are user-friendly, there are others who are affected by the fear of the unknown in handling computers and other equipments. There is a feeling that the initial investment is high and hence financially not viable.

Obviously, all these have their own solutions. One can easily draw a simile with what happened when computers were introduced way back in late eighties (1980). There were

strikes against introducing them. The costs were prohibitive. But then where do we stand today? There is a computer on every table in every office / business centre. There is a laptop moving with every executive as an integral part. There is a heavy competition between manufacturers and the pieces are available “dime a dozen”. Use of computer has become a second nature and a healthy culture. The story is no different with land phones and mobile phones.

Thus Telemedicine is a reality. All that is needed is for the concerned people to apply their mind. The systems have to be progressively made more and more user friendly and economical. The users have to come out of their shells and familiarize with the systems. Most importantly, we require people who mean service to the people – that too those in the rural and remote areas. It should be told to the credit of NGOs and social service organisations that they are already into this in their own capacity. They need to be encouraged and supported by all the agencies and at all levels.

This will also become a reality more because psychology plays an important role in the patients’ recovery from illness. What a relief it is for a patient in a remote area to get an advice from a specialty hospital! It is a facility at a nominal cost at your doorstep. In the present day system, there is the advantage of medical insurance schemes which are

affordable even by farmers. These entitle them even to major surgeries which otherwise cost a few lakhs of rupees.

When we talk of developing countries like India, we can use this facility right now for Teleconsultation and post operative consultations without the patients having to travel all along to the Specialty Hospitals thus avoiding the associated hurdles. But it is also a fact that there are technological developments taking place all over the world. We have the Tele-surgery, Tele-robotics, etc. along with the associated sophisticated equipments and instruments. All these enhance the level of services available to the patients making it possible for patients to get better surgical treatment. These also demand a corresponding upgradation in the manufacturing and software technologies.

The reliability and performance of these equipments and software have to be of the highest order. The quality of data and data transfer itself has to be maintained at uncompromisingly higher levels. This in turn calls for generation and maintenance of appropriate standards. Combined with these advances is the need to look at the social and ethical aspects of Telemedicine.

One of the most precious things in any programme is experience. The quickest way to pick up a new system is from experienced people. Everything is there for you under one roof – the people, the expertise and the occasion. There is a need for you to know. There is facility for you to use. It is for you to take it – just for the asking.