

## 4. Telemedicine

Telemedicine, the delivery of health care with the patient and health professional at different locations has been around for over 30 years. Its driving force has been the development in communications technology. As new communications systems are developed health applications are proposed such as supporting the delivery of primary health care to geographically remote areas or regions underserved through maldistribution of professional expertise.

As applications for telemedicine grow, so does the confusion as to what telemedicine really is. Telemedicine has been defined in many ways viz.:

*"a technology that marries telecommunications, videoconferencing, and medical technologies to deliver health care from a distance."*

*"telemedicine is telemedical diagnostics, because basically telemedicine is medical diagnosis via telephone lines"*

*"telemedicine is any interaction between a physician and patient via video, telemedicine is simply any use of telecommunications in the delivery of health care"*

*"medicine delivered across distance with patient in one place and a doctor in another"*

*"telemedicine is a high-tech solution to the universal problem of access to health care"*

In Malaysia, telemedicine is defined in the Telemedicine Act as the **"practice of medicine using audio, visual and data communications"** So the practice of Telemedicine must have the three essential components namely, the audio, visual and data communications to be present.

Malaysia's telemedicine vision is aligned with Malaysia's health goals, which are

1. Wellness focus
2. Person centered
3. Informed individuals and
4. Self help

In line with the telemedicine objectives, several pilots have been identified and several hospitals have been identified to carry out these projects.

Telemedicine as such is not widely practiced or accepted even in the developed countries. There are various reasons for this:

1. There is no globally accepted definition of telemedicine.
2. Telemedicine is technology driven and not physician driven
3. Telemedicine equipment is complex and cost ranges from very high to modest.
4. Expenses incurred for usage of telecommunications facilities.
5. Support costs to run and maintain equipment at rural nodes.

6. Payment for telemedicine services.
7. Legal issues like who is responsible for the patient.
8. Privacy and confidential issues.
9. Doctors not willing to make diagnosis from a distance without seeing the patient.
10. Competition among the various equipment manufacturers and telecom operators.

If telemedicine is widely accepted, it will undoubtedly force some structural changes in the delivery of health care and medical services. The huge cost of health care in industrialized countries may make governments in developing countries to promote telemedicine as a way of containing health care costs. If a patient can be treated via telemedicine, he or she need not visit the hospital. Hospitals are the major cost centers. However it must not be forgotten that equipment used in telemedicine is still expensive.

#### **What are the benefits of telemedicine?**

Instant access to information, whether it be about a certain patient or a certain topic can be essential or even life saving. Multifold increase in efficiency for all types of medicine would be another benefit. Travel time for patients and doctors could be significantly reduced. Telemedicine could create a paperless environment and handling of medical records could be significantly improved. Self-help may increase with the online availability of so much medical information. Informed patients can result in less unneeded visits to the doctor, and patients are better able to express symptoms to the doctor when they go. Telemedicine also promises individualized care guidelines for the ill and easier long-term monitoring of chronically ill patients.

One of the most important promised benefits of telemedicine is better reaching of underserved areas such as the rural communities. Continuing medical education of health care providers is another benefit of telemedicine. Accuracy of diagnosis is another promised aspect of telemedicine. With accurate diagnosis, there is quicker recovery time, less of use of unneeded medicines and reduced costs to patients and hospitals.

However one has to be cautious when practicing or promoting telemedicine. Even though Malaysia has enacted the Telemedicine Act, the act itself is deficient in certain areas. There is no provision for legal action against any practitioner of telemedicine from across the national boundaries, if mistakes are made in diagnosis and treatment advice. The local doctor who does a telemedicine consultation is the one who is liable, even though it is not his fault. Who will bear the cost of the telemedicine consultation? The patient or the doctor? Who will pay for the equipment? The doctor or the government or the private hospital?

Are we ready for telemedicine? Isn't our health care comparable to other countries?(even without telemedicine). We do boast of health centers within reach of the common man, where he can obtain the necessary advice and treatment, in times of needs. Will telemedicine change that scenario? We hope not.

With the current economic situation, telemedicine is not the answer for health care needs of the country. What is required is equitable distribution of doctors throughout the country, with good remuneration for them.