

Telemedicine in Pakistan – Future of Healthcare Services

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“Telemedicine is the practice of medicine over a distance, in which interventions, diagnoses, therapeutic decisions, and subsequent treatment recommendations are based on patient data, documents and other information transmitted through telecommunication systems”. This is the definition of telemedicine as described by the World Medical Association (WMA) in 1999 and also adopted in 2018.¹ This form of communication can be between a clinician and a patient or between two or more clinicians or healthcare worker. With enormous change in the field of information technology, there is a radical change of people’s perception regarding time and distance. Previously, for any medical expert advice, they go to their physician but today increasing number of people are seeking medical advice online. Similarly, telemedicine is very useful for patients who cannot physically consult a physician because of any reason. According to a study, until 2016, only 15.4% of the physicians in USA are utilizing telemedicine facility to interact with their patients.² Similarly till 2019 only 1% of the rural population in Unites States of America had any experience with telemedicine where this facility is already available.³ No reliable statistics are available on how many people in Pakistan are utilizing facility of telemedicine or are aware of this facility.

During the COVID-19 pandemic, telemedicine usage has increased much which helped in saving human lives allowing patients and doctors to come together without infecting each other.⁴ As a result of COVID-19 pandemic the concept of online ‘work from home’ was developed around the globe, similarly in healthcare services usage of telemedicine was popularized giving opportunity for virtual patient-physician relationship to continue.⁵ In Pakistan as well during the pandemic, practice of telemedicine up surged steeply because of strict lockdown specially in major cities.^{6,7,8}

Few of the advantages and benefits of telemedicine are; any patient can consult any doctor/physician in any part of the world round the clock, rural patients where healthcare

facilities are very inadequate can be benefitted, patient’s time can be saved that will otherwise be lost in travelling and waiting queue in the clinic, cost-effective by saving travelling expenses, carrying of disabled or bed ridden patients to clinics/hospitals can be reduced, chances of cross infection can be reduced specially in pandemics, follow-up visits can be reduced in cases of chronic and long-standing diseases etc. Another important and significant role of telemedicine is during natural disasters like earthquakes, floods, ice-storms, cyclones, land-slides, hurricanes etc. where mass mobilization of the healthcare workers to the affected site is not possible. Telemedicine stations can be set at the site of the disaster which is connected with other specialized healthcare units of the country. Telemedicine can also be employed as a method for “forward triage” to sort out different patients, visiting in emergency room in any hospital, thus it can improve efficiency to focus on critical patients more.⁹ Through telemedicine, local physicians can help to generate foreign revenues to improve Pakistan’s economic condition by offering medical consultation to other countries.

In spite of these unquestionable advantages of telemedicine there are many shortcomings. Due to physical distance in consultation, physician as well as patient’s satisfaction is compromised and it lacks humane warmth.¹⁰ Many of the clues can be missed as the patient’s body language is difficult to assess that can otherwise help a lot in management of the disease. In addition proper clinical examination cannot be done. Although multiple aids are available for performing clinical examination during telemedicine but these cannot replace proper physical clinical examination. Another major hindrance of telemedicine is availability of good quality internet connection for seamless communication between the physician and the patient.¹¹ In Pakistan this issue is very pertinent as fast internet connection may not be available in remote/rural areas and even in some bigger cities. Lack of computer/smart phone literacy is another important barrier in implementing successful telemedicine practice.¹² Physician-patient relationship is very pertinent in delivery proper healthcare management. This relationship is a bit difficult to develop during telemedicine. This relationship should be seen and understood in cultural and social background of the country. The expectations of the doctor as well as patients must be addressed for successful acceptance of this program. There are so many challenges for wide acceptance of

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telemedicine in future and it is related with physicians, patients, service provider and overall health care system. Majority of the physicians otherwise with years of clinical experience are not properly trained for telemedicine and to successfully perform an online consultation with “No Touch policy” to the patient.

Different modes may be utilized for telemedicine like phone calls, video conferencing, email, texting/messaging etc. In addition different online portal are also available that provides complete solution for online consultation with video conferencing, record keeping, prescription writing, uploading investigations/radiology films etc. In Pakistan also there are so many portals for online consultation that provides all these facilities like Oladoc, Marham, Dawaai, eshifa, ringadoctor, icliniq, shifa4u and so on. These portals can be easily accessed by smart phone through its apps. With the new concept of Metaverse (virtual world with virtual and augmented reality), virtual clinics can be set up where patient and physician can meet giving a real life simulation.

In conventional physical consultation, there is a mutual trust and respect between the patients and physician. Likewise in telemedicine consultation, similar trust and respect must be present and both should reliably know and identify each other for better results. Confidentiality, privacy and data integrity of the patient must be strictly maintained by the physicians during telemedicine consultations. Patient’s data and personal information obtained during this electronic process must be secured enough from unauthorized access and illegal use. Privacy of the physician can be compromised due to constant availability round the clock. He must inform the patient about the timings of telemedicine consultation and alternative arrangement in case of any emergency situation in odd hours. There are many instances where it is not advisable to do telemedicine in patient like who requires proper clinical examination, having respiratory distress, cases of acute and severe trauma, with acute and severe abdominal pain, profusely bleeding from any site, sudden unconsciousness etc.

To summarize, telemedicine is of great help and support for healthcare services especially in developing countries like Pakistan if practiced ethically and except for few instances, it can be used in almost all scenarios. Following are the recommendations to promote culture and benefits of telemedicine in Pakistan are:

1. Government policies are lacking regarding the practice of telemedicine in Pakistan. Proper policy has to be formed and its implementation should be strictly ensured.
2. Accreditation, licensure and monitoring of the online portals offering online physician consultation is required.
3. Cyber security should be strictly maintained to safeguard confidentiality, privacy and personal information of the patient.
4. Proper training of the doctors and physicians is required to use online portals and other apps for telemedicine.

5. Subject of telemedicine should be introduced in the all under-graduate curriculums of medical and health sciences.
6. Promotions regarding benefits and use of telemedicine should be done through print media, radio, television and social media etc.

Authors Contribution:

Iqbal Hussain Udaipurwala: Substantial contributions to the conception critically evaluation of intellectual content, final approval of the version to be published

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