Use of telemedicine in healthcare during COVID-19 in Pakistan: Lessons, legislation challenges and future perspective

Dear Editor,

The coronavirus disease 2019 (COVID-19) pandemic has significantly impacted healthcare systems across the globe and rapidly transformed healthcare delivery. As the pandemic continues, international health organisations, governments and hospitals grapple to contain the spread. The current public health disruption has compelled authorities to prevent overcrowding of healthcare services and depletion of medical supplies and resources. Telemedicine offers a solution to conserve healthcare resources by eliminating the need for hospital visits during this time of necessary social distancing, and has a potential to establish itself permanently within the healthcare system.[1]

Pakistan, like other lower-middle-income countries, has a weak healthcare system. Approximately 64% of Pakistan's population reside in rural areas, and only 30% of its rural population has access to the necessary health facilities.[2] Pakistan's health sector is faced with challenges of poor infrastructure, shortage of healthcare human resources, and inadequate medical facilities in rural areas. As of January 2020, there are 164.9 million mobile connections in Pakistan—a 6.2% increase from the previous year—making up to 75% of the total population. Clearly, electronic health (e-health) may prove to be the critical solution to healthcare access in rural and remote areas of Pakistan, as mobile usage rises.

Like many other countries, Pakistan openly adopted telehealth in the wake of the COVID-19 pandemic.[3] It was the first country to launch a free telehealth service through WhatsApp. The initiative was made possible by Digital Pakistan and the Ministry of National Health Services, Regulations and Coordination, and has enabled people to connect with domestic and overseas doctors to address COVID-19 related health concerns. The federal government of Pakistan has also launched a COVID-19 emergency response telemedicine service "Yaran-e-Watan", which allows overseas Pakistani health professionals to offer medical services to patients in Pakistan.

Telemedicine initiatives like "Sehat-Kahani", "Oladoc", "Marham", "ring a doctor" and "eDoctor" are some examples of successful telehealth interventions in Pakistan. "Sehat-Kahani" has provided more than 150,000 online consultations with over 1.05 million beneficiaries as of December 2020. The eHealth app "Teeku" developed by Aga Khan University, Pakistan is being used successfully to maintain immunisation data. Online tracking software apps are now being used for dengue and typhoid surveillance.[4]

The regulatory issues regarding licensure and medical liability in telemedicine practice are of considerable debate. Privacy and confidentiality, along with payment for telemedicine services, have emerged as significant policy issues that affect the sustainability of telemedicine programmes. According to the World Health Organization, a telemedicine survey published in 2016 reported that Pakistan had no telemedicine laws and legislation in place,[5] which may lead to significant ethical and privacy concerns. The barriers to implementation of telemedicine in Pakistan were reported in 2012 substandard digital infrastructure, a non-supportive culture, and a lack of policy framework.[6]

Poor service and reliability of online healthcare providers remain today as major hurdles to e-health in Pakistan.[2] The lack of knowledge on telemedicine technology among providers and consumers; a general mistrust of technology in healthcare; and Internet connectivity issues impede telemedicine, especially in rural areas. Other impediments and demotivation faced by telemedicine doctors are security issues, where several healthcare providers have faced harassment through phone and text messaging, besides computer system hacking issues. There is a dire need for appropriate infrastructure and legislation to facilitate telemedicine in Pakistan.[6]

The Pakistan Medical and Dental Council Code of Ethics (1970) mentions telemedicine, however, in a vague context.[7] The lack of any regulations makes the setting up of telemedicine difficult, especially for international corporations who intend to establish a legal safety net before starting projects in new markets. Local or international telemedicine companies active in Pakistan must be recognised and be able to enjoy certification by any third-party compliance authority, such as LegitScript, which ensures certified companies operate transparently and safeguard patients from fraud. At present, only 1 telemedicine company that maintains a set of business standards has been vetted by LegitScript and certified for e-pharmacy.

There is a need to implement robust data governing structures for ethical and secure use of digital health programmes by users in lower-middle-income countries. The 4 critical domains in which data governance structures can be articulated and implemented include: (1) ethical oversight and informed consent processes; (2) data protection through data access controls; (3) sustainability of ethical data use; and (4) application of relevant legislation. The legal framework of telemedicine should consist of local and regional legislation about healthcare, protection of privacy, and access to personal information.

The federal health ministry has decentralised its authority and the health sector in Pakistan is currently independently controlled by each province. The decentralisation created problems such as a lack of coordination and strategy for the proper implementation of public healthcare; lack of funding; inadequate capacity by provinces for policy making, health planning and generation of health information; and poor development of human resources and international agreements.

The national digital health authority of Pakistan therefore needs to undertake the responsibility of enforcing telemedicine laws and guidelines.[7] Electronic health records should be established to assist healthcare providers, and these records must be kept confidential, accurate and frequently updated. A uniform procedure should be designed for the registration of telemedicine companies so that they are certified when compliant with standard rules and regulations. These standards include implementation of licensing laws, consumer privacy, and provision of pharmaceutical services with valid prescriptions. For cross-border practice of telemedicine, there must be recognition of professional licences granted to doctors in another country that would allow them to practise virtually in Pakistan. A legal framework governing medical negligence and malpractice in telemedicine would also be required. Standardised payment procedures should be implemented along with well-defined reimbursement policies. Medical e-prescription guidelines should be laid down, and there should be defined restrictions for prescription of narcotics, psychotropic, and antimicrobial drugs. Appropriate informed consent procedures should be assured, and effective safeguard mechanisms should be adopted to protect databases containing patient information.

The legislative mechanism should be trust-building between developers, regulators and consumers as a requirement for digital health innovation. Mobile usage in the country is increasing rapidly, and telemedicine is key to overcoming healthcare issues in the future. The timely implementation of guidelines will not only assist in dealing with crisis scenarios, anomalies and pandemics such as COVID-19, but also lay strong foundations for telemedicine in Pakistan—making healthcare accessible and affordable for all in the long run.

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