

Telehealth, The Light at The End of The Tunnel-A Ray of Hope for Rural and Remote Healthcare

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Telehealth is the provision of medical services across distance by qualified healthcare professionals using Information and Communication Technologies (ICTs) to exchange accurate and authentic information [1]. Real-time or store-and-forward delivery methods are employed for providing telehealth services. Most families now have at least one digital device, such as a smartphone or other gadget that allows for patient and healthcare provider communication, due to the rapid innovation and downsizing of portable electronics.

The goals of telehealth, include the following:

- Make health care readily available to persons who reside in rural or isolated regions.
- Keep patients as well as healthcare providers safe during outbreaks like COVID-19.
- Provide basic medical services for an extensive spectrum of communicable and noncommunicable diseases.
- Make programs more accessible or convenient for individuals with restricted mobility, time, or transportation.
- Provide access to medical experts.
- Facilitate communication and care coordination across the members of the medical team and the patient.
- To continue serving patients with terminal illnesses with health treatment.
- Tele mental health is highly beneficial for video/audio teleconsultations and teleconsulting.

Teleclinics, Teleradiology, Tele Emergency, Tele Audiology, Teleophthalmology, Tele CME's, Telepsychiatry Counselling, Tele ICU, and Tele Homecare are a few examples of services in India that use telehealth.

In order to sustain access, when physical care was thought to be unsafe due to the COVID-19 epidemic, telehealth's role changed from one of option to a near requirement. Taking this into consideration, Government of India and Medical Council of India (MCI) proactively released Telemedicine practice guidelines in March 2020 [2]. World Health Organization (WHO) has recognized.

Telemedicine and telehealth for essential health services in strengthening the health systems response [3]. Each state in India and many organizations across developed telehealth portals

to accommodate and facilitate seamless connectivity. Apollo Telehealth (ATH) a division of Apollo hospitals, India the world leader in telemedicine with an expertise of more than 20 years is probably the oldest and largest network of multi-disciplinary telemedicine infrastructure in South Asia, benefitting both urban and rural populations by facilitating uninterrupted access to high-quality healthcare.

ATH has established itself on providing digital health solutions across India and globally in providing quality remote healthcare services. ATH is an esteemed partner with many key public health bodies and functionaries of India. ATH has proven to be an essential tool for prevention, diagnosis and treatment of major Non communicable diseases such as diabetes, hypertension etc [4].

Telemedicine for mental health is a more practical and available option for those with mental illnesses. They can now communicate their worries and receive the required treatment or counselling without worrying about being judged or stigmatized as a result of the healthcare system being brought to them. Not only has it eased the load on transportation, but it has also enabled people to receive assistance from the convenience of their homes [5].

Issues such as difficult Geographical terrains, lack of infrastructure, deficiency of healthcare professionals in rural areas, lack of disease awareness and lack of speciality care have proven to be major players in creating a gap in the rural healthcare system in the current scenario in India and Telehealth very conveniently fills up this gap by providing continuum of the speciality health care. Through telehealth many public health campaigns such as cancer screening, Tuberculosis eradication programmes are being undertaken with the help of digital Point of care devices which are seamlessly integrated to telehealth portals. These devices record vitals, capture pictures of specific lesions and some are also used as screening devices. The data is shared real time onto the portal for doctors to access and manage. Telehealth has been helping in an effort to improve the early detection and recognition of cancers and promote more timely appropriate intervention, eventually improving the outcome.

It's crucial to understand how telehealth technologies have

been employed in tele ICUs if one is to understand the impact of telehealth. Critical care has been revolutionized by tele ICUs. The degree of healthcare expertise across rural and urban locations differs significantly. Over 70% of Indians often live in rural or semi-urban settings, which results in a high demand for the care of critically ill patients there [6]. Even worse, there aren't enough intensive care specialists in these regions. Today, there is a fair amount of healthcare expansion into semi-urban areas, and small hospitals are expanding, but sadly, there is a lack of specialized physicians who can treat very ill patients. In this situation, technology is employed as a tool to connect, monitor, and treat patients in far-off places, enhancing the productivity of the doctor and reducing patient moves and cost restraints. By connecting all semi-urban/urban hospitals to Tertiary care ICUs and enhancing the ICU services at these outlying hospitals, Tele-ICU has the potential to improve treatment and services for these populations [7].

India is viewed as the upcoming location for top-notch healthcare. We are grateful for technology and the remarkable changes it has sparked in the healthcare industry so quickly. To get emergency medical care to the outlying places was where it mattered the most, though. This gap has been greatly closed by the idea of tele-emergency, which has been a fantastic solution. To put it simply, tele-emergency uses video conferencing or other Telehealth technology to connect medical professionals and patients in outlying or rural locations with emergency room staff at a central hub [8]. This has significantly altered how quickly and efficiently emergency services may be delivered to rural and distant areas.

Telehealth and Telemedicine have shown the perfect path to medical professionals and health care workers around the world, in successfully managing many vital medical conditions, without overburdening the health care system, which otherwise has been facing severe shortage of resources. The Apollo Telehealth and telemedicine, in this case, is a leading example of delivery and facilitation of specialty health care reaching a wide base of population using modern Telehealth technologies in cost effective and convenient ways. Telehealth goal encompasses, providing accessibility to the remotest patient to reach expert medical practitioners, using state-of-the-art technologies, with an optimal economic outcome.

Physicians and patients are highly recommended to use telehealth technologies as a suitable choice as there is convenience of patient data privacy. Modifications of the current guideline enhanced digital awareness of the population, and technological advances would help to overcome the shortcomings of health care system, breach of data privacy, confidentiality, and lack of speciality care in rural and remote areas. Telehealth is here to stay and, in the coming years, would prove to be a game-changer in the field of medical care and education to ensure universal health coverage. Future research should continue to examine the adoption of telehealth and other similar patient-friendly and convenient service delivery methods, as well as their effect on treatment outcomes. As many patients as possible should have access to complete patient-centred care, integrated telehealth portals, telehealth enabled Point of care devices, and audio/video-based telehealth services, should be established by government and private health organizations.

References

1. Arindam Basu, Chapter 5 - Platforms for collaborative process, Editor(s): Shashi Gogia, Fundamentals of Telemedicine and Telehealth, Academic Press, 2020; 93-113. ISBN 9780128143094, <https://doi.org/10.1016/B978-0128143094.000057>. <https://www.sciencedirect.com/science/article/pii/B9780128143094000057>
2. Telemedicine Practice Guidelines Enabling Registered Medical Practitioners to Provide Healthcare Using Telemedicine. Ministry of Health and Family Welfare, 2020.
3. WHO-consolidated telemedicine implementation guide.
4. About Us | Apollo TeleHealth. (n.d.), 2021.
5. Yu J, Bekerian DA. Telemental Health and Diverse Populations amid COVID-19. Encyclopedia, 2023; 3(1): 267-278. <https://doi.org/10.3390/encyclopedia3010017>
6. Mohan P, Kumar R. Strengthening primary care in rural India: Lessons from Indian and global evidence and experience. J Family Med Prim Care, 2019; 8(7): 2169-2172. doi: 10.4103/jfmprc.jfmprc_426_19. PMID: 31463225; PMCID: PMC6691438.
7. Kumar S, Merchant S, Reynolds R. Tele-ICU: Efficacy and Cost-Effectiveness Approach of Remotely Managing the Critical Care. Open Med Inform J, 2013; 7: 24-29. doi: 10.2174/1874431101307010024. PMID: 24078857; PMCID: PMC3785036.
8. Ganapathy K, Alagappan D, Rajakumar H, Dhanapal B, Rama Subbu G, Nukala L, et al. Tele-Emergency Services in the Himalayas. Telemed J E Health, 2019; 25(5): 380-390. doi: 10.1089/tmj.2018.0027. Epub 2018 Jul 23. PMID: 30036152.