

Current Scenario of Pharmaceutical and Herbal Medicine and Future Prospectus

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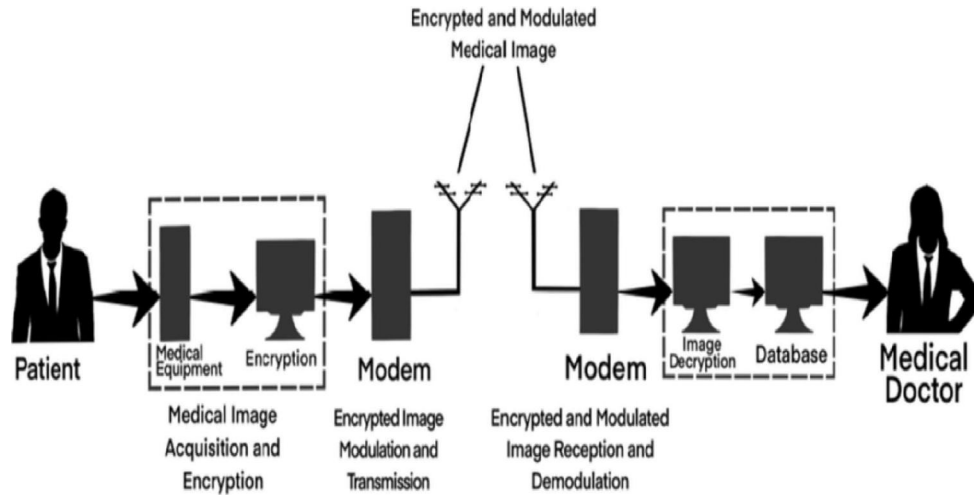
Abstract: *The pharmaceutical sector is undergoing a dynamic shift with an increasing focus on integrating herbal medicine into mainstream healthcare. The current scenario reflects a growing awareness of the potential synergies between pharmaceutical and herbal approaches, aiming for more holistic and personalized treatment options. This trend is driven by the rising demand for natural remedies, emphasizing the need for evidence-based research to validate the efficacy and safety of herbal medicines. In the future, the prospectus involves further exploration of the therapeutic benefits of herbal compounds, coupled with advancements in pharmaceutical technology. Collaboration between traditional pharmaceutical companies and herbal medicine practitioners is expected to deepen, fostering innovative drug development. This evolving landscape presents opportunities for novel treatments, addressing diverse health challenges while embracing the rich heritage of herbal medicine. However, challenges such as standardization, regulation, and scientific validation will need ongoing attention to ensure a seamless integration of pharmaceutical and herbal approaches for the benefit of global healthcare. The pharmaceutical sector is undergoing a dynamic transformation, with a greater emphasis on incorporating herbal medicine into mainstream healthcare. The current environment shows a rising awareness of the possible synergies between pharmaceutical and herbal methods, with the goal of providing more holistic and individualized therapeutic alternatives.*

Keywords: Telehealth, teliagnosis, remote consultation, telecommunication, digital health, covid-19 pandemic

I. INTRODUCTION

There are still many areas in India without adequate medical facilities. In such a situation, technology can be useful, particularly in reaching out to remote regions and providing a higher standard of care at a lesser cost. Telemedicine refers to the distant treatment and diagnosis of patients using communication networks. When more patients have access to telemedicine payer see how to much less erperience it is than traditional treatment and clicalawerness of advantages.. Telemedicine is a more helpful technology that can increase access to preventive care and pearly 50 years ago, telemedicine was dismissed as a difficult, costly, and inefficient technology. Because of the rapid advancement of information technology and telecommunications, telemedicine is now a practical, dependable, and beneficial practice. Telemedicine has proven effective for practitioners and medical professionals in a wide range of domains. The COVID-19 pandemic underlined the importance of strong primary healthcare networks in ensuring a more effective public health response during health emergencies, as well as the fragmentation of healthcare delivery systems. Although primary care serves as the first point of contact between the general public and the healthcare system, it has received little attention or financing in recent years. Even beyond COVID-19, telemedicine has the ability to overcome long-standing impediments to primary care in India, such as otentially contribute to long-term health. Telemedicine has the potential to significantly impact public health. This study evaluates the current condition of telemedicine in India.

Defination: Telemedicine is the remote delivery of healthcare administrations, such as well-being assessments or consultations, using the broadcast communications foundation. It enables healthcare providers to access, analyse, and treat patients using everyday technology such as video conferencing and cell phones, eliminating the need for an in-person visit.



Telemedicine effective in emergency situations?

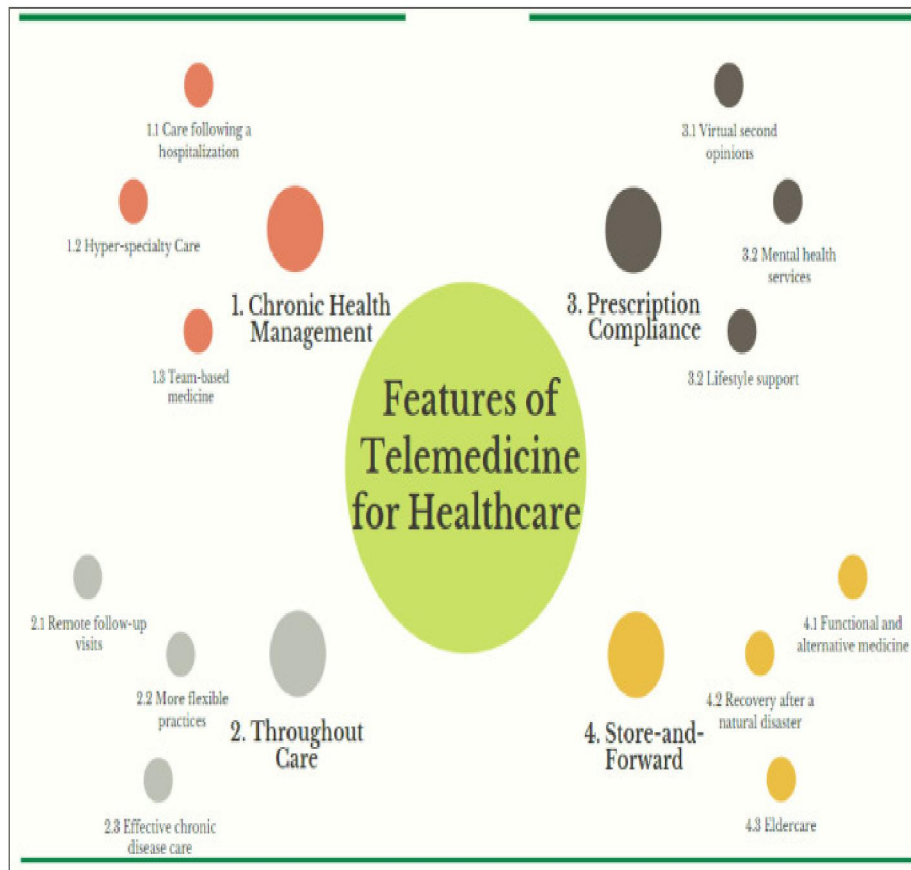
Peritoneal dialysis patients may benefit from a well-structured telemedicine protocol that allows for the evaluation of the patient's living environment, the assessment of the patient's ability to follow the recommended technique, the observation and correction of potential or actual hazards that may increase the risk of infection, and the reinforcement of patient confidence in self-care through support and encouragement. These are only a handful of the potential benefits that have been identified. Furthermore, telemedicine monitoring and home-visit programmes strengthen the link between patients and their carers [35]. Telemedicine may help with two processes: diagnostics and reviews. A mobile phone app that has been created to allow non-medical personnel to recognise episodes as epileptic has good diagnostic utility.

Importance of telemedicine in COVID -19:

Following the large spread of the SARS-CoV-2 virus, the World Health Organisation (WHO) proclaimed a pandemic by coronavirus 2019 disease (COVID-19) on March 11, 2020. The COVID-19 outbreak has caused global lockdowns, having a significant impact on daily life as well as most health systems, which have been tasked with managing both infected patients and ordinary non-COVID-19 patient care. Based on earlier evidence and models, during the COVID-19 pandemic, social distance has resulted in three possible e-health applications on the one hand, patients at increased risk of infection, particularly those with chronic, autoimmune, or immunosuppressive conditions, can reduce their exposure to risk factors by talking remotely with their general practitioner and/or specialist. Referral to clinical facilities is consequently confined to serious cases.

1. Diabetic Retinopathy Management during COVID-19

As previously stated, among chronic diseases, diabetes, together with its various complications, puts patients at high risk of poor prognosis [28, 29]. Telemedicine has long been recognised as an effective method for managing glycemic levels on a regular basis [30]. Telemedicine has been expanded to provide effective screening for problems without requiring necessary on-site visits. Lack of time, distance from specialised centres, disability, and extensive waiting lists are some of the most prominent reasons for patients' limited access to specialty care. In the case of pandemics, societal distance also contributes. Evidence for diabetic remote monitoring during the COVID-19 epidemic is still limited. The recent spread of the pandemic, along with a paucity of data, severely limits the ability to trace the disease's true management. We can only hypothesise, based on past data on people who have already used these devices, that data transfer enables remote monitoring. A similar strategy can be taken for diabetic retinopathy; thus, it is reasonable that general practitioners use retinal cameras or other equipment to support effective treatment even during pandemics.



	Patients, <i>n</i>	%
BMI		
Normal (<25)	392	36.1
Overweight (25–30)	460	42.4
Obese (>35)	234	21.5
Smoking		
Yes	154	14.2
No	932	85.8
Diabetes		
Yes	61	5.6
No	1,025	94.4
Hypertensive		
Yes	91	8.4
No	995	91.6
Comorbidity		
Heart disease	12	1.1
Lung disease	12	1.1
Thyroid	22	2
Malignancy	5	0.5

Significance of exploring current scenarios and future prospects:

During the COVID-19 epidemic, telemedicine has become a method of ‘advance triage,’ in which patients are triaged before visiting an emergency department. Direct-to-consumer, also known as on-demand telemedicine, has emerged as a method for screening patients who have self-quarantined. This method of triage ensures patient-centered treatment while protecting both patients and healthcare providers. Telemedicine has been utilised to assess respiratory symptoms in COVID-19 patients, which may be part of the early presentation. Beyond aiding triage, the use of telemedicine has had a positive impact on the public health emergency by enabling for the rapid deployment of large numbers of healthcare personnel and the provision of services when local hospitals and healthcare centres are unable to meet demand. During the infectious pandemic, telemedicine was used to provide healthcare information to both affected and uninfected people. As telemedicine has grown in popularity, various ways of triaging have arisen. For example, automated logic flows, sometimes known as bots, can refer moderate and high-risk patients to triage lines staffed by nurses, while simultaneously allowing virtual video consultations with physicians to avoid in-person contacts. (Enioutina EY, et al. Expert Rev Clin Pharmacol. 2017.)

Telemedicine an effective solution for management of chronic disease during the COVID-19 epidemic:

Chronic diseases are considered high risk during the COVID-19 outbreak because they are more likely to become infected with or die from COVID-19 (Emami et al., 2020; Martini et al., 2020). Because society’s fear of cross-infection has limited routine medical visits to hospitals, physicians should consider how to provide adequate healthcare services to such patients (Singh et al., 2020). During the COVID-19 outbreak, telemedicine is being re-examined as a medical approach to respond to the epidemic given its advantages of non-face-to-face medical care, no constraints on time and space, and the practicality of traceability. In 2018, the National Health Commission of the People’s Republic of China issued Measures for the Administration of Internet Diagnosis and Treatment (for Trial Implementation), which allow physicians to perform online diagnosis and treatment and issue prescriptions for follow-up online consultations for some chronic diseases. Because of differences in expectations and understanding of online diagnosis and treatment among provinces, these procedures have not been applied nationwide. In the early stages of the epidemic, medical demands and accompanying worries produced a massive influx of patients into the hospital, resulting in an insufficient supply and a slow response from offline medical services (Carvalho AC, et al. J Ethnopharmacol. 2014. PMID: 25169216)

Advantages and opportunities of telemedicine during the COVID-19 epidemic:

COVID-19 patients range in age from 40 to 60 years, with many being elderly adults with underlying disorders or obesity (Hussain et al., 2020; Wang et al., 2020). COVID-19 was first discovered in Wuhan, China. Huang et al. (2020) presented an epidemiological review of the first 41 verified cases in China in The Lancet, revealing that 32% of the patients had chronic conditions such as diabetes, hypertension, and coronary heart disease. About 20% of the patients had diabetes. Diabetics may be particularly vulnerable to this epidemic because they have long-term hyperglycemia, which destroys the blood vessels, brain system, and other organs. CemalBulut conducted a meta-analysis of eight epidemiological studies on COVID-19

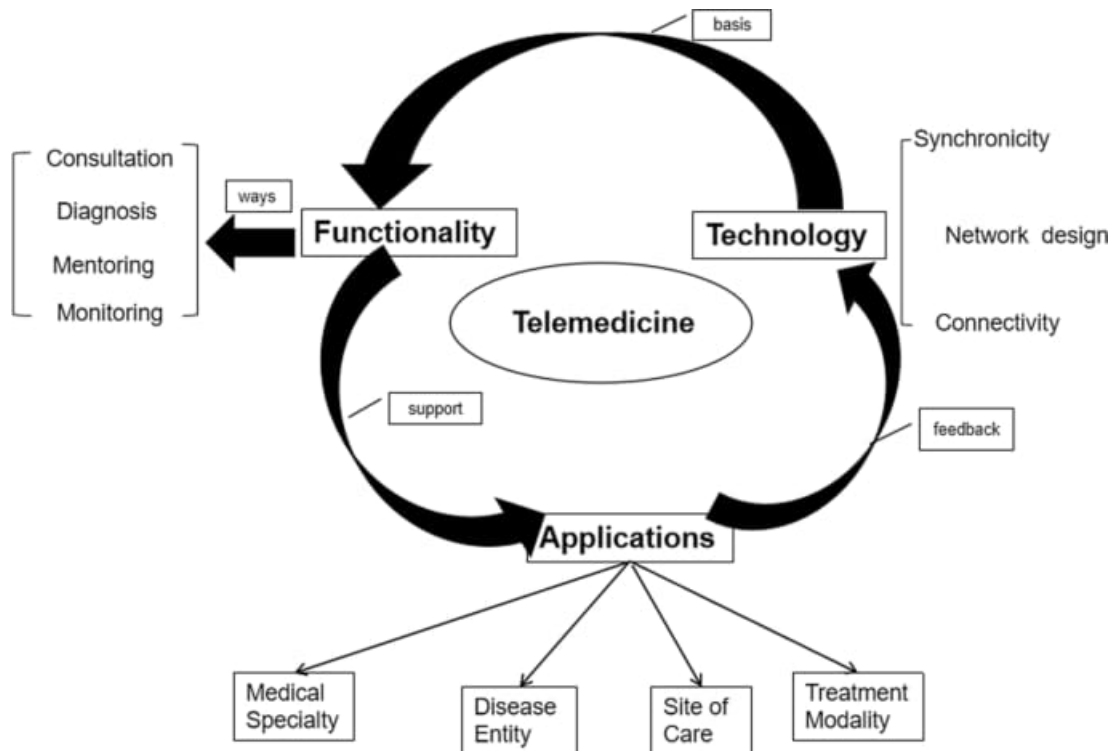
Current barriers, solutions, and future development of telemedicine:

Telemedicine is another sort of medical behaviour; it is an online extension of the hospital’s work scenario involving the main body of physicians and nurses. However, the current state of telemedicine is heavily reliant on internet technologies. Although physical hospitals use technology, the knowledge system and emotional communication among hospital patients are influenced by the experiences of medical staff who learn and work in real-world hospital settings. Senior medical professionals, given their experience, should be considered while developing the online working situation. Without adequate medical information collection, precise diagnosis and treatment logic, and a rigorous error correction and prevention system, it is impossible for physicians to successfully provide medicine service. Telemedicine has aided the transfer of chronic disease treatment from hospitalisation to interactive communicative remote/mobile care. Big data technology has been used to dynamically gather and compare health risk factors in order to identify health-related risks and provide targeted intervention strategies using an intelligent medical decision-making

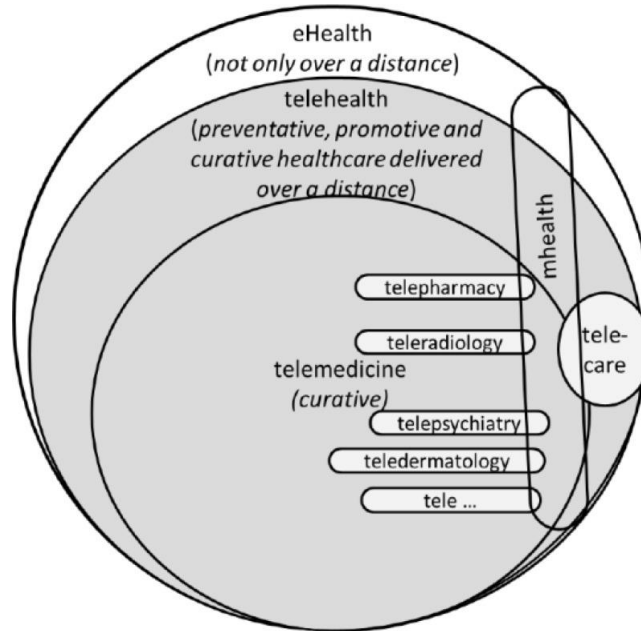
system This system, which can be used to improve the comprehensive analysis capabilities of medical data and help physicians improve clinical decision-making accuracy, has made the integrated medical service mode of remote monitoring and intelligent diagnosis for chronic diseases an irreversible trend of social development.(Thelingwani R, et al. Curr Drug Metab. 2014. PMID:25658125)

Future development of telemedicine, an active healthcare model:

Telemedicine is fighting a long-term battle against the COVID-19 outbreak, and we may face similar issues again in the future. This epidemic emphasises the importance of adopting a healthy work and life style. With the advancement of big data and AI technologies, passive health management is gradually becoming active health management; the tendency of static retrospective analysis giving way to dynamic, forward-looking analysis is also a feature of the big data era. Big data technology offers individuals new ways to comprehend and transform the world, which is an innovation in the medical profession. Telemedicine fulfils the needs of active health scenarios by enabling cyclical closed-loop management across hospitals, work units, and families. Because the main scenarios of telemedicine are applicable to work units and families, the purpose of telemedicine is not only to treat diseases but also to perform prevention and treatment activities, with physicians serving as health ‘coaches’ and patients’ friends and lifestyles, such as exercise and nutrition, as treatment tools.



Role of Telemedicine and Digital Technology in Public Health in India:



The COVID-19 outbreak forced practitioners to make their first foray into the telemedicine sector. Because certain otolaryngology procedures might release aerosolized virus particles, limiting patient engagement and contacts may help to decrease transmission. Recent modifications in Medicare fee-for-service billing, which allowed equal compensation for virtual consultations, pushed telemedicine as an economically viable and moral answer to the epidemic. Telemedicine was the communication of health-related information such as outbreaks and epidemics using ancient hieroglyphic writing and scrolls [12]. Telemedicine was disregarded nearly 50 years ago as a clunky, unreliable, and costly technology. Telemedicine is currently a realistic, dependable, and practical practice as a result of the quickly increasing telecommunications and information technology industries. Numerous medical specialisations and practitioners have achieved success with telemedicine.

Petritonial dialysis patients may benefit from a well-structured telemedicine protocol that allows for the evaluation of the patient’s living environment, the assessment of the patient’s ability to follow the recommended technique, the observation and correction of potential or actual hazards that may increase the risk of infection, and the reinforcement of patient confidence in self-care through support and encouragement. These are only a handful of the potential benefits that have been identified. Furthermore, telemedicine monitoring and home-visit programmes strengthen the link between patients and their carers [35]. Telemedicine may help with two processes: diagnostics and reviews. A mobile phone software designed to help non-medical professionals recognise epileptic episodes has a high diagnostic utility, sensitivity, and specificity.

Ethical and Legal Challenges of Telemedicine in the Era of the COVID-19 Pandemic:

Before beginning a telehealth assessment or therapy, informed consent must be sought, just as it must with any other patient encounter. However, there are certain additional considerations to consider while implementing digital technologies. In addition to giving information regarding assessment and treatment, health providers will need to provide information about telehealth’s special features, including its strengths and weaknesses.[8][9] The amount of information necessary may vary depending on the client’s experience with technology.[10] Certain dangers, such as misunderstandings or inadequate examinations, must be recognised.[10] When using telehealth to treat vulnerable groups, such as older persons or children, it is equally vital to determine if a parent, carer, or advocate should be present.(Shaw D, et al. J Ethnopharmacol. 2012. PMID: 22342381 Review.)

Other considerations:

When engaging in telehealth consultations, it is critical to remember to consider culturally specific difficulties, just as with any other consultation. This includes:

1. Consider whether eye contact is appropriate or not.
2. Checking whether it is acceptable to record photos.
3. Consider if a patient would prefer a therapist of a specific gender.

II. CONCLUSION

choice Telemedicine is a crucial technique for connecting clinicians with patients and ensuring long-term lifestyle improvements. It provides major benefits to medical office employees. This often alleviates the strain of patient check-in and allows for more focused attention on higher-value duties. With online visit capacity, physicians can care for their patients while also potentially supporting other afflicted practices. This also lowers distance limits by communicating information regarding a diagnosis, care, and disease prevention between the doctor and the patient using electronic methods. Improves access to underserved areas, making it easier for people to book and keep appointments. People with limited mobility receive medical advice and medicines more promptly. They are responsible for managing medicine, testing, and procedures at their workplace. Telemedicine reduces doctor and patient travel throughout the world and improves each sick person's life by ensuring that they receive the necessary health care.

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