Setting Up and Providing Telepsychiatry Services in India

Furkhan Ali[1], Vachana Kamila[2], Mahesh R Gowda[2], Preeti Srinivasa[2], Guru S Gowda[1], Suresh Bada Math[1]

ABSTRACT

The exponential growth of technology in the past few decades has benefitted the healthcare sector. Telemedicine is a newer advancement which is making healthcare affordable and more accessible to the needy in recent times. This article discusses how to set up telepsychiatry services, the procedure of telepsychiatry consultation, how to record and maintain the electronic health records, the potential challenges, ethical and legal aspects concerning telepsychiatry while ensuring the good practice guidelines, medical ethics, patient rights, and the minimum requirements as established by the Information Technology Act and the telemedicine practice guidelines (TPG) 2020 issued by the Indian Medical Council.

Keywords: Telepsychiatry, telepsychiatry setup, telemedicine, India

In the past few decades, there has been a revolution in the information and technology (IT) sector, especially in many developed countries, including in India. That made affordable smartphones and faster, low-cost mobile internet, there has been wider penetration of mobile and internet accessibility. According to the Department of Telecommunications, Ministry of Communications, Government of India, there are more than 636 million internet users. The teledensity (telephone users per 100 inhabitants) has increased from 3.5% in 2001 to 90% in 2019.[1] This has led to the tremendous growth of e-commerce, online education, and internet-based businesses.

Further advancement and the ease of use of technology has increased its usability and acceptance among larger populations.[2] All these have resulted in the amalgamation of the IT sector and healthcare, giving rise to telemedicine. Telemedicine in the current scenario has played a pivotal role in catering to physical and mental well-being and has reached the majority of our population. The World Health Organization (WHO) describes telemedicine as, "The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for the diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities."[3]

In India, tremendous contributions from the Department of Information Technology (DIT), Indian Space Research Organization, North Eastern Council (NEC) Telemedicine Program for the North-Eastern States, Karnataka State Wide Area Network (KSWAN) have led to delivery and advancement of telemedicine health care delivery services. On Mar 25, 2020, Telemedicine Practice Guidelines (TPG, 2020)[4] got legal approval and came into existence to facilitate the use of telemedicine by general practitioners. The National Institute of Mental Health and Neurosciences (NIMHANS) has also issued guidelines for tele-psychotherapy, telepsychiatry social work practice, in addition to telepsychiatry.[5–7] Telemedicine is a convenient alternative and perhaps even ideal in scenarios where there is a difficulty for users to avail of quality healthcare owing to various constraints such as economic, transportation, social, or in places with no healthcare facilities. Also, India has a problem of wide treatment gap for mental illness, ranging between 70% and 92%, as per the estimates of National Mental Health Survey (NMHS) conducted in 2015–2016,[8] and telepsychiatry could help bridge this gap. This article attempts to discuss the process of setting up, levels of telemedicine facility, and managing telemedicine services with a focus on telepsychiatry, the challenges associated with it, and possible solutions.

How to Set Up and Run a Telepsychiatry Service

An effective teleconsultation requires the good functioning of its constituents. Ideally, these need to be user friendly and should not cause additional financial burden either to the service user or the provider and meet the standard safety, privacy, and confidentiality of data storage and encryption as per the IT Act 2000 and TPG 2020. It is, therefore, vital that the infrastructure already available on both ends be optimized and used for the teleservices to be successful in the long run.

The key components that form the basis of teleconsultation unit are described in the following sections.

Human Resources

Any successful telemedicine services would require adequately trained people who are well versed in the system. Broadly, they can be divided into the following two categories.

1. **Specialists:** They can further be categorized into medical specialists and IT specialists. Medical specialists are doctors, nursing staff, and pharmacists who deliver healthcare to the user. IT specialists are people who develop and manage the software, servers that host the data, and the security of the data and hardware necessary for the smooth functioning of the telepsychiatry services. The Telemedicine Society of India has started an online training module for the registered medical practitioners (RMPs) which aims at familiarizing

the doctors to telemedicine, with a focus on concepts like tele-triaging, legal aspects, and a "Do-It-Yourself" approach to setting up a telemedicine practice,[9] and this was planned in compliance with Telemedicine Compliance Guidelines.

2. **Non-specialists:** They are the people who replace the role of a traditional "front-desk receptionist." They are responsible for primarily handling managerial issues like identification of the patient by verifying their ID (Aadhaar card, driving license, voters ID, etc.), the schedule and fix the consultation, brief the users about the use of the software by giving a remote demonstration, or sending them pre-recorded video demos of the interface. They should explain to the clients the "dos" and "donts" of teleconsultation for the users. They need to take feedback of the teleconsultation and resolve any queries. They can send reminders about the next consultation, with the consent of the user, and also supervise online fee transactions through RTGS, NEFT or other online payment portals. Their role can expand to include the responsibility to maintain the electronic consultation records. They also need to be trained to explain to the user about the process of data collection, sharing of data with other service providers as part of referral care, storage of data in local or external servers, and the risks of breach of privacy.

Hardware Requirements

Gadgets like smartphone/personal computer/laptop computers are minimum requirements for an effective teleconsultation on individual RMP level practice. For catering to multi-specialist hospitals, there are teleconferencing solution providers that offer a comprehensive portfolio including video conferencing systems, infrastructure, designing, acoustic solutions, lighting solutions, state of the art audio and interior designing of the studio, and so on.

Physical Infrastructure

Well-lit rooms that have minimal noise should be sufficient for conducting a teleconsultation session. However, if feasible, sound-proofed places are preferred. The consultation room walls should preferably be painted with soft colors to prevent distracting the users.

Internet

A good internet connection is perhaps the most vital component of telemedicine. Service providers should invest in having good quality, high-speed broadband connections, and, if possible, have a separate link for teleconsultation. It is sensible to have a backup connection in place to avoid any connectivity-related issues during the consultation. In India, there are many internet service providers both from government and private sectors which offer good-quality, high-speed broadband internet services at affordable prices.

Power Backup

One of the major issues reported in telemedicine consultation is a loss of connectivity, usually because of electricity failures. An alternative power backup can be linked in the form of a UPS or generator to avoid this.

Mobile Number/Telephone for Telemedicine Services

It is preferable to have an exclusive mobile phone/landline connection and a number for managing consultation. Multipurpose front-desk or other hospital telephone lines are better avoided. These can also be used as a portal to manage appointments, exchange lab investigation reports, prescriptions, follow-up reminders, etc. via messaging mobile applications such as WhatsApp.

Email for Telemedicine Services

An official hospital/ institute email can be set up and be used for all other support services. These can also be used as a portal to manage appointments, exchange lab investigation reports, prescriptions, follow-up reminders, etc.

Software

The RMP/polyclinic/organization may choose an application that best suits their patients' and doctors' needs. An ideal application would be something that has a minimal cost, with good accessibility, and is secure and user friendly. However, any software application being used must adhere to the guidelines laid down by HIPAA.[10]

Electronic Medical Record

According to the "Integrated Care Electronic Health Record (EHR)," "an Electronic Medical Record (EMR) is a repository of information regarding the health of a subject of care in computer-processable form that can be stored and transmitted securely and is accessible by multiple authorized users."[8,9] Telemedicine EHR is a framework that ensures encoding, storing, and retrieval of the medical records that are maintained online. EMR is a select category of EHR that holds records specific to the scope of the medical domain. There are various types of EMR: Departmental EMR, Inter-Departmental EMR, Hospital EMR, and Inter-Hospital EMR. These can include video logs of the consultation, notes by the psychiatrist, personal details of the user, consent forms, etc. Psychiatrists may either choose a telemedicine platform that has an integrated EHR or choose a standalone telemedicine solution without EHR and can enter all the notes into the patient's physical file directly and have physical documents (similar to traditional in-person documentation). Telepsychiatry platforms can be used exclusively for giving appointment, video conferencing, and generating and transmitting prescriptions. EHRs should not be seen as the core of healthcare but rather as an augmentation to the telepsychiatry consultation. However, psychiatrists while maintaining EHR need to comply with the Mental Healthcare Act (MHCA), 2017, Sec[11] 25 which stresses on the need for preserving basic medical records in hard copy and the guidelines framed by the Ministry of Health & Family Welfare (MoHFW) which notified the "EHR Standards for India" in September 2013.[12]

In recent times, many governments and non-government entities have started to provide open EHR systems to the doctors. The Government of India also has a hospital management system with

EHR services, named "e-hospital" from the National Informatics Centre (NIC)[13] and e-manas,[14] a platform from National Health Mission, Government of Karnataka, provides the EHR, state-wide registry of mental health facilities and professionals. The MoHFW, Government of India, has developed "National Teleconsultation Service" named e-Sanjeevani, which is the first of its kind online OPD service offered by a national government to its citizens. Safe and structured video-based clinical consultations between a doctor in a hospital and a patient in the confines of his home are offered.[15] Various platforms, which are mostly offered by private enterprises like Practo Pro,[16] Ment Doc,[17] TeleArogya,[18] are available for psychiatrists; some of them are free for both service providers and the users, whereas others offer software solutions for a fee. These provide software solutions for video consultation, text-based consultation, e-prescription generation, and maintenance of health records. Mental health professionals need to be aware of the user data being collected by these platforms and understand the extent of control one has over the data. Although the platforms report that they are comply with the guidelines laid down by MHCA, 2017, IT Act and HIPAA, it is always prudent for a professional to verify the same, before associating with any of the platforms.

Levels of Telemedicine Facility

A telemedicine/telepsychiatry facility can be established in various settings based on several factors such as infrastructure, manpower, budget, and availability of essential resources. Based on these factors, a telemedicine service can be of different types.

Stand-Alone Clinic

This setting would be ideal for a practitioner who is a beginner or a standalone practitioner or OPD clinic. It requires minimal equipment and space in the form of a single room with a laptop or even a smartphone with a good camera and a good network connection will suffice. This will encourage the budding RMPs/psychiatrist to reach more people and establish a good patient base.

Multi-specialty Facility

It involves setting up a telemedicine setup having one or more consultants of different or same specialties. The requirements will be similar to that of a teleconsultation but in a slightly sophisticated manner. It comprises a consultation chamber specially designed for patient interaction along with a team trained with the basic technical knowledge required to facilitate a smooth hassle-free teleconsultation.

Institutional Facility

This involves setting up of a teleconsultation in a corporate hospital or a medical college. This involves a bigger set up involving many consultants having multiple consultation chambers and various trained technical staff to manage the procedure of the consultation and also to maintain the EMRs.

Place of Setup of Telemedicine Consultation Facility

Existing guidelines do not stipulate the site from where the telemedicine facility needs to locate. Hence it can even be set at the home of a practitioner if all the general requirements can be satisfied. The TPG guidelines do not insist on particulars of specifications for hardware or software, infrastructure building, and maintenance. The provider can decide whether it be a separate (dedicated) telemedicine facility or an integrated one that may be used for other purposes too. It also up to the service provider to decide on investing in a dedicated comprehensive software solution, EHR/EMR services, or use one of the freely available platforms; each will have its advantages and disadvantages.

The Procedure of Telepsychiatry Consultation

Before Consultation

Fix Up the Schedule with Patients and Specialists

The non-specialist assistants can manage the appointments, request for prior medical records via asynchronous modes of telepsychiatry.

Identification

Identifying the patient and verification of the patient's identity by checking their ID document (AADHAR/ driving license, voters identity card, etc.): The non-specialist assistants need to verify and establish the identity of the service user, and this is preferably done via video conference rather than over an audio call, to enhance the reliability. However, any failure in this step, the vicarious liability is cast upon the RMP as per TPG-2020.

Demonstration of Software to Service Users (Patients)

The user must be familiarized with the consultation platform and the software for a seamless consultation. This can either be done by sending pre-recorded demo videos or done just before the consultation by the support staff.

Disclosure of Data Privacy, Confidentiality, Storage, Record to the Client

According to the TPG, 2020, an RMP "should abide by the Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulations, 2002 and with the relevant provisions of the IT Act, Data protection and privacy laws or any applicable rules notified from time to time for protecting patient privacy and confidentiality."[4] However, it exonerates the RMP of any responsibility for "breach of confidentiality if there is reasonable evidence to believe that patient's privacy and confidentiality has been compromised by a technology breach or by a person other than RMP. The RMPs should ensure that a reasonable degree of care while hiring such a service."[4]

Explaining Dos and Don'ts During the Consultation

The assistant should brief the user about proper teleconsultation etiquette, for example, wearing decent professional attire, being in a well-lit room with minimum noise and interruptions from others, having good internet and power backup, and a capable camera on their gadgets (mobile phone/computer) to ensure a seamless consultation from the user's end. The assistants need to seek permission to record the consultation and brief the user about maintaining confidentiality.

Consultation/Counselling/Therapy

Consent

Consent is mandatory for any telemedicine consultation. The consent is implied when the user initiates a one to one consultation; in all other situations, explicit documented consent needs to be taken. Proper informed consent requires all necessary information,[19] and the patient and his family must be made to understand the limitations and procedures of the consultation, taking extra care to explain what data may be collected and how it will be stored and used. Consent can be recorded in any form, either audio, video conference, written form, which is in line with IMC TPG. All rules of regular consultation apply to telepsychiatry, and the psychiatrist must follow all good practice guidelines applicable otherwise.

Prescription

Same professional accountability entails for prescribing medications via telepsychiatry as in the traditional in-person consult. It is done based on the professional discretion of the treating psychiatrist. If a medical condition requires a particular protocol to be followed to diagnose and prescribe as in a case of the in-person consult, then the same prevailing principle will apply to a telepsychiatry consult. It is recommended that a detailed evaluation and collection of information must be done by the psychiatrist before prescribing medication.[4] If a psychiatrist believes that a physical examination is necessary, it would be a good practice to request the user to get a physical examination done either in-person consult with the same doctor or a nearby physician before prescribing medications online. Prescribing medications via telepsychiatry also depends upon certain criteria such as follows:

1. **Type of consultation (first/follow-up consult):** In situations where it is possible, it is preferable to have an in-person first consult, and later for follow-up, one can switch to teleconsultations. However, TPG-2020 and Operational Telepsychiatry Guidelines (OTG)-2020 do not prohibit tele-first consult.
2. **Mode of consultation (text/audio/video):** It is not ideal to prescribe medications in a text or audio consultation. Prescribing medications must be done, preferably, after a video consultation.
3. **Categories of the medications:** The telemedicine guidelines issued in March 2020[4] allowed for e-prescription of the drugs in Lists O, A, and B. List "C" drugs have been prohibited from prescribing via a teleconsultation. Also, the psychiatrist has to prescribe medications as per the Drugs and Cosmetics Act, 1940 (DC Act)
4. TPG mandates to prescribe medications with their generic names only and prescribe medications to patients rather than routing to pharmacies.
5. It is also advisable to prescribe medications to patients rather than routing to pharmacies. If routed to any specific pharmacy, the RMP needs to take explicit consent to do so.

Follow-Up Plan/Aftercare Plan

Aftercare plans/follow-up can be made during consultation and reminded with the users using one of the many asynchronous modes. Telepsychiatry perhaps makes following up a user more convenient and effective because of ease of accessibility, and the hope is that a mental health service user will continuously be in the care-loop, helping in less relapse and hospitalization.

After Consultation

Post-consultation formalities are usually handled by non-specialist assistants as discussed earlier and involve the following:

1. **Sending e-prescription**—e-Prescription can either by handwritten, scanned, or printed and digitally signed. These can be sent across via various asynchronous methods. In addition to the usual requirements of a good prescription, it is advisable to mention the mode of consultation, that is, video consultation, etc., and reason for the teleconsultation.
2. **Feedback about the consultation**—It is a good practice to collect feedback from the users on technology use, satisfaction, comfortability and so on. Analyzing and addressing the issues can improve user satisfaction and the quality of telepsychiatry services.
3. **Consultation fee**—The users need to be assisted regarding various online payment methods, an invoice has to be generated, and receipt has to be issued. It is important to ensure that the payment portals chosen are secure and reliable.
4. **Documentation**—The following documents are to be maintained: patient records, reports, documents, images, diagnostics, data, etc. (digital or non-digital) utilized in the telemedicine consultation should be retained by the RMP. Specifically, in cases where the prescription is issued with the patient, the RMP is required to maintain the prescription records, as required for in-person consultation.[4,11,20] The RMP is also expected to maintain records related to the consultation for a long period in the form of EMRs. They are generally done by a team that includes a trained technical staff who maintains the same.[4,19]
5. **Referral/other services and investigation/imaging**—Like in an in-person consultation, any referrals to other specialties, need for involvement of allied services, or the need for lab investigations and imaging can be handled through asynchronous modes of telepsychiatry seamlessly.

Maintaining Standards and Quality of Telepsychiatry Services

Regular monitoring can help to improve the quality of services provided. This is possible by obtaining feedback from both the person getting consulted and the consultant. Rating of consultation can be done, and the same must be documented. A periodic audit of the teleconsultation team is also necessary. All aspects and constituents of teleconsultation need to be monitored, and any deficiencies need to be rectified accordingly.[2,21,22]

Legal Aspects of the Setting of Telepsychiatry Practice

With healthcare originally coming under the ambit on consumer protection

act, doctors have become "service providers" and providing healthcare has become a challenging job, with a threat of legal issues hanging over their heads at all times, the recent amendment to the Act in 2019 [23] has created more debate and ambiguity about the legal interpretation of healthcare services. It would be inaccurate to consider the Consumer Protection Act, 2019, as medical negligence blind law, but rather it sets the tone for ethical and patient-oriented medical professionalism and strives to curb unfair medical practices.[24] As telemedicine is a new practice, it will be in the best interest of all parties involved that all be aware of the laws and regulations governing its use. The telepsychiatry setup should be compliant with the Information Technology Act, 2000,[25] the Information Technology (Intermediaries guidelines) Rules, published by the Ministry of Communication and Information Technology in 2011,[26] and the TPG, 2020 issued by the Indian Medical Council. Although the MHCA, 2017,[11] and The Rights of Persons with Disabilities Act, 2016,[27] does not explicitly lay down laws to govern telepsychiatry practice, it is important to understand that as most of the mental health services come under the purview of MHCA 2017, and the service provider must run telepsychiatry services in accordance with the same. Also, the service provider must take care to ensure that the services are disabled-friendly. This can be done by ensuring that the technology is friendly for all types of disabilities or by having other people assist those in need in a comfortable manner. Telepsychiatry service providers can, therefore, be held liable for any misuse or breach of privacy and data under any of the laws mentioned above.

Challenges of Running Telepsychiatry Services

Legal and Ethical Issues

Legal and ethical matters such as a duty of care, role in emergencies, privacy, and confidentiality, the security of data, and defining the duties and role of the specialist consultant at a site distant from the patient are a major challenge. This crucial ethical issue of duty of care can be addressed by consultant services rather than therapist services via telepsychiatry. The consultant does not directly assume responsibility (which may be difficult to carry out, e.g., in emergencies), but at the same time provides support to the primary care professionals present at the site of care.[28] Also, this arrangement might resolve the "tele" versus face-to-face care debate with the essential components of empathy and human interaction not being disrupted by technological limitations.

Training of the Staff

It is another challenge in the effective functioning of telepsychiatry services. The staff needs to be formally trained to operate devices and the platform used for teleconsultation. They should also be alert and learn to troubleshoot any issues arising before or during a consultation.

Health Insurance

In 2018, the Insurance Regulatory and Development Authority of India (IRDAI) issued a directive to health insurance providers to include mental illnesses in medical insurance policies,[29] in accordance with MHCA, 2017. Ayushman Bharat, a landmark initiative from the Government of India, providing health coverage to its citizens, has accepted 17 of the 21 proposals from the Indian Psychiatric Society (IPS) and NIMHANS. However, private psychiatry has not been included in Ayushman Bharath,[30] and there has been a directive to the insurance providers by the IRDAI to cover expenses incurred from accessing telemedicine services.[31]

Professional Indemnity Insurance

Similarly, many private insurance providers have started to provide indemnity cover for the disputes arising from telepsychiatry services for a professional.

Future Direction

Telepsychiatry has tremendous untapped potential. As technology advances, telepsychiatry services will continuously improve itself. Use of asynchronous methods to record detailed case history and send across lab investigations, radiographic images etc., will familiarize the psychiatrist with the user and decrease the consultation time while increasing the quality of the care provided. Perhaps, advances in augmented reality and virtual reality would help in bridging the empathy gap, which currently exists, by simulating a real-world experience for both the service user and the provider.

Conclusion

The technology required to run telepsychiatry services is available not just in urban but in almost all parts of the country. The NMHS (2015–2016) has found that the treatment gap for mental illnesses ranges between 70% and 92%.[8] While the lack of human resources is one of the biggest reasons for the wide gap; studies have shown telepsychiatry consultations could be an alternative and innovative approach to bridge this gap in low-resource settings.[32] Telepsychiatry services can be set up quickly and do not require large financial investment; it offers promise as an innovative modality to reach out to the vast majority of people who are in dire need of good quality psychiatry services and mental healthcare. Telepsychiatry helps in realizing the vision of the WHO to provide cost-effective, good quality services to all irrespective of their socio-economic status.

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[1]Dept. of Psychiatry, National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru, Karnataka, India. [2]Spandana Health Care, Bengaluru, Karnataka, India.

Address for correspondence: Guru S Gowda, Dept. of Psychiatry, National Institute of Mental Health and Neuro Sciences (NIMHANS), Hosur Road, Bengaluru, Karnataka 560029, India. E-mail: drgsgowda@gmail.com

Economic Perspectives on Setting up and Running Telepsychiatry Services in India

Khushboo Dewani[1], Chethan Basavarajappa[2], Guru S Gowda[2], Mahesh R Gowda[1], Preeti Srinivasa[1], Chandrashekar Muthyalappa[1], Channaveerachari N Kumar[2], Narayana Manjunatha[2], Sandeep Vohra[3], Suresh Bada Math[2]

ABSTRACT

Background: Telemedicine Practice Guidelines, 2020 and Telepsychiatry Operational Guidelines, 2020 can be potential game changers in the practice of medicine in India. They provide legal grounds for the practice of telemedicine. The economics of setting up and running telepsychiatry services vis-à-vis in-person services in India is discussed in this paper to aid the practitioners in understanding the costs involved in each of these modalities.

Methods: Costs for various hardware, software, real estate, and human resources are collated from various sources. Telepsychiatry vs. in-person setup is compared for the costs involved.

Results: Telepsychiatry consultation will cost much lesser to that of in-person consultation.

Conclusions: Telepsychiatry is an economically viable option. There are many benefits and hurdles in telepsychiatry practice. It is a step towards providing psychiatric services at the doorstep in compliance with the Mental Healthcare Act 2017, upholding the rights of persons with mental illness. It will benefit the practitioner, the patient, and the society.

Keywords: Costs, economics, telemedicine/telecare, telepsychiatry

Board of Governors, in supersession of the Medical Council of India in partnership with the National Institution for Transforming India (NITI Aayog), released Telemedicine Practice Guidelines 2020 (TMPG) on March 25, 2020—a potential game-changer in the practice of medicine in India. The guidelines constitute Appendix 5 of the Indian Medical Council (Professional Conduct, Etiquette, and Ethics) Regulations 2002 (IMC regulations).[1] It was the right time to embark upon the rarely charted territory in view of the current coronavirus disease (COVID) pandemic. It will enable the registered medical practitioner (RMP) to provide healthcare using telemedicine. Indian Psychiatric Society and Telemedicine Society of India, in collaboration with the National Institute of Mental Health and Neurosciences (NIMHANS), soon brought out Telepsychiatry Operational Guidelines 2020 (TPOG) on May 26, 2020.[2]

Telemedicine practice is not new to India as the Indian Space Research Organization had initiated Telemedicine Pilot Project as early as 2001. NIMHANS had adopted this initiative in 2005. In the late 2000s, Schizophrenia Research Foundation also started utilizing telemedicine. The Ganiyari model 2012 also used telemedicine to cater to rural and tribal areas of Bilaspur, Chattisgarh.[3] Technology has not only been used to provide teleconsultations but also for educating patients and the general public, providing information about treatments and disease, psychological assessments, etc.[4]

If telemedicine practice was already existent, one might ask, then what is the requirement of guidelines now? The dilemma regarding the legality of telemedicine practice was created by a verdict on a bail plea "Deepa Sanjeev Pawaskar and another vs. The State of Maharashtra" given by the High Court of Maharashtra (pronounced on July 25, 2018). In this case, a post-cesarean patient who presented to the hospital with vomiting was re-admitted and treated with instructions over the telephone. The lady succumbed to death later, and negligence was alleged. However, the culpable negligence charge held against the doctors was not for instructing telephonically, but for issuing the prescription without diagnosis.[5] Indian Medical Association East Delhi branch went overboard at that time issuing a notice