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Telemedicine Registry and Evaluation in India

PRELIMINARY STUDY DESIGN

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What is Telemedicine?

Some of the global definitions of Telemedicine and Telehealth are

"According to the classification proposed by Hersh et al. in 2006 (21), telemedicine services or programs are grouped into services based on stored images (store and forward) such as teleradiology, telehistopathology, teledermatology, etc.; home monitoring programs and systems (home-based services) and real-time specialized care (hospital-based services)" – Framework for the Implementation of a Telemedicine Service, PAHO and WHO, 2016

"Telehealth is the provision of health care remotely by means of a variety of telecommunication tools, including telephones, smartphones, and mobile wireless devices, with or without a video connection." – State of Telehealth, 14th July 2016, NEJM, E. Ray Dorsey and Eric Topol.

"World Health Organization defines telemedicine as 'The delivery of health-care services, where distance is a critical factor, by all health-care professionals using information and communications technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and the continuing education of health-care workers, with the aim of advancing the health of individuals and communities.' Quoted in Telemedicine Practice Guidelines, MoHWF India, March 25th 2020.

Telemedicine in India

In India, telemedicine has been around since late 1990s primarily to improve access of healthcare services for rural/semi-urban population as doctors and providers availability is highly concentrated in urban areas.

"Telemedicine provides remote diagnosis and treatment of patients by means of telecommunications technology, thereby providing substantial healthcare to low income regions. Earliest published record of telemedicine is in the first half if the 20th century when ECG was transmitted over telephone lines. From then to today, telemedicine has come a long way in terms of both healthcare delivery and technology."
A major role in this was played by NASA and ISRO. The setting up of the National Telemedicine Taskforce by the Health Ministry of India, in 2005, paved way for the success of various projects like the ICMR-AROGYASREE, NeHA and VRCs. Telemedicine also helps family physicians by giving them easy access to speciality doctors and helping them in close monitoring of patients. Different types of telemedicine services like store and forward, real-time and remote or self-monitoring provides various educational, healthcare delivery and management, disease screening and disaster management services all over the globe. Even though telemedicine cannot be a solution to all the problems, it can surely help decrease the burden of the healthcare system to a large extent. Chellaiyan VC, Nirupama A Y, Taneja N. Telemedicine in India: Where do we stand? J Family Med Prim Care 2019;8:1872-6

Private healthcare organizations and Medical Colleges have been using telemedicine as a hub-and-spoke model to connect remote healthcare centers with expertise to guide doctors and paramedics on the field to triage and advice on treatment.

Covid19 pandemic has made practicing physicians and healthcare organizations to consider telemedicine solutions as OPDs are shut down and elective surgeries are not being done during the lockdown.

In response, Board of Governors of Medical Council of India has released the Telemedicine Practice Guidelines (TPG) on March 25th, 2020 to allow Registered Medical Practitioners (RMPs) to practice teleconsultation within a defined framework to ensure safe and secure delivery of telemedicine services.

Start-ups in consumer healthcare like Practo, mFine and Docprime were already offering specialist consultation online through mobile applications in the last couple of years.

Few of the leading healthcare providers and physicians have been practicing telemedicine using proprietary applications for several years, they are now training doctors on why and how to use telemedicine in a safe, secure and comprehensive process compliant with TPG.
OBJECTIVE OF STUDY

Overall objective of the study is to guide healthcare ecosystem in India on technology solutions for telemedicine as proposed in the National Digital Health Blueprint (NDHB) and Telemedicine Practice Guidelines (TPG) quoted below:

“These guidelines will provide information on various aspects of telemedicine including information on technology platforms and tools available to medical practitioners and how to integrate these technologies to provide health care delivery. It also spells out how technology and transmission of voice, data, images and information should be used in conjunction with other clinical standards, protocols, policies and procedures for the provision of care. Where clinically appropriate, telemedicine is a safe, effective and a valuable modality to support patient care.” Last Paragraph of Page 8.

In the current situation, physicians and healthcare providers are looking for information and guidance from industry experts and healthcare and technology associations to make appropriate choices available in India that comply with TPG and NDHB.

Purpose of the study is to put together a repository of telemedicine solution providers and evaluate their suitability for healthcare providers in India aligned with TPG and NDHB.

Priorities considered important in current context are:

01 TELE-CONSULTATION
needed immediately to provide access to healthcare during the Covid19 lockdown as well as for the new normal, the consultation provided can be doctor-to-patient, doctor-to-caregiver, doctor-to-doctor or doctor-to-paramedic.

02 TELE-ICU AND OTHER TELE-SERVICES AT THE HOSPITAL
to effectively and efficiently use scarce resources in ICUs and improve quality of care in the hospital, this will include use of IoT devices and sensors.

03 REMOTE PATIENT MONITORING AND COUNSELLING
as patients are unable to leave their homes, many chronic patients will require remote monitoring of their condition by a clinical team and as far as possible care at home.

04 SPECIALIZED TELESERVICES USING DEVICE AND NETWORKS
services such as teleradiology, telecardiology, telepathology, telepsychiatry etc. with medial devices that enable remote diagnostics and therapeutic support and interventions as these will improve the capacity to handle load of patients and access to specialized clinicians.
Since the need for providing information to stakeholders is urgent, the study is designed using a rapid methodology and quick deployment on the field. Initial dipstick conversations and desk research has been carried out to define the scope of study.

### Time Frame of Study

The study has to be completed by May 8th, 2020. Accordingly, the timelines for each stage will be:

1. **Primary Survey:** 23rd April - 29th April, 2020
2. **Evaluation by Experts:** 30th April - 5th May, 2020
3. **Study Report:** 6th May - 8th May 2020

On completion, the report will be released by the associations on their website. Interim results of primary survey may be released earlier.
References for Telemedicine

Desk Research

- Telemedicine Practice Guidelines (TPG), Ministry of Health and Family Welfare

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- Telemedicine Society of India – https://tsi.org.in

- Telemedicine in India: Where do we stand?. J Family Med Prim Care 2019;8:1872-6, Chellaiyan VG, Nirupama A Y, Taneja N.
  http://www.jfmpc.com/article.asp?issn=2249-4863;year=2019;volume=8;issue=6;spage=1872;epage=1876;aulast=Chellaiyan
Survey Partner Organisations

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DHIndia Association
https://dhindia.org/

CAHO
https://www.caho.in/

CHIME India Chapter
https://chimecentral.org/international/

HIMSS India Chapter
http://india.himsschapter.org/

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