Tele medicine guidelines - the need of hour in times of a global pandemic

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World Health Organization defines "Health is a state of complete physical, mental and social well-being and not merely the absence of disease."[1]

In India, giving in-person health care to all is quite challenging given the large geographical area, limited number of health care professionals, nursing, caregivers and resource allocation.

Various countries adopt different allocation of resources for health services to their citizens. For example in USA, in 2018 it was approximately 3.5 trillion dollars and in 2019 it was 3.6 trillion dollars.[2] It accounts for approximately 18% of their Gross Domestic Product[GDP].

Currently, India has one of the lowest allocation towards health care when compared with other countries across the globe at 1.6 percent of GDP. India's national health policy 2017 envisages to increase the health budget to 2.5 percent of GDP.[2]

Despite India having achieved significant economic growth over the decades, the progress in health has not been commensurate. The inability to rapidly improve the human capital also places a binding constraint on economic growth.[3]

Government of India is committed to provide equal access to quality health care to all of its citizens and want to utilise digital mode to achieve this. India's digital health policy advocates use of digital tools in health and wellness Centers at the grassroots level wherein a mid level health care provider can connect to specialist doctors through technology platforms in providing best health care services.

The future of India lies in its villages. Unless we meet healthcare needs of rural population of India (approximately 65.97%), we cannot achieve desirable health outcomes.[4]

National Institution for Transforming India (NITI) AAYOG is spearheading the health index initiative to bring about transformational change in achieving desirable health outcomes.[5]

In India with a population of 130 crores, it will be difficult to provide equal health care to all. To promote health where specialist opinion is needed and resources are limited alternate strategies are being planned like telemedicine.

CORONA- Global Pandemic

A disease that started in Wuhan, China in December 2019 as a viral outbreak has changed the global health care dynamics. Day by day the number of people who are affected is increasing at an alarming rate. It has spread across 200 countries and has affected more than fifty five lakhs till date. The number is increasing at a exponential rate. It made lot of countries to change the guidelines in handling regular outpatients who need medical care. India is no exception to this.

Due to panic created regarding the mode of spread, social distancing and staying in home is the golden principle being practiced all around the world. Elective health care services have been shut down and only emergency health care was given to reduce community spread.

Shut down of public transport systems has made the situation even more challenging.

As an alternate to direct visit to the physician, telemedicine is being proposed as a newer health care delivery module. New guidelines have been formed by Board of Governors in super session of the Medical Council of India to enable registered medical practitioners to provide health care using telemedicine. This constitutes appendix 5 of the Indian medical council (Professional Conduct, Etiquette and Ethics Regulation, 2002) on 25th March 2020.[6]

Effect of COVID-19 Pandemic on psychological health

Sudden outbreak of a disease with no definitive treatment, high morbidity and mortality can cause serious impact on the mental health of individuals. Mental health care professionals are indeed noticing worsening health issues during this sudden outbreak.

To stop spread of the viral infection, Government of India has announced national lock down. Majority were not prepared for such restrictive measures. In addition the continuous watching of false and unauthentic news, listening to the loss of loved people, preoccupation and uncertainty regarding their own health, future financial implications, all have increased the stress and people have started experiencing worsening of their physical and psychological health. It is a known fact that stress alters our immunity and we are more prone to diseases.

Psychiatrists across the globe have noticed flare up of anxiety issues particularly COVID phobia, worsening of depression due to loss of loved ones, delusional thoughts regarding viral disease, substance abuse withdrawals and many more.[6]

Majority of the psychiatry set ups across the country are not prepared to handle the disease spread as it is extremely contagious. A voluntary shut down of elective Out Patient Department [OPD] services and handling of only psychiatric emergencies is being practiced. Like any health professional the psychiatrist is also not immune to contracting the viral infection. In such kind of scenarios alternative health care

delivery with minimal risk of exposure to patients and doctors is needed to help the vulnerable.

Telemedicine... need of the hour
The main purpose of telemedicine is to address medical needs of a remote patient in a simplest possible way.

Telemedicine is "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 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.[7]"

Tele health is "delivery and facilitation of health and health- related services including medical care, provider and patient education, health information services, and self care via telecommunications and digital communication technologies[7]".

Practical Guidelines have been proposed to all health care professionals which will provide sound course of action based on current information, available resources and patient needs to ensure patient and provider safety. They provide norms and protocols relating to physician- patient relationship, issues of liability and negligence, evaluation, management and treatment, informed consent, continuity of care, referrals for emergency services, medical records, privacy and security of the patient records and exchange of information, prescribing, reimbursement, health education and counseling.

Information on technology platforms, tools available, integration of technologies is available in the guidelines. Integration of technology and transmission of voice, data, images, information with other clinical standards, protocols, policies and procedures are possible with telemedicine.

All these telemedicine guidelines should be used in conjunction with existing national clinical standards, protocols, policies and guidelines.

Few Guidelines in India:[7]
1. Telemedicine should be appropriate and sufficient as per the context of case.
2. Registered Medical Practitioner [RMP] should ensure that there is a mechanism for both to verify the credentials and contact details.
3. Consent- when patient initiates telemedicine then the consent is implied. Explicit consent is needed if a health worker, RMP or a caregiver initiates a telemedicine consultation.
4. RMPs must make all efforts to gather sufficient medical information about the patient's condition before making any professional judgment.
5. RMP should provide health education as appropriate in the case, provide guidelines related to specific condition, prescribe medicines.
6. Prescription of medicines without an appropriate diagnosis or provisional diagnosis will amount to professional misconduct. Medicines are categorized

as list O, list A, list B, prohibited list. Medicines listed in schedule X of drugs and cosmetics act and rules or any Narcotic and Psychotropic substances act 1985 should not be prescribed.
7. RMP shall issue a prescription as per the Indian Medical Council Regulations and shall not contravene the provisions of the Drugs and Cosmetics Act and rules.
8. All the principles of medical ethics, including professional norms for protecting patient privacy and confidentiality as per Indian Medical Council act shall be binding and must be upheld and practiced.
9. All the rules to protect data protection and privacy laws as per Information Technology act shall be practiced. Reasonable degree of care should be taken to prevent data breach and also during hiring third party services.
10. RMP should maintain log or record of telemedicine interactions, patients digital or non digital records, prescription records used in telemedicine consultation.
11. RMP can charge an appropriate fees for telemedicine consultation and provide a receipt or invoice for the fees charged.
12. Technology platforms based on Artificial Intelligence/ machine learning are not allowed to counsel the patients or prescribe any medicines.
13. Telemedicine guidelines, drug lists, directions, advisories, any clarifications can be amended from time to time in larger public interest with the prior approval of central government (ministry of health and family welfare, Government of India).

Tools for telemedicine:[7]
Applications can be classified into four basic according to the mode of communication, timing of the information transmitted, purpose of consultation and the interaction between the individuals involved. Tools used are telephone, video, devices connected over LAN, WAN, Internet, mobile or landline phones, chat platforms like WhatsApp, Face book messenger etc., mobile App or internet based digital platforms for telemedicine or data transmission systems like Skype/ email/ fax can be used.

Online course:[7]
An online program will be developed and made available by the board of governors in supersession of Medical Council of India. All registered medical practitioners willing to provide online consultation need to complete a mandatory online course within 3 years of this notification. In the interim period, guidelines should be followed.

Emergency consultations
Telemedicine can be used in such situations only when alternative care is not present and this is the only way to provide timely care. To the best of the registered medical practitioners judgment consultation should be limited to first

aid, life saving measures, counseling and advice on referral. Patient can be advised in person interaction at the earliest.

Emergency situations
Goal and objective should be to provide in person care at the earliest. RMP based on his professional discretion may advise first aid, counseling and facilitate referral. In all cases of emergency, patient must be advised for an in-person interaction with a registered medical practitioner at the earliest.

Exclusions from telemedicine services
Following are explicitly excluded:
1. Doesn't provide consultations outside the jurisdiction of India.
2. Use of digital technology to conduct surgical or invasive procedures remotely.
3. Data management systems involved; standards and interoperability.
4. Specifications for hardware or software, infrastructure building and maintenance.
5. Other aspects of tele-health such as research, evaluation and continuing education of health care workers.

Advantages
There are lot of benefits to this health care delivery like timely access to appropriate interventions including faster access to services that may not otherwise be available.
1. Faster access to health care.
2. Timely access to health service.
3. Less travel for rural patients to obtain health care.
4. Reduced financial costs.
5. Less inconvenience/ impact on family, caregivers and social factors.
6. Reduced burden on secondary hospitals.
7. Proper maintenance of records and documentation so that patient doesn't miss health advice.
8. Increased legal protection of both parties.
9. Health workers safety and doctors safety in situations where there is risk of contagious infections.

Disadvantages
1. Can be abused.
2. Data breach and misuse of patient personal details
3. Medico legal issues if guidelines not followed.
It can be reduced by appropriate training, enforcement of standards, protocols and guidelines

Conclusions
In this era of smart phones and digital India, Telemedicine, can be taken as an alternate method of health care delivery. Health care institutions and doctors should invest in telemedicine module of health care delivery in future for effective service to the patients. Like any health system it has its own challenges, which can be rectified with proper training and increased usage. If utilized properly in primary health care centers, it will fill the specialist gaps in many rural areas and reduce burden on secondary and tertiary hospitals.

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Conflict of Interest
None.

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