

A STUDY TO UNDERSTAND THE UTILIZATION PATTERN OF TELEMEDICINE IN UROLOGY PRACTICE ACROSS INDIA

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STUDY TITLE

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INTRODUCTION

- **Telemedicine as described by WHO is “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 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**
- Telemedicine involves the use of electronic communication and software platforms to provide healthcare services to patients thereby eliminating the need for in-person consultation.
- Telemedicine can be used for follow-up visits, chronic disease management, patient education and counselling.

HISTORY OF TELEMEDICINE

The earliest instance of telemedicine use in medicine can be traced back to 20th century when telephone was used to transmit ECG.

Another notable use of telemedicine was made by NASA for disaster management during the 1985 earthquake in Mexico

The first steps toward telemedicine in India were taken by ISRO (Indian Space Research Organization) in 2001.

Private sector has always been ahead in the adoption of telemedicine, few noted examples are Aravind Eye Care and Apollo Telemedicine.

In the public sector, the telemedicine division of MoHFW has designed a National Telemedicine portal and has also developed certain standards for Electronic Health Records (EHR).

The Telemedicine Practice Guidelines were released on 25th March 2020 by the Board of Governors, Medical Council of India, in partnership with NITI Aayog

RESEARCH OBJECTIVES

- **General objective:** To understand the utilization pattern of Telemedicine in Urology practice across India.

Specific objectives

- To understand the pattern of usage of telemedicine in urology practice, urologist's perception of telemedicine and perceived barriers in its adoption.
- To explore the current state of information regarding telemedicine among urologists and the need of training for the same

RESEARCH METHODOLOGY

STUDY DESIGN	Cross sectional descriptive study
SAMPLING METHOD	Convenience sampling
SAMPLE SIZE	A total of 90 urologists were included in the sample
STUDY POPULATION	All the Urologists who are members of the “Urological Society of India “will be considered for this survey <u>Inclusion criteria</u> - All urologists practicing in India irrespective of age, gender, experience were considered for this survey. <u>Exclusion criteria</u> – Any practioneers other than urologists were excluded from the survey.



RESULTS

A) Demographic characteristics of study participants (N = 90)

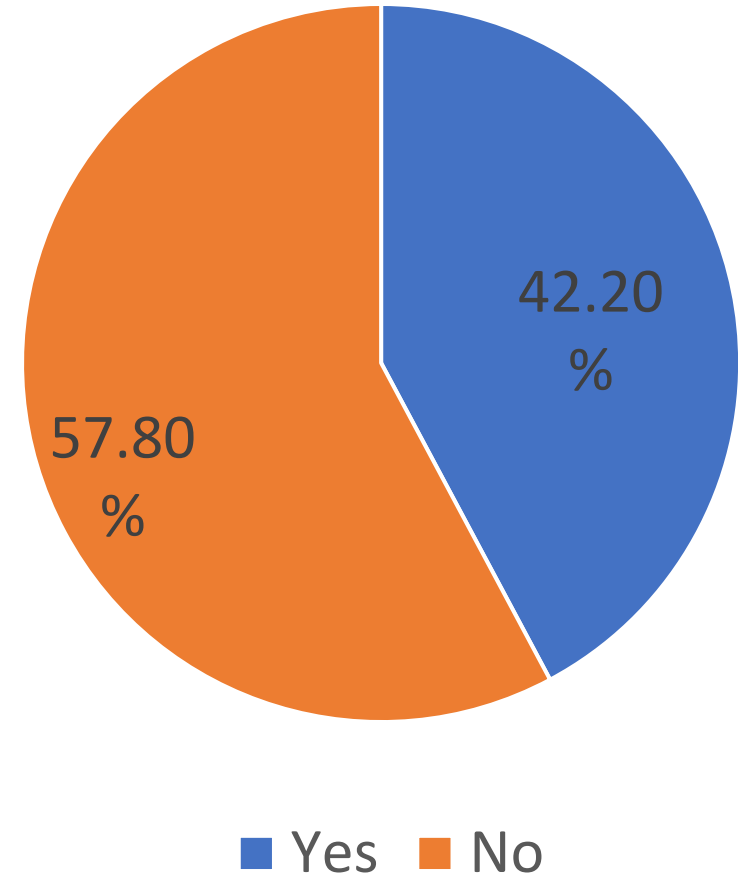
- Out of the total 90 study participants nearly **97.8 %** were male and the maximum participants were in the age group of **31-40** years. Almost **38.9%** of the respondents described their primary work setting as a **public teaching hospital**, whereas rest of the respondent’s primary work setting was a public teaching hospital and private non-teaching hospital (including single or multispecialty nursing home). **56.7%** of the urologists participating in the survey practiced **multi-subspecialty urology** (high end work in multiple sub-specialty areas with or without general urology) and **30 %** of the respondent urologists practiced **general urology**.

VARIABLES	FREQUENCY (n)	PERCENT (%)
Gender - Male - Female - Other	88 2 -	97.8% 2.2% -
Age Group - Less than 30 years 31 - 40 years 41- 50 years 51 - 60 years 61 years and above	4 40 22 13 11	4.4% 44.4% 24.4% 14.4% 12.2%
Primary work setting - Public Teaching Hospital - Private Teaching Hospital - Public non-Teaching Hospital - Private non-Teaching Hospital (including single or multispecialty nursing home) - Day-care Urology	35 27 1 27 -	38.9% 30% 1.1% 30% -
Type of Urology practice - General Urology only - Multi-subspecialty Urology (High end work in multiple sub-specialty areas with or without general urology) - Single subspecialty Urology (High end work in single sub-specialty areas with or without general urology)	27 51 12	30% 56.7% 13.3%

B) CURRENT USE OF TELEMEDICINE

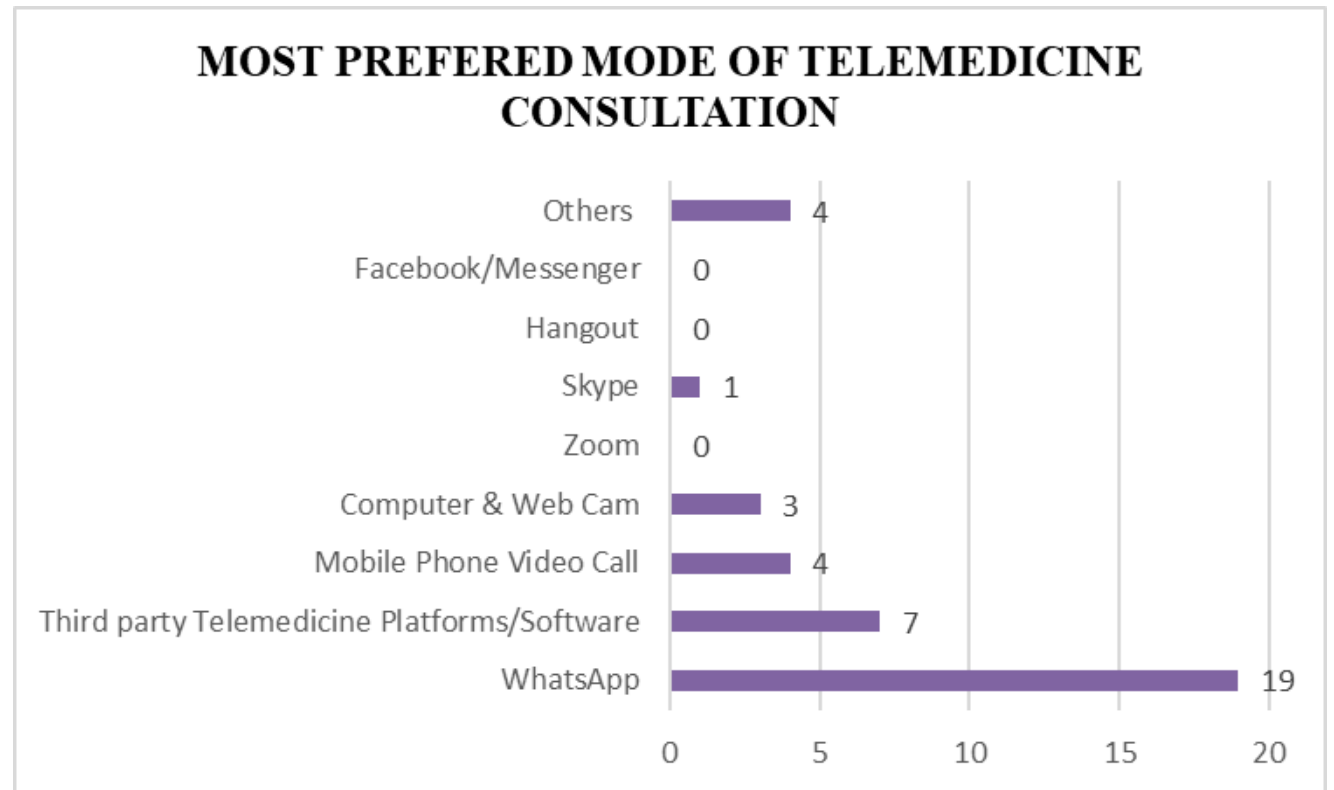
57.8 % of urologists participating in the survey recorded no current usage of telemedicine and 42.2% of the respondents reported use of telemedicine in their practice.

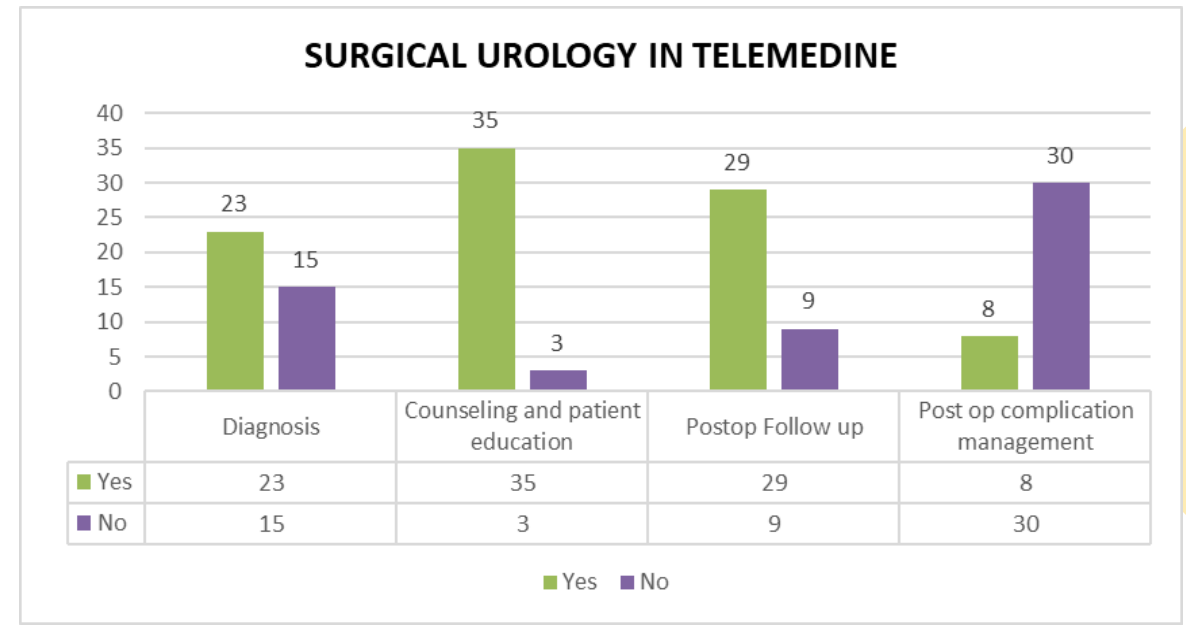
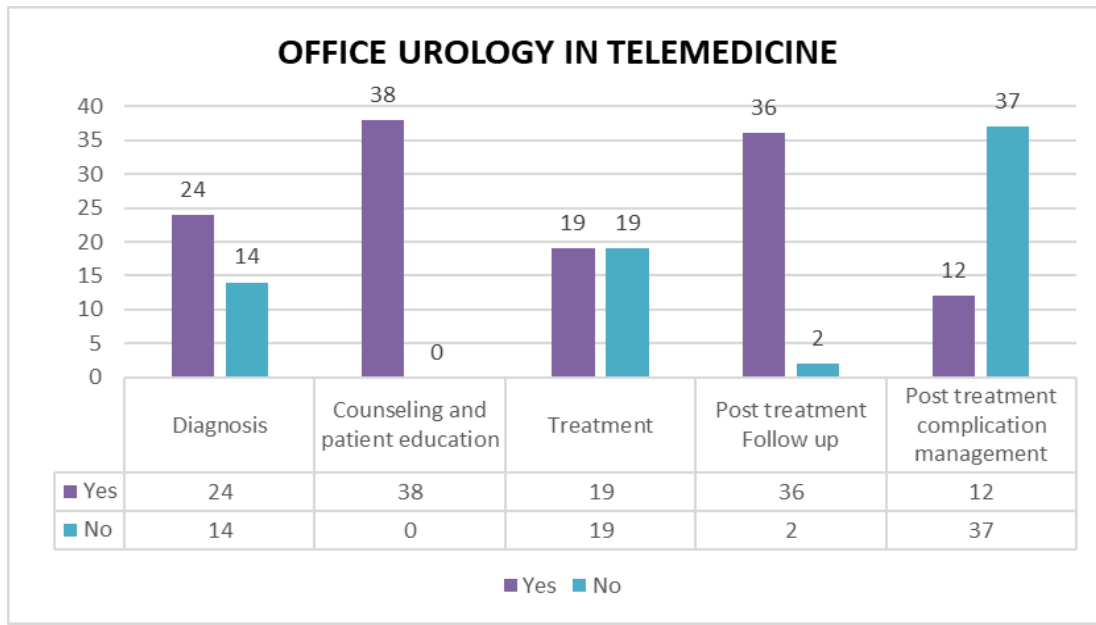
USAGE OF TELEMEDICINE
AMONG RESPONDENTS



C) Trends in telemedicine practice (for urologists practicing telemedicine N=38)

The most preferred mode of teleconsultation used by urologists in the survey was WhatsApp (n= 19 ,50%), followed by third party telemedicine platforms(n=7,18.4%). Some of additional platforms recorded were telegram, Jitsi, self-made google forms and mobile phone calls, hospital video consultation.



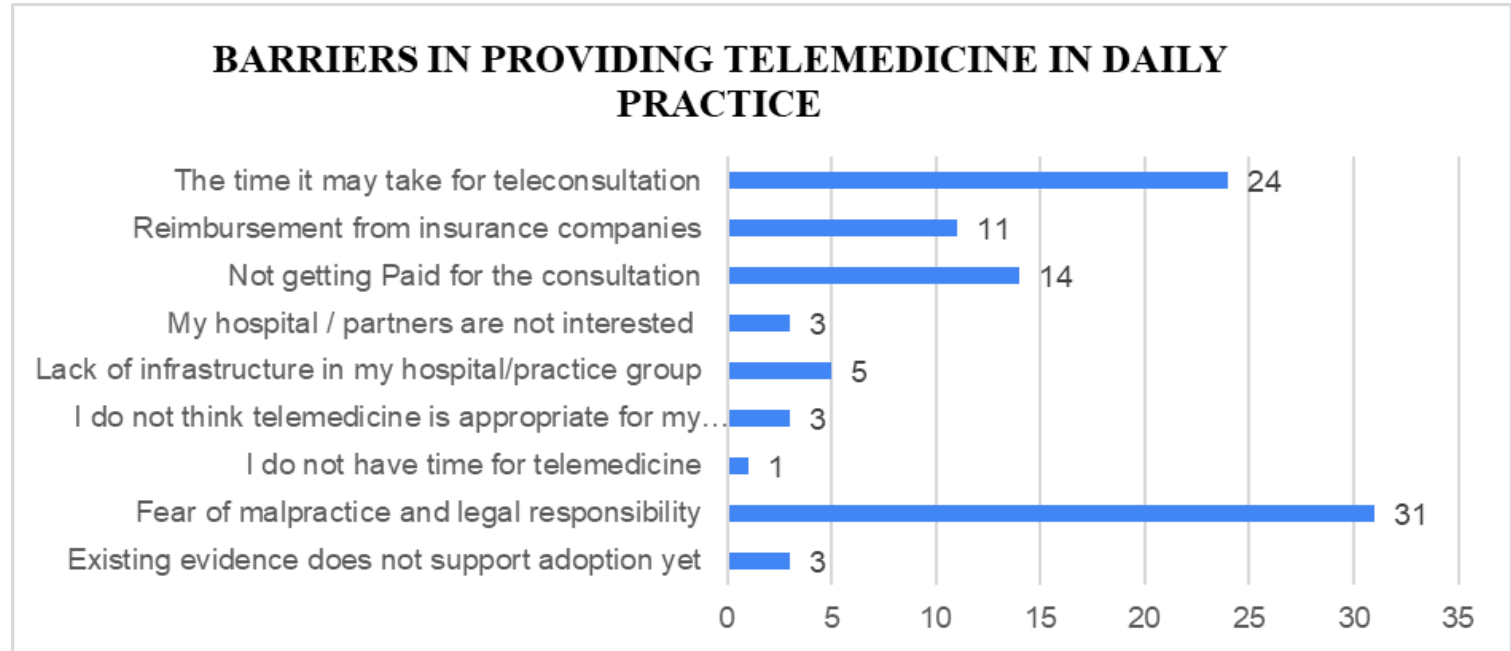


For the use of telemedicine in aspects of office urology, maximum respondents felt that counselling and patient education was the most feasible aspect of office urology that could be carried out via telemedicine consultation, on the other hand most respondents believed post treatment complication management in office urology was not feasible to carry using telemedicine consultation.

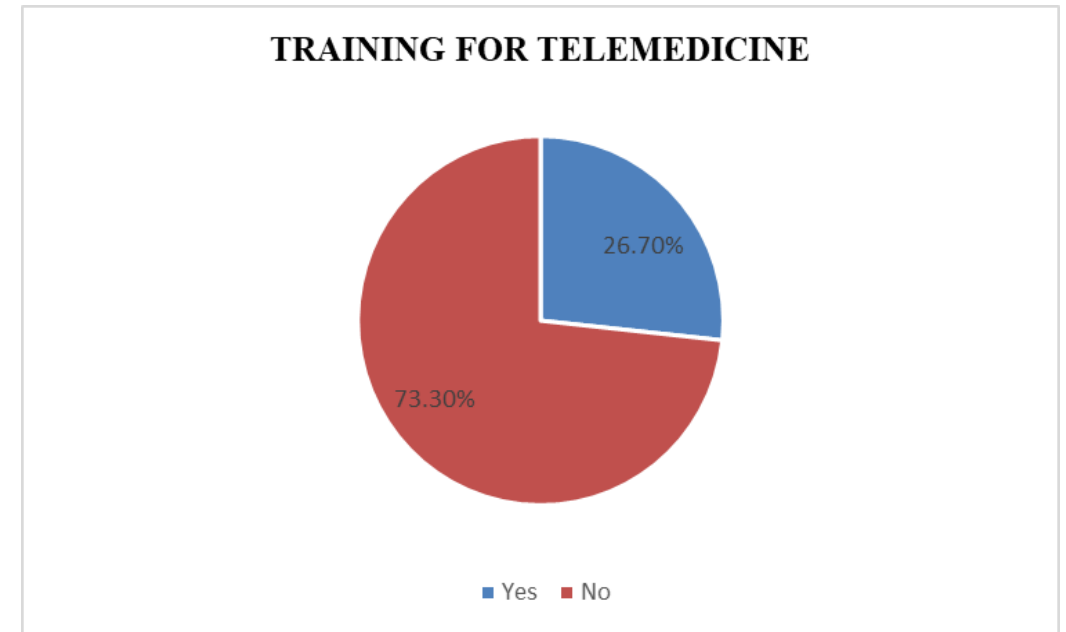
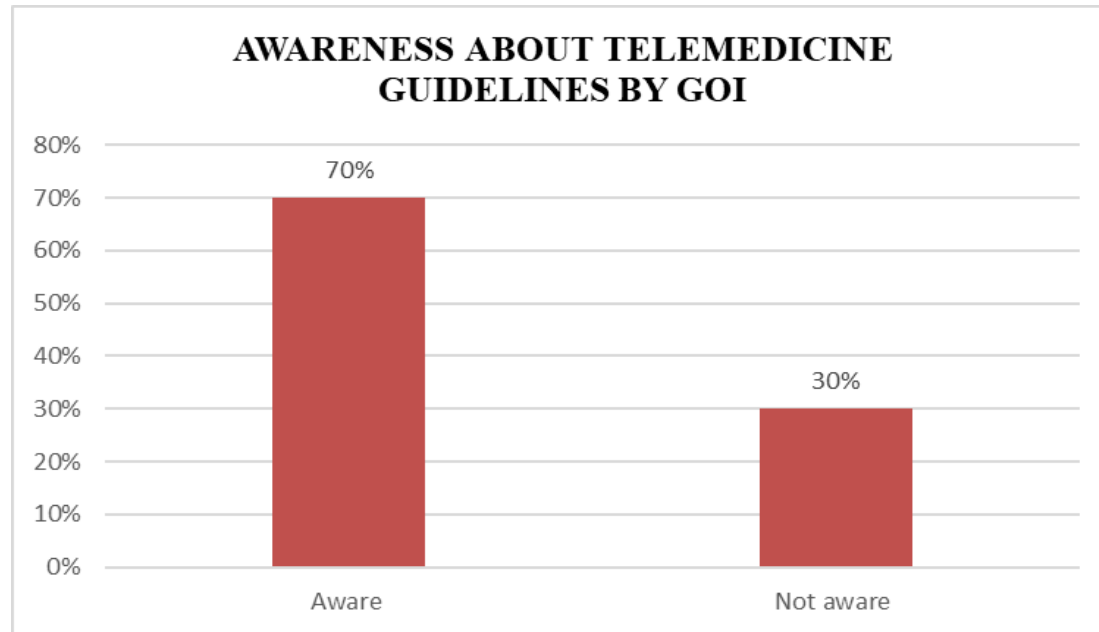
Almost 55.2% of the respondents practicing telemedicine in their urology practice felt that the amount of effort involved in telemedicine was the same as in regular in-person consultation and 36.9% of the urologists felt that the effort involved in telemedicine was more than in in-person consultation.

D) BARRIERS IN ITS IMPLEMENTATION

- The respondents were asked to choose multiple options from list of possible barriers to implementation of telemedicine. Maximum of the respondents rated the fear of malpractice and legal responsibility as the biggest barrier in the widespread implementation and adoption of telemedicine in daily practice



E) KNOWLEDGE AND TRAINING FOR TELEMEDICINE



- Of the 90 urologists that participated in the survey, 70 % of the urologists were aware that the GOI has brought out a framework to practice telemedicine in India and 30% of the urologists had no awareness of any such guidelines
- Maximum of the study participants i.e., 73.3% of them reported to have never undergone any training workshop/read/attended any webinar related to the Telemedicine practice

DISCUSSION

On studying the relationship of use of telemedicine with several variables such as demographic characteristics of the respondents it was seen that telemedicine found the highest use in the age groups of 31-40 years and 41-50 years. The use of telemedicine was highest in the urologists practicing multispeciality urology and catering to the patient population belonging to cities

Approximately 60% of urologists participating in the survey recorded no current usage of telemedicine. A majority of the respondents were hesitant to adopt telemedicine for the fear of malpractice while several could not accept virtual consultation as an alternative to in-person consults which according to them played a big role in developing doctor patient relationship and developing correct diagnosis.

A major concern that the non – telemedicine practicing urologists had was, the lack of detailed guidance in practicing safe telemedicine. However, as a result of the global pandemic several non -telemedicine practicing urologists showed a willingness to learn about telemedicine in practice and were of the opinion that use of telemedicine in urology practice could increase in the coming future.

Of utmost importance in the practice and adoption of telemedicine is the status of internet availability at both ends of the spectrum i.e., for both the provider and the recipient of healthcare, also important is their ability to use the said technology. For adoption of telemedicine, it is imperative that both the physician and patient become familiar and efficient in using telemedicine platforms

SUGGESTIONS

A well-planned comprehensive set of guidelines for urologists practicing telemedicine should be developed preferably by the “Urological Society of India. These guidelines should include instructions on choosing the appropriate setup for telemedicine practice, its installation, record maintenance, do and don’ts etc.

More user-friendly platforms need to be developed to facilitate the ease of operation for the patient and provider.

Regular workshop should be held within the fraternity of urologists for skill- upgradation regarding technological aspects of telemedicine, discussions on new treatment modalities with respect to telemedicine and updating of the above-mentioned guidelines.

Sensitization sessions should be held for both public and private set ups disseminate information telemedicine and advocate its use in regular practice.

CONCLUSION

Telemedicine has the capacity to make healthcare more affordable and accessible for all. It can help facilitate the delivery of healthcare irrespective of location of the recipient and provider using real time technology.

Currently Telemedicine is not used uniformly across urology practice due to reasons such as lack of technical literacy, fear of malpractice, lack of organized platforms etc.

What is needed is adequate institutional support, research and funding as well as government policies to promote the use of telemedicine in urology practice as a alternative or adjunct line of treatment

However, it should be kept in mind telemedicine cannot be used in a one size fits all strategy, it needs to be tailor made as per the requirements of the healthcare provider and the recipients.



THANK YOU

