INTRODUCTION

Pakistan has an estimated population of 191.71 million comprising of 51% as female & 64.27 million in the age cohort of less than 14 years with two-third living in rural areas, spread over an area of 796,00 square kilometers stretches from Himalaya in the north to Arabian Sea in the south carrying literacy rate as 58% area, is comprises of geographically in inaccessible sparsely populated Baluchistan, Southern Punjab, rural Sind, southern KP, hilly areas of AJK, Gilgit, Chitral & most part of northern districts of KP1.

Three tier health system of primary, secondary & tertiary care is managed through 1142 tertiary & secondary care hospitals, almost 450 rural health centers and 9000 fist level care facilities. All the public sector hospital & most of the rural health manage oral health services through 15106 dental surgeons. Dental services are not available in 9000 fist level care facilities including basic health units, mother & child health centers, dispensaries, first aid post1,2.

Telemedicine, healing at distance, providing clinical consultation & medical care through electronic data transfer in telecommunication technologies is evolving through telehealth & currently e-health covering wider subjects ranging from awareness, distant medical education, clinical consultation between patient-doctors & doctor-specialist, robot-managed bed care of patients and robot-performed distant surgical operations3,4,5,6,7,8. Telemedicine or e-health is being practiced in Pakistan in some institution where m-health, provision of healthcare services through mobile phone technologies, is being

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HOW TELEDENTISTRY IS APPLICABLE IN PAKISTAN?

Geographically sparsely populated Pakistan with lack or shortage of qualified professionals in dentistry, shortage of dental specialist at secondary care hospitals and hardly available classified specialists in dentistry, arguably, make environment of Pakistan as most suitable for establishment of teledentistry. Making it priority in policy design & overcoming barriers in decision making process is considered difficult. Strong advocacy by professionals in the field, support by academia & promotion by intellectuals are the minimum requirements.

Fastness, Access & Efficiency are the basic arguments for provision of dental care through teledentistry but first appointment for consultation or care is documented taking longer than routine practices subject to availability of oral health services. Ambitiousness in the subject needs to be avoided. Keeping apart the first visit, teledentistry is fast, accessible & easily available5,6,10,11.

Cost efficiency is argued negative while including investment in the technology, installation and management by addition of skilled professional. Capital investment for implementation is of course additional burden but cost for the patient is the minimum most. Once installed, ordinary trained dental profession can make teledentistry run with all ease12,13.

Convenience & comfort in teledentistry toward patients suffering from pain of dental diseases at the farthest
distances where there is no skilled person available carry no comparison\textsuperscript{6,12,13}.

**Payments & reimbursements** in teledentistry are the major legal drawbacks toward patients as well as toward professionals. Accounting mechanism for reimbursement of public servants has to devise. National Health Insurance Program covering oral health being launched has to design their policies for payments & reimbursements to professional against provision of oral health through teledentistry\textsuperscript{10,11,14}.

**Factors for Implementation** particularly issues concerning with maintenance of governance, administration of accountabilities, legal requirements, ethical consideration are the hardest subjects. Very little legislative arrangement in the subject are prevailing even most of the developed countries. Cyber managements are in the process of evolution & are being taken care with the passage of time\textsuperscript{10,11}.

**Emergencies & Referral** are considered the most suitable through teledentistry particularly in the backdrop of shortage of facilities, services, qualified dental professionals, specialist consultation. Otherwise, the vacuum has to be filled by quackery, the abuse of health services\textsuperscript{6,10,11,15}.

**Triaging during Disasters**, otherwise an ethical issue, by qualified professionals is the critical most of the subjects. Teledentistry, through a team of qualified professionals is the most feasible remedy during the odd & critical moment of decision making\textsuperscript{16}.

**Dental Education** through teledentistry requires all possible efforts for inclusion of the subject as an optional subject in curricula of dental education having very little space available for addition of additional subject\textsuperscript{19}.

**Dental Hygiene** in School Health through demonstration of documentaries, considered the most suitable & cost-effective, needs much of considerations\textsuperscript{20}.

**Limitation**

Dependency on telecommunication technologies, trained dental professionals in the subject, resistance of dental professional, adaptation by population with literacy rate as 45% are some of the important limitation & barriers in initiation of teledentistry.

Moreover, teledentistry may be extremely effective in diagnosis and follow-ups but its application in actual execution of procedures of restorative dentistry, prosthetics, surgery and orthodontics are limited.

**CONCLUSION**

Fast, accessible & cost-effective teledentistry suites much in the health system of Pakistan with shortage of dental facilities & oral health services, lack of dental specialist at secondary care hospitals, second opinion of classified dental specialists, emergencies & referral and triaging during disasters. Designing policy priorities, the subject can be accommodated in development budget. National Health Insurance Program covering oral health needs to consider teledentistry as a valid subject not only for consultation & care but as wider subject in regards outlined above.

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