

Teledentistry in Dentistry

Jaycee Murray, Lauren Chestnut | Dental Hygiene Department, Westbrook College of Health Professions

Research Question

In patients, how does access to teledentistry compared to traditional in-person dental appointments affect increased access to oral health care?

Abstract

Teledentistry is an online service that is utilized in many dental offices allowing for clinicians to virtually meet with patients using interactive tools and telecommunications. This method of care has been extremely beneficial to both the patient and clinician as it continues to become popular and more developed, it increases access to care for many populations by minimizing the cost of dental treatment and providing more convenient care options. Through teledentistry, problems that impact patients' access to care such as unequal access, lack of financial resources, and lack of practice availability are eliminated, allowing for different populations to receive consultation, treatment, and diagnosis from clinicians.

Introduction

- Oral health care access is limited for populations such as low-income, uninsured, and rural populations.
- Individuals who are unable to receive professional dental treatment and care are left susceptible to an increased occurrence of decay and periodontal disease, having effects on overall systemic health.
- A rising, innovative form of dental care, teledentistry allows oral health professionals to meet with patients, enabling dental care, education, and treatment remotely.^{1,2}
- Teledentistry was a form of care developed as a result of the COVID-19 pandemic and is still utilized today through its ability to use interactive tools and telecommunications to offer an innovative solution for oral health care.²

Review of Literature

- Teledentistry interactions can be used for accessing patient information obtained from previous appointments to aid the clinician in treatment planning and patient counseling, as well as the ability to update patient information, clinical findings, and diagnosis through video-conferencing.^{1,2}
- This form of care is beneficial in the management of oral health concerns, detections of lesions, and general consultation through teleconsultation, telediagnosis, teletriage, and telemonitoring available through developed smartphone software.²
- A four-year longitudinal study suggested that elementary aged students are still able to receive successful Interim Therapeutic Restorations, a restoration to further prevent decay, from their hygienist without a supervising dentist on site because of teledentistry.³
- Teledentistry allows for college aged students and those unable to travel to still obtain frequent dental visits and current education to prevent infection and disease.⁴
- This care is supportive of parents and guardians of young children in which are looking for a cost-effective alternative to visual examinations.⁴

Figure 1: Uses Of Teledentistry in Current Practice

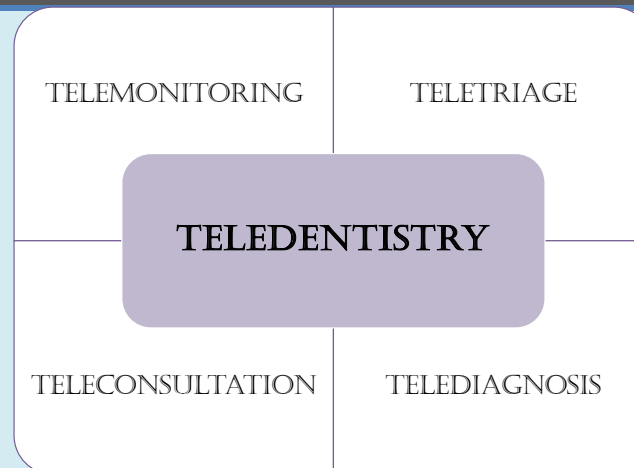


Figure 1: Interactive tools and telecommunication involved in the use of teledentistry can be used in different forms of dentistry including hygiene care, maxillofacial surgery care, orthodontic care, and pediatric care.^{1,2}

Discussion

- The current literature supports the idea that teledentistry would be beneficial to increasing access to oral health care and can be utilized in many dental offices allowing clinicians to virtually meet with patients using interactive tools and telecommunications.
- This rising form of dentistry accommodates the patient's needs and financial ability to receive care by minimizing the cost of dental treatment and providing more convenient care options that do not require transportation or travel expenses.
- Teledentistry is up and coming and dental providers should learn about the benefits of this care, how it is applied to current dental practices, and how it has continued to advance since its development during the COVID-19 pandemic.
- The downside to teledentistry includes cost of equipment, need for proper employee training, patient privacy concerns, unstable internet connection, and improper diagnoses.

Conclusion

- In a review of literature, one can conclude that teledentistry is a rising form of care in dentistry and provides many benefits to both patients and oral health care providers.
- Teledentistry eliminates the problems that impact patients' access to care such as unequal access, lack of financial resources, and lack of practice availability.

References

1. Ghai, S. (2020) Teledentistry during COVID-19 pandemic. *Diabetes & Metabolic Syndrome: Clinical Research*, Volume 15, Issue 5, p. 933-935. <https://doi:10.1016/j.dsx.2020.06.029>.
2. Islam R., Ferdous S., Watanabe C., Yamauti M., Alam MK., Sano H., (2022) Teledentistry as an effective tool for the communication improvement between dentists and patients: An overview. *MDPI Healthcare (Basel)*. 10(8):1586. <https://doi:10.3390/healthcare10081586>
3. Jampani, N. D., Nutalapati, R., Dontula, B. S., & Boyapati, R. (2011). Applications of teledentistry: A literature review and update. *Journal of International Society of Preventive & Community Dentistry*, 1(2), 37-44. <https://doi.org/10.4103/2231-0762.97695>
4. Kohli R., Clemens J., Mann L., Newton M., Glassman P., Schwarz E., (2021) Training dental hygienists to place interim therapeutic restorations in a school-based teledentistry program: Oregon's virtual dental home. *Journal of Public Health Dentistry*, Volume 82, Issue 2 p. 229-238 <https://doi.org.une.idm.oclc.org/10.1111/jphd.12465>