

Publication status: Preprint has been published in a journal as an article  
DOI of the published article: <https://doi.org/10.1590/1980-549720200082>

# Teledentistry in Brazil: a viable alternative during COVID-19 pandemic

Lucas Alves da Mota Santana, Marcos Antônio Lima dos Santos, Hélio Igor Melo de Albuquerque, Sara Ferreira dos Santos Costa, Erika Rezende-Silva, Anne Caroline Gercina, Wilton Mitsunari Takeshita

<https://doi.org/10.1590/1980-549720200082>

Submitted on: 2020-06-29

Posted on: 2020-06-29 (version 1)

(YYYY-MM-DD)

DOI: 10.1590/1980-549720200082

e200082

## Artigo especial

### Teledentistry in Brazil: a viable alternative during COVID-19 pandemic

*Tele odontologia no Brasil: uma alternativa viável durante a pandemia de COVID-19*

**Running title:** Teledentistry during COVID-19 pandemic

Lucas Alves da Mota Santana<sup>a\*</sup> ([lucassantana.pat@gmail.com](mailto:lucassantana.pat@gmail.com); **orcid:** 0000-0002-8261-1504)

Marcos Antônio Lima dos Santos<sup>a</sup> ([marcosals@outlook.com.br](mailto:marcosals@outlook.com.br); **orcid:** 0000-0002-7589-4809)

Hélio Igor Melo de Albuquerque<sup>a</sup> ([igor.bmf@gmail.com](mailto:igor.bmf@gmail.com); **orcid:** 0000-0001-8198-2162)

Sara Ferreira dos Santos Costa<sup>b</sup> ([costa.sfs@gmail.com](mailto:costa.sfs@gmail.com); **orcid:** 0000-0001-5150-9227)

Erika Rezende-Silva<sup>a</sup> ([erikarezendes@academico.ufs.br](mailto:erikarezendes@academico.ufs.br); **orcid:** 0000-0002-9059-1013)

Anne Caroline Gercina<sup>c</sup> ([annegerc@gmail.com](mailto:annegerc@gmail.com); **orcid:** 0000-0002-0381-9543)

Wilton Mitsunari Takeshita<sup>a</sup> ([wmtakeshita2@gmail.com](mailto:wmtakeshita2@gmail.com); **orcid:** 0000-0001-5682-1498)

<sup>a</sup> Department of Dentistry, Federal University of Sergipe, Aracaju, SE, Brazil.

<sup>b</sup> School of Dentistry, Federal University of Minas Gerais, Belo Horizonte, Brazil

<sup>c</sup> Department of Biosciences, Piracicaba Dental School, University of Campinas, Piracicaba, SP, Brazil.

**\*Corresponding author:** Dr. Lucas Alves da Mota Santana. Department of Dentistry

Federal University of Sergipe (UFS). Health and Biological Sciences Institute.

Rua Cláudio Batista, s/n, Santo Antônio, **ZIP CODE:** 49060102. Aracaju, Sergipe, Brazil. **E-mail:** [lucassantana.pat@gmail.com](mailto:lucassantana.pat@gmail.com)

**Conflicts of Interest:** None

**Sources of Support:** None

**Ethical approval:** None required.

**Acknowledgments:** None.

**\*Conceptualization:** Santana LAM, Gercina AC, Santos MAL and Silva ER

**\*Writing - Original Draft Preparation:** Santana LAM, Albuquerque HIM and Costa SFS

**\*Writing - Review & Editing:** Takeshita WM and Costa SFS

**Dear editor,**

Commonly, dental care is characterized by contact with patients, especially their upper airways. Due to the advance of COVID-19, the routine of dental offices was enormously affected and elective services were temporarily suspended, being performed only emergence and urgency procedures. As saliva is a potential transmission vehicle for SARS-CoV-2,<sup>1,2</sup> dentists have resorted to alternative solutions to avoid aerosol production by high-rotating equipment and minimize the impact caused by the pandemic.

For that reason, teledentistry, which is an information and communication resource with the potential to improve the quality of dental health care has conquered space by

both dental professionals and patients. It enables oral care and health attention in remote areas, as well as it allows professionals to identify the high risk groups and provide prompt service when necessary, consequently, reducing the waiting lists.<sup>3</sup>

In emerging countries like Brazil, teledentistry represents an alternative to offer good quality telemonitoring, especially for people most in need at an affordable cost. This tool has been imminently used in public health services, with good experiences of telemedicine programs in primary care around the world, including Brazil with Telehealth, an initiative of the Ministry of Health of Brazil that provides Teleducation actions. In this scenario, specific services were created to support the study of oral lesions.<sup>4</sup>

This year, the Brazilian Federal Council of Dentistry published the resolution nº 226 addressing the remote dental practice. Considering the Law 5081/66, which regulates the exercise of dentistry, the resolution determines the prohibition of technologies-mediated dental consultations for diagnosis, prescription, and treatment plan elaboration. Regarding the dentist-patient relationship, the remote care and telemonitoring of patients are only admitted when patients undergoing treatment are unable to return to the office, or a teleorientation carried out by the clinician to decide the best time to perform face-to-face assistance.<sup>5</sup>

During the pandemic, with distance measures ruling, and imminent risk of contamination by SARS-CoV-2, patients have shown constant apprehension regarding their safety and the quality of dental service. Additionally, most of our patients depend exclusively on public health services, such as oral oncologic attention, periodontal care, oral hygiene, and routine appointments. For this group of patients, continuous appointments are vital. Therefore, some measures such as the inclusion of voice and video calls, in the interval between face-to-face consultations, may represent an ideal

temporary solution to avoid aggravations and decompensations of the patients' health status, ensuring frequent remote monitorization at a distance.<sup>3</sup>

Carrard *et al.* (2017)<sup>7</sup> highlight that the use of WhatsApp mobile application by oral medicine patients presented expressive success rates. In Greece, Georgakopoulou (2020)<sup>5</sup> achieved good results with telehealth in her private dental clinic, even bringing new patients. Machado *et al.* (2020)<sup>8</sup> reinforce the usefulness of mobile applications for telemonitoring patients.

In conclusion, telecommunications strategies are suitable for scenarios such as the one we are currently facing. Furthermore, it is believed that the telemonitoring tool for dentists and patients will become popular over time, and advances in this area will likely consolidate this resource, taking it to the daily routine of dental professionals.

## References

1. Meng L, Hua F, Bian Z. Coronavirus Disease 2019 (COVID-19): Emerging and Future Challenges for Dental and Oral Medicine. *J Dent Res.* 2020:0022034520914246. <https://doi.org/10.1177/0022034520914246>.
2. Sabino-Silva R, Jardim ACG, Siqueira WL. Coronavirus COVID-19 impacts to dentistry and potential salivary diagnosis. *Clin Oral Invest.* 2020:1-3. <https://doi.org/10.1007/s00784-020-03248-x>.
3. Estai M, Kanagasingam Y, Tennant M, Bunt S. A systematic review of the research evidence for the benefits of teledentistry. *J Telemed Telecare.* 2018; 24:147 - 156. <https://doi.org/10.1177/1357633X16689433>.

4. Carrard VC, Roxo Gonçalves M, Rodriguez Strey J, et al. Telediagnosis of oral lesions in primary care: The EstomatoNet Program. *Oral Dis.* 2018;24(6):1012 - 1019. <https://doi.org/10.1111/odi.12851>.
5. Georgakopoulou EA. Digitally aided telemedicine during the SARS-CoV-2 pandemic to screen oral medicine emergencies. *Oral Dis.* 2020. <https://doi.org/10.1111/odi.13383>.
6. CFO. RESOLUÇÃO CFO-226, June 4, 2020 [Internet]. Conselho Federal de Odontologia; 2020 [accessed 20 jun. 2020]. **Available in:** [http://sistemas.cfo.org.br/visualizar/atos/RESOLU%  
c3%87%c3%83O/SEC/2020/226](http://sistemas.cfo.org.br/visualizar/atos/RESOLU%c3%87%c3%83O/SEC/2020/226)
7. Carrard VC, Martins MA, Molina-Bastos CG, Gonçalves MR. WhatsApp: a telemedicine platform for facilitating remote oral medicine consultation and improving clinical examinations-some considerations. *Oral Surg Oral Med Oral Pathol Oral Radiol.* 2017;123(3):408. <https://doi.org/10.1016/j.oooo.2016.09.228>
8. Machado RA, de Souza NL, Oliveira RM, Martelli Júnior H, Bonan PRF. Social media and telemedicine for oral diagnosis and counselling in the COVID-19 era. *Oral Oncol.* 2020;105:104685. <https://doi.org/10.1016/j.oraloncology.2020.104685>.

This preprint was submitted under the following conditions:

- The authors declare that they are aware that they are solely responsible for the content of the preprint and that the deposit in SciELO Preprints does not mean any commitment on the part of SciELO, except its preservation and dissemination.
- The authors declare that the necessary Terms of Free and Informed Consent of participants or patients in the research were obtained and are described in the manuscript, when applicable.
- The authors declare that the preparation of the manuscript followed the ethical norms of scientific communication.
- The authors declare that the data, applications, and other content underlying the manuscript are referenced.
- The deposited manuscript is in PDF format.
- The authors declare that the research that originated the manuscript followed good ethical practices and that the necessary approvals from research ethics committees, when applicable, are described in the manuscript.
- The authors declare that once a manuscript is posted on the SciELO Preprints server, it can only be taken down on request to the SciELO Preprints server Editorial Secretariat, who will post a retraction notice in its place.
- The authors agree that the approved manuscript will be made available under a [Creative Commons CC-BY](#) license.
- The submitting author declares that the contributions of all authors and conflict of interest statement are included explicitly and in specific sections of the manuscript.
- The authors declare that the manuscript was not deposited and/or previously made available on another preprint server or published by a journal.
- If the manuscript is being reviewed or being prepared for publishing but not yet published by a journal, the authors declare that they have received authorization from the journal to make this deposit.
- The submitting author declares that all authors of the manuscript agree with the submission to SciELO Preprints.