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Nicolas Giraudeau

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Nicolas Giraudeau, DDS, PhD^{1,2} 

Abstract

The current health crisis has led to the emergence of new practices, new tools, and an increased use of digital health. Unfortunately, these are too often developed in a way that defies all logic or which has nothing to do with public health. Oral health professionals have been particularly affected during this crisis, and the use of digital health, and especially teledentistry, has been considered in many countries. However, the development of teledentistry is not free of bogus “good” ideas. It is time that teledentistry be adequately considered, while ensuring the quality of the medical procedure and with the aim of reducing inequalities in terms of access to oral healthcare and public health problems.

Keywords

oral health, telemedicine, teledentistry, digital health, public health

What do we already know about this topic?

Teledentistry has been studied for 10 years now but too many bad practices have been developed and the most important element of telemedicine or teledentistry has been disregarded too many times: the public health implication.

How does your research contribute to the field?

My research and this article are a reminder for those who implement teledentistry, so that they do not forget that digital health is not always needed and that we must not allow the Covid-19 pandemic to increase inequalities in terms of access to healthcare.

What is your research’s implication toward theory, practice or policy?

I manage the teledentistry department in a university hospital and we have already carried out more than 6000 oral teleconsultations. Following my PhD in health law, I am now working on the impact of digital oral health in a medical pathway, and I am a digital health expert for the WHO and other national and international organizations.

The unprecedented health crisis that the world is currently experiencing had led us to deeply reflect on our society, our habits, and our personal and professional practices. The health sector is at the forefront. It is mostly healthcare professionals that have had to deal with this new virus and take care of patients but as “it never rains but it pours,” they have also been particularly affected by the changes in professional practices. This includes their outfits (PPE clothing, FFP2 masks, etc.) but patient care as we knew it has also changed significantly during this very strange period. They had to be innovative to adapt their professional activity to the strictest health restrictions. The lockdown periods that many countries around the world have experienced have certainly been the most difficult for medical practices. How can they treat, inform and reassure their patients when it is difficult or even impossible to meet with them? This question that many

caregivers have asked themselves should give rise to genuine innovation. However, it has also led to significant abuses and deteriorations in patient care.

Oral medicine has been particularly affected. It is considered as one of the health professions that was the most exposed to the virus, due to its activity inside the oral cavity

¹CEPEL, CNRS, University of Montpellier, Montpellier, France

²Dental department, University Hospital of Montpellier, Univ Montpellier, Montpellier, France

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Corresponding Author:

Nicolas Giraudeau, University of Montpellier, 545, Avenue du Pr Jean Louis Viala, Montpellier, 34080, France.
Email: nicolas.giraudeau@umontpellier.fr



and its proximity to patients. Consequently, oral medicine has had to adapt. Only dental emergency procedures¹ could be provided during the periods of active viral circulation,² and extremely specific procedures regarding ventilation of the premises, the practitioners' clothing and patient regulation had to be applied. During periods of low and medium viral circulation, all types of treatment could be provided. Nevertheless, the number of patients seen by a dental surgeon remains limited, due to hygiene protocols to avoid cross-contamination between patients or contamination between patients and oral health professionals.

In this strange context, innovative solutions had to be developed to ensure the continuity of care. Digital health has been used in many countries and in various forms. In this article we will only discuss the oral telemedicine or teledentistry applications that arose during this time, some of which are still in use.

Telemedicine is defined by the WHO as "*The delivery of health-care services, where distance is a critical factor, by all health-care professionals using information and communications technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and the continuing education of health-care workers, with the aim of advancing the health of individuals and communities.*"³

Oral telemedicine can therefore be defined as the application of telemedicine to oral health and more specifically to dentistry. However, experts and representatives of the profession need to reflect further, so that teledentistry can be better defined. I am among those who consider telemedicine to be a remote medical practice. This excludes any non-medical activity such as health education, information, and promotion. These 3 types of activity can be defined as a practice of digital health or e-health but not telemedicine. These types of practice must be systematically considered as "classic" or "conventional" activities. Teaching medical or dental students is not considered a medical practice. So why qualify it as telemedicine just because it is carried out remotely? Information and health promotion must be carried out as widely as possible in order to be effective. If information and health promotion carried out through digital tools is considered as telemedicine, this means that all those who participate in these activities are medical professionals. Moreover, if they are not medical professionals, they could be accused of illegal medical practice.

It is therefore essential to differentiate telehealth from telemedicine. Just as medicine is a part of health, telemedicine is a part of telehealth. Therefore, there is room for other health practices in the digital health sector, but these should not be considered as telemedicine or teledentistry.

Teledentistry could therefore be defined as the remote practice of dentistry by oral health professionals, within the limits of their practices, via the use of information and communication technologies. Its objectives are as follows: diagnosis, preventive and post-therapeutic monitoring, specialist advice, assistance in performing a procedure, prescription of a procedure or medicinal product, and any other practices

reserved for oral health professionals. This medical practice must be carried out with the same level of quality as when carried out in person.

As teledentistry is now defined as a medical activity, the acts performed must be of high quality. As with any new medical practice, it is essential that telemedicine practices be scientifically validated and that the technological tools used be recognized as medical devices. Telemedicine in general, and more specifically teledentistry, should not be viewed as an "inferior" dentistry practice. The credibility of the dentistry procedure is at stake. Indeed, if a teledentistry procedure does not provide a high level of care but is nevertheless recognized as a medical procedure, this could lead to a loss of recognition regarding the medical quality of our practice. Let us consider a concrete example: recognizing a videoconference as a remote oral consultation, even when it is carried out without the use of a medical device to visualise the teeth's surfaces and anatomical elements, discredits "traditional" oral consultations that would normally require equipment. It is therefore essential to clearly define the capacities, advantages, and limitations of each practice in teledentistry, so as to not deceive the patient but also to not expect too much from this inevitably limited practice. Even the current times should not justify the misuse of digital health and teledentistry. Digital health in general, and more specifically teledentistry, should only be considered as tools in the caregiver's therapeutic arsenal of 2020.

Telemedicine, and more specifically teledentistry, should be used in a closing reflection of territorial public healthcare.⁴ It is only part of the answer regarding the organization of continuity of care during lockdown periods and will only be of particular interest when it is integrated into a global public health policy applied in a given territory.⁵

Finally, digital health is undoubtedly the tool that will reduce inequalities in access to healthcare and that will help us move toward a health democracy that is often dreamed of but never achieved. To this end, we need to ensure that the development of telemedicine does not lead to new inequalities: (i) economic inequalities: access to these telemedicine services must be possible for all populations and not restricted to those who have a high-quality smartphone or laptop or who are able to purchase healthcare data collection devices; (ii) geographic inequalities: the development of telemedicine must be carried out in conjunction with the policies of digital coverage of an area; the development of teledentistry tools should not further penalize populations living in remote places where there are already few oral health professionals; (iii) usability inequalities: even if mobile applications and digital tools are more and more accessible, it is essential to keep in mind that not everyone has the same capacity to use an application or the same literacy in digital health; tools must be co-designed with the end-users.

Teledentistry practices must be developed by integrating these parameters related to quality of care and territorial public healthcare, so as to not discredit dentistry in its entirety.

These practices must also aim to meet an existing health need, without creating a new type of demand.

Author Contribution

Nicolas Giraudeau wrote the entire article alone.

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ORCID iD

Nicolas Giraudeau  <https://orcid.org/0000-0003-1141-0171>

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