

Launching a public statewide tele(oral)medicine service in Brazil during COVID-19 pandemic

Dear Editor,

The letter to the editor published by Villa, Sankar, and Shiboski (2020) encouraged us to also share our tele(oral)medicine model, proposed for the State of Santa Catarina (Brazil) and recently launched due to the COVID-19 pandemic.

The State of Santa Catarina is located in the South of Brazil, covering an area of 95,730 km², and is divided into 295 municipalities, with an estimated population of 7.164.788 inhabitants. Specialised medical facilities are centralised in urban centres. The State has 39 registered oral medicine (OM) specialists (one per 183,700 inhabitants).

The State, in partnership with the Federal University of Santa Catarina (UFSC), has developed a large-scale telemedicine network, which has been in place in the last 15 years. The *Santa Catarina State Integrated Telemedicine and Telehealth System* (STT/SC) offers coverage to 100% of the municipalities, and it integrates primary, secondary and tertiary healthcare facilities in a single infrastructure (Nobre & von Wangenheim, 2012; Savaris et al., 2017). Specific modules for some specialties are available, such as Teleradiology (von Wangenheim, Junior, Wagner, & Cavalcante, 2009), Telecardiology (Giuliano, Barcellos Junior, von Wangenheim, & Coutinho, 2012), Tele dermatology (von Wangenheim & Nunes, 2019)—and recently, Tele(oral)medicine. Some tests with Telepathology are also in progress (Petrolini et al., 2019).

Our tele(oral)medicine module aggregates a set of functionalities and processes established to enable the following: (a) the collection of clinical data by the dentist at the primary health units, (b) the remote support by a specialist to manage clinical conditions that can be treated at primary healthcare units and (c) the proper referral of patients to secondary health units, based upon prioritisation protocols. The prioritisation protocols were established in partnership with OM specialists from UFSC and Federal University of Rio Grande do Sul (Brazil), and submitted for analysis and approval by the State Health Commission (CIB/SC) (State Secretariat of Health of Santa Catarina, 2018).

The tele(oral)medicine module was implemented in the STT/SC web-based system, complying with the security criteria required for the transit of sensitive patient data through the network, according to the Brazilian regulations (i.e. confidentiality/encryption, authenticity, integrity, irrefutability and timestamping). The pilot phase started in January 2020 and was expected to last four months.

However, with the suspension of elective consultations due to the pandemic, the launch of the teleservice was anticipated, focusing on identifying and prioritising consultations for patients with serious conditions, such as those with suspected oral cancer.

The tele(oral)medicine flow is illustrated in Figure 1. Dentists at primary healthcare units collect clinical data and images of oral lesions, registering the information via STT/SC portal (<https://telesauade.ufsc.br/>). Clinical data are collected using the online version of the OralDESC structured form (Zimmermann, Meurer, Lacerda, Mello, & Grando, 2017). The OM specialist then evaluates the case and provides a report, indicating the clinical management. When a more serious condition is suspected, an urgency priority is established and face-to-face consultation at a secondary healthcare unit is authorised. Elective cases, during the pandemic, are being monitored at primary healthcare units and being placed on a waiting list (priority already established).

We adopted the asynchronous interaction between healthcare professionals, although the system supports video conferencing-based teleconsultations. To some extent, this is due to Brazil having authorised patient/professional consultations only recently (15 April 2020) and exclusively during the COVID-19 pandemic. On the other hand, as the model was developed for the Brazil's National Health System, it makes sense that it is focused on providing low-cost, large-scale specialist support to primary healthcare units.

The images sent by dentists often have good quality, and few cases were invalidated due to poor-quality images (in these cases, the professional is instructed to take new images). The experience acquired with Tele dermatology, however, showed the importance of training healthcare teams, and training sessions are being planned to occur after the end of the pandemic. Clinical management protocols and models of structured reports are also being considered in order to facilitate routine reporting and metadata retrieval in the future. The development of a smartphone application for a controlled image acquisition is also being considered.

We agree with Villa, Sankar & Shiboski that telemedicine/telehealth tools are useful to provide clinical and supportive care to patients with oral diseases in these pandemic times. We also believe in the educational potential of the relationships established between professionals through the referral processes of patients (Tattersall, Butow, Brown, & Thompson, 2002), even if they are mediated by interactions at a distance.

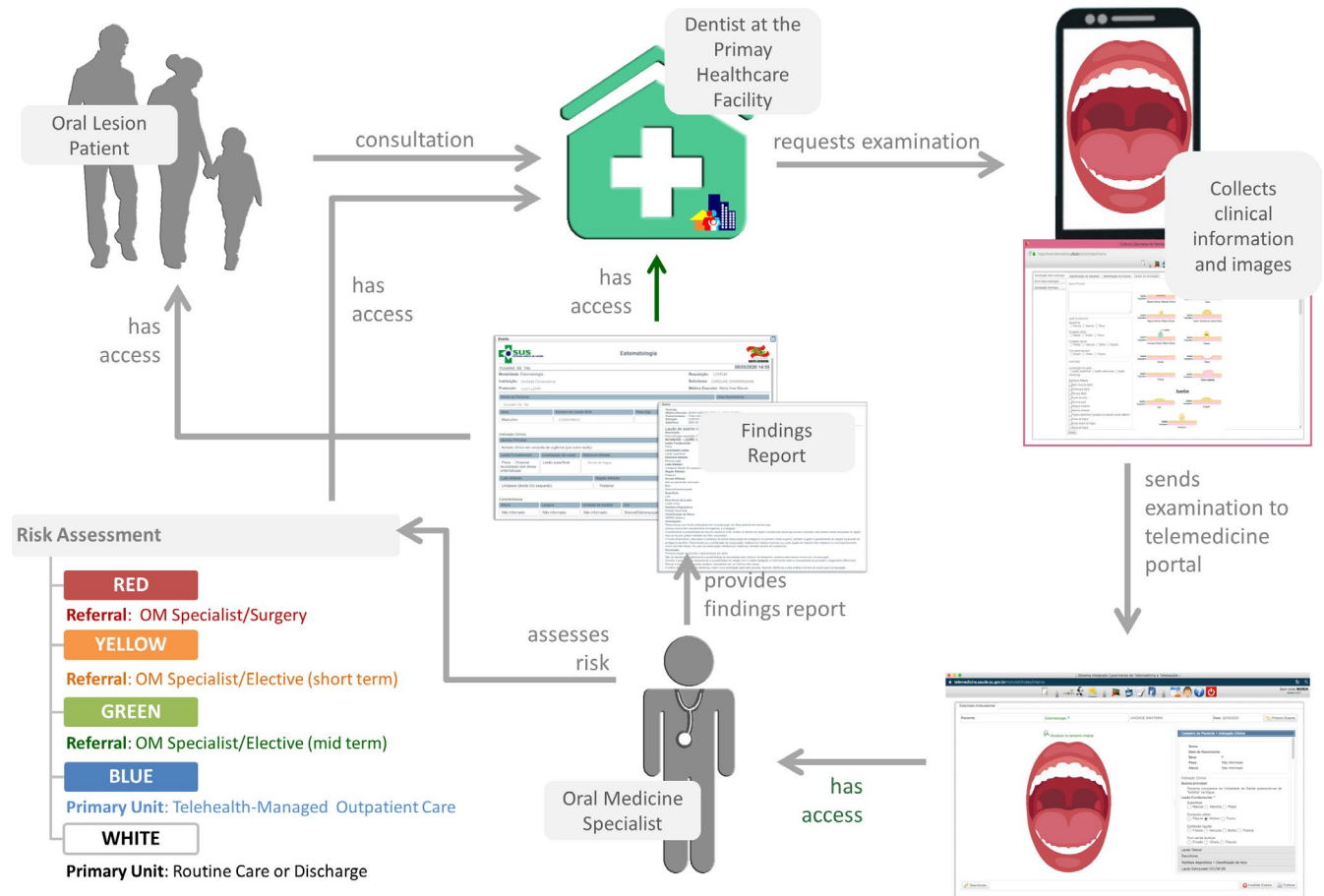


FIGURE 1 Tele(oral)medicine flow at STT/SC system, showing the roles of the dentist and the OM specialist. Colours are used for risk assessment and prioritising of the consultation with the specialist: red > yellow > green. Blue refers to cases that can be managed at primary care with remote tele-assistance from specialist. White refers to cases that require only patient guidance (no treatment)

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CONFLICTS OF INTEREST

None to declare.

AUTHOR CONTRIBUTION

Maria Inês Meurer: Conceptualization; Investigation; Methodology; Project administration; Supervision; Validation; Writing-original draft; Writing-review & editing. **Aldo von Wangenheim:** Conceptualization; Methodology; Visualization; Writing-original draft; Writing-review & editing. **Caroline Zimmermann:** Conceptualization; Investigation; Methodology; Validation; Writing-review & editing. **Alexandre Savaris:**

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