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LETTER TO THE EDITOR

# Impact of the COVID-19 pandemic on dental surgery procedures performed by maxillofacial surgeons in Brazil

Letter to the Editor,

The COVID-19 pandemic arising from the spread of the SARS-CoV-2 virus all over Brazilian territory, exceeded 590 thousand deaths in September 2021 (https://covid.saude.gov.br/). Despite the Brazilian Unified Health System (*Sistema Único de Saúde* - SUS) being the biggest public health system in the world covering dental care services, the country still faces an alarming epidemiological scenario, which has led to direct consequences for the performance of elective and/or emergency oral and maxillofacial surgery (OMFS) procedures.[1,2]

In this dental specialty, professionals carry out reconstruction of facial fractures, drainage of abscesses, tooth extractions, orthognathic surgery, rehabilitation of orofacial clefts, and other surgical procedures. Studies around the world have evaluated the effects of the pandemic in dental care by maxillofacial surgeons.[3-5] In the sense of clarifying the implications of the COVID-19 pandemic on OMFS services in Brazil, this study aimed to compare the number of OMFS procedures and consultations in SUS between the pre-pandemic (March 2019–February 2020) and the pandemic (March 2020–February 2021) periods, from the five Macroregions of Brazil (North, Northeast, Southeast, South and Midwest), representing the Brazilian States (26 States and the Federal District).

Dental records collected from the Information Technology Department of the Public Health Care System–SUS (DATASUS)[6] showed a great drop in dental surgical procedures in the pandemic period (-60.5%), with enucleation of odontogenic and non-odontogenic cysts (-70.5%), permanent tooth extraction (-61.9%) and periapical curettage (-60.9%) being the most affected treatments (Table 1). The decrease in the number of consultations performed by maxillofacial surgeons in SUS reached 53.5% throughout Brazil, corresponding to over one million unfulfilled dental care during the pandemic period. Among the different Brazilian regions, the Southeast (-68.6%) had the highest decrease in the number of OMFS appointments (Table 2). Tables 1 and 2 also show the comparison of the incidence rate adjusted per million population for the five geographical regions of Brazil and throughout the whole country. There was a consistent and significant decrease in the incidence rate all over Brazil.

Notwithstanding the restrictive measures imposed by the COVID-19 pandemic, a variety of oral diseases requires proper diagnosis and treatment. The alarming reduction in the demand for dental care, as mentioned by Chisini et al (2020) in paediatric dentistry, may also be serious in OMFS. Since the postponement or even the non-performance of surgical procedures, such as the treatment of alveolitis and abscess drainage, can lead to the spread of severe infections, compromising oral and systemic health of patients.[1,3,7]

In a near future, the Brazilian public health system could suffer a dramatic impact for damage to the oral health of the population, likely to be previously treated with low complexity dental procedures, besides the increase in the number of hospitalisations of patients with severe infections. This becomes a complicating factor in the pandemic period, due to the limited number of professionals and hospitalisation vacancies.[2,8] Barca et al. (2020)[7] and Maffia et al. (2020)[7] warn that the advance in the vaccination against COVID-19 and the use of personal protective equipment reduce the risk of contamination during dental surgical procedures and ensure the maintenance of OMFS services.

The COVID-19 pandemic period seems to negatively impact the dental care provided by Brazilian maxillofacial surgeons. Thus, this study highlights the importance of maintaining the OMFS services in the pandemic period to attend dental emergencies, avoiding the possibility of worse outcomes.

## PATIENT CONSENT

Not applicable.

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### CONFLICTS OF INTEREST

None to declare.

**TABLE 1** Difference between the number of *dental surgery procedures* performed by *maxillofacial surgeons* in Brazil by the Brazilian Public Health System (SUS) from the pre-pandemic compared to the pandemic period.

| Procedure | Pre-pandemic period Mar/19–Feb/20 | Pandemic period Mar/20–Feb/21 | Difference | % | |
|---|---|---|---|---|---|
| Permanent tooth extraction | 463,756 | 176,674 | −287,082 | −61.9 | |
| Per million pop. | 2197.89 | 837.31 | | | <0.0001 |
| Alveolitis treatment | 6517 | 2892 | −3625 | −55.6 | |
| Per million pop. | 30.86 | 13.7 | | | <0.0001 |
| Abscess drainage | 6214 | 3629 | −2585 | −41.6 | |
| Per million pop. | 29.5 | 17.2 | | | <0.0001 |
| Periapical curettage | 165,214 | 64,602 | −100,612 | −60.9 | |
| Per million pop. | 783.0 | 306.17 | | | <0.0001 |
| Odontogenic and non-odontogenic cyst enucleation | 7984 | 2352 | −5632 | −70.5 | |
| Per million pop. | 37.83 | 11.14 | | | <0.0001 |
| Temporomandibular dislocation reduction | 1827 | 1242 | −585 | −32.0 | |
| Per million pop. | 8.65 | 5.88 | | | <0.0001 |
| Alveolar fracture reduction | 9574 | 4960 | −4614 | −48.2 | |
| Per million pop. | 45.37 | 23.5 | | | <0.0001 |
| Suture of skin and oral mucosa | 44,403 | 22,311 | −22,092 | −49.8 | |
| Per million pop. | 210.44 | 105.73 | | | <0.0001 |
| Total | 705,489 | 278,662 | −426,827 | −60.5 | |
| Per million pop | 3343.54 | 1320.62 | | | <0.0001 |

Abbreviation: Pop, Population

**TABLE 2** Difference between the number of *appointments* performed by *maxillofacial surgeons* in Brazil by the Brazilian public health system from the pre-pandemic compared to the pandemic period.

| Region | Pre-pandemic period Mar/19–Feb/20 | Pandemic period Mar/20–Feb/21 | Difference | % | |
|---|---|---|---|---|---|
| North | 153,115 | 62,208 | −90,907 | −59.4 | |
| Per million pop | 9383.19 | 3812.23 | | | <0.0001 |
| Northeast | 787,204 | 554,472 | −232,732 | −29.6 | |
| Per million pop | 14602.92 | 10285.68 | | | <0.0001 |
| Southeast | 1,242,410 | 390,718 | −851,692 | −68.6 | |
| Per million pop | 15231.96 | 4790.20 | | | <0.0001 |
| South | 275,598 | 127,742 | −147,856 | −53.6 | |
| Per million pop | 9938.03 | 4606.36 | | | <0.0001 |
| Midwest | 152,828 | 78,573 | −74,255 | −48.6 | |
| Per million pop | 10595.43 | 5447.39 | | | <0.0001 |
| Total | 2,611,155 | 1,213,713 | −1,397,442 | −53.5 | |
| Per million pop | 12375.14 | 5752.19 | | | <0.0001 |

Abbreviation: Pop, Population.

## AUTHOR CONTRIBUTIONS

All authors contributed to data interpretation, writing and final approval of the manuscript.

## ETHICAL APPROVAL

Not applicable.

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