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**Original Article**

## **Continuing education in Oral Medicine and Oral and Maxillofacial Pathology: a Brazilian regional experience**

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#### **Statement of Clinical Significance**

This study highlights the substantial impact of a virtual continuing education program in Oral Medicine and Oral Pathology on dental practitioners in Minas Gerais. By offering accessible, cost-free education, the program addressed key gaps in professional development, particularly in the diagnosis and treatment of oral diseases, with a focus on oral cancer. The success of this initiative is evidenced by high participant engagement, with over 2,300 professionals attending a series of ten events. In addition to enhancing clinical knowledge, the program also fostered a sense of professional recognition and achievement through prestigious awards, motivating practitioners to excel in their fields. The findings underscore the importance of continuing education in advancing clinical competence, improving patient care, and promoting lifelong learning in the dental community.

## **Abstract**

**Objective:** The objective of this study is to evaluate the outcomes of the continuing education program in Oral Medicine and Oral and Maxillofacial Pathology, from December 2021 to April 2024. **Methods:** The program, conducted virtually via Google Meet®, aimed to enhance the professional development of dental practitioners in the state of Minas Gerais. **Results:** A total of ten events were held, attracting over 2,300 participants, including general dentists, dental students, and oral health technicians. The topics covered ranged from clinical case discussions to the diagnosis and treatment of oral diseases, with a particular focus on oral cancer. The study assessed participant engagement through metrics such as attendance and participation in discussions. In addition to the educational events, two awards were established: the "Professor Edgard Carvalho Silva" award, which recognizes outstanding projects in the field of Oral Medicine and Oral Pathology, and the "Carlos Roberto Martins" award, which honors exceptional professionals for their achievements in teaching and research. These initiatives successfully promoted lifelong learning and motivated professionals to advance in their respective fields. **Conclusion:** The findings indicate that educational program played a pivotal role in addressing the professional needs of the dental community, offering accessible, cost-free education, and fostering greater awareness and excellence in Oral Medicine and Oral and Maxillofacial Pathology throughout Minas Gerais.

**Keywords:** Diagnosis oral; Education; Oral pathology, Oral cancer, Oral medicine.

## **INTRODUCTION**

Health education aims to reduce individual and collective disparities in professionals<sup>1,2</sup>. Brazil is the second country with the highest number of dentists, approximately 400,368, and the most significant proportion of dentists per 10,000 inhabitants, approximately 19,712, although very poorly distributed around the sizeable Brazilian territory. Jointly, these facts reinforce the even greater need for continued and accessible education<sup>3,4</sup>.

Oral diseases are among the most prevalent disorders worldwide, causing significant health and economic burdens and diminishing affected individuals' quality of life<sup>5</sup>. In 2023, more than 15,000 Brazilians were to be affected by oral cancer, with the majority diagnosed in advanced stages, reducing the chance of disease control and patient survival<sup>6,7</sup>. Education, in the context of a formal learning environment, cannot be considered a finite element of subject development, instead, an ongoing process<sup>2</sup>. The Brazilian Society of Stomatology and Oral Pathology has implemented continuing education programs, which have greatly contributed to the field of oral medicine<sup>8</sup>.

Brazil, in addition to having the Federal Council of Dentistry that supervises the professional activity in the country, also has 27 Regional Councils<sup>9</sup>. The Regional Council of Dentistry of the Minas Gerais state established the Technical Chamber (TC) of Oral and Maxillofacial Pathology and Oral Medicine in December 2021. This advisory group is composed of specialists, researchers, and professors who provide advice to the Council<sup>10</sup>.

The TC was created to support and improve the performance of these specialties, thereby promoting integral health for the public. It also assists in preparing opinions, consultations, and publications related to Oral and Maxillofacial Pathology and Oral Medicine. In this period of approximately two years of operation, the TC organized virtual continuing education activities, including events that covered essential topics in the clinical practice of Oral Medicine and Oral and Maxillofacial Pathology.

The objective of this study is to assess the outcomes and effectiveness of the continuing education program organized by the TC in Oral Medicine and Oral and Maxillofacial Pathology. Specifically, it aims to evaluate the participation, topics covered, and overall impact on dental professionals and students in Minas Gerais.

## **METHODS**

This study analyzed data from ten continuing education and awards events conducted by the TC from December 2021 to April 2024. The continuing education events, held virtually via the Google Meet® platform, featured lectures and discussions led by specialists in Oral Medicine and Oral and Maxillofacial Pathology. Minas Gerais

is a state in the Southeast region of Brazil, with 853 municipalities and a population of 20,538,718<sup>3</sup>, with 48,587 dentists. Events metrics, including attendance rates, topics covered, participation in discussions, and interaction with event materials (such as shared documents and presentations), were recorded to gauge the level of engagement among attendees.

We also report the creation of two awards to recognize outstanding contributions and achievements within the field of Oral Medicine and Oral and Maxillofacial Pathology. The award categories were defined as follows: the first category focused on projects and actions within the field, while the second category recognized outstanding researchers and professors in the area in the state of Minas Gerais. As for the selection criteria, a committee was formed to review the nominations and select the recipients. This committee was carefully assembled to ensure there were no conflicts of interest with any of the award nominees, ensuring the selection process was fair and unbiased.

## RESULTS

The development of continuing education opportunities in Oral Medicine and Oral and Maxillofacial Pathology, offered through free digital platforms, involved the participation of dental professionals, including undergraduate students and practicing dentists of Minas Gerais and other Brazilian states. This assessed the outcomes of a continuing education program created by the TC of Oral Medicine and Oral and Maxillofacial Pathology. The lectures focused on clinical themes developed by Oral Medicine and Oral and Maxillofacial Pathology specialists ([Table 1](#)).

**Table 1.** Continuing education program in Oral Medicine and Oral Pathology and the audience that simultaneously participated in the transmission.

Date	Theme	Number of participants
April, 2022	Training of dentists to welcome oncology patients.	220
June, 2022	Do you know how to examine your patient?	200

July, 2022	The importance of diagnosis and initial clinical management in Oral Medicine and Pathology.	213
September, 2022	Is trauma a risk factor for oral cancer?	230
September, 2022	Is oral cancer different in young patients?	230
November, 2022	Electronic cigarette and oral health: what is important to know?	250
February, 2023	Interesting Clinical Cases in Oral Medicine and Maxillofacial Pathology.	300
April, 2023	Biopsy of oral lesions: indications and technique.	267
August, 2023	Oral Cancer for the General Practitioner.	196
April, 2024	Introduction to the use of lasers in dentistry.	256
Total		2,362

So far, there have been ten continuing education opportunities, each with an average of 236 attendees and a total audience of 2,362. Most participants were general dentists, dental students, and oral health technicians. The most commonly addressed topic was oral cancer, the main focus of four events. The meetings lasted about two hours in the evening via the Google Meet® platform. In all actions, specific issues regarding Oral Medicine were presented and discussed, such as challenging clinicopathological cases, diagnosis, treatment, and prognosis, and open to the public for consideration and questions. The TC has actively promoted Oral Medicine and Oral and Maxillofacial Pathology through educational activities accessible to all oral health professionals. They conducted several in-person training programs and used various media platforms, including television, social networks, and booklets, to disseminate guidance on relevant topics for dental professionals.

Apart from the public-oriented actions, the TC has created two awards to recognize the efforts of professionals. The first award aims to acknowledge the programs and initiatives that contribute to the growth of Oral Medicine. The "*Professor Edgard Carvalho Silva*" award has been instituted in honor of one of the pioneering

dentistry professionals who dedicated his life to these specialties. In its two editions, more than 40 works from across the state competed for the award. The second “*Carlos Roberto Martins*” award recognizes excellence in teaching, researching, and developing Oral Medicine and Oral and Maxillofacial Pathology. These actions have increased the scope and relevance of Oral Medicine and Oral and Maxillofacial Pathology in Minas Gerais.

## DISCUSSION

The findings indicate a strong interest and participation among dental professionals and students in the continuing education events organized by the TC. The program effectively utilized digital platforms to overcome geographical barriers, ensuring widespread accessibility without financial cost to participants. By focusing on relevant clinical topics and leveraging the expertise of specialists, the TC contributed significantly to the professional development and knowledge enhancement of the dental community in Minas Gerais. The development and implementation of continuing education opportunities in Oral Medicine and Oral and Maxillofacial Pathology have significantly impacted dental professionals in Minas Gerais, Brazil. The continuing education program orchestrated by the TC of Oral Medicine and Oral and Maxillofacial Pathology stands out as a pivotal initiative in fostering ongoing professional development within the state.

In Brazil, during the COVID-19 pandemic, elective health services were impaired work and partially suspended, leading to a significant reduction in assistance for patients affected by oral diseases and cancer<sup>11,12</sup>. However, several continuing education and telediagnosis actions were carried out during this period, which were beneficial to professional development and improved the quality of diagnosis and treatment of patients<sup>13</sup>. Digital media has played a crucial role in consolidating knowledge in the healthcare sector across the globe. It has proven to be a valuable and effective tool for learning, especially when utilizing interactive and collaborative means of teaching. Such methods take into consideration the students' motivation and expectations while using easy-to-use technologies that place the viewers at the center of

the learning process<sup>14</sup>. Utilizing the Google Meet® platform for virtual sessions lasting about two hours each evening has proven effective in accommodating diverse schedules and geographic locations across the state's 853 municipalities. This accessibility has democratized access to specialized knowledge, allowing a wide range of professionals to engage in discussions on challenging clinicopathological cases, diagnosis, treatment modalities, and prognostic considerations.

Over the last 50 years, Oral Medicine in Brazil has expanded significantly thanks to the relentless efforts of committed professionals who teach, practice, and research in the field<sup>15</sup>, while the same development can be observed for Oral and Maxillofacial Pathology. Expanding dentistry education in Brazil, especially in the private sector, has posed significant challenges in structuring and training dentists, including teaching oral medicine. Teaching Oral Medicine and Oral and Maxillofacial Pathology varies among institutions, and the content is not considered a specific subject in some undergraduate dental programs<sup>15,16</sup>. However, the country's scientific production significantly impacts the number of publications in the prominent journals of Oral Medicine and Oral and Maxillofacial Pathology<sup>17</sup>. This growing body of research is not only a reflection of the country's advancements in the field but also plays a crucial role in enhancing the quality of education. Having these distinguished professionals involved in continuing education programs is of great importance, as their expertise significantly contributes to the improvement of teaching standards and the professional training. Excellence in professional care, teaching, and research activities gave the specialty a featured place in this country<sup>15</sup>.

Beyond educational sessions, the TC established two prestigious awards — the "Professor Edgard Carvalho Silva" and "Carlos Roberto Martins" awards — specifically to recognize outstanding actions and professionals in the fields of Oral Medicine and Oral Pathology within the state of Minas Gerais. These awards demonstrate a strong commitment to honoring excellence in both clinical practice and professional contributions within the region. These awards not only honor the contributions of outstanding professionals but also stimulate innovation and excellence in teaching, research, and clinical practice within the field. The enthusiastic response from participants, with over 40 submissions competing in each edition, underscores the awards' role in motivating and inspiring professionals to strive for excellence. The effects of these initiatives extend beyond Minas Gerais, influencing similar activities and initiatives throughout Brazil. By promoting these awards and disseminating



knowledge through various media channels, social networks, the TC has effectively heightened awareness and relevance of Oral Medicine and Oral and Maxillofacial Pathology on a national scale.

## **CONCLUSION**

In conclusion, this study prompts reflections on the continuing education opportunities available to dental professionals and students, as well as highlights the importance of the involvement of Oral Medicine and Oral and Maxillofacial Pathology professionals in this discussion and the role of the Council of Dentistry as a promotor of these actions. Notably, this proposal of continuing education has easy access, has no financial cost for the participants, and can be a way to transmit specialized knowledge to more participants.

## **SUBMISSION DECLARATION**

This article has not been previously published; it is not under consideration for publication elsewhere; its publication has been approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out. If accepted, it will not be published elsewhere, the copyright holder's written permission, including digitally in the same form, in English or other language, without the copyright holder's written consent.

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## **AUTHORS' CONTRIBUTIONS**

FTAS: conceptualization, data curation, methodology, validation, supervision, writing – original draft, writing – review & editing. FPF: data curation, investigation, methodology, writing – review & editing; MCFA: data curation, investigation, methodology, writing – review & editing. SNA: data curation, investigation, methodology, writing – review & editing. SPBP: data curation, investigation, methodology, writing – review & editing. ALSG: data curation, investigation, methodology, writing – review & editing. LAR: data curation, investigation, methodology, writing – review & editing. LMRPD: data curation, investigation, methodology, writing – review & editing. SVC: data curation, investigation, methodology, writing – review & editing. MSC: data curation, investigation,

methodology, writing – review & editing. JACH: data curation, investigation, methodology, writing – review & editing. HMJ: conceptualization, investigation, supervision, methodology, writing – original draft; writing – review & editing.

## CONFLICT OF INTEREST STATEMENT

**Funding:** This study was not supported by any funding.

**Competing interests:** The authors have no relevant financial or non-financial interests to disclose.

**Ethics approval:** This study is a report of educational experiences in oral pathology and oral medicine, not involving patients and therefore there was no need for ethics committee approval.

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