

# Implementation of a Program to Tackle Dental Caries in Schoolchildren in the State of São Paulo through Continuing Education

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## Graphical Abstract

### Highlights

- Empower oral health teams to combat dental caries in São Paulo schoolchildren through Minimal Intervention Dentistry.
- Use of ICTs for Continuing Education, document analysis, YouTube statistics, and evaluations during the first 7 months.
- Broad engagement of the Regional Health Departments, predominantly mobile access, and dissemination of practices to other professionals.
- Virtual clinics and ICTs reduce inequalities, promote training, and integrate science into professional practice.

### IMPLEMENTATION OF A PROGRAM TO TACKLE DENTAL CARIES IN SCHOOLCHILDREN IN THE STATE OF SÃO PAULO THROUGH CONTINUING EDUCATION

#### Methodology

- Case report with a quali-quantitative approach.
- Data collected through document analysis and YouTube statistics.
- Classes delivered via YouTube with interaction through WhatsApp and Google Classroom.
- Workshops held to support the implementation of the new oral health care model in the state.

#### Results

- Wide adherence to the program, with the participation of representatives from all Regional Health Directories (DRS) in the state of São Paulo, Brazil.
- Predominance of access through mobile devices, highlighting the importance of ICTs in expanding access.
- Effective dissemination of the practices discussed in the virtual clinics to other professionals in the service.

#### Conclusion

- ICTs complement traditional strategies and help reduce inequalities in access to Permanent Education in oral health.
- The partnership between education, service, and community promotes implementations adapted to municipal needs.
- Permanent education empowers workers, strengthening the integration between science and professional practice.

Graphic summary made by Giraldes, AL.

### Abstract

Despite the advances of the National Oral Health Policy (Brasil Soridente Program) in reducing the prevalence of caries, challenges persist, especially among more vulnerable groups. This study aimed to describe and analyze the process of the first seven months of implementing a government program of Continuing Education to tackle dental caries in schoolchildren in the state of São Paulo, using Information and Communication Technologies (ICTs) to disseminate Minimal Intervention Dentistry practices in partnership with the University. This is a case report with a qualitative-quantitative approach. Data sources included document analysis and statistics produced by YouTube. Classes were conducted via the YouTube platform, with interaction through WhatsApp groups and Google Classroom. Workshops were developed to support the implementation process of the new oral health care model in the state. The experience reported in this study highlights the effectiveness of using ICTs, as a considerable audience was reached, with at least one representative from each Regional Health Department (DRS) present. There was a higher prevalence of access via mobile devices, underscoring the potential of technologies to complement traditional strategies and help reduce inequalities in access. Collaboration between teaching, service, and the community allowed for implementation aligned with the specificities of each municipality, highlighting the role of science in professional practice. Furthermore, it is noteworthy that Continuing Education empowered workers, as information from professionals who participated in virtual clinics was disseminated to service professionals.

**Keywords:** Professional Practice. Primary Health Care. Oral Health. Implementation Science. Continuing Education.

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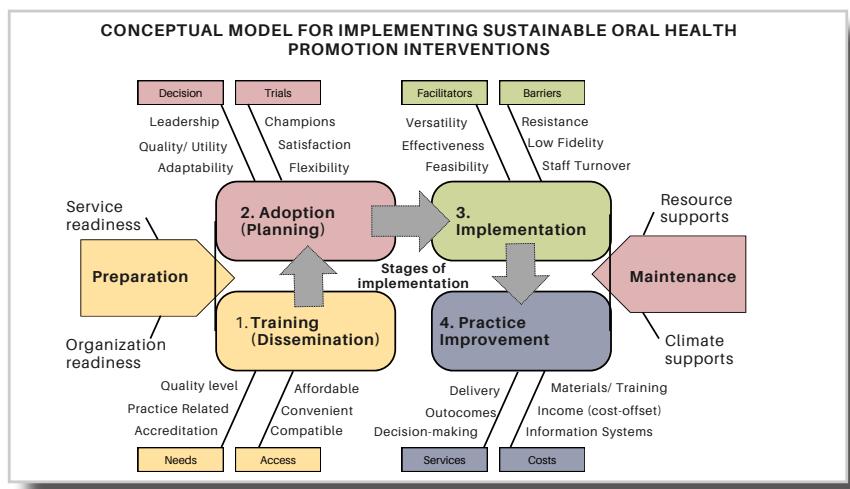
## INTRODUCTION

Continuing Education is a political-pedagogical approach that provides workers with the opportunity to learn continuously and integrated into their practice<sup>1</sup>. This modality is a fundamental strategy for promoting changes in the health sector, aiming to make it an environment where professionals can act critically, reflectively, proactively, committedly, and technically competently<sup>2</sup>. The qualification of professionals should occur based on the demand of workers and aim to improve the quality of the work process<sup>3</sup>.

In recent years, advances in Information and Communication Technologies (ICTs) have enabled more accessible knowledge exchange through the creation of non-face-to-face teaching and learning spaces that bring learners and educators closer<sup>4</sup>.

Thus, it becomes crucial to leverage the advantages of technologies to promote the education and training of professionals at a distance, and consequently establish a closer relationship between Academia (evidence producers) and services (evidence consumers).

Simpson, in 2011, proposed a theoretical model for implementing oral health actions and programs, which considers training as the first step in the process to make an intervention sustainable (Figure 1). According to the authors, training is based on two pillars: the first is "need," which includes quality, its link to practice, and the certification of learners. The second pillar is access, meaning that training must necessarily be accessible, convenient, and compatible<sup>5</sup>.



**Source:** Simpson, 2011.

**Figure 1** - Conceptual Model for implementing sustainable oral health promotion interventions.

In Brazil, there are many challenges related to oral health, with a focus on dental caries, which remains the most prevalent condition. However, this is not a national problem, as the World Health Organization (WHO) estimates that this condition affects more than two billion adults, resulting in the loss of permanent teeth, and more than 560 million children, leading to the loss of deciduous teeth.

Since the early years of implementing the National Oral Health Policy (known as Brazil Smiling – *Brasil Soridente* Program), the prevalence of dental caries has decreased significantly<sup>6</sup>. No entanto, a doença ainda apresenta uma distribuição desigual, sendo mais prevalente em grupos sociais vulneráveis. However, the disease still shows an unequal distribution, being more prevalent among vulnerable social groups. In the state of São Paulo, in particular, data from the State

Oral Health Survey SBSP2015<sup>7</sup> reveal that poorer individuals use dental services less and, when they do seek care, it is not primarily for preventive reasons, resulting in a worse prognosis<sup>8</sup>. Minimal Intervention Dentistry (MID) has been pointed out as an alternative for treating dental caries, with positive cost-effectiveness and longevity of restorations. Given these new evidences, it is imperative to rethink the oral health care offered to the population, with the need for a more qualified workforce using innovative Continuing Education processes that result in practice change.

This study aimed to describe and analyze an experience of qualifying oral health teams to tackle dental caries in schoolchildren in the state of São Paulo, based on the implementation of Minimal Intervention Dentistry and the teaching-service-community relationship.



This is a case report, considering that the phenomenon studied is in a current context. According to Prodanov and Freitas<sup>9</sup>, for a case study, the researcher must also be prepared to use multiple sources of evidence. In this sense, document analysis, statistics produced by YouTube, and qualitative and quantitative evaluations of activities carried out during the first seven months of the oral health team qualification project were used as sources of evidence. In addition to these sources, the participation of the authors of this article as active agents in the implementation process of the experience will be considered. This project was approved by the Ethics Committee of the School of Dentistry of the University of São Paulo (CEP/FOUSP) under opinion no. 7,067,561 (Appendix 01).

### **Context of the qualification project**

São Paulo is the largest and richest state in Brazil, with a total area of 248,222.362 km<sup>2</sup> and about 44 million inhabitants. If it were an independent country, its nominal GDP could be ranked among the top 20 in the world (IBGE, 2022).

The State Health Secretariat (SES) has a technical area for oral health, which aims to promote the oral health of the population, prevent diseases, and daily support municipalities and induce oral health policies and programs. In 2021, São Paulo had 1,700 Oral Health Teams (ESB), distributed across its 645 municipalities, in 17 Health Regions.

The state has several public universities, including the University of São Paulo (USP), which has a dentistry course recognized nationally and internationally<sup>10</sup>, and, historically, develops projects in partnership with SES.

SES and USP, through its Evidence and Economic Analysis Center, used technological tools to develop Continuing Education strategies to facilitate decision-making and the reorganization of work processes in the oral health area throughout the state of São Paulo<sup>11</sup>.

The state of São Paulo has shown a decrease in the prevalence of caries, which is positive and reflects the work of the state's oral health teams. However, the same data reveal that the pattern of disease polarization persists, with vulnerable groups deeply affected, which poses a challenge for oral health teams and has strained the relationship between users and the local health system<sup>12</sup> (DataSUS, 2024).

### ***The intervention proposal in the oral health of the state of São Paulo***

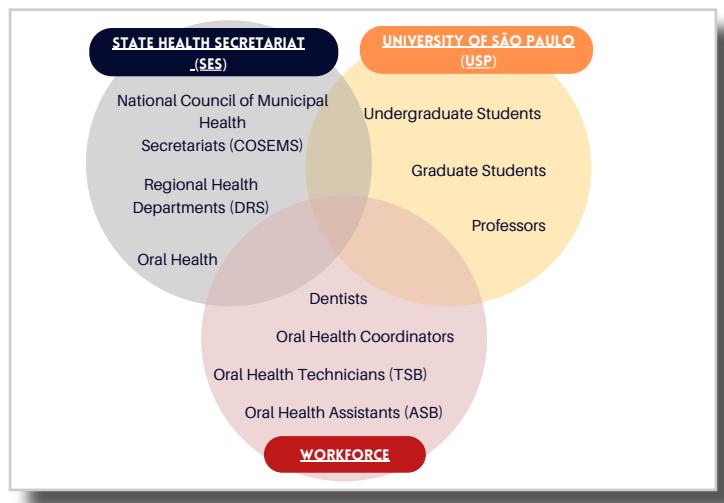
Every year, municipalities in the state of São Paulo, through the School Health Program (PSE)<sup>13</sup>, conduct risk assessment and referral of schoolchildren in need of individual treatment. However, previous studies have warned that only 11.8% of these schoolchildren attend the Basic Health Units (UBS), where the oral health teams are located<sup>14</sup>.

Given the need to care for these schoolchildren, a community intervention model applied in the school environment was proposed. This model addresses the issue of dental caries from a collective perspective, based on Minimal Intervention Dentistry, considering advances in scientific evidence, dental materials, and operative techniques<sup>15</sup>. The Atraumatic Restorative Treatment (ART) was created based on scientific evidence to promote health in an innovative, ethical, and humanistic way. This minimally invasive technique consists of two phases: the educational and preventive phase, which includes guidance on oral hygiene and diet, and the restorative phase, intended only for children who need intervention. The intervention is based on the selective removal of dentin tissue and the restoration of the cavity with adhesive material using manual instruments, without the need for dental equipment such as an electric motor<sup>16</sup>.

The qualification process of the state's oral health team began with the synthesis of evidence on available options for tackling dental caries<sup>17</sup>, resulting from research by USP graduate students, which culminated in the development of a customized project for the state of São Paulo. Developed by the Evidence and Economic Analysis Center of USP in partnership with the technical area of oral health of SES/SP, it was presented and approved by different decision-making instances at the state level (State Councils of Municipal Health Secretaries - COSEMS), regional (coordinators of the Regional Health Departments - DRS), and local (oral health articulators of the Regional Health Departments - DRS).

Figure 2 shows the participation of various actors in the project implementation process. The involvement of different professional categories is highlighted, in addition to the predominance of those involved in dental issues, including researchers, managers, consultants, and technicians.



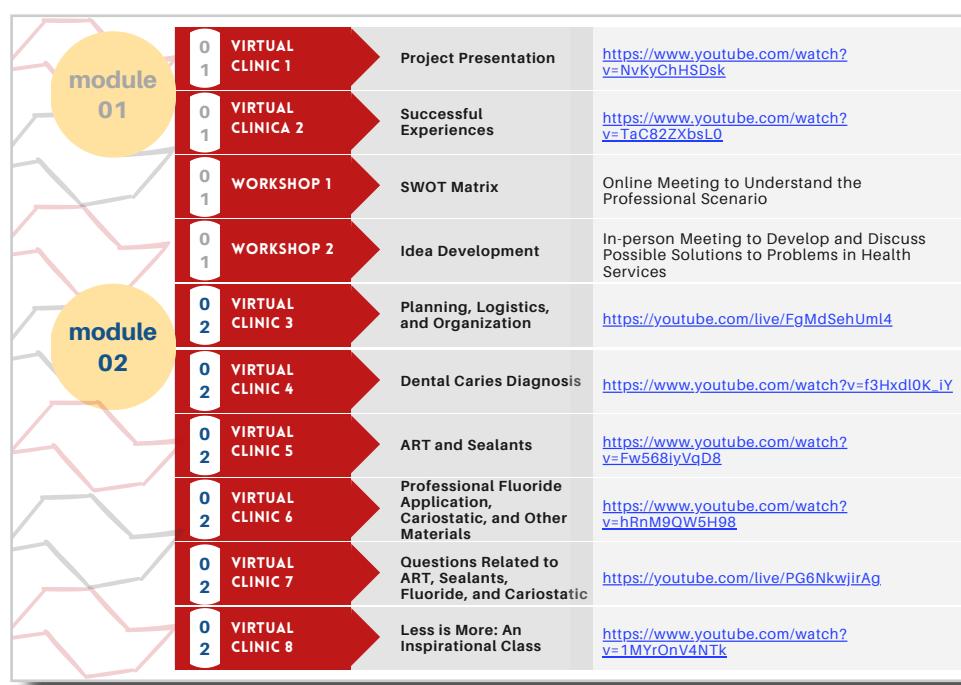


**Source:** Design produced in Canva, 2024.

**Figure 2** - Relationship of SES in partnership with USP and the workforce of the oral health service in the Project "Task Force to Tackle Caries in Schoolchildren in the State of São Paulo - Brazil".

To implement this new care model, the "Task Force to Tackle Dental Caries in the State of São Paulo" was proposed, based on Continuing Education and the training of the oral health workforce through two distinct strategies. The first was knowledge translation<sup>18</sup>, called "virtual clinics," in the format of lives via YouTube, divided into modules and taught by ex-

perts on the topics. The second strategy was based on theoretical models of implementation science<sup>19</sup> and scaling science<sup>20</sup> and was characterized by synchronous workshops (in-person and online) mediated by tutors. These strategies were carried out in two modules developed at different periods but close to each other without discontinuity (Figure 3).



**Source:** Design produced in Canva, 2024.

**Figure 3** - Link and themes of the contents of Module 01 and 02 of the Project "Task Force to Tackle Caries in Schoolchildren in the State of São Paulo - Brazil".

Module 1 aimed to launch the proposal to managers and oral health workers in the municipalities and sensitize the various actors to the presented proposal, in November and December 2023 and January 2024. Two virtual clinics were presented, and two workshops were developed to enable co-creation between state management, researchers, oral health articulators from the regions (DRS), and municipal oral health coordinators.

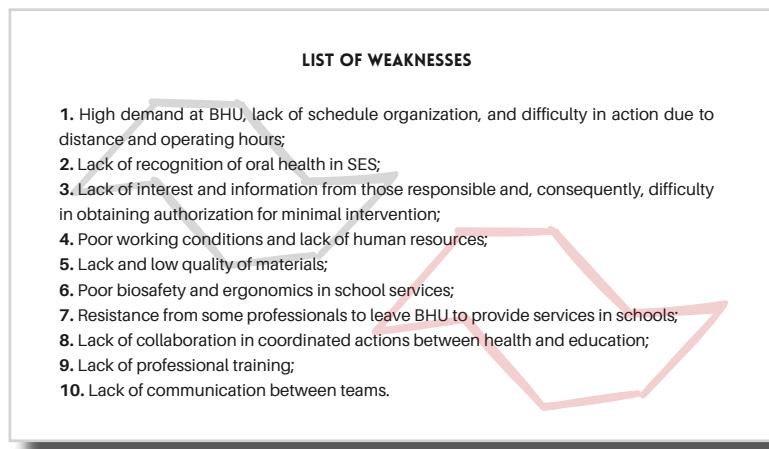
Module 2, on the other hand, aimed to continue the knowledge translation process through virtual clinics, informed by the best scientific evidence, for managers and oral health workers in the municipalities, presenting Minimal Intervention Dentistry techniques, in March, April, and May 2024.

### **The first module**

The two virtual clinics of the first module consisted of the presentation of the project and reports of successful experiences with the execution

of ART in schools.

The implementation and scaling strategy resulted in the existence of two workshops. The first was held virtually in December 2023 with the creation of nine rooms on *Google Meet*. There were 250 participants, where coordinators were divided into each room based on their Regional Health Departments (DRS). In each of the nine meeting rooms, in addition to oral health coordinators, there were university professors, researchers, graduate students, and undergraduate research students. In this first workshop, the SWOT Matrix<sup>21</sup>, was presented, a tool used to understand the professional scenario. This activity allowed, based on the reports of the professionals themselves, to reveal a list of weaknesses, strengths, threats, and opportunities perceived by the actors at the beginning of the implementation. The list of weaknesses was obtained using *Google Jamboard* and *Google Forms* (Figure 4).



**Source:** Design produced using Canva from *Google Jamboard* and *Google Forms*, 2024 by the authors.

**Figure 4** - List of the 10 most prevalent weaknesses found by oral health service workers in the state of São Paulo.

Given this, with the listing of the 10 main weaknesses, it was possible to discuss and reflect on them during the second workshop held in person in January 2024 at the headquarters of the São Paulo Association of Dental Surgeons (APCD). On that day, 298 professionals were present and divided into 20 groups. Each group was given an Idea Development (Policy Lab Toolkit) (Supplement 1), a methodology inspired by Design Thinking, used to explore ideas and compose solutions that best solve the existing problem in the most effective way. With this tool, oral health coordinators and their workers sought solutions to one of the ten problems listed in the first workshop. In addition to the proposed solutions, a space for reflection on the difficulties experienced and the perspectives of resolutions and referrals was pro-

vided, aiming to improve the results of the program to tackle dental caries in the state.

The evaluation of these workshops was conducted via *Google Forms* with the question: "How was your experience in the workshop on January 23<sup>rd</sup>, 2024?". The alternative "positive, I am looking forward to the next ones" was marked by the majority of respondents (88.8%), while the alternative "Neutral" had 10.4%. The alternative that responded that the experience had been "negative, I was not interested in the subject" was marked by only two respondents (0.8% of the total of 214 respondents). The result of this evaluation contributed to maintaining and improving the Virtual Clinics conducted later.

The activities carried out in this first module were essential to sensitize health service profes-

sionals and awaken interest in Atraumatic Restorative Treatment (ART). Given the feedback obtained in the first module, the virtual clinics were approved, and the execution of the second module was confirmed.

### The second module

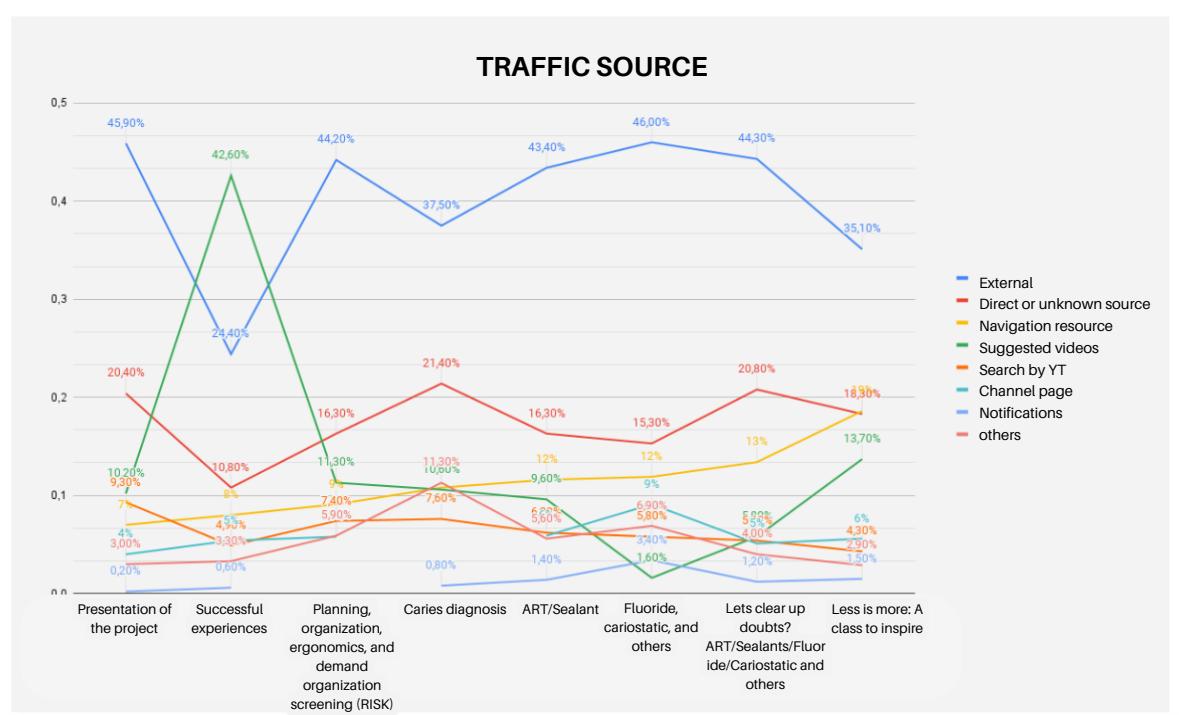
The second module consisted of planning and developing minimally invasive procedures. In this module, six virtual clinics with didactic content were held: 1. Planning, logistics, and organization; 2. Caries diagnosis; 3. ART and sealants; 4. Professional fluoride application, cariostatic, and other materials; 5. Class on the doubts raised by professionals about ART, sealants, fluoride, and cariostatic; and to close the module: 6. Inspirational class: Less is more.

The classes were produced based on scientific evidence made available synchronously on the

YouTube channel of EviPOralHealth on Fridays, lasting 1 hour and 30 minutes for all workers. The videos were saved for later access and had a total of 5,169 views (data generated by the YouTube platform on May 22<sup>nd</sup>, 2024).

### Analyses and products of the two modules

The knowledge translation strategy (modules 1 and 2) generated 14,049 views (data collected on September 6th, 2024), in 8 virtual clinics held. The audience was predominantly female (83.03%), and the average age of viewers was 45 to 54 years, representing 36.52% of the views. In addition, most accesses were made via mobile devices (64.37%), followed by computers (31.71%). The main traffic sources (Figure 5) were external, meaning they accessed the virtual clinic directly through the link sent by the coordination team (39.57%) and direct/unknown (17.27%).

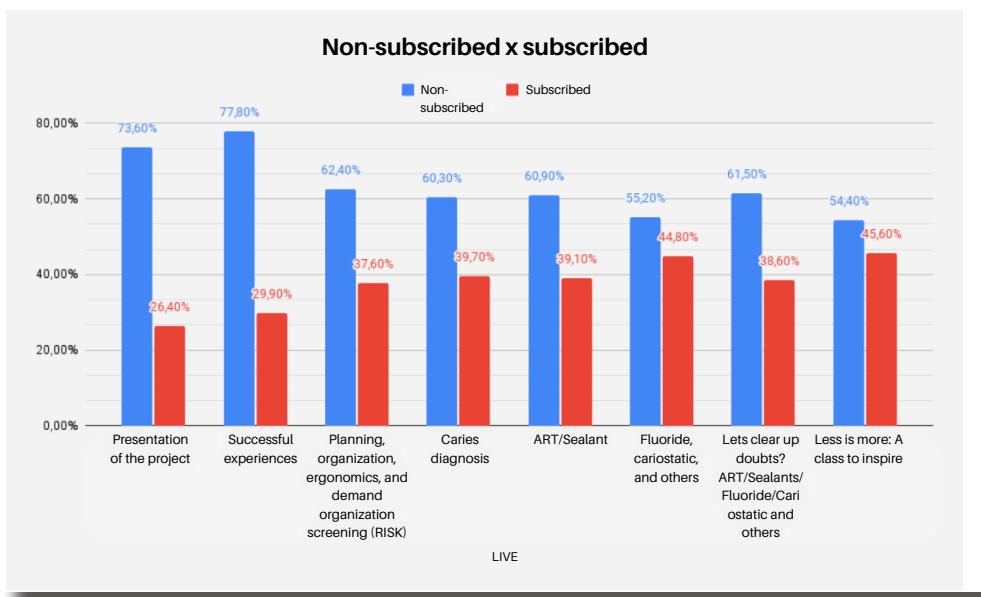


**Source:** Data extracted from Google Analytics on 06/09/2024.

**Figure 5** - Graph of the traffic origin of the virtual clinics made available on the YouTube platform of the Evidence-Based Oral Health Center - FOUSP EviPOralHealth account.

It is observed that the navigation resource increased over time, which can be explained by the gradual increase in subscribers to the @EviPOralHealth channel and that during the virtual clinics, the teams were in-

structed to subscribe to receive notifications of the next classes (Figure 6). This resource has been pointed out as a tool that provides a positive user experience and facilitates interaction with the content.

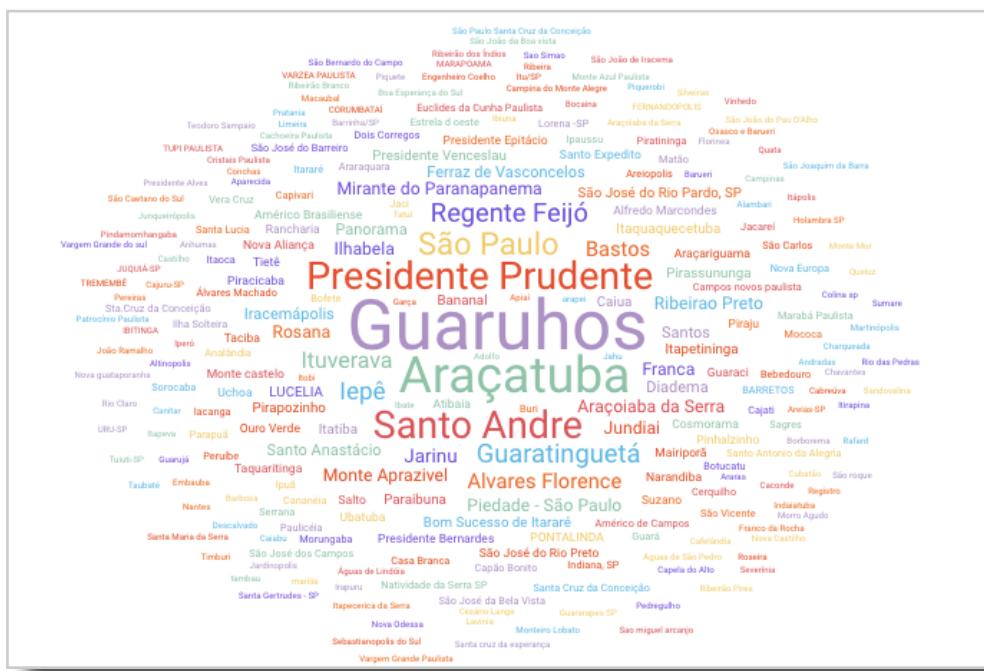


**Source:** Data extracted from Google Analytics on 06/09/2024 by the authors.

**Figure 6** - Graph of the number of subscribed and unsubscribed users of the virtual clinics made available on the YouTube platform of the Evidence-Based Oral Health Center - FOUSP EvipOralHealth account.

SES sent an invitation to all municipalities in the state of São Paulo. Although not all 645 municipalities participated, the presence of 485 municipalities (75.19%) was observed. The DRS that engaged the most was DRS 1,

and at least one municipality from each DRS was present (Figure 7), with the most engaged cities (which had the highest number of participants throughout the clinics) being São Paulo, Guarulhos, and Campinas.



**Source:** Word cloud created in Infogram.

**Figure 7** - Word cloud produced from the attendance form of the virtual clinics of the Project "Task Force to Tackle Caries in Schoolchildren in the State of São Paulo-Brazil" defining which were the total municipalities and the most participating ones.

The two modules were enriched by the exchange of experiences between academia and health service professionals, facilitated by the use of the virtual clinic chat (live on *YouTube*) and also through the *WhatsApp* group and *Google Classroom*. In addition, contact was available via email to clarify doubts. This communication channel opened a dialogue between the project coordination and the oral health teams, managers, and technicians from the municipalities, where they could present their doubts, make suggestions, and demonstrate commitment, highlighting the protagonism of the municipality in the process.

Some messages from the chat in the virtual clinic and the *WhatsApp* group stand out, where some teams watched the classes in groups at the health service and reported that this time allowed for team meetings. Some oral health teams, on the other hand, sent photos of how they were gathered to watch the live clinics. During the process, some testimonials also appeared, such as the use of mobile devices for individual use since the computers available at the health service did not work properly.

Some additional knowledge translation products were developed, created, and made available to the oral health team, with emphasis on:

- contents in Pocket Class format, some related to the practice of ART (Available at: <https://www.youtube.com/@nucleodeevidencias-fousp-1644/videos>) and another on the importance of

the dentist in the school (Available at: [https://www.youtube.com/watch?v=nI8SaM3x\\_68&t=69s](https://www.youtube.com/watch?v=nI8SaM3x_68&t=69s));

- documents such as authorization to be delivered to parents and/or guardians of children/adolescents from schools;

- video to communicate to education secretaries about the activities to be carried out in schools (Available at: <https://www.youtube.com/watch?v=IwpjpRfXXYc>);

- Step-by-Step ART document (list of materials and practical guide to the atraumatic technique (Available at: <https://laoha.org/materiais/protocolo-clinico-tratamento-restaurador-atraumatico.pdf>?authuser=0);

- informative materials for dissemination on social networks, such as Instagram, produced by undergraduate students enrolled in the Expanded Clinic of Health Promotion course at the School of Dentistry of the University of São Paulo (FOUSP);

- digital e-Book (Available at: [https://laoha.org/ebooks/Ebook\\_Guia\\_Trad%20Conhecimento\\_Final.pdf](https://laoha.org/ebooks/Ebook_Guia_Trad%20Conhecimento_Final.pdf)); and

- knowledge translation website - <https://laoha.org/>.

The development of these products was carried out by the teams based on the needs and experiences of the municipalities themselves, pointed out during the virtual clinics and workshops. The final products were customized by the municipalities, SES, and academia, as they were in an open format.

## DISCUSSION

This case occurred in the largest state of the federation, in partnership with SES and USP through the Evidence and Economic Analysis Center, which imposes a detailed analysis of the strategies and results found.

The high prevalence of dental caries among children and adolescents in conditions of social vulnerability highlights the need for dental treatments and the implementation of social policies that serve these populations<sup>22</sup>. Factors such as urban infrastructure, access to health services, and socioeconomic conditions are critical determinants of oral health<sup>23</sup>. Clearly, these factors were observed and reported by professionals during the application of the SWOT Matrix. It is interesting to note that dental caries not only affects the physical health of children but also has significant psychological and emotional implications, such as pain, difficulty eating, and self-esteem issues, which can impact their

development<sup>24</sup>.

The interest of the oral health teams in the project is notable, as in addition to the number of engaged municipalities and all DRS being represented, the workers themselves mobilized to watch the virtual clinics on these techniques, in groups or individually. The topics covered by the virtual clinics prioritize PSE actions, such as health education activities, brushing techniques, and access to appropriate dental treatments, to reduce the incidence of the disease and improve the quality of life of affected children. This project aligns with the new ordinance of the Ministry of Health, which, like the state of São Paulo, has recognized MID as the most cost-effective and socially sustainable strategy to tackle dental caries in the SUS (Ordinance GM/MS No. 3,493).

Through the PSE, municipalities in the state of São Paulo conduct risk assessment and referral of



schoolchildren in need of treatment to UBS, but less than 1/3 of these students attend scheduled appointments<sup>14</sup>. This may be related both to the characteristics of the children and to the low adherence of families to dental care related to the organization of the service offered<sup>25</sup>. It is worth noting that this non-adherence can be explained, among other factors, by the current changes in family arrangements. A recent study reveals that the number of female-headed households has increased by 1.7 million, and these women take on the upbringing and, still, the support of their families. In this context, it is an overload to decide between missing work or not attending and accompanying their children to health services<sup>26</sup>.

Given the need to care for schoolchildren and the existing situation in health services, the community intervention model applied in the school environment becomes a fundamental approach to integrate care and promote health. MID shows good results in controlling dental caries<sup>27</sup> and proves to be an effective and minimally invasive alternative for children and adolescents, especially in places with difficult access<sup>28</sup>.

The implementation of this care model was based on Continuing Education (CE) and the training of the oral health workforce, using ICTs. The use of these technologies has proven to be important for CE in health in the SUS, as they allow new interactions and the creation of spaces favorable to the teaching-learning process<sup>29</sup>, as with their use, professionals can update themselves continuously, overcoming geographical and time barriers<sup>30</sup>.

Transformations in Continuing Education have been present in public policies for some decades. The main attempts are related to the implementation of processes and not just content, but also addressing how professionals participate in these processes. In the field of health, deficiencies and challenges are still present for the regulation of Continuing Education initiatives<sup>31</sup>.

The experience reported here innovates this debate by highlighting the possibilities of this process happening in the work environment itself, integrated between different teams in their territories and the program managers, in addition to counting on tools that bring scientific evidence closer to the needs of the service.

Researchers have pointed out the need for connections between a policy to be implemented and the events produced in the daily work<sup>32</sup>. Not recognizing this movement can imply low participation of workers. In this sense, the experience highlights that the motivation and interest of the teams in terms of numbers and geographical distribution were strongly positive and with rapid adherence to

the process.

Human resources researcher Dussault M. emphasizes that any health system crucially depends on its workforce<sup>33</sup>. Health services cannot be provided, regardless of how well-designed the policies are or how many financial resources are available. Therefore, the need to empower and train workers is perceived, as efficient health systems depend on the workers who compose them.

According to Colin *et al.* (2011), learning obtained in the workplace is perceived by workers as a practical need<sup>34</sup>. However, this learning can be obtained through interventions such as internal training, experience-based learning opportunities, and training through mentorships and continuous learning<sup>35</sup>. In this way, Academia assumes the position of facilitator and mediator of this continuous learning process, contributing to the professional development of workers, ensuring that they can acquire and apply new skills in a practical and efficient way in the work environment. This approach not only improves individual performance but also promotes innovation and adaptation within services.

This approach demonstrates the importance of the integration between teaching, service, and community, highlighting the need for knowledge translation and the creation of exchange spaces for the effective implementation of practices, programs, and oral health policies<sup>36</sup>.

Experiences in the service allow workers to develop essential practical skills and strengthen decision-making capacity. Active listening allows for a better understanding of the perspectives and experiences obtained during the workers' experiences in health services, leading to decisions that meet the real needs of the team<sup>37</sup>. This active listening can be worked on in workshops as a strategy for active learning and allows participants to feel more engaged and valued<sup>38</sup>. Professionals often face difficulties in using evidence due to lack of time and complexity in searching for assets<sup>39</sup>. Practical experience in bringing evidence to professionals facilitates access, and users cease to be mere consumers of evidence and become access mediators.

The analysis of the SWOT Matrix (weaknesses, strengths, opportunities, and threats) in the health context allows for a comprehensive view of the factors that influence the effectiveness of the services provided. By identifying and working on these factors, managers were able to develop strategies that improve the quality of the service offered. Recognizing the existing weaknesses in the service was important to reflect on areas that need improvement. The Design Thinking method is fundamental for innovation and problem-solving, as it allows for

the generation of creative solutions that may not be evident in a homogeneous group<sup>40</sup>.

Design Thinking (DT) is an iterative process, where learnings can influence actions in others. The application of DT in the development of digital products brings benefits such as user focus, continuous innovation, and effective solutions. The digital products developed and disseminated to the oral health teams can be essential to create solutions that provide meaningful experiences for users.

Virtual clinics or educational live streaming have gained great importance in the current context, especially in Continuing Education and the dissemination of health information. These clinics allow access, flexibility, interaction, knowledge dissemination, continuous training, updating, and autonomy. However, the excess of available information can be both an enriching and exhausting phenomenon, as the ease of access can lead to a state of mental fatigue and overload.

## CONCLUSION

The Continuing Education experience reported here, considering the theoretical model of implementing oral health actions and programs, responds to the pillars proposed by the model: it was based on needs and became accessible to oral health teams in their various work environments.

First, it details an innovative model that integrates communication technologies to create an accessible training approach. The use of virtual clinics makes it possible to reach oral health professionals throughout the state of São Paulo with educational content in a flexible and interactive way. This promotes initial engagement and mobilizes workers, making learning more inclusive and closer to the real needs of the team.

In addition, the project exemplifies how scientific evidence can be transformed into accessible and customized practices for each municipality. The approach allows each region to receive the type of educational support appropriate to its specificities, promoting more effective training aligned with local needs. The collaboration between the University of São Paulo and the State Health Secretariat was fun-

damental for the implementation of this strategy, facilitating the integration between academia and professional practice.

However, the project also presents limitations. The absence of formal certification for participants and the lack of stricter control over the YouTube platform may limit the formalization and recognition of learning. Additionally, the career plan of professionals in the municipalities is not directly addressed by the project, which may impact the continuity of engagement and the practical application of the knowledge acquired.

Thus, actions such as the development of a certification system, the creation of stricter control ensuring content updates, integration with career plans that align training with workers' perspectives, and initiatives that value the reporting of experience are suggested. In addition, other research that has the experience as a result should be conducted and disseminated, as they can complement and contribute to scientific knowledge, especially in the field of health practices.

### CRediT author statement

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All authors have read and agreed to the published version of the manuscript.

### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.



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## SUPPLEMENTARY MATERIAL



### Idea development



What is the challenge/problem to be faced in a few words?

In the group's opinion, what is the best solution to tackle the problem? Why?

How would you describe the challenge or problem in more detail?

What would the key user say about the proposed solution?

**Draw or describe your ideas to overcome the challenge.**

List the ideas that, based on experiences and evidence, you believe can help solve the challenge.

1/3



### Idea development



How will you further develop your idea?

How will you test your idea? (Let's think about the implementation.)

Who will help deliver/develop your idea?

What are the risks and barriers?

Actions to avoid:

1.

2.

1.

2.

3.

3.

2/3



# Idea development



What are the previous experiences and evidence?

1.

2.

3.

4.

5.

What policy decision or change in the scenario will this idea provide (benefits)?

1.

2.

3.

4.

5.

What would you consider a success?

How do you plan to measure this success?

Who will love it? And who will hate it? Put them on the line.

Hate

↔ Love

3/3