

## The care of patients with special needs in pediatric dentistry



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### ABSTRACT

Children with special needs encompass a variety of conditions that require specific medical care, specialized interventions, and the use of adapted services or programs. This definition is applied in an equally crucial way to the context of dental care. This article aims to conduct a literature review on

the challenges faced by pediatric dentists when dealing with patients with special needs and to discuss adapted approaches that can be implemented to overcome these complex difficulties. Patients with special needs in pediatric dentistry present unique challenges that require tailored approaches and a comprehensive understanding by professionals in the field. The implementation of strategies, such as behavioral guidance, conscious sedation and multidisciplinary teamwork, emerges as a necessity to offer quality care, ensuring the well-being and oral health of these patients in a holistic way. This complex scenario highlights the importance of a personalized and integrated approach to dental care for children with special needs, aiming not only at the clinical aspect, but also at the quality of life of these patients. The intersection between education, professional training, and adequate support is essential for the success of these adapted approaches.

**Keywords:** Adaptation, dental care, pediatric dentistry, child.

## 1 INTRODUCTION

Children with special needs refer to those who have a diversity of physical, developmental, mental, sensory, behavioral, cognitive, or emotional conditions, requiring differentiated medical attention, specialized intervention, and/or the use of specific services or programs (ROBERTSON *et al.*, 2019; BONVALLET COMMENTZ *et al.*, 2023). This definition also applies to the dental context, where such children may require specific approaches, such as appropriate behavioral guidance techniques, conscious sedation, or even general anesthesia, tailored to their individual characteristics (Townsend & Wells, 2019).

Dentistry faces significant challenges when dealing with patients with special needs (PPNE). This is due to the lack of experience and specific knowledge in the area of Special Patients (PE), which makes the interaction and treatment of these patients more complex. They depend on intensive guidance and assistance to perform oral hygiene and maintain oral health (Devinsky *et al.*, 2020). The



dental approach to NEP requires care, patience, determination, and knowledge from professionals in the field. It is essential to provide each patient with appropriate treatment to avoid inconvenience in the office and reduce the need to resort to general anesthesia (Eades *et al.*, 2019; Devinsky *et al.*, 2020).

Despite this, there are situations in which the more frequent use of general anesthesia for dental treatment may be justified. These situations include criteria such as the need for extensive treatment, challenging behavior, and, to a lesser extent, possible associated medical conditions. Such criteria require a more comprehensive and specialized approach to ensure the comfort, safety, and effectiveness of dental treatment in children with NEPP (Devinsky *et al.*, 2020; Wong *et al.*, 2020).

According to the recommendations of the American Academy of Pediatric Dentistry and the American Society of Anesthesiologists (ASA), it is extremely important that patients undergoing deep sedation and general anesthesia be continuously monitored by an anesthesiologist. During the procedure, it is imperative to monitor oxygenation levels through pulse oximetry, ventilation through the expired concentration of carbon dioxide using capnography, in addition to evaluating respiratory rate and hemodynamic parameters such as heart rate and blood pressure. This data needs to be recorded at least every 5 minutes. In addition, it is essential that a properly trained professional continuously observes the patient until they are discharged. These measures are crucial to ensure patient safety and well-being throughout the anesthetic procedure (Coté *et al.*, 2019; Vo *et al.*, 2021).

The purpose of this article is to explore the challenges faced by pediatric dentists in caring for patients with special needs and to discuss tailored approaches to overcome these difficulties. Technical, emotional and behavioral aspects involved in the dental treatment of these patients will be considered, aiming to improve understanding and offer practical guidelines for clinical practice. Deepening the understanding of these challenges and the adapted strategies available aims to improve the quality of pediatric dental care for patients with special needs, providing them with a positive experience and contributing to their long-term oral health and quality of life.

## 2 MATERIALS AND METHODS

This study is a review of the literature on patients with special needs in pediatric dentistry. The review involved advanced searches in the Scientific Electronic Library Online (SciELO), U.S. National Library of Medicine (PUBMED) and ScienceDirect databases using the keywords "Pediatric dentistry", "patient with special needs", "management".

## 3 LITERATURE REVIEW

### 3.1 CHALLENGES IN THE CARE OF NEPP IN PEDIATRIC DENTISTRY

Professionals face significant challenges when dealing with patients with special needs, especially with regard to the behavior of these children. Challenging behaviors, such as anxiety, intense



fear, and communication difficulties, make building trust and effectively executing dental treatment a challenge (AL-WESABI *et al.*, 2019; MORAIS JUNIOR *et al.*, 2019). In addition, communication difficulties due to cognitive, linguistic, or sensory impairments can impair the understanding of the practitioner's instructions and the expression of discomfort or pain during treatment (MIAN *et al.*, 2020). Special patients may also experience adverse physical reactions, such as involuntary movements, tactile hypersensitivity, or exaggerated responses to dental stimuli, requiring tailored approaches to ensure patient comfort and safety (SCHNABL *et al.*, 2019).

The lack of technical preparation of dentists in relation to the care of special patients is a concern, impacting the quality of dental care and guidance to the parents of these patients (D'ADDAZIO *et al.*, 2021). The academic and professional training of dentists should include a specific discipline for the care of patients with special needs, addressing technical aspects and the importance of effective communication with parents. Promoting the continuous development of these professionals, through courses and training, is essential to ensure quality care and adequate guidance for the parents of these patients (NQCOBO *et al.*, 2019; DEVINSKY *et al.*, 2020).

### 3.2 BEHAVIOR GUIDANCE

The behavioral approach is crucial in dental care for PNEPs, and it is essential to establish a relationship of trust between the professional and the patient. Techniques such as visual communication, positive reinforcement, and adaptation of the environment play an essential role in reducing anxiety during treatment (ALJUBOUR *et al.*, 2021). Visual communication is particularly effective for patients with verbal difficulties, using gestures, images, or simplified sign language to facilitate interaction. Positive reinforcement, through praise and rewards, motivates and engages the patient, contributing to a positive experience in the dental office (HERRERA-MONCADA *et al.*, 2019). In addition, the adaptation of the environment, with adjustments to lighting, sounds, and decoration, creates a welcoming and safe space, while physical supports, such as adapted chairs, ensure comfort and stability during the dental procedure (ALBHAISI *et al.*, 2022).

### 3.3 CONSCIOUS SEDATION

The application of conscious sedation may be considered a viable alternative in certain situations for patients with special needs, especially those who face cooperation difficulties or suffer from extreme anxiety. This technique aims to induce a state of relaxation and comfort during dental procedures, facilitating treatment in NEP (VALLOGINI *et al.*, 2022). During conscious sedation, medications are administered to promote relaxation, reduce anxiety, and provide a sense of tranquility. It is noteworthy that the patient remains awake and able to respond to stimuli and instructions from the dental professional, enabling access to the necessary treatment (BARROS & DE CAMARGO, 2020).



The choice to use conscious sedation should be based on a thorough assessment of the patient, taking into account the benefits and risks involved. In addition, it is crucial that the dental professional has the proper training and follows the established guidelines and protocols to ensure the safety and effectiveness of this approach (AYDIN & DEMIREL, 2020; BARROS & DE CAMARGO, 2020).

### 3.4 MULTIDISCIPLINARY CARE

The performance of a multidisciplinary team is extremely important in the care of patients with special needs. By involving professionals from different specialties, such as pediatric dentists, psychologists, and occupational therapists, it is possible to provide complete and integrated care. This collaboration makes it possible to comprehensively address the physical, emotional, and behavioral needs of patients with special needs (COMO *et al.*, 2021; MANGIONE *et al.*, 2020).

Teamwork enables an exchange of knowledge and experiences among the professionals involved, resulting in a more efficient and personalized treatment plan for each patient (MANGIONE *et al.*, 2020). Pediatric dentists are responsible for the dental care itself, ensuring that procedures are performed properly and safely (CURI *et al.*, 2022; BONVALLET COMMENTZ *et al.*, 2023). The presence of psychologists in the team is of great importance, as they have expertise in dealing with patients' emotional and behavioral issues (COMO *et al.*, 2021). They can assist in the management of anxiety, fears, and traumas related to dental treatment, providing emotional support and strategies to cope with these challenges (COTÉ *et al.*, 2019).

Occupational therapists also play a relevant role, as they work with the adaptation and development of patients' motor, sensory, and cognitive skills (MORAIS JUNIOR *et al.*, 2019). They can offer guidance on posture, movement control, and the use of assistive devices to facilitate access to dental treatment (VALLOGINI *et al.*, 2022). The collaboration between these professionals allows for a more comprehensive and individualized care, considering the particularities of each patient. In this way, it is possible to overcome the barriers and challenges faced by patients with special needs, providing quality dental care and a more positive and comfortable experience (TOWNSEND & WELLS, 2019).

## 4 CONCLUSION

Patients with special needs in pediatric dentistry face unique challenges that demand personalized approaches and a comprehensive understanding from professionals in the field. Understanding the specific needs of each patient is crucial for successful dental treatment. Pediatric dental professionals must be well-prepared to deal with a variety of conditions, adjusting their techniques and approaches as needed. By using strategies such as behavioral guidance, conscious sedation, and multidisciplinary teamwork, it is possible to offer quality care, ensuring the well-being



and oral health of these patients. Ongoing education and training of pediatric dental professionals is essential to improving the quality of care. Staying up-to-date on the latest research, guidelines, and disability-specific approaches is critical. In addition, establishing partnerships with other medical specialties and organizations supporting patients with special needs can strengthen integrated care and provide more comprehensive support. Despite the challenges, it is rewarding to provide quality pediatric dental care to patients with special needs. These children have the right to receive proper dental care, contributing to their oral health and overall well-being. With tailored approaches, empathetic understanding, and collaborative working, it is possible to overcome barriers and ensure that all patients receive the attention they need.



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