# **Barriers and Trends in Pediatric Endodontic Treatments by Endodontists**



# INTRODUCTION

Pediatric patients often require endodontic care for caries- or trauma-induced pulpal pathosis. While pulp therapy techniques are similar to those used in adults, their application in children becomes more complex due to factors such as the stage of root development, behavior management challenges, and family compliance.

Studies show that nearly 37% of children aged 6–18 need dental treatment involving the pulp, yet fewer than 22% receive completed endodontic therapy, with many cases ending in extractions or temporary measures. Despite clinical advancements, significant barriers still hinder optimal care ranging from limited insurance coverage and sedation access to gaps in provider training and systemic constraints. Understanding these barriers from the perspective of endodontists is essential for improving access, delivery, and outcomes in pediatric endodontic care.

#### PURPOSE

To identify barriers faced by endodontists in providing effective endodontic treatment to pediatric patients aged 6–18. This survey study aims to categorize these barriers into patient-related, parentrelated, practitioner-related, and system-related factors.

## METHODS

- This study was approved by TAMU IRB, protocol #: STUDY2024-1126.
- Attitudes of the practicing endodontists towards treating the pediatric patients were assessed with an anonymous survey.
- The survey was set up in Qualtrics and emailed to 419 of active members of Connection forum of American Association of Endodontists.

Table 1. Board certifica
*Chi-square test p-valu

Board Certification	0-4	5-9	10+
No	23 (79.3)	9 (39.1)	16 (50.0)
Yes	6 (20.7)	14 (60.9)	16 (50.0)

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#### METHODS

• The survey consisted of 25 questions about endodontist's demographic and practice information, pediatric patient selection criteria, pediatric behavior management, financial factors of treatments, and treatment choices.

• Submitted surveys were screened for completeness and those missing over 50% of the answers were removed.

• Data analysis included chi-square tests of count and contingency tables and multinomial and ordinal regression for categorical variables of interest.

## RESULTS

• The survey was open for two months. 104 responses were collected (24 % response rate) and after removal of grossly incomplete answers 84 answers were used for analysis.

Categorical regression of accepted comorbidities on board certification and length of practice revealed that length of practice had a positive effect on acceptance of pediatric patients with uncontrolled asthma (p-value = 0.0025), autism with comorbidities like seizures (p-value = 0.011), and uncontrolled diabetes (p-value = 0.002).

• Length of practice had a positive effect on the frequency of conscious sedation of pediatric patients both under (p value = 0.00384) and over (*p* value = 0.029) 12-years old. Pediatric training had a positive effect on the frequency of pediatric referrals (p-value = 0.039).

> ation vs length of practice, counts (% by column). ue = 0.009

# RESULTS







#### DISCUSSION

Application of pulp therapy techniques in children can be complex due to factors such as the stage of root development, behavior management challenges, and family compliance. It has been documented that fewer than 22% of nearly 37% of children aged 6–18 who needed dental treatment involving the pulp received endodontic therapy. Additionally, many of these cases ended with extractions or temporary measures.

There is a need to identify significant barriers which may hinder timely and effective provision of endodontic treatment to pediatric patients. Such barriers may include, but are not limited to, insurance coverage, access to sedation, provider training, and systemic constraints. Endodontists should become more familiar with these barriers to help improve access, delivery, and outcomes in pediatric endodontic care.

# CONCLUSION

- Access to care for endodontic treatment still remains limited for pediatric patients and those with special healthcare needs.
- This limited dataset suggests that behavior management and presence of pre-existing medical conditions (i.e., high-risk patients) are barriers commonly faced by the surveyed endodontic practitioners.
- Pediatric endodontic therapy may also be hindered by lack of access to appropriate anesthesia, insurance and financial burdens.
- More exploration is needed to thoroughly understand barriers that hinder the timely and optimal pediatric endodontic care.

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