

# Assessment of Pediatric Dental Resident E-Cigarette Knowledge and Prevention

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## Purpose

The purpose of this study was to investigate the knowledge of pediatric dental residents regarding electronic nicotine delivery systems (ENDS) and to assess e-cigarette prevention counseling being provided to pediatric dental patients. Pediatric dental patients ideally visit their dentist every six months and e-cigarette counseling should be a part of comprehensive care and anticipatory guidance, but is often overlooked. This research sought to emphasize the necessity of equipping providers with knowledge to stress e-cigarette prevention and its consequences.

## Introduction

- A recent youth risk behavioral survey found that 50% of US high school students used an e-cigarette product, and that 33% had used an e-cigarette product in the last 30 days [1].
- There have been many concerns raised that marketing schemes such as sleek designing and flavoring of ENDS have been intended to target an impressionable market [3].
- When comparing e-cigarettes to traditional cigarettes, many youth surveyed indicated that they would opt for using an e-cigarette, likely due to the perception that they are less harmful [6].
- ENDS create a vapor that is directly inhaled by the user. The aerosols typically contain diacetyl (a chemical linked to lung disease), nicotine, and other harmful chemicals [4].
- Research has proven that nicotine not only leads to addiction, but also can impair brain function and cognitive development in adolescents [7].

## Methods

Web-based surveys were collected via Microsoft Forms. The research participants included pediatric dental residents currently enrolled in accredited post-graduate training programs for pediatric dentistry across the United States. Participants were recruited via email communication through the AAPD web email listserv. Data collection occurred for three months.

## Results

Demographic Profile		
Characteristics	Frequency	Percent
Age		
Less than 30	37	48%
31 to 35	25	32%
36 to 40	6	12%
Over 40	9	8%
Gender		
Male	25	32%
Female	52	68%
Residency Status		
PGY-1	25	34%
PGY-2	39	53%
PGY-3	9	12%
Location of Program		
Northeast	30	39%
Southeast	8	10%
North Central	16	21%
Southwest	10	13%
West	9	12%
Other	3	4%
Type of Program		
Hospital Based	33	43%
University Based	9	12%
Combined	33	43%
Other	1	1%
Program Environment		
Urban	62	81%
Rural	5	6%
Suburban	10	13%

Table 1. Demographic information of pediatric dental residents surveyed

### I wish I knew more about e-cigarettes.

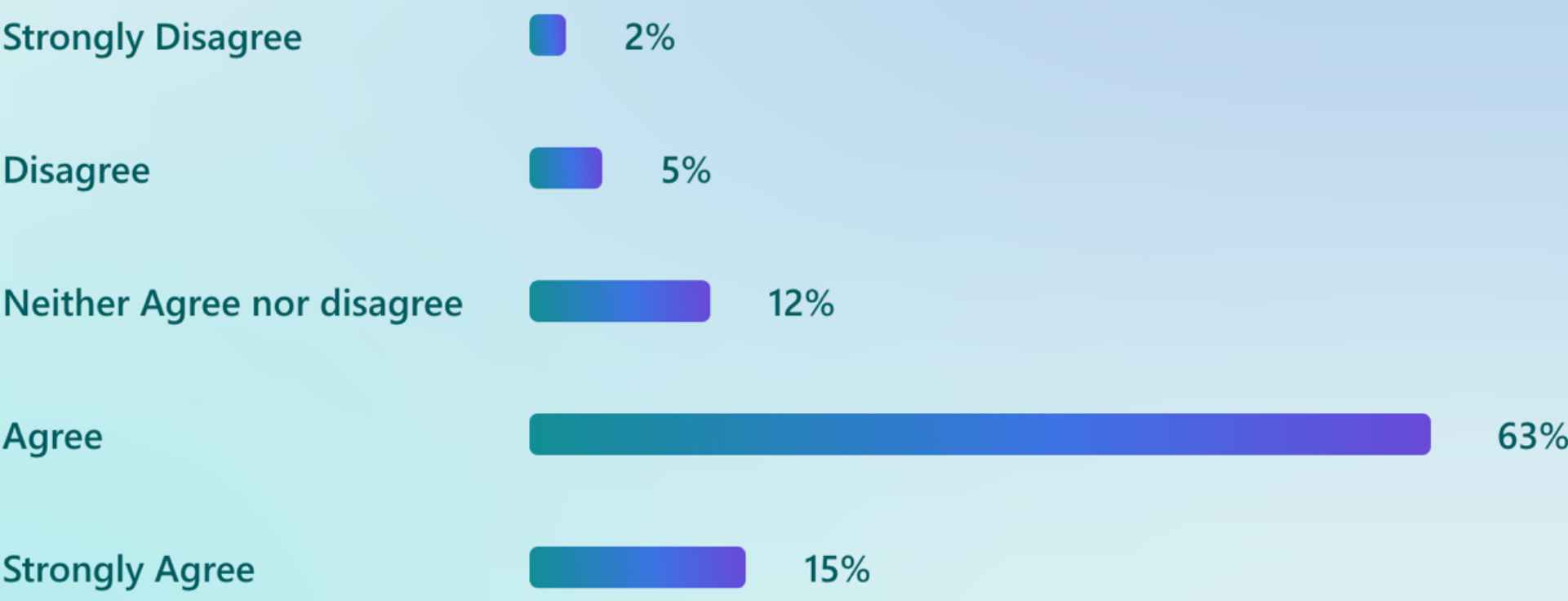


Figure 1. Surveyed residents who wish they had more e-cigarette education.

### I am currently discussing e-cigarettes with my patients.

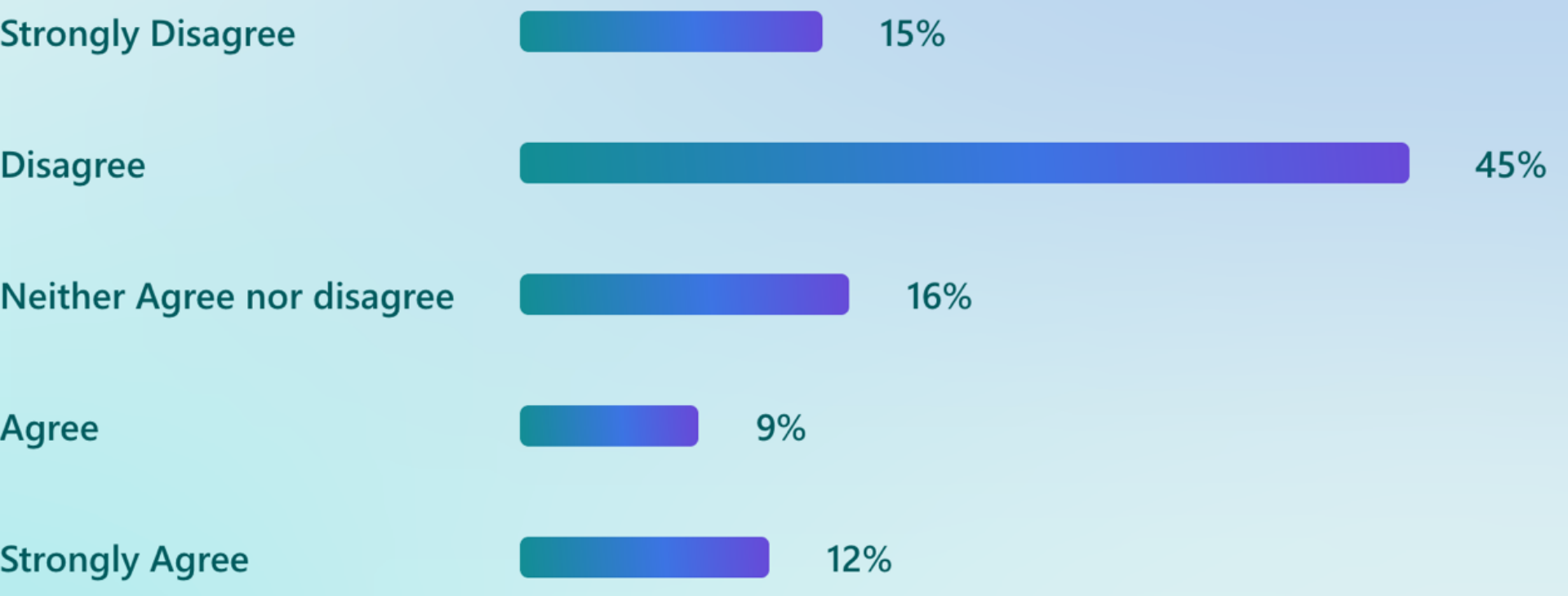


Figure 2. Surveyed residents who are providing e-cigarette counseling.

### I think adolescents are at risk for e-cigarette usage.

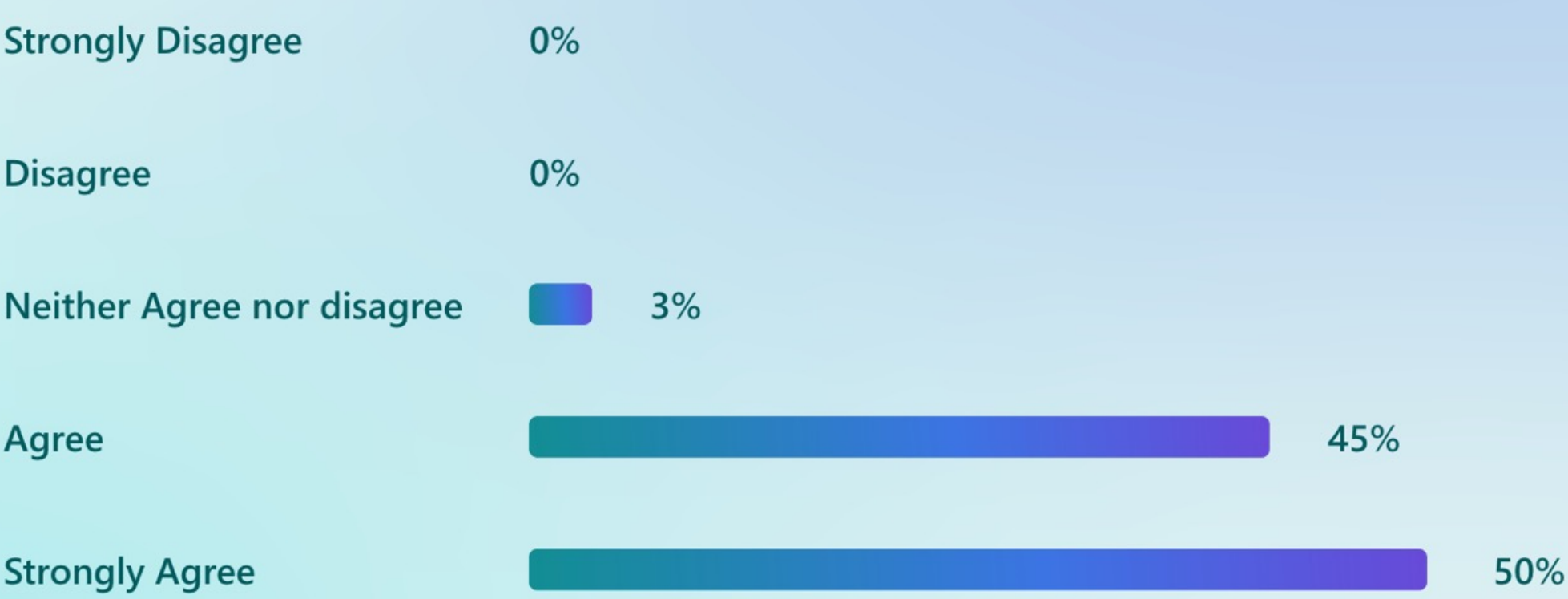


Figure 3. Surveyed residents who believe adolescents are at risk for e-cigarettes.

## Discussion

- Many pediatric dental resident providers feel that they wish they had more knowledge and understanding about electronic cigarettes and their sequela on the pediatric dental patient.
- Due to the rigorous nature of residency education, a continuing education course in e-cigarettes may be a solution to facilitate understanding of e-cigarettes and the consequence of e-cigarette usage.
- Providers currently recognize that parents would also see value in e-cigarette prevention counseling.
- Future studies in this area should aim to increase sample sizes by including currently practicing board-eligible or board-certified pediatric dentists.

## Conclusion

Given the drastic increase in e-cigarette usage among pediatric patients, it is imperative that pediatric dental providers offer counseling services during their appointments. Survey participants conclusively recognized value in providing e-cigarette counseling to their patients. Additionally, participants reported a great interest in obtaining more knowledge about electronic cigarette devices and their consequences.

## References

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