

Dental Laser Training and Education in Postgraduate Pediatric Dental Programs in North America

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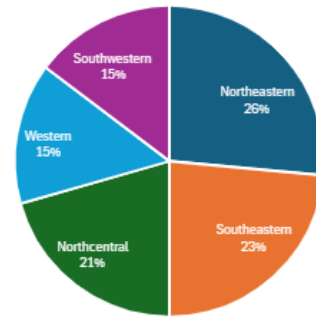
Purpose

- This research survey aims to investigate the extent to which dental lasers are incorporated into pediatric dental residency programs, focusing on training and education.
- The survey will assess the prevalence, scope, and depth of laser training within pediatric dental residencies, including didactic instruction, clinical exposure, and hands-on experience.
- Additionally, the survey will explore perceived barriers to integrating laser education and identify areas for improvement.

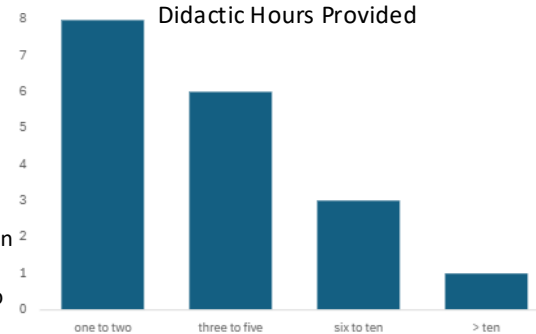
Methods

- After obtaining approval from the Colorado Multiple Institutional Review Board (COMIRB), a 15-question survey was developed to assess the clinical, didactic, and research experiences of pediatric dental residents with dental lasers.
- The survey was distributed electronically to pediatric dental residency program directors via email, using the online survey platform, Microsoft Forms.
- To make the survey as easy as possible to complete, the software was programmed to automatically direct respondents to only pertinent questions and shorten the survey to a maximum of fifteen questions.
- Descriptive statistical analysis was performed on the survey data to summarize the responses.
- Frequencies and percentages were calculated for categorical data.
- Continuous data, where applicable, were summarized using means and standard deviations.
- Responses were analyzed by geographic region, program size, and other relevant demographic characteristics to identify any notable trends or variations in laser training practices across pediatric dental residency programs.

Location of Residency by AAPD District



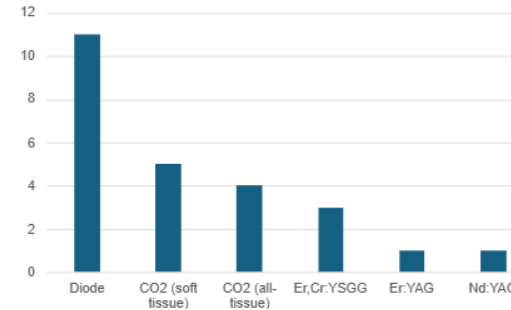
Didactic Hours Provided



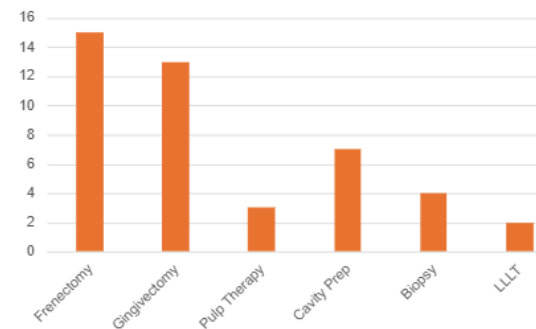
- No program reported residents doing more than 10 procedures during residency.
- 88% of programs plan to provide residents with clinical training in the future.
- Only 2 programs report using lasers for research purposes.

Results

Clinical Use of Lasers in Training

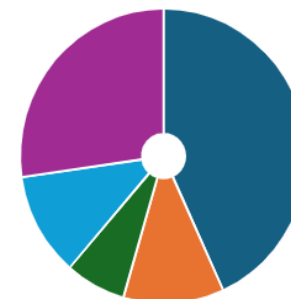


Clinical Procedures Performed



Barriers to Use

- Cost
- Certification
- Lack of Evidence
- No interest
- Other



Conclusions

- While there is substantial interest in dental laser technology within pediatric dental residency programs, current clinical and didactic training practices appear to be limited, with few residents gaining significant hands-on experience.
- The high cost of lasers and the lack of sufficient evidence regarding their effectiveness are key barriers to more widespread use.
- Despite these challenges, the majority of programs plan to incorporate dental laser training in the future.
- To optimize residents' preparedness, there is a clear need for expanded training opportunities, including increased didactic hours, more hands-on clinical experience, and formal certification.
- Future research should focus on the long-term outcomes of laser use in pediatric dentistry, which could help overcome existing barriers and further integrate this technology into clinical practice.

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