

Pediatric Dental Training in Postdoctoral General Dentistry Residency Programs

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ABSTRACT

Purpose: To evaluate the scope of pediatric dentistry training within Postdoctoral General Dentistry (PGD) residency programs (AEGD and GPR) and to understand the experience PGD residents gain in treating pediatric patients.

Methods: A questionnaire containing seventeen questions was emailed via SurveyMonkey to 268 PGD program directors in the United States as obtained from the directory of the Commission on Dental Accreditation. Data was collected over sixteen weeks.

Results: Response rate was 28%; AEGD directors 20% (N=19) and GPR directors 32% (N=55) . Fifty-five percent of programs do not provide daily treatment to patients under the age of thirteen, and 51% allocate less than five classroom hours per year on pediatric dentistry within their curriculum. Nineteen percent of programs do not include didactic or clinical technique on the subject of clinical oral examination of patients under the age of thirteen. Additionally, 33% of program directors reported a “dense curriculum” as a barrier preventing an increase in curriculum hours dedicated to pediatric dental care.

Conclusion: There is a significant deficit in pediatric dentistry training within PGD programs nationwide. PGD program directors should re-evaluate and reinforce pediatric dentistry education within curriculum, to enhance the preparedness of general dentists in treating pediatric population.

INTRODUCTION

Early Childhood Caries (ECC) and Severe Early Childhood Caries (S-ECC) pose significant oral health challenges in children under six. ECC left untreated leads to increased expenses and family burden, highlighting the importance of early intervention.¹ Only 4% of all professionally active dentists are pediatric specialists, with disparities in access noted in rural areas.² The majority of children receive dental care from general dentists, necessitating improved pediatric training in postdoctoral general dentistry (PGD) programs.² Advanced Education in General Dentistry (AEGD) and General Practice Residency (GPR) Programs vary in duration and location, emphasizing diverse clinical experiences. New York State mandates at least one year of postdoctoral training for licensure.³ The former Surgeon General noted issues in dental education including workforce shortage and overcrowded curricula.⁴ Expansion of pediatric residencies has not equated to improved access for underserved populations.⁵ Accreditation standards of both AEGD and GPR programs lack explicit requirements for pediatric dentistry training.⁶ The curriculum should incorporate didactic and clinical components to ensure competency. Improved pediatric dentistry training in PGD programs is essential to address disparities in access to care for vulnerable populations. Understanding the pediatric experience of postdoctoral general dentistry residents is crucial for enhancing their ability to serve this patient population effectively.

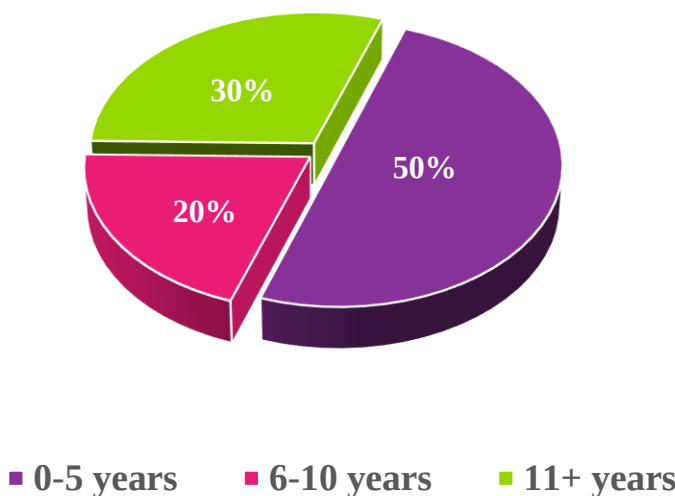
MATERIALS AND METHODS

A survey consisting of 17 questions was sent via SurveyMonkey to 268 residency program directors of AEGD programs (N=95) and GPR programs (N=173) as listed on ADEA Postdoctoral Application Support Service (ADEA PASS). The survey investigated the directors regarding their demographics, their residents’ demographics, program’s curriculum topics, clinical and classroom hours on pediatric dentistry, and patient population. The data was collected over 16 weeks period. The list of the emails was obtained from Commission on Dental Accreditation. The cover letter included the purpose of the study, and that the completion of the survey was voluntary and anonymous. There were no costs or expenses incurred to the participants associated with this research study. Institutional Review Board of the Albert Einstein College of Medicine approved this study #2023-15024.

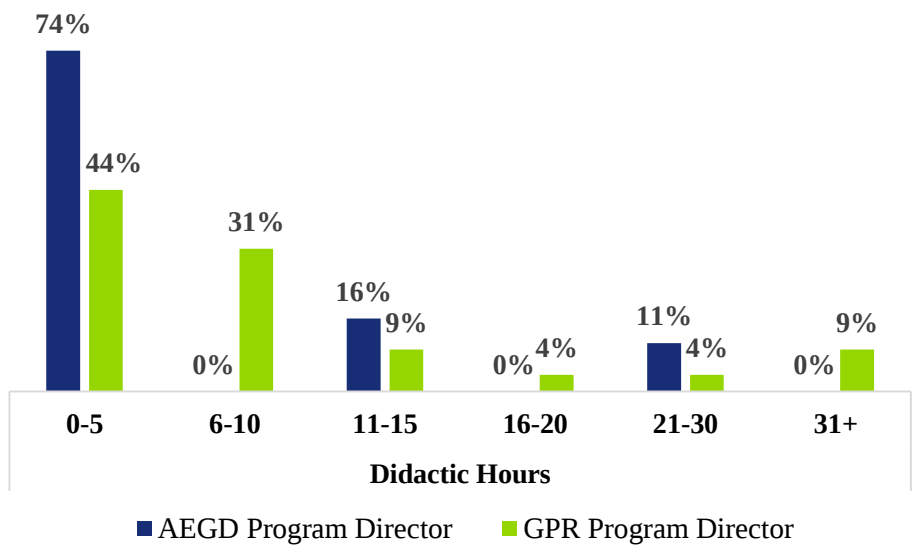
Table 1. Demographics

Program Directors	Response % / N
GPR	74% (N = 55)
AEGD	26% (N=19)
Program Location	Response % / N
Northeast	50% (N = 37)
Southern	22% (N = 16)
Central	14% (N = 10)
Western	15% (N=11)
Program's setting	Response % / N
Urban	58% (N = 43)
Suburban	32% (N = 24)
Rural	10% (N = 7)
Number of Residents	Response % / N
0 – 10	80% (N = 59)
11 – 20	18% (N = 13)
21 – 30	3% (N = 2)
Number of Patients Seen Daily	Response % / N
0 – 5	23% (N = 17)
6 – 10	69% (N = 51)
11 – 15	7% (N = 5)
16 -20	1% (N = 1)

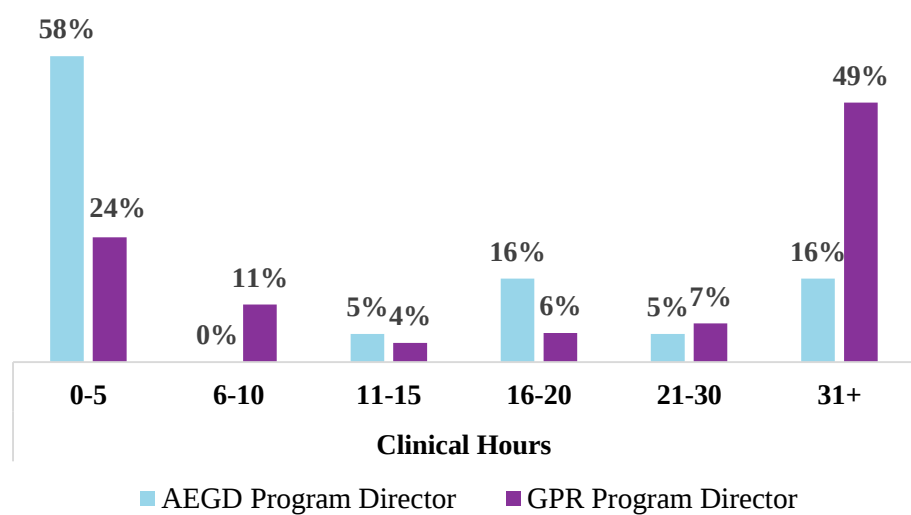
Graph 1. Years as Program Director of a PGD Residency Program



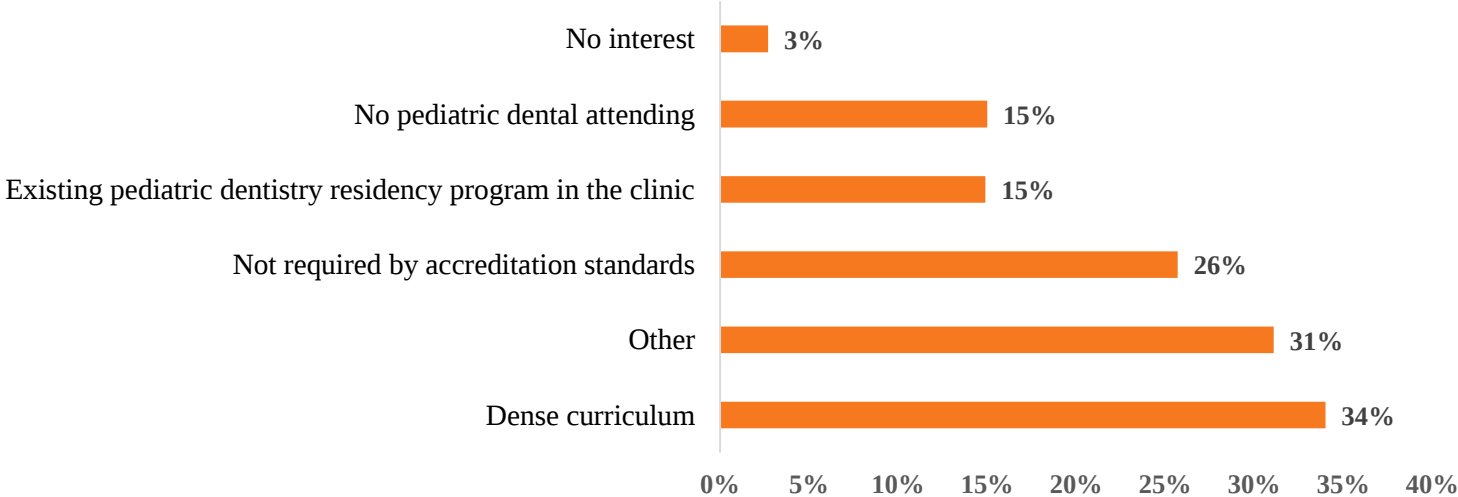
Graph 2. Didactic Hours Dedicated to Pediatric Dentistry



Graph 3. Clinical Hours Dedicated to Pediatric Dentistry



Graph 4. Barriers to Increasing Curriculum Hours Dedicated to Pediatric Dentistry



RESULTS

Among the respondents, 26% (N=19) were AEGD directors, while 74% (N=55) represented GPR directors. Fifty percent have served less than 5 years as program director of a PGD residency, 20% served 6-10 years, and 30% have served 11 or more years (Graph 1). Thirty-seven percent of respondents were female, 61% were male, and 3% preferred not to answer. Most notably, 50% of respondents were located in the Northeast region of the United States; 58% of programs were in urban areas, 32% in suburban, and 10% in rural settings (Table 1).

Most directors (69%) reported an average daily load of 6-10 patients per resident, and 55% indicated residents not regularly seeing pediatric patients (under the age of 13). Ninety percent of AEGD directors reported their residents see zero pediatric patients, as compared to 30% of GPR directors reporting that their residents see on average 2 or more pediatric patients daily. Interestingly, directors with fewer years of experience tended to have residents who saw fewer pediatric patients daily, with 90% of AEGD directors reporting zero patients and 44% of GPR directors reporting the same. Additionally, there was a discrepancy in directors responding to the following statement “Residents in my program treat patients with early childhood caries or severe early childhood caries” with statistically significant difference (P -value = 0.0000) between AEGD and GPR directors; 47% of AEGD directors expressing “very unlikely” compared to 40% of GPR directors responding, “very likely”.

Program directors were surveyed about didactic and clinical hours per year built into the curriculum spent on pediatric dentistry (Graph 2 and 3). Fifty-eight percent of AEGD directors include less than 5 clinical hours; 49% of GPR directors responded that they spend 31 or more clinical hours. Seventy-four percent of AEGD directors responded that they dedicate less than 5 hours on didactic time while 31% of GPR directors dedicate 6-10 hours. Over 86% of directors included the topic “Caries Lesion Detection and Diagnosis” in their curriculum, while topics such as “Speech/Language Development”, “HPV and Vaccination”, and “Intraoral/Perioral Piercing” were less commonly incorporated. Notably, GPR programs were more likely to include topics such as “Stainless steel crowns”(86%) and “Strip crowns on primary anterior teeth”(74%), compared to AEGD.

When addressing barriers to increasing curriculum hours, a dense curriculum was the most prominent concern overall (Graph 4). However, AEGD directors predominantly cited this barrier (42%), whereas GPR directors identified a lack of pediatric patients (36%) as their primary concern.

CONCLUSIONS

Based on this study’s results, the following conclusions can be made:

- There is regional variation in program director representation, with a notable concentration in the Northeast region.
- Residents in GPR programs see more pediatric patients than AEGD residents.
- GPR and AEGD programs exhibit differences in curriculum emphasis, with GPR programs demonstrating a greater focus on clinical skills such as stainless steel crowns and strip crowns.
- Program directors identify dense curriculum and a lack of pediatric patients as primary barriers to increasing curriculum hours dedicated to pediatric care.
- Discrepancies between AEGD and GPR programs in treating patients with ECC and S-ECC highlight the importance of ensuring consistent exposure to common pediatric dental conditions across all PGD program.

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