

Pediatric Dentist Experiences with Caregiver Radiograph and Imaging Refusal

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BACKGROUND

Radiographs and dental imaging are essential for comprehensive dental care, aiding in the detection and monitoring of caries, periodontal disease, dentofacial development, and craniofacial pathologies.

Pediatric patients are more vulnerable to radiation exposure due to higher organ radiosensitivity and longer life expectancy, increasing the risk of cumulative DNA damage. While dental radiographs are safely administered with minimal radiation, some caregivers question their necessity or refuse them altogether.

Dental radiographs and imaging play a vital role in detecting conditions such as caries, developmental anomalies, and pathology that may not be visible through clinical examination alone. Delayed imaging can lead to undiagnosed conditions, potentially necessitating more invasive treatment. Caregiver refusal also challenges pediatric dentists, who must balance parental concerns with the need for diagnostic imaging.

Investigating this issue can help develop strategies to improve communication, address parental concerns effectively, and ensure children receive appropriate dental care.

PURPOSE

This study aimed to explore pediatric dentists' experiences with caregiver refusal of radiographs and imaging, as well as how they manage these situations in practice.

METHODS

American Academy of Pediatric Dentistry (AAPD) members were recruited by email from October 2024 to November 2024 to complete an online Research Electronic Data Capture (REDCap) survey on experiences with caregivers who refuse radiographs (intraoral, extraoral, and bitewing) and cone beam computed tomography (CBCT) imaging; bitewing radiograph refusal management; lead shielding practices; and provider and practice characteristics.

Bivariate analyses were completed using the Chi-square test ($\alpha=0.05$).

RESULTS

- Substantial percentages of responding pediatric dentists reported radiograph and CBCT refusal to be a big or medium-sized problem** (intraoral=23.2%; extraoral=12.1%; bitewing=21.7%; CBCT=9.0%)
- Pediatric dentists in private practice were significantly more likely to report radiograph refusal as a big problem than those in community health center/public health clinic or hospital/university settings (P -values<.05)
- Pediatric dentists practicing in clinics with >50% Medicaid-enrolled children reported having significantly fewer caregivers who refused radiographs** (P -values<.05)

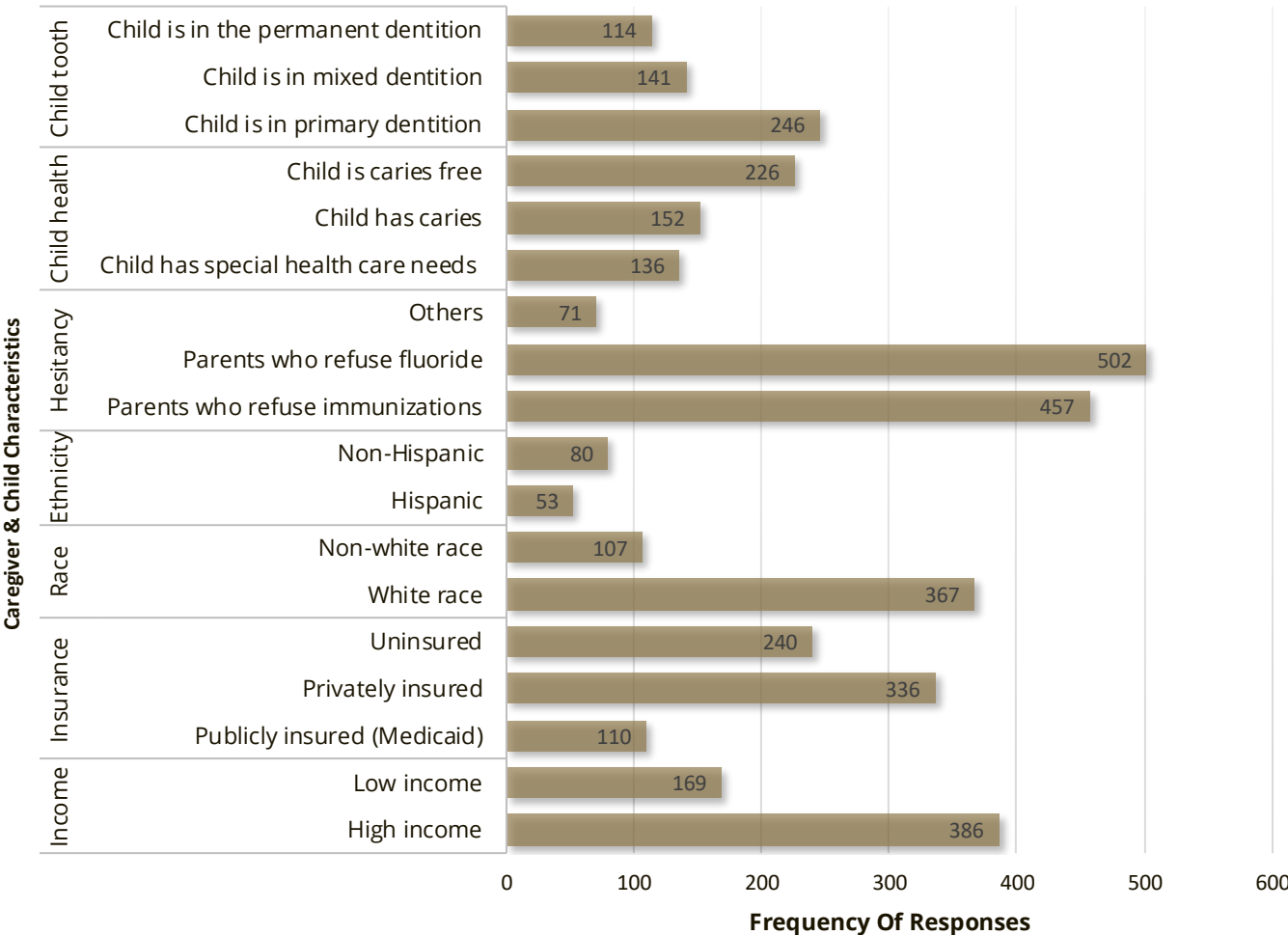


Figure 1 – Provider and Practice Characteristics of Respondents of a National Survey to Understand Caregiver Perceived Caregiver and Child Characteristics Associated with Bitewing Radiograph Refusal Administered to Members of the American Academy of Pediatric Dentistry (N=695)

- Dentists believed caregivers who refused immunizations and those who refused fluoride were most likely to refuse bitewing radiographs
- 56.5% of providers stated that over the years, they though parent refusal of bitewing radiographs have stayed the same. 40.5% reported that it has gotten worse**
- For parents that refused radiographs, most providers always (33.2%) or often (38.9%) tried to convince parents to accept them
- Most dentists (81.0%) used lead shielding, for whom the most common reason was that it increased caregiver acceptance of radiographs (73.6%).**

DISCUSSION

Interventions to reduce radiograph refusal may need to be tailored to the specific type of practice, with a focus on addressing the concerns of caregivers in private practices, particularly when caring for a child with no visible disease .

Targeted educational efforts should emphasize that radiographs are prescribed based on best practice guidelines and that radiation protection measures are in place to minimize exposure.

In 2024, the ADA recommended discontinuing the use of lead abdominal aprons and thyroid shields. Targeted education to healthcare entities and state dental boards can improve consistency in application of the guideline.

CONCLUSION

- Pediatric dentists in private practice and those treating low numbers of Medicaid-enrolled patients were significantly more likely to report radiograph refusal as a big problem than those in community or hospital settings.
- Pediatric dentists reported that caregivers who refuse immunizations and fluoride are also likely to refuse bitewing radiographs.
- At the time of the survey, most respondents reported continued use of lead shielding during radiographic examination.

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