

# Dental Anxiolytic Premedication Effectiveness in Children with Special Needs

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## OBJECTIVE

To obtain an overview of pediatric patients with special healthcare needs seen in the Children's Health outpatient clinic who received pre-visit anxiolysis, including which medications were used.

## BACKGROUND

The American Academy of Pediatric Dentistry defines children with special health care needs (SHCN) as those with physical, developmental, mental, sensory, behavioral, cognitive, or emotional conditions requiring specialized medical care. These conditions may limit daily activities and require adaptations beyond routine care. According to the Annie E. Casey Foundation, approximately 1 in 5 children in the U.S. (over 14.5 million) have SHCN. In pediatric dentistry, pharmacologic approaches such as premedication are often used to manage anxiety and uncooperative behavior. Oral medications are commonly used to achieve anxiolysis (minimal sedation), a state in which patients remain calm and responsive, with minimal impact on cardiovascular and respiratory function. This approach is especially beneficial for children with SHCN, as it can improve cooperation, enhance safety, and reduce risk of injury.

However, there is limited evidence regarding:

- Which patients are receiving premedication
- What medications are most commonly used
- Whether premedication improves behavior in patients

Understanding these factors is essential to guide evidence-based practice and optimize patient care outcomes.

## REFERENCES

1. American Academy of Pediatric Dentistry. Management of dental patients with special health care needs. The Reference Manual of Pediatric Dentistry. Chicago, Ill.: American Academy of Pediatric Dentistry; 2024:343-50.
2. Annie E. Casey Foundation. *The State of Children with Disabilities and Special Health Care Needs*. 14 July 2024.
3. Sebastiani, Francesco R., Harry Dym, and Joshua Wolf. "Oral Office Sedation in the Dental Office." *Dental Clinics of North America*, vol. 60, no. 2, 2016, pp. 295-307. <https://doi.org/10.1016/j.cden.2015.11.006>

## MATERIALS AND METHODS

### Study Design

This retrospective chart review evaluated pediatric patients with special health care needs (SHCN) who received anxiolytic medications at a Children's Health outpatient dental clinic between June 2021 and July 2025.

### Sample Selection

A total of 1,275 patient charts were initially identified. After removing 663 duplicate records, 612 charts were reviewed. Exclusion criteria included prior anxiolytic use before the study period (n = 79), limited dental examinations (n = 15), and cases in which no anxiolytic medication was required (n = 186). The final study sample consisted of 300 patients, including both new and recall visits.

### Patient Characteristics

The study cohort included 157 new patients (88 males, 69 females) with a mean age of 11.4 years and 143 recall patients (101 males, 42 females) with a mean age of 11.1 years.

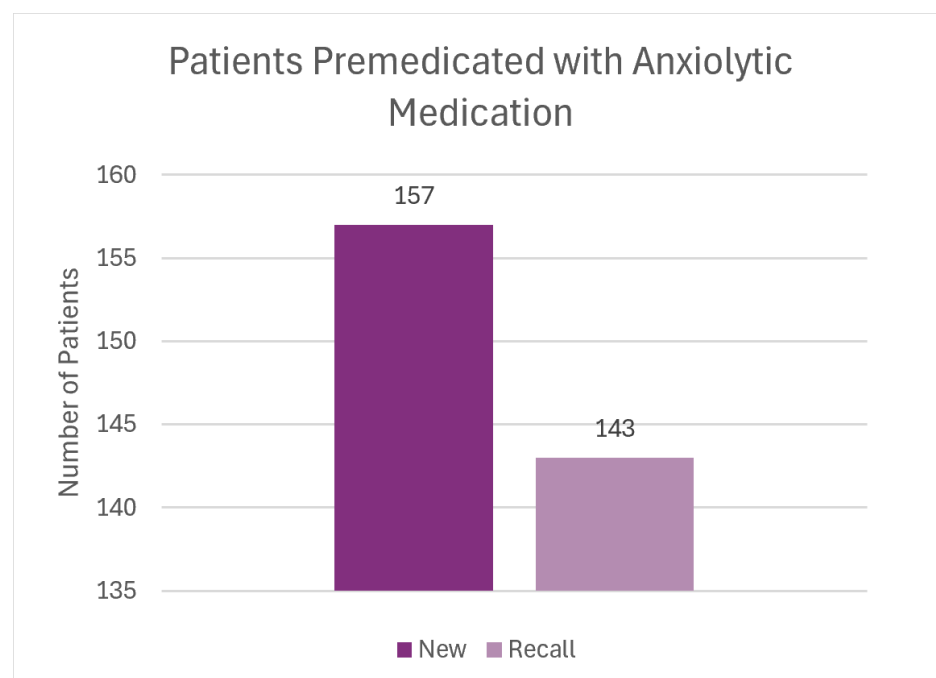
### Data Collection and Analysis

Data were extracted from the Children's Health database, de-identified, and assigned randomized subject numbers. Data were organized using Microsoft Excel. As no group comparisons were performed, analysis was descriptive, focusing on demographic characteristics and clinical patterns of SHCN patients treated in an outpatient dental setting in Dallas, Texas.

### Ethical Considerations

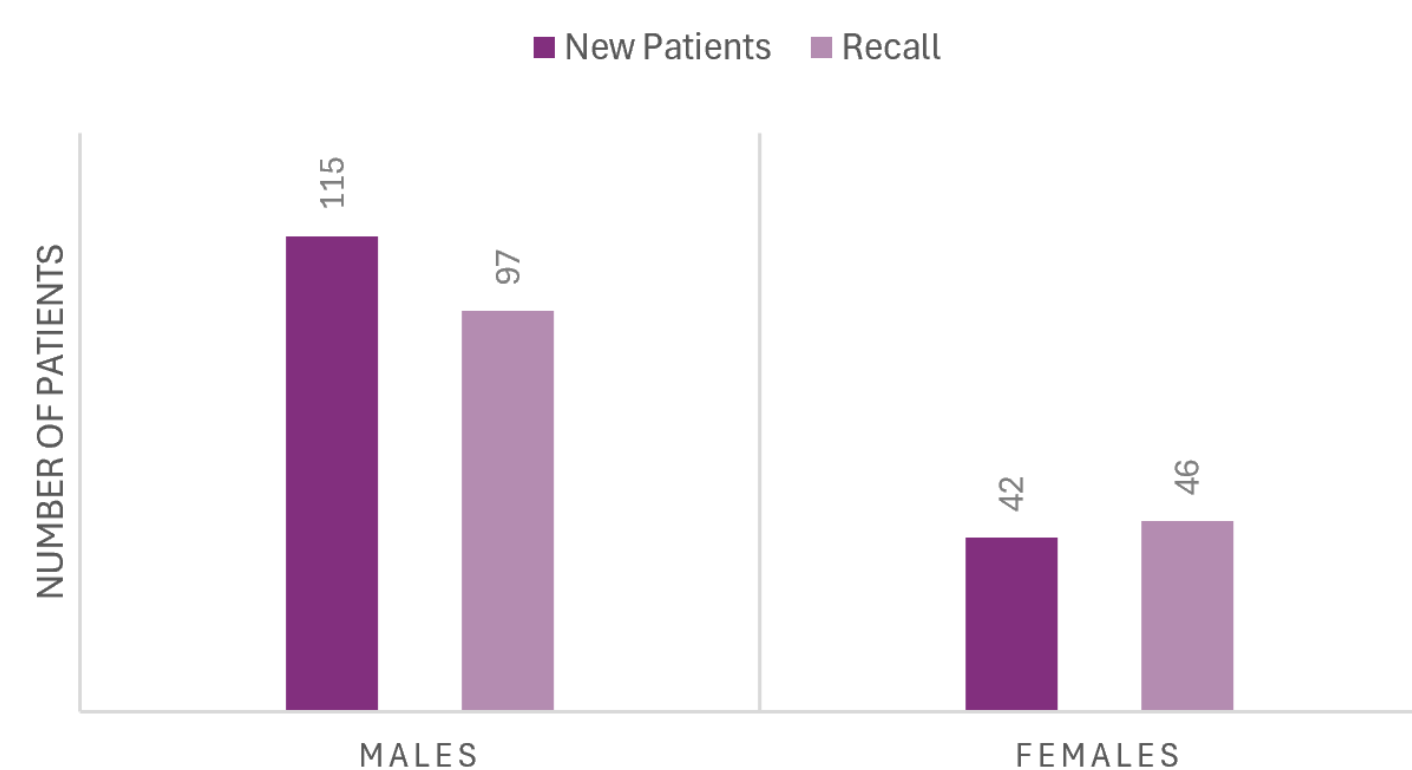
This study was classified as minimal risk and conducted in compliance with the Health Insurance Portability and Accountability Act (HIPAA). All data were de-identified.

## RESULTS

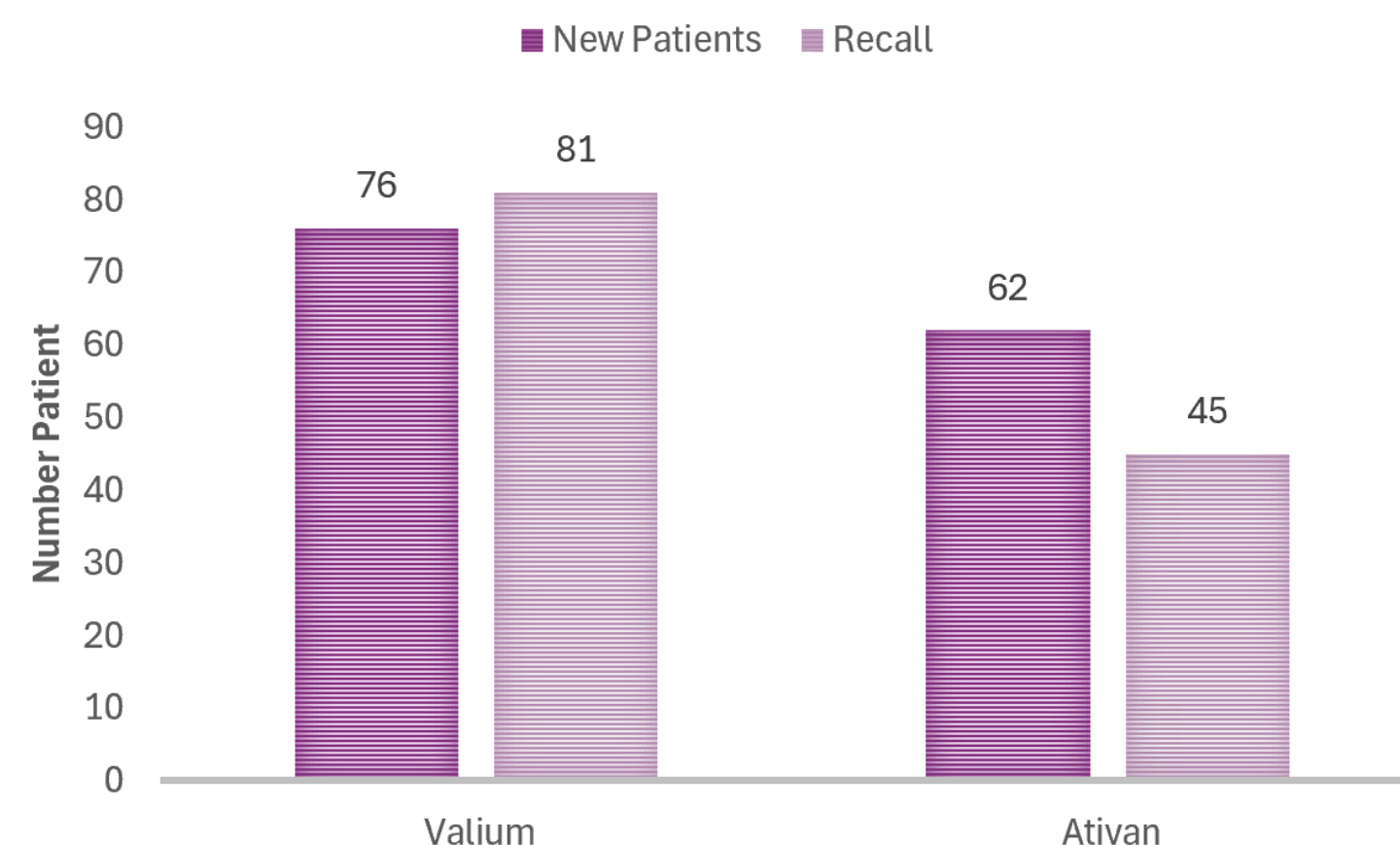


## RESULTS

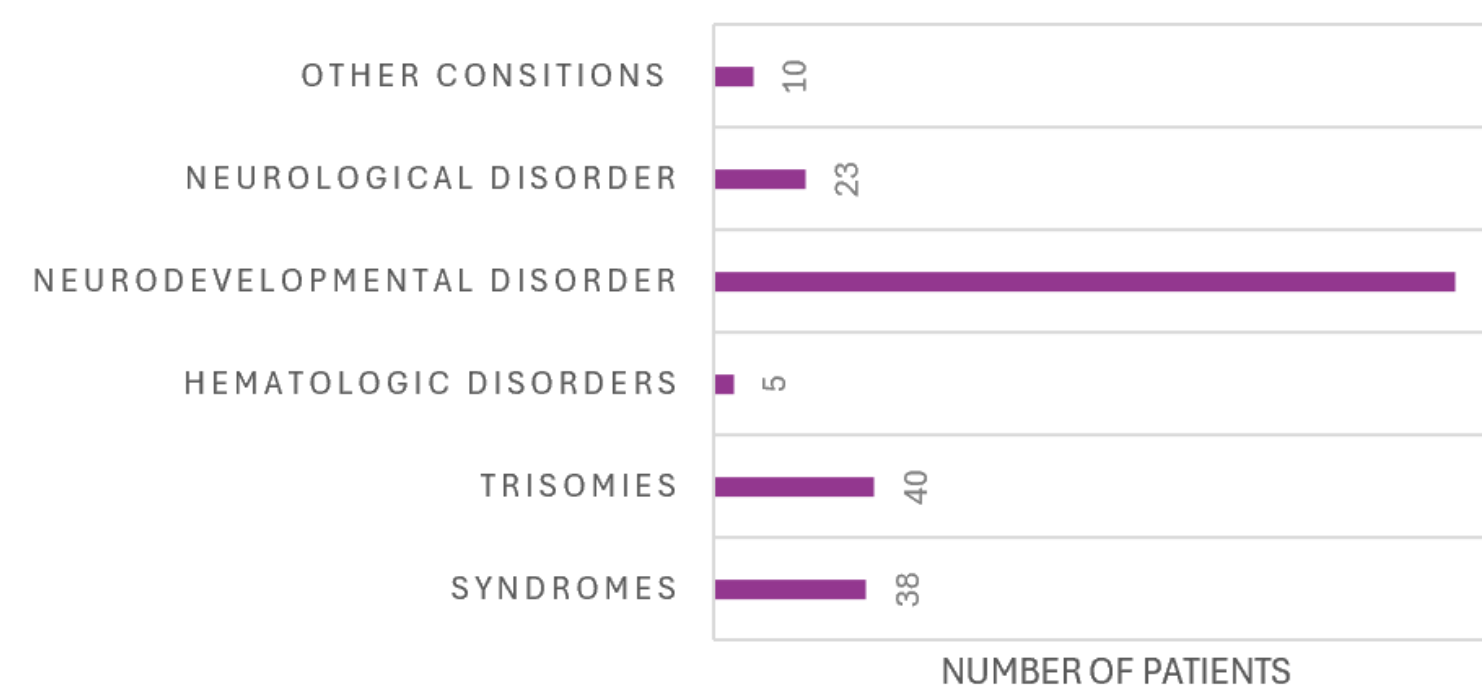
### SEX DISTRIBUTION OF PATIENTS PRESCRIBED ANXIOLYTIC PREMEDICATION



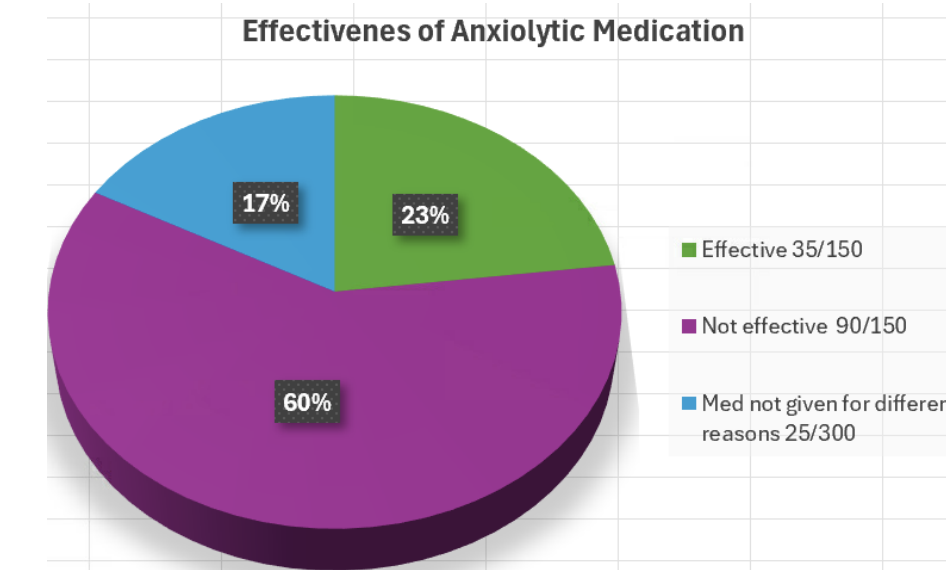
### ANXIOLYTIC MEDICATION PRESCRIBED



### MEDICAL CONDITIONS REQUIRING ANXIOLYTIC PREMEDICATION



## RESULTS



## DISCUSSION

This study provided a descriptive overview of pediatric patients with special health care needs (SHCN) receiving pre-visit anxiolysis in a Children's Health outpatient dental clinic. Overall, findings suggested limited effectiveness of premedication in improving behavior across the study population. Behavioral assessment was subjective and represented a key limitation. As the outpatient clinic functions as a teaching environment, continuity of care was limited, and patients were often evaluated by different residents at each visit. This variability likely influenced behavioral assessments and may have contributed to inconsistent evaluation of anxiolytic effectiveness. Additionally, evaluating behavior in patients with SHCN was inherently complex. Multiple factors may have influenced outcomes, including time of day, concurrent medications, medical conditions, disruption of daily routines, and baseline mood. These variables made it difficult to isolate the true effect of anxiolytic medications such as Diazepam and Lorazepam. Importantly, caregivers may provide the most reliable assessment of medication effectiveness, as they are most familiar with the child's baseline behavior. Future studies should consider incorporating caregiver-reported outcomes. Development of a standardized behavioral assessment scale within the residency program may improve consistency and allow for more objective evaluation of treatment outcomes.

## CONCLUSION

1. Pre-visit anxiolysis showed limited overall effectiveness in this population.
2. Behavioral outcomes were variable and influenced by multiple external factors.