



Boston University Henry M. Goldman School of Dental Medicine

Medical Comorbidities in Pediatric Dental Patients Under General Anesthesia

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BACKGROUND & PURPOSE

General anesthesia (GA) is commonly used in pediatric dentistry for patients with complex behavioral, medical, or dental needs.¹

Children with medical comorbidities present unique challenges requiring meticulous preoperative planning to optimize safety.²

Purpose: To determine the prevalence and distribution of medical comorbidities in pediatric dental patients receiving GA and evaluate differences by age.

METHODS

Study Design: Retrospective chart review

Sample: 634 patients (≤17 years) treated under GA at Franciscan Children's Hospital, Brighton, MA

Study Period: June 1, 2019 – June 1, 2021

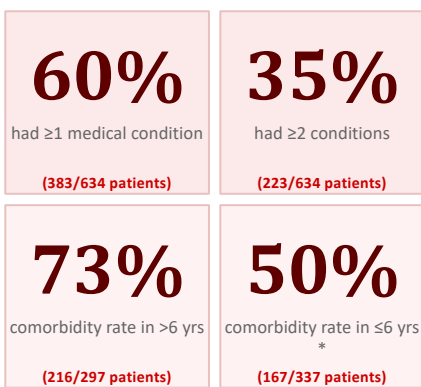
Data Source: Physician-completed preoperative consultation forms

Condition Categories:

Neurological • Behavioral • Cardiovascular
Genetic • Respiratory • Metabolic • Other
(Conditions categorized from prior research)³

Statistics: Descriptive stats; Chi-square/Fisher's exact tests by age group (P<.05)

RESULTS



* Age difference statistically significant: P<.001

Figure 1. Most frequent diagnoses (% of 634 patients)

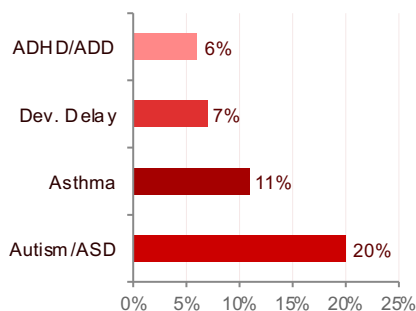
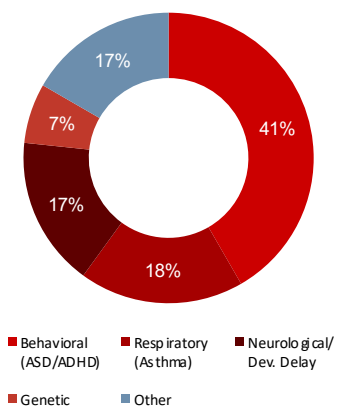


Table 1. Sample characteristics

Characteristic	n (%)
Total Patients	634
Male	380 (60%)
Female	254 (40%)
Age ≤6 years	337 (53%)
Age >6 years	297 (47%)
≥1 Comorbidity	383 (60%)
≥2 Comorbidities	223 (35%)

Figure 2. Comorbidity categories



CONCLUSIONS

1. Medical comorbidities are common among pediatric dental patients receiving GA (60% had ≥1 condition).

2. Comorbidity prevalence increased significantly with age: 73% (>6 yrs) vs. 50% (≤6 yrs) (P<.001). This likely reflects that older children requiring GA often do so due to underlying behavioral or medical diagnoses (e.g., ASD, ADHD) that complicate conventional dental care.⁴

Clinical Significance:

- ✓ Comprehensive preoperative medical review
- ✓ Multidisciplinary coordination with physicians
- ✓ Individualized preoperative planning
- ✓ Optimized patient safety protocols

References

