

# Using Triazolam for Pediatric Dental Sedation

Yinger S,<sup>1</sup> Claman D,<sup>1</sup> Hammersmith K,<sup>1</sup> Gross E,<sup>1</sup> Lee J,<sup>1</sup> Meyer B<sup>1</sup>

<sup>1</sup>The Ohio State University and Nationwide Children's Hospital, Columbus, OH

## Purpose

This study explored the use of the benzodiazepine, **triazolam (Halcion)**, in pediatric dental oral conscious sedation (OCS).

The primary objective of this study was to describe triazolam's use, to report physiologic responses (**safety**), and to **compare its behavioral effectiveness** to non-sedated patients for permanent first molar (PFM) extraction.

## Retrospective Chart Review 2018-2022

**Exposure Group:** Children ≥ 8 years with PFM extraction

- Triazolam OCS
- BMI <95 percentile
- ASA I or II

**Control Group:** Children ≥ 8 years with PFM extraction

- No OCS
- BMI <95 percentile
- ASA I or II

## Outcome Measures

**Adverse events (scored as yes vs no):** apnea, desaturation, hypertension, hypotension, bradycardia, tachycardia, paradoxical agitation

**Behavioral effectiveness:** Frankl score for the visit as assigned by the treating dentist

For extractions of first permanent molars in patients ≥ 8 years, OCS with triazolam is a safe option

Based on Frankl behavior scores, triazolam improved the patients' visit behavior

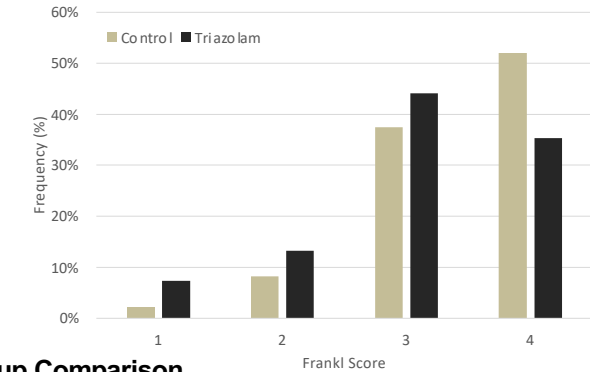
## Safety Summary

Zero instances of apnea, desaturation, hypertension, hypotension, bradycardia, tachycardia, or paradoxical agitation.  
Zero cases requiring emergency management skills or equipment.

## Effectiveness Summary

### Between Group Comparison

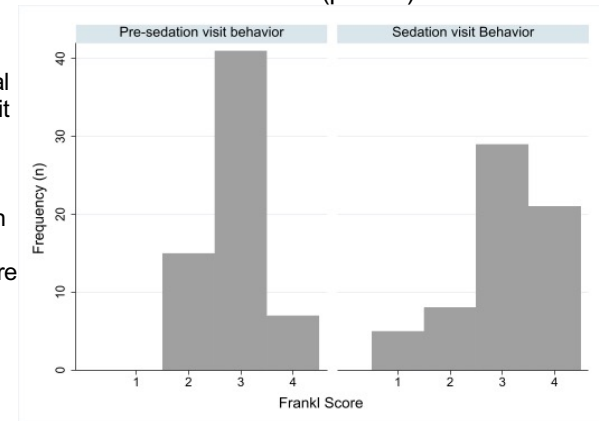
Figure 1. Frequency distribution for behavioral scores at extraction visit for the exposure and control group. X-axis represents the categories of Frankl score where 1=definitely uncooperative and 4=definitely cooperative



### Within Exposure Group Comparison

Visit behavior improved in 35% of triazolam cases (p=0.11).

Figure 2. Frequency distribution for behavioral scores at the referral visit (pre-sedation visit behavior) and sedation visit (sedation visit behavior). X-axis in each panel represents the categories of Frankl score where 1=definitely uncooperative and 4=definitely cooperative



References: Kaufman et al. Oral Surg Oral Med Oral Pathol. 1993 Feb;75(2):156-64.  
Berthold et al. J Am Dent Assoc. 1993 Nov;124(11):58-64.

