

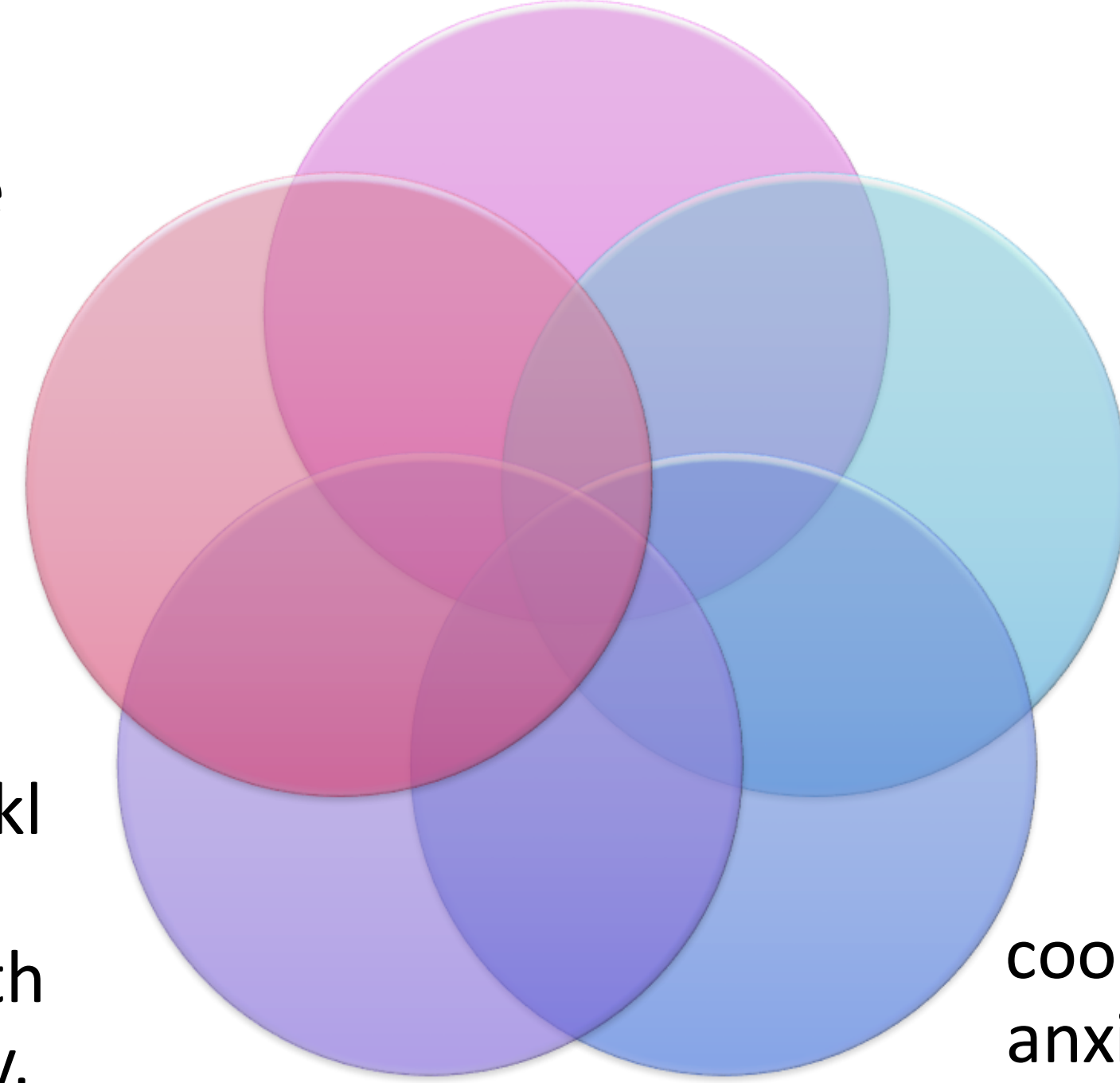


## Introduction

Patients with Autism Spectrum Disorder may exhibit challenges with social interactions and communicating with others which may inhibit providing exceptional dental care in an office setting without the use of pharmacological behavioral guidance techniques.

**General anesthesia:** patients with special health care needs, patients with poor cooperation, extensive dental needs, younger children, inability to perform proper exam or obtain radiographs

**Oral conscious sedation:** lower Frankl or behavior scores (1 and 2), patients with severe dental anxiety, or when non-pharmacologic behavior management is not effective



Dental treatment can be completed in several sedation regimens:

- Nitrous Oxide Sedation (Minimal)
- Oral Conscious Sedation (Moderate)
- General Anesthesia

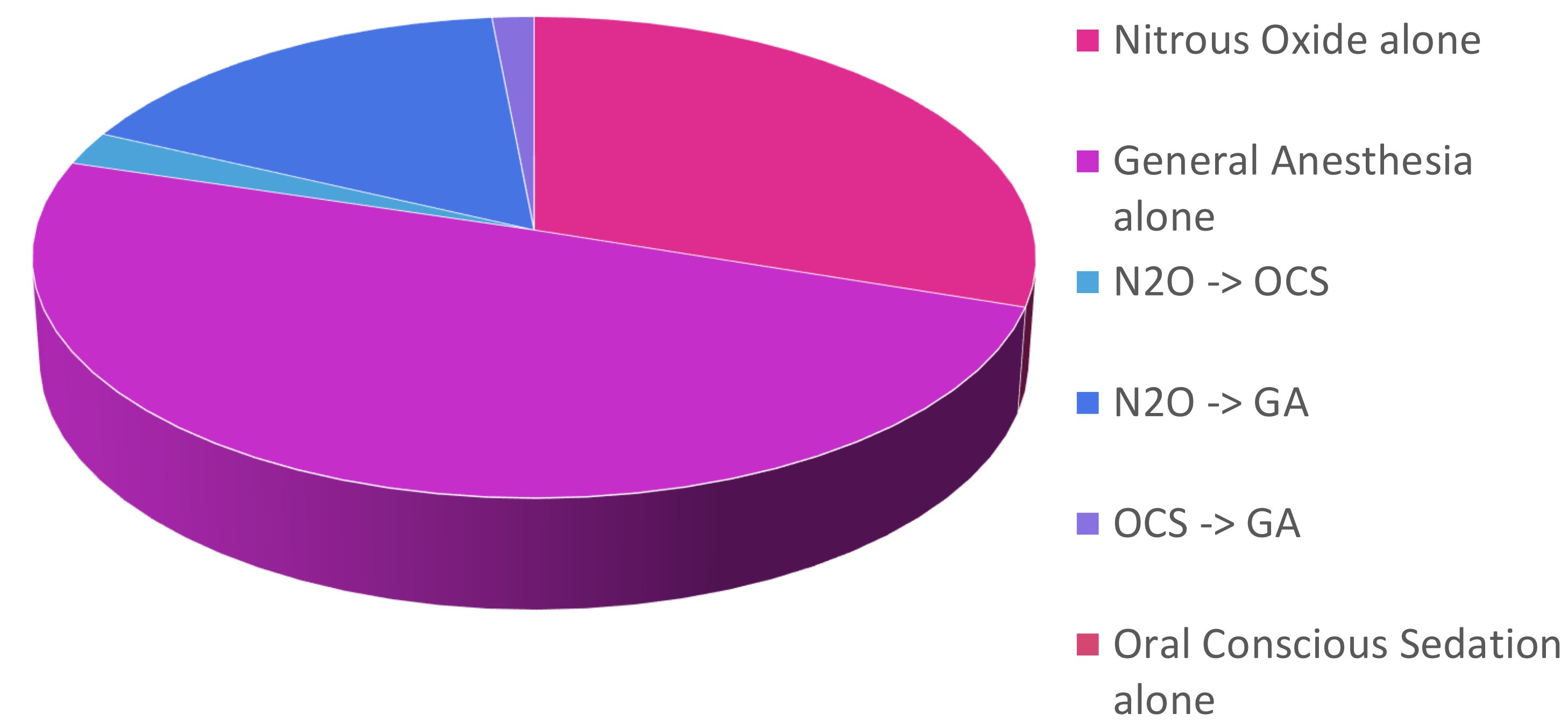
**Nitrous oxide:** cooperative behavior but anxious, verbal to ensure communication

## Methods

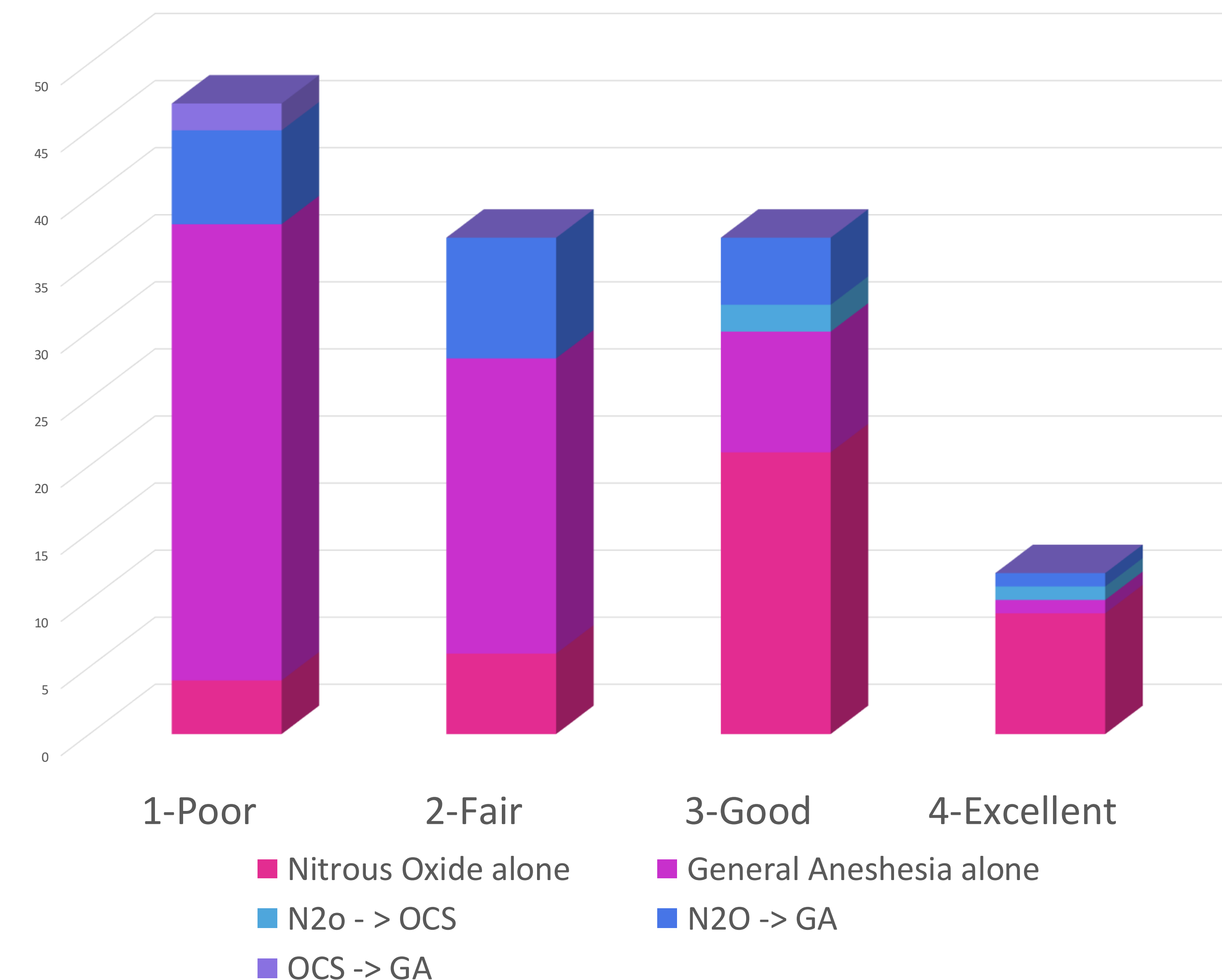
- A five-year retrospective study completed with 133 pediatric patients with autism spectrum disorder from ECU School of Dental Medicine Pediatric Dentistry
- **Inclusion:** Pediatric patients between the ages of 2 and 16 years old, Diagnosis of autism spectrum disorder, treatment completed with *at least* one sedation regimen: nitrous oxide, oral conscious sedation, and/or general anesthesia
- Behavior scores at initial visit were obtained: 1-Poor, 2-Fair, 3-Good, or 4-Excellent
- **IRB Study:** #UMCIRB 24-002492

## Results

Dental Treatment Considerations



Sedation Regimen based on Behavior scores



## Discussion

Effectiveness of nitrous oxide is usually seen in children with autism spectrum disorder that exhibit mild symptoms of ASD, categorized as high-functioning ASD, or with cooperative behavior suitable for a setting like a dental office.

Dental treatment with general anesthesia is best suited for patients with ASD due to its effectiveness to treat multiple teeth in one sitting, eliminates the need for cooperation or communication

Multiple patients started with a minimal or moderate sedation regimen and then had to have treatment completed in another sedation regimen and this can be due to patient's becoming uncooperative for treatment to be treated safely and effectively in office via Nitrous oxide or General Anesthesia.

Younger patients (2-5 years old) are more likely to be uncooperative and can best be treated in a general anesthesia setting

This study supports the need for future research to examine the effectiveness of oral conscious sedation in dental procedures for patients with autism spectrum disorder and finding a way to quantify the different spectrums in autism spectrum disorder in regard to dental treatment.

## Conclusions

- **Patient selection** is key when treatment planning for patients with special health care needs such as autism spectrum disorder and allows for the provider to make decisions that benefits the patient so that limited interactions with poor experiences in a dental office can be limited and emphasizes the importance of a thorough initial exam and history taking.
- **Behavior and Cooperation** in a dental setting helps to determine the treatment modality for treating dental needs of pediatric patients with autism spectrum disorder.
- **General anesthesia** serves as an affective and thorough behavior management tool for addressing dental concerns and providing comprehensive dental treatment for pediatric patients with autism spectrum disorder
- **Changes in Sedation regimen:** Depending on how the dental appointment runs, there may need to be changes in sedation regimens for dental treatment completed by the dental provider, and it is crucial for the dental provider to recognize when adjustments are needed

## Acknowledgements

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