### INTRODUCTION

- Operative based dental procedures are compounded by frequent anxiety and fear of dental treatment in pediatric populations and necessitate moderate sedation. During a sedation, the need for safety using isolation becomes paramount. The placement and use of an isolation method is intrinsically tied to the overall success of treatment.
- The rubber dam is still considered to be the gold standard isolation technique in pediatric dentistry with use for well over 100 years. TheIsoVac can be used for the same restorative procedures as the rubber dam and consists of a bite block, tongue shield, and a vacuum channel for suction.
- Patient acceptance becomes even more important in moderately sedated children who are easily aroused to stimuli.
- No study has attempted to look at the behavioral success of dental treatment during a moderate sedation based upon the placement of either a rubber dam or IsoVac isolation.

### METHODS

- A retrospective chart review of a total of 70 charts was completed for patients who underwent restorative procedures with either rubber dam and IsoVac isolation under moderate sedation at Bon Secours Pediatric Dental Associates in Richmond, VA.
- All patients underwent the usual sedation protocol of the pediatric dental clinic and were medicated with either dexmedetomidine, midazolam, triazolam, hydroxyzine, nitrous oxide, or some combination thereof.

### DATA ANALYSIS

All data were analyzed with a Wilcoxon Rank Sum Test. Significance was set at $p < 0.05$.

### RESULTS

- Significantly better behavior was found in moderate sedations that utilized rubber dams.
- Significant differences were found in Beginning Frankl, Ending Frankl, and, most importantly, Behavior at Isolation Placement.
- The significant difference between Behavior at Isolation and Ending Frankl was still seen when adjusted for medication and depth of sedation.

### CONCLUSIONS

Both rubber dam and IsoVac isolation methods have their place during a moderate sedation. The data suggests rubber dam isolation does contribute to better behavior as well as a better overall sedation when compared to the IsoVac. Randomized controlled studies are needed to further assess behavior with different isolation techniques during pediatric dental sedations.

### REFERENCES