



Implementing dental resources to improve care for patients with ASD

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Introduction

Per the 2018 CDC report, the current prevalence of autism spectrum disorders (ASD) has increased to 1:44 individuals in the U.S.¹ Several barriers to appropriate dental treatment exist for individuals with ASD such as communication deficits, intellectual disability, and sensory sensitivity.² The above listed barriers often result in undesirable behaviors during dental visits which can lead to hesitation by certain dental providers to examine and treat individuals with ASD.³ Several techniques and therapies have proven to improve behavior of individuals with ASD in a dental setting such as: social stories and video modeling, pre-visit parental questionnaire, desensitization, environmental modifications, sedation, and general anesthesia.^{4, 5} Based on the increasing frequency of individuals with ASD, it is pertinent that dental providers feel prepared and comfortable to treat more patients with ASD.

Purpose

This quality improvement (QI) project aims to implement a protocol within The Department of Dentistry at Children's National Hospital (CNH) to improve overall experience for patients diagnosed with ASD during dental visits.

Methods

Upon CNH IRB approval, This QI project involved the editing of a pre-visit caregiver questionnaire, social story, and a Picture Exchange Communication System (PECS), all of which were developed specifically for CNH department of dentistry. The three resources were co-created and revised by the CNH department of dentistry and the ABC (Autism Behavioral Communications) team. A program was implemented to make these resources accessible to caregivers both in-person and via online PDFs on the CNH's Webpage prior to their dental visit. 64 caregivers of children with ASD were provided an anonymous post survey after their child's dental visit to assess the effectiveness of the resources and satisfaction of the caregivers in helping to improve the quality of their child's dental visit. The surveys results were collected and the data was analyzed through Excel.



Figure 1: A snippet of the PECS form demonstrating the dental chair and use of sunglasses during appointments

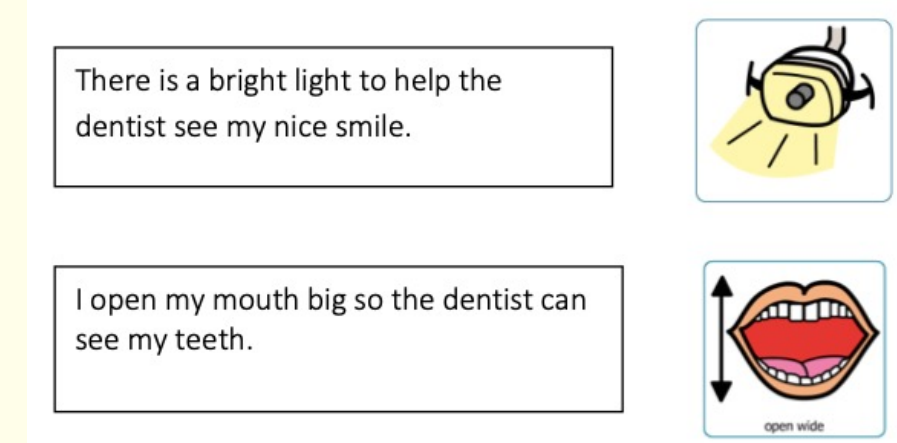


Figure 2: A snippet of the PECS form demonstrating the use of an overhead light and examining patient's teeth

Results

Satisfaction Rate of ABC Resources

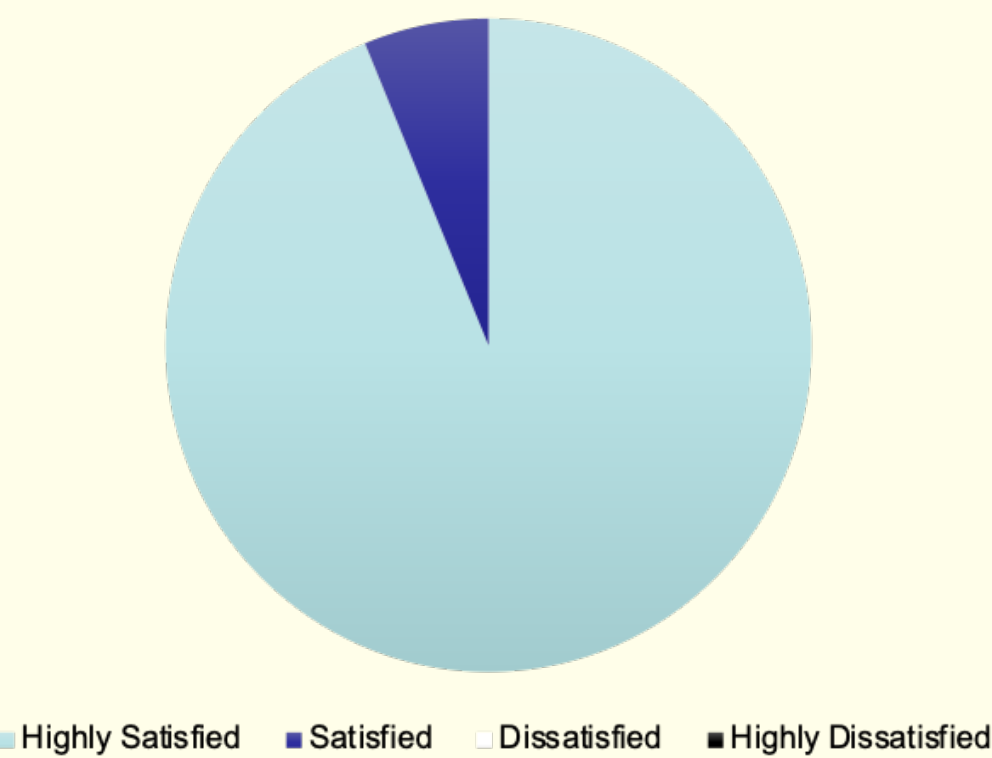


Figure 3: This chart shows caregivers' satisfaction rate after using the provided dental resources compared to other previous dental visits (n=64)

Effectiveness of ABC Resources

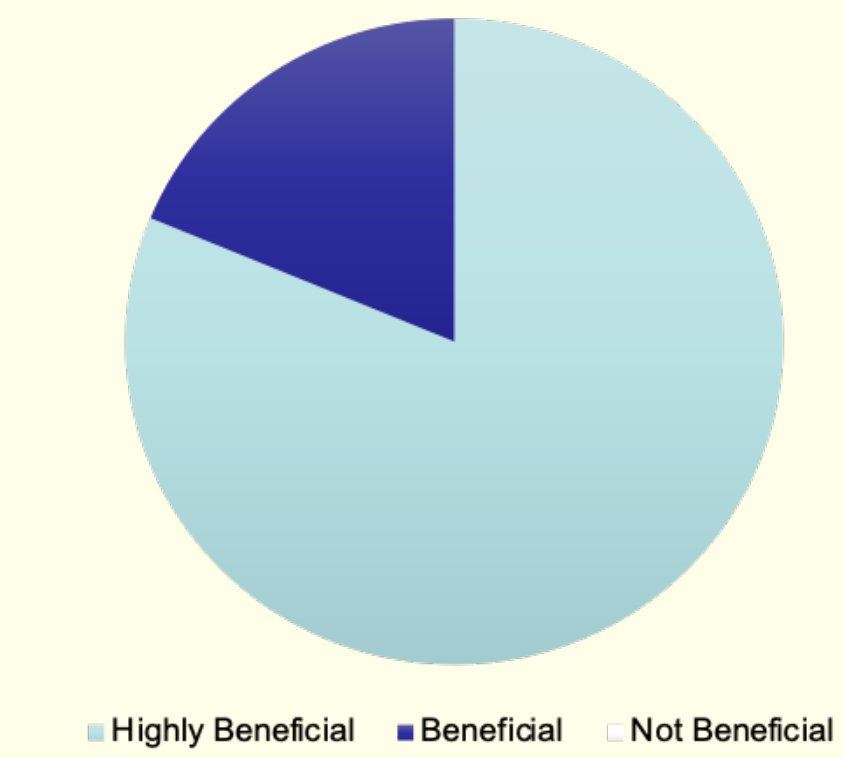


Figure 4: This chart shows the effectiveness of the ABC resources in improving patient management and cooperation during dental visits (n=64)

Parental Feedback:

- “The ASD survey is a great tool for you to understand my child's communication needs. Only recommendation is that the staff member uses the same questionnaire again for the next visit.”
- “We all parents and special needs persons, need more as far as dental support. We are thankful for improvements that have been made since our arrival/first appointment.”
- “I really appreciate the questions about autism as it related to my son. Every clinic should have this form.”
- “Based on past appointments, the department has made great improvements dealing with ASD children.”
- “The pre-appointment questionnaire was very helpful so the doctors can be aware and know what to expect to accommodate the patient better.”
- “They were very supportive and walked him through everything and made him super comfortable. :)”
- “This was wonderful. I am very happy!”
- “Everything went fine. It worked really well with my daughter. It was my daughter's best dental visit yet. A video could also help.”
- “The resources were valuable in helping my daughter accommodate to the dental clinic. The provider and assistant used my feedback in the survey to help her feel more comfortable. Thank you! Great visit.”

Discussion

- There are several techniques and therapies that have proven to be effective in improving behavior of individuals with ASD in a dental setting, such as social stories and video modeling; pre-visit parental questionnaires; desensitization, environmental modifications to reduce sensory triggers; sedation and general anesthesia.^{3, 4, 5}
- The 3 resources developed through this Quality Improvement project are cost effective and are well received by both patients with ASD as well as their families.
- All 3 resources are delivered in PDF format so that they may be viewed on the media of choice (digital or paper). Previous research has shown that delivery of resources on media of choice is correlated with effectiveness of resources.⁴
- Out of 64 surveys, 52 caregivers found it to be “Highly Beneficial”, 12 reported it to be “Beneficial”, 0 caregivers indicated that it was “Not Beneficial”. Thus, 100% of the participants found the resources to be “Beneficial” or “Highly Beneficial”.
- Out of 64 surveys, 60 caregivers indicated that they are “Highly Satisfied”, 4 indicated that they are “Satisfied”, and 0 caregivers indicated that they are “Dissatisfied” nor “Highly dissatisfied”. Thus, 100% of caregivers were “Satisfied” or “Highly Satisfied” with this dental visit compared to previous dental visits.
- Overall feedback of the resources was positive; however, some families encouraged development of a video modeling resource based on previous success with video modeling resources for other aspects of life.

Conclusions

- Caregivers reported that pre-visit caregiver questionnaire, social story, and a Picture Exchange Communication System (PECS) seem to be effective resources in improving quality of care and dental appointments for patients with ASD.
- There were requests from caregivers for additional resources (such as video modeling) and a more universal form/database for all aspects of healthcare.
- Future research is needed to assess the most beneficial ABC resource that has proven to be the single most effective in improving quality dental appointments with patients with ASD.

References

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