

Special Health Care Needs And Oral Health Awareness

Nina Beck
Tonisha Jaquez
Maddalena Roseto
Tiffany Tran
Paige Zambito

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Introduction

The American Academy of Pediatric Dentistry (AAPD) defines special health care needs as, “any physical, developmental, mental, sensory, behavioral, cognitive, or emotional impairment or limiting condition that requires medical management, health care intervention, and/or use of specialized services or programs. The condition may be congenital, developmental, or acquired through disease, trauma, or environmental cause and may impose limitations in performing daily self-maintenance activities or substantial limitations in a major life activity.” Individuals with special needs usually require extensive dental care services; yet, dental care often takes the backseat because other grave medical requirements take focus. In an article titled “Guideline on Management of Dental Patients with Special Health Care Needs” by the AAPD it is reported that, oral diseases can have overwhelming and undeviating influences on the health and quality of life of those with certain systemic health complications or conditions. Parents and/or legal guardians, teachers, paraprofessionals, nursing aids of special needs children, and even the child with special needs (depending on their cognitive/dexterity level) must be educated on the importance of oral health and prevalent oral conditions that are common amongst the special needs population.

In order to bring oral health awareness to the special needs community, a group of 5 dental hygiene students, Nina Beck, Paige Zambito, Maddalena Roseto, Tiffany Tran and Tonisha Jaquez, assessed, planned, implemented and evaluated an oral health education program at an elementary school that catered to children with special needs. We planned on going to about 4 classrooms with about 5-7 students, ages 5-12 years, diagnosed with autism. A PowerPoint presentation was created with colorful pictures

reviewing oral homecare and the importance of going to the dentist. We also printed out pages with pictures that the students were able to color in, crossword puzzles and “brush-charts” to bring home to their parents in order to keep track of their oral hygiene on a daily basis. The dental hygiene students also provided stickers as positive reinforcement, nutritional posters as a teaching aid, and tyodonts along with toothbrushes in order to assist the children as they learned the proper tooth brushing technique. Upon arrival at PS 329, The Surfside School, in Brooklyn, New York, we were informed that the students we were presenting to did not only suffer from autism, they had very low cognitive abilities and suffered from several kinds of disabilities such as; Down’s syndrome, spinal cord injury, muscular dystrophy, visual and hearing impairments, cerebral palsy, seizures etc. Minor adjustments were made to our plan, and we quickly implemented it into our project. As we evaluated we realized we could have done a few things differently in order to accomplish our goal of bringing oral health awareness to the special needs population.

Assessment

Patients with special needs are those, who due to physical, medical, developmental or cognitive conditions require special consideration when receiving dental treatment. This can include people with autism, Alzheimer's disease, Down syndrome, spinal cord injuries and countless other conditions that make standard dental procedures more difficult. The target populations for our service-learning project are children and adolescents with special needs. Children and adolescents with special needs may appear with some oral conditions such as, delayed tooth eruption, malocclusion, developmental defects, tooth anomalies, trauma, bruxism and oral infections. They also lack understanding the importance of good oral health. Balancing the requirements of a special needs child can be very challenging for parents. Pressing medical issues often take focus and dental care can take a back seat. The problem is that, according to the Academy of Pediatric Dentistry, those children are almost twice as likely to have dental problems compared to children without special needs. It is also important to pay close attention to the lack of dexterity some special needs patients may have. It may help to introduce daily brushing schedules, brushing instructions, and different types of toothbrushes, to get the child to maintain proper oral health. Down syndrome and other genetic disorders can cause delays in tooth eruption, sometimes up to two years according to the National Institute of Dental and Craniofacial Research. These children may also have malformed teeth, supernumerary teeth, congenitally missing teeth, crowding and poor alignment. Children and adolescents with developmental disabilities are prone to gum disease and tooth decay because their teeth are difficult to keep clean. In cases of severe intellectual disability or cerebral palsy, children may habitually grind their teeth,

making them flat as they gradually break down the enamel.

Tooth decay and gum disease can also be a result of a child's impaired immune system and connective tissue disorders. Many of the medications these patients are eligible for are high in sugar or cause xerostomia, which is directly related to tooth decay. Certain medications can also cause gingival hyperplasia. We, as dental professionals, must educate the caregivers and ask the medical doctors about what oral conditions some of these medications might cause. We must start educating as soon as we can so the parent can establish a home care routine. As dental professionals, it is important for us to inform and educate the parents or caregivers of special needs children. Caring for a special needs patient takes compassion and understanding. While most dental professionals can accommodate special needs patients, some focus on meeting the needs and working with the limitations of these patients.

Planning

Prior to attending Surf Side Middle School, my group members and I had spoke to Dr. Truncalli about her past experiences in her annual presentations to the students of this school. Since she regularly attends Surf Side Middle School annually for a Career Day presentation, Dr. Truncalli mentioned to my group and I the different levels of severity of Autism in which we would be encountering. Her description was as following, a school of classes with 5-10 students, each floor dedicated to the severity of the disorder. The classrooms were labeled as X (highest level of functioning), Y, and Z (lowest level of functioning).

Many of the members in our group have never worked alongside children with Autism so much of our planning was based on what we have learned during seminar of DEN2400. We wanted to base all of our learning strategies around colors and shapes that would intrigue the students. Since we learned that children of Autism have difficulty in focusing their attention, we wanted to use as little words as possible in our presentation and more images, props, and posters to entice their interest. We created a PowerPoint of the main objectives of what a child should do to keep a healthy mouth (brushing, rinsing, eating healthy foods, and regular dentist appointments). Our power point was full of images, large font, and simple wording. Originally we planned to use this power point in the initial presentation, and then follow with a poster of the “Bad” foods and “Good” foods, allowing for the children to participate in which foods are good for our teeth and which are not so good. Next, our plan was to use our typodonts for student interaction. Based on what we would discuss in our power point, we each have each child show us what they learned as the proper technique of brushing, allowing them to hold and

stimulate the brush as we held onto the typodont. Our final technique in enforcing our presentation to the children was with the use of take home activity sheets which included daily brushing logs and coloring sheets. Our final plan to create the appropriate learning experience for the children was the use of stickers as positive reinforcement, a major teaching strategy used for children with autism. Our plan acknowledged that the children we would be encountering would face some difficulties in engaging, but we as a group felt well prepared in creating alternatives if one aspect of the plan did not go accordingly.

As we had planned for, the ideal presentation was slightly side tracked due to the severity of the children we were encountering. We were unaware of how low functioning the “Z” group would be. Our Power point, “Happy Tooth/Sad Tooth poster, our stickers, and our props were of no interest to the children of group “Z”. There was little to no response from each child. Although we received no interest or feedback, we continued our presentation verbally, in hopes that voice stimulation would be more beneficial rather than just having a power point play. Group “X” which were children of a higher functioning level, did not show much engagement either, but surely more than that of group “Z”.

Although we have learned the techniques of patient education in children with ASD, and have been tested, and have read studies, nothing can quite prepare you on what each child with different levels of the disorder can grasp. I believe my group members and I were as prepared in presenting to the children of Surf Side Middle School as we could have been. Yes our planning was forced to be re-routed when we saw the severity of each class, but the alternatives were accomplished, and our presentation was complete.

Implementation

The goals of the lesson for the elementary school students were to demonstrate proper brushing and flossing techniques, explain the importance of adequate oral hygiene and determine which foods are good and bad for your teeth, inside the classroom. Going into this, we were told the children were Autistic. We prepared a power point presentation to help keep the children focused. However, upon arriving to the classrooms, we were told a power point would not work because there were no smart boards present. We also found out that these children had developmental disabilities far beyond Autism. Some were wheelchair bound, mute, hyperactive, and some were more active in participating physically and mentally. We had to adapt to the different classrooms quickly, and decide what we can and cannot do according to the child's disabilities.

The first classroom we entered, the children were mute and wheelchair bound. The paraprofessionals and teachers in the classroom told us that the children could hear us, except for one who was deaf. Other than that, the children didn't interact with us because they physically could not, and they couldn't speak. What we decided to do was to hand the teachers a take home "brush chart" which we provided, that their parents could check off when they brushed in the morning and at night, for a 30 day period. We then took out a typodont and toothbrush and showed the children how to brush correctly using a circular brushing motion. The teachers and paraprofessionals were answering most of our questions because the children themselves could not. We also found out that this school used to teach the children how to brush their teeth and do it in school with them, but because of budget cuts, they no longer provide this service.

The second classroom we went to the children were hyperactive, speaking, and seemed interested in what we had. So we started off by asking them when they brush their teeth and for how long, to get some participation going. Then, we had a large piece of oak tag paper with a “happy tooth” and a “sad, crying tooth”. We held up index cards with foods on them such as ice cream, pizza, soda, apples, and water. We asked the children whether they thought the pizza, soda, apples, and water were good for your teeth or bad for your teeth. Then we stuck the food items onto the correct tooth. Pizza, ice cream and soda went on the sad, crying tooth and apples and water went onto the happy tooth, The children were really interested in this activity and they found it exciting and funny. Most of the children got the questions correct. Then we handed out pieces of paper with teeth, toothbrushes, toothpaste, and puzzles on them for the children to color in and complete. After about 5-10 minutes of this, we took out the typodonts and showed them how to brush using a circular motion. Then, we handed the typodont to each student to demonstrate the proper way to brush. We stood close by incase one of the students decided to put the toothbrush in his or her own mouth, which almost happened.

Each classroom had a different group of children each with different disabilities. Although we were not aware of this prior to going to the school, we accomplished what we set out to do. We left the kids, hopefully, with knowledge that they didn't previously have regarding brushing their teeth and how to maintain healthy teeth for the rest of their lives.

Evaluation

Due to the low cognitive levels of the students, and their inability to coherently respond to our lesson plan, it would not be ideal to conduct a post evaluation to follow up on what the students were able to take away from the lesson. Rather, we posed questions after our oral hygiene lesson to determine what the students were able to remember. This was of course more successful in some of the more verbal and higher cognitive classrooms. We asked questions such as: how many times a day should we brush our teeth? How long should we be brushing our teeth for? How many times a year should we see a dentist? What foods are good for our teeth and health? What foods are bad for our teeth and health? We rewarded students who presented correct answers with stickers and/or temporary tattoos as encouragement. We noticed that in some classes, students were more eager to participate in answering our questions when they received rewards. We also recognized that in the higher cognitive level classes, the students were able to understand and grasp certain key points in our presentation. They were very successful with our good food vs. bad food lesson. We also provided a take-home “brushing calendar”, where the students, with the assistance of their parents, were able to keep track of how often they were brushing. They were given stickers to put onto the calendar after each successful brushing session. Prior to arriving at the school, although we knew we had an autistic elementary school population, we were unaware of the severity and broad spectrum of the cases we worked with this day. We were able to modify our lesson plans for each class, depending on the students, so that they received the best lesson suited for their needs. We believe we were able to successfully carry out what was initially planned. With the assistance of visuals and hands-on demonstration, we believe the

students were able to take away some important information regarding their oral health care. We hope that the students did benefit from our lesson and the parents and caretakers of the children are also aware of what attention is needed for these students.

Conclusion

For the Service Learning Field Project, the dental hygiene student's focus was special health care needs children and oral health awareness. The group addressed the importance of oral health in the special needs community by assessing, planning, implementing and evaluating an oral health education program at an elementary school in Brooklyn, NY, PS329 The Surfside School. The population we targeted were individuals suffering from debilitating medical conditions that limited their ability to accomplish self-maintenance activities for themselves, such as; Down's syndrome, autism, spinal cord injury, muscular dystrophy, visual and hearing impairments, cerebral palsy, seizures etc. With the help of recent published literature, the dental hygiene students recognized that the parents of special needs children often place dental care on the bottom of the priority list because of the burden of other crucial medical necessities. Recent literature also helped us note that oral disease is twice as likely to occur in children with special needs than in children without special needs. While planning our oral health education program we developed fun activities and demonstrations that emphasized the importance of brushing twice daily with fluoride toothpaste, nutritional counseling and frequent dental visits. We implemented our plan by going to a site that targeted our population of special needs children, exhibiting proper tooth brushing techniques on typodonts with a toothbrush, providing side-by-side brushing assistance on a typodont with a toothbrush, giving out stickers as positive reinforcement when a child answered a question correctly or demonstrated good behavior, provided dental related activity sheets with fun crossword puzzles and pictures to color in, and discussed good nutritional habits with a "happy tooth-sad tooth" oak tag poster. After the oral health education program, the

group of dental hygiene students felt as if the program could have been more affective if there was no miscommunication during the assessment portion of the project. In the beginning we were under the impression that we were presenting to classrooms that consisted of autistic children with mild cognitive disabilities; therefore, we created a presentation that was very hands-on and focused primarily on speaking to and educating the children, teachers and paraprofessionals. Yet, the last minute realization that we were presenting to children with a wide variety of disabilities put us at a disadvantage being that we were not fully prepared to do everything necessary to accomplish our goals. In hindsight, we realized that we could have given out self-made pamphlets or brochures for the children to bring home in order to educate the parents on proper tooth brushing methods and the importance of dental visits because the parents are usually responsible for scheduling doctor visits and for the self-care activities the child is incapable of accomplishing. Presenting our information to the children, teachers and paraprofessionals might not have accomplished the goal we originally had of bringing oral health awareness to most, if not all, of the individuals present during our presentation; yet, we are sure our project made a difference and a small portion of the 50 students, teachers or paraprofessionals left our presentation with a little more oral health awareness.

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