

Educating New Parents about Oral Health for Babies/Children

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Introduction

A healthy mouth is a very important factor in living a healthy life physically and mentally. Having good dental health not only helps you eat, talk, and smile but also helps boost one's self-confidence. If a good oral health is not maintained from an early age, it can cause cavities, infections, early tooth loss, and later in life can cause Periodontal disease. According to the World Journal of Advanced Scientific Research, “Maternal oral health has significant implications for birth outcomes and infant oral health”[6]. A baby’s teeth begin to grow when it’s still a fetus about 6 weeks of age, at 3-4 months during gestation the next phase happens when the hard tissue surrounds the teeth.

According to the Journal of Dental sciences, “Early dental caries is one of the most common childhood diseases”[1]. Once the baby is born, practicing healthy habits can reduce and prevent carious lesions. One method/habit that has shown great results is cleaning the infant's mouth/gums with a moist clean cloth that can be wrapped around the index finger.

A mistake that is commonly made by new parents is putting their babies to bed with the bottle of milk in their mouths. According to the World Journal of Advanced Scientific Research, this is called “Baby Bottle Syndrome and it aids in the occurrence of caries due to the sugar found in milk.”[6]

An issue that is being seen more and more in this day of age is non-nutritive sucking. There are two types of sucking when it comes to babies, nutritive sucking which include breastfeeding or bottle feeding and can be categorized as providing nutrients to the baby, and non-nutritive sucking which include pacifiers, thumb/digit sucking, which are often used to calm

and comfort the babies and can come in handy when needed provide pain relief from immunization. However, non-nutritive sucking long term can cause some serious conditions such as malocclusion. According to BMC Oral health, it was found that children who were breastfed for more than 6 months had significantly less daily pacifier use, as well as prolonged “daily pacifier use increased the chances for more thumb/digit sucking habits”[3]. In the article, it mentions that a research has been done and “the result of the study agree with previous studies in that thumb sucking is associated with Class II incisor relationships, Class II canine relationships and also increased overjet”[3], which then results in a severe open bite, high palatal arch due to the pressure of the thumb/index applied on the roof of the mouth.

As future dental hygienists, it is our duty to educate people on oral health and given all of the above, it is important that parents are informed and properly educated on the importance of healthy oral habits from an early age and the implications of poor oral health. Therefore, our service learning project focuses and specifically centered around infants oral health and educating the parents.

Assessment

The target population is babies ranging from newborns to two years of age. This group is vulnerable because they do not have the ability to care for their own oral health, therefore there is a heavy reliance on the parents. Being new parents can be overwhelming, and the oral health can be overlooked. Teeth eruption is an exciting milestone, but it can cause tenderness in the babies' gums. It is certainly a stressful and uncomfortable time for them. Oral health education for new parents is crucial for maintaining a healthy primary dentition, which is important for the development of the permanent dentition.

Early childhood caries is a significant public health problem found throughout the general population. As stated in the Prevention agenda 2008- 2012 on NYS Department of Health, "7 in 10 children with ECC still have untreated decay in a recent survey" [5] In addition, an article that researched procedures for the management of ECC, brought up the negative impacts of ECC; such as "...eating, sleeping, problems with growth and development, pain and the need for hospitalization or emergency room visits." [3] It is important for new parents to learn the importance of prevention through oral health care. Another dental concern for babies is the use of pacifiers. Pacifiers are used to provide comfort, but prolonged use can cause changes in the oral cavity. An article published in the International Journal of Pediatric Dentistry mentioned "...the risk of pacifier use was associated with various types of malocclusion in the primary dentition, the most prevalent types were accentuated overjet, anterior open bite and posterior crossbite." [2] New parents should be taught the outcomes of non-nutritive sucking, to reduce the incidence of malocclusions.

According to My Water's Fluoride from the CDC, it reports that the community water of Nyack Village is not fluoridated. It also states that the water system has fluoride from natural resources but it is not enough to prevent tooth decay. [4] This is why we thought prenatal centers provide a perfect opportunity to educate new parents because they provide postpartum care to expecting or new parents. When we asked the group if they knew what ECC and the effects of pacifiers, the majority of them did not know. They also did not know that their water system does not have enough fluoride to prevent tooth decay. With this lesson, we hope to provide education for these parents about the importance of fluoride, and oral health behaviors to obtain a healthy oral cavity for their babies.

Planning

Our main goal was to bring awareness to the future or existing parents that the future of their children's oral health starts as soon as they're born and can have a great impact on their future oral health as they grow into adults. The goal for us is to improve the level of comprehension of parents that may know close to nothing about children's teeth development and care to know basic knowledge about primary teeth and how to care for them as early as possible. To achieve this goal, we created four sub-goals. First, we would brief them on tooth development and primary dentition as it is important to know the timeline of when to expect teeth to erupt and exfoliate in their children. Secondly, how caries develop and how to prevent them early on in children. Thirdly, the effects of prolonged pacifier use and the effects it can leave behind. Lastly, educate the parents on proper oral hygiene including when to start brushes gums/teeth, and when to take their child for their first dental visit. We would obtain our goals through a PowerPoint demonstration with lots of pictures and videos, a doll representing a baby to show parents hands on how to execute some of the techniques we talked about, and an assignment/homework to implement at home.

To achieve a successful program, we developed our lesson plan to start with some ice breaker questions for the parents to answer, go over a chart explaining teeth development and primary dentition, show a video on caries development, select pictures of what they think caused malocclusion in older children, show and explain various toothpastes and toothbrushes for children, and lastly gave the parents an assignment to plan how they will implement these things at home. We begin with asking questions to analyze what the parents already knew and what they had no idea about. Using their answers or lack of we showed and explained charts showing teeth

development and primary dentition. We then played a video showing how caries develop. We continued to explain how children are more prone to caries especially with the influence of their parents. That let us explain the use of pacifiers in children and their possible effect on caries and malocclusion development. We showed pictures of children with caries and malocclusion and asked the parents to identify what they think caused that based on what we reviewed. We proceed to explaining how to prevent caries and malocclusion in children by educating the parents on when to start wiping their children's gums, brushing their children's teeth, using which products and when to take their child for their first dental visit. We showed the parents products we recommend for each age group, while demonstrating techniques on a baby doll.

Lastly, we assigned them homework to think about what and how they would implement for their child now knowing what we have discussed. This allows them to set a standard of oral hygiene with their children from the very beginning and have a good foundation as their children grow up. We hope that our presentation enlightens the parents about oral health in their children as it is not widely talked about in early development years usually until their child gets their first cavity.

Implementation

In order for us to achieve our goal and educate new parents about oral health for their newborns/infants, we explained how it is important to take care of the baby's teeth now even though they will eventually fall out and be replaced by permanent dentition in the future. We presented a baby teeth eruption chart which showed when they expect to see certain teeth to erupt and shed. We continued to explain how losing a tooth earlier than normal can cause the permanent teeth to drift into the empty space and become problematic for the other adult teeth to come in. And how this will cause the teeth to become crooked or crowded. We mentioned how implementing good dental habits early will help prevent or reduce caries and maintain a healthy smile to last a lifetime.

We educated the parents on how it is crucial that the baby does not go straight to bed after feeding without brushing first or fall asleep with the bottle contained with milk or juice except for water. Because there are bacteria on the gums or teeth which will lead to Early Childhood Caries. We played a video showing how caries develop. Even if the baby doesn't have any teeth erupted, it is essential for the parent to wipe the gums with a clean damp cloth to remove as much bacteria as possible. One of us showed the parents how to wrap the clean damp cloth around the index finger and pretended to wipe the gums on a doll. We mentioned how this will also help benefit the baby by getting accustomed to having their mouth cleaned.

We moved on to explaining how bacteria can be transmissible from the parent to the baby. We used the same doll that included a pacifier and demonstrated how easily the parent can transmit bacteria to the baby without even realizing it. One of the team members pretended to be the mom and the baby accidentally dropped the pacifier onto the floor. The mom will pick up the

pacifier, lick it to clean it and put it back into the doll's mouth. Another example we demonstrated was sharing spoons or cups and food while feeding. This also points out how the parent must also keep their mouth healthy.

We continued to show a few examples of teething rings to the parents and how to use it on the baby when they start teething. The teething rings can be chilled to help ease the pain or discomfort. Parents can also use a clean finger with a wet gauze or a cool spoon to rub the gums. Lastly, we advised that the baby's first dental appointment with the pediatric dentist should be within 6 months after the first tooth erupts or before their first birthday. This will help him/her become familiar with getting their mouth brushed or examined.

After providing the parents with all these new materials and methods, we gave them their homework which is to figure out how they would use it on their newborns in order to accomplish our goal.

Evaluation

In order to evaluate whether or not we would be successfully providing comprehensible information to future or existing parents, we need pre and post evaluations.

First, we began by briefing the parents to get a better understanding of their knowledge when it came to their babies oral hygiene. We prepared a powerpoint along with six questions to gauge their knowledge. Prior to presenting our powerpoint, only 7% of parents answered questions correctly and knew about primary dentition and tooth development.

Following the six question brief, we presented pictures of malocclusion and caries in children and asked what they think could be the cause of this. When presenting pictures, we asked about the term “vertical transmission”, which is known to cause caries in babies through the pacifier from the parent. We then went into detail about the cause of caries and presented a video to show how caries develop and also discussed the effects of prolonged use of a pacifier. Prevention protocols for caries came next along with a display of products to help promote healthy oral hygiene.

Finally, our post-evaluation tool was to give parents a homework assignment. This assignment had five questions that could be answered following our presentation. At the end, 59% showed to have a better understanding by answering questions on the homework correctly, while the remaining 41% had one incorrect answer.

Conclusion

In conclusion, our program goal was to bring awareness to parents on the importance of maintaining their children's oral health from an early age. Parental education is crucial, in preventing problems such as cavities, infections, early teeth loss, and periodontal disease later in life. The main reason for these complications is lack of knowledge. Many parents are not aware of the importance of maintaining oral health on primary dentition. They do not know that poor oral health on primary dentition can affect the development of permanent dentition. As dental hygienists we are aware of this problem, and that is why we created this educational program. We educated parents on tooth development, caries prevention, the use of prolonged pacifiers and proper hygiene education, in order to prevent and reduce problems such as ECC in the future. Education is the key for a healthier future.

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