

12-2019

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Community Health Workers on Oral Health: Raising Awareness

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November 24, 2019

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Abstract

The Monterey County Oral Health Program (MCOHP) is a program funded through the California Department of Public Health's Oral Health Program that was made possible by the State's \$2 tobacco tax, Prop 56. The goal of the MCOHP is to address the oral health needs of the Monterey County community through prevention, education, and organized community efforts. In Monterey County, the rates of tooth decay among children are too high. The high rates are due to untreated tooth decay. According to the California Department of Public Health (2017), "Tooth decay is the most chronic condition experienced by children-far more than asthma or hay fever." Tooth decay is caused by poor dietary choices and dental hygiene, shortage of dental professionals, and lack of oral health awareness. If tooth decay is left untreated, it can lead to significant consequences in children. Tooth decay can cause the child poor school-performance, experience pain, and tooth loss. Tooth decay can be preventable. A prevention program was developed and implemented to raise awareness, train, and educate Community Health Workers (CHWs) on oral health in Monterey County. The program consisted of training a group of CHWs in the topics associated with oral health. After the program was implemented, an evaluation form was given to parents for feedback, recommendations, and measure the success of the training. The training was a success, with parents reporting they gained knowledge about oral health and said they felt ready to share the knowledge they learned with other parents to spread awareness. The program will continue to raise awareness and educate CHWs about the importance of oral health.

Keywords: Oral Health, Tooth Decay, Community Health Workers.

Agency and Communities Served

The Monterey County Oral Health Program (MCOHP) is a division of the Monterey County Public Health Bureau. Prop 56 (a \$2 tobacco tax in the State of California) funds the California Department of Public Health's Oral Health Program. As a measure to prevent oral health disease in children, the California Oral Health Program extended its funds to the MCOHP. The mission of the Monterey County Oral Health Program is to address the oral health needs of the Monterey County community through prevention, education, and organized community efforts. Some services provided by the program are education efforts to parents and students, raising oral health awareness, promoting good oral health, community outreach, free fluoride treatments to children, dental sealants, and dental screenings. The program is promoting good oral health and practices for healthy eating and lifestyle. The MCOHP meets its goal by focusing on the following objectives: build capacity and community engagement, collaboration, community professional expertise in dental public health for program direction, coordination, and collaboration (Local Oral Health Program, n.d.). The MCOHP identifies the oral health needs of children in Monterey County to implement preventative healthcare policies and guidelines for programs, health care providers, and institutional settings (e.g., schools). The policies address common risk factors for oral diseases and chronic diseases, including tobacco and sugar, and promote protective factors that reduce disease burden (LOHP, n.d.).

The population that is being served by the MCOHP are vulnerable population groups, parents, and students from Kindergarten to 6th grade. The population mostly affected by this issue are Hispanic/Latinos, low-income, and uninsured children.

Problem Description

In Monterey County, the rates of tooth decay among children are too high. High rates of tooth decay are due to untreated tooth decay. As stated by the California Department of Public Health (CDPH), “Tooth decay is the most chronic condition experienced by children-far more than asthma or hay fever” (2017). In Monterey County, 15.5% showed evidence of untreated dental decay according to recent screening results of reporting school districts, Aved (2016). In California, nearly 54% of kindergarteners and 70% of third graders have experienced dental caries (tooth decay), and nearly one-third of children have untreated tooth decay, states the CDPH (2017). These results demonstrate how severe tooth decay is affecting children in Monterey County. Many children with dental caries are not being treated, which is likely to result in more severe and extensive oral health issues. As reported by Aved (2016), “only 37% of low-income children, ages birth-5, had visited a dentist in the past year in Monterey County in 2016.” Tooth decay is mostly affecting vulnerable populations; Hispanic/Latino and low-income children. The reason for this is because of habits children develop at home. Most children, especially among Hispanic/Latino households, which is the largest ethnic population the Oral Health Program serves, have unhealthy food eating habits and inadequate dental care.

Contributing Factors

Lack of Oral Health Awareness

CDPH (2017) stated that “In California, Latino children and poor children experience more tooth decay and untreated tooth decay than any other children” (p.9). This is telling us that Hispanic/Latino children are at higher risk of tooth decay than any other race. One of the leading causes of untreated tooth decay is attributed to a lack of oral health awareness in vulnerable populations, especially in the Hispanic population. According to the Centers for Disease Control

and Prevention (CDC) (2018), "tooth decay is most common among Hispanic children than among non-Hispanic White children." Research shows that low-income families have poorer dental care compared to the general population. The U.S. Census (2017) reported that Monterey County holds 58.8% of the Hispanic/Latino population, where the vast majority are agricultural workers, have lower levels of education, and only speak Spanish. Parents who have lower levels of education and only speak Spanish are more likely for their children to suffer from tooth decay because they are not aware of the problem. Parents who have lower levels of education are more likely not to take their children to the dentist, having regular check-ups, cavities removed and getting fluoride treatments. Not having regular dental visits is one of the main leading causes of tooth decay in children. Hispanic and Latino parents are not aware of oral health issues and the adverse effects it can cause on their children.

Poor Dietary Choices and Dental Hygiene

Poor dietary choices and dental hygiene is another cause attributed to tooth decay among children. As stated by the American Dental Association (n.d.) "The foods you choose and how often you eat them can affect your general health and the health of your teeth and gums" (p.3). Consuming too many sugar-filled sodas, sweetened fruit drinks, or non-nutritious snacks, one could be at risk for tooth decay. Children who are born in low-income families are at a higher risk of developing tooth decay. According to the National Center for Biotechnology Information (2012), "For children 2–5 years of age the rate increase was greater, rising from 24 percent to 28 percent. Increases were identified specifically among non-Hispanic white males and children living in households with incomes at or below the Federal Poverty Level (FPL)." Hispanic and low-income families, especially parents who never obtained an education higher than high school, have higher chances of teaching their children poor eating habits. As stated by the U.S.

Census (2017), between 2013-2017, only 49.6% of Hispanic of Latino Origin obtained a high school diploma, or higher and only 7.7% obtained a Bachelor's degree or higher. Low-income families are less likely to give their children healthy foods and educate them on how to make healthy choices. They are not aware of tooth decay and the negative consequences they can bring to their children. For these reasons, "In California, Latino children and poor children experience more tooth decay and untreated tooth decay than other children" (CDPH, 2017, p.9). If a family struggles financially, a child's parent might not have the resources to provide healthy, and the child might have developed poor dental hygiene habits. As a result, parents have not practiced nor enforced healthy eating habits among their children.

Shortage of dental professionals

The shortage of dental professionals attributes to poor oral dental health. The 2013 Monterey County Community Health Assessment stated that the Dental Health Professional Shortage Areas (HPSA) are based on a dentist to population ratio of 1:5,000. Two areas in Monterey County fall under the dental health professional shortage areas, primarily in the "Southern Coast and South County."

One cause of oral health disparities is the lack of access to dental services, in particular among racial/ethnic groups populations. "Nearly 50 percent of dentists in California are Caucasian/White/European or Middle Eastern" (CDPH, 2017). Increasing the number of dental professionals from these underrepresented racial and ethnic groups is viewed as an integral part of the solution to improving access to care. With the shortage of dental professionals, it is harder for families to find a dental home where dental services will be provided to their children to prevent tooth decay. With the shortage of dental professionals, children are less likely to receive

dental treatments, and the rate of children with tooth decay will continue to increase, causing severe dental problems.

Consequences

Pain and Tooth Loss

Oral health is essential in a child's early developmental stages because it contributes to their overall health. If dental health problems in children are left untreated due to tooth decay, the child may suffer from pain and may lose teeth prematurely. "If these conditions worsen, they cause the child hospitalization and require anesthesia for procedures needed, which can cost a lot" (CDA, n.d). Oral conditions, if left untreated, can quickly develop into tooth decay, periodontitis, and tooth loss. According to Aved (2016), "Only 29.5% of surveyed dentists who serve children start seeing them by the recommended first tooth/first birthday." It is recommended for a child to visit a dentist as soon as the child turns one year old or as soon as their first tooth comes out. If parents are not doing what is recommended their child will experience severe pain and tooth loss. Children should be seeing their dentist at least every 6 months or as recommended by their dental professional to avoid pain and tooth loss.

Poor School-Performance

Poor oral health in children can affect more than just teeth. Dental health is just as important as general health, and bad oral health can often result in poor performance in school. According to the CDPH (2018), "It is estimated that California children miss 874,000 days of school each year due to dental problems" (p.3). If the child is in severe pain or discomfort, it can result in reduced concentration and poor grades in school. Although dental health and school performance do not seem to be visibly related, the health and wellbeing of a child can impact many other aspects of life. It can be tough for someone to concentrate on school work and other

tasks when in pain. The Greater Houston Pediatric Dentistry (2018) states that “it was determined that children with dental discomfort performed significantly worse than other kids in school. Part of the reason for this is that kids who have dental issues often miss more school, resulting in poor grades” (p.2). The other reason is that children feel uncomfortable while they are at school with tooth pain. As a result, concentration and performance is affected.

Capstone Project

In Monterey County, the rates of tooth decay among children are too high. There is a great need to address this issue and inform parents about the negative consequences of tooth decay, and how they can prevent it. A program will be developed and implemented to promote good oral health to parents, teach them how to make better health choices for their children, teach them how to brush their child's teeth properly, and remind them about taking their child to the dentist every six months. An oral health education curriculum will be developed to train and educate a group of Community Health Workers on oral health and how to best care for their child’s teeth and overall health. CHWs will be trained on spreading the message to other parents and the community.

Figure 1: A model illustrating the causes, problem, and consequences of tooth decay.

Problem Model

Contributing Factors	Problem	Consequences
Lack of oral health awareness	In Monterey County, the rates of tooth decay among children are too high.	Pain and tooth loss
Poor diet and dental hygiene		Poor school-performance
Shortage of dental hygienists		

Capstone Project Description and Justification

Project Implementation

The project implemented was an oral health training to Community Health Worker to raise awareness, educate parents and community members about the importance of oral health. The Monterey County Oral Health Program is already assisting with educating students from Sherwood Elementary about oral health and how to care for their teeth. For this project, an Oral Health Program parent curriculum that covers different topics on oral health was developed. Some of the topics covered in the parent curriculum are: why is it important for every child to have a dental home, why is it important to visit the dentist every 6 months, how to properly brush and floss your child's teeth, what is fluoride varnish and the positive effects on your child, what are sealants and why are they important for your child, nutrition, etc. A group of Community Health Workers from Sherwood Elementary School were trained on oral health topics. The purpose of this project is to educate less educated and vulnerable parents about oral health, which many are not aware of how important oral health is to their child's overall health. Trained parents will be giving short presentations on what they learned and will be responsible for delivering the messages to other parents and the community. An evaluation was given to parents for comments and feedback on the training. Resources that were needed to implement the training were a group of CHWs from Sherwood Elementary School, an oral health education curriculum covering different topics on oral health, brochures given to parents with relevant information, a training evaluation, and gift cards. A detailed implementation plan and timeline can be seen in the Scope of Work in Appendix A.

Project Purpose

The purpose of this project is to raise awareness, address the oral health needs and educate less educated and vulnerable parents that are not aware of how much a child's oral health can impact their overall health. Less-educated parents are not aware of the different causes of tooth decay and how tooth decay can be prevented. Parents are not being educated on this, and they need people to educate them at their learning level. One of the leading causes of untreated tooth decay is attributed to a lack of oral health awareness in vulnerable populations, especially in the Hispanic population. According to the CDC, "tooth decay is most common among Hispanic children than among non-Hispanic White children (2018)." Research shows that low-income families have poorer dental care compared to the general population. There is such a high need for oral health education to both students and parents. Untreated tooth decay is attributed to a lack of oral health awareness in vulnerable populations, and this project will close this gap and educate these less vulnerable populations.

Project Justification

"Researchers perceive the use of CHWs to bridge the gap between community needs and health resources as one of the most viable solutions to meeting community needs" (Swider, 2002; Andrews et al., 2004). Numerous projects using the CHW model have sought to improve health outcomes and increase access to needed care across the United States during the last ten years. CHWs generally have been used to target hard-to-reach populations, traditionally excluded racial/ethnic groups and other medically underserved communities. CHWs usually belong to the community they serve, share the same language and culture, and understand the needs of their community. CHW proponents believe that patients and their communities are more receptive to messages provided by CHWs (Swider, 2002; Andrews et al., 2004). CHWs serve as

a cultural bridge between community-based organizations, health care agencies, and their respective communities (Andrews, Felton, Wewers, 2004; Swider, 2002). CHWs provide valuable personal inside knowledge of the communities they serve to project staff that is critical in tailoring a project to meet the unique needs of any target community. Previous studies have primarily focused on using CHWs to improve health behaviors effectively, chronic disease management and health outcomes (Balcazar, Alvarado, Hollen, Gonzalez-Cruz, Pedregón, 2005; Forster-Cox, Mangadu, Jacquez, Corona, 2007; Staten, Scheu, Bronson, Peña, Elenes, 2005).

Expected Outcomes

The project will train and educate parents about the importance of oral health to their child's overall health. Different topics on oral health will be taught to the group of parents, and they will become educated to parents. The project will raise awareness and learn about the needs of the community. The expected outcomes of this project are to raise awareness, address the oral health needs of the community, and create a healthy and safe oral health community. Also, to get parents to take their child to the dentist when required to prevent tooth decay and oral health diseases among their children.

Assessment Plan

The project will measure the effectiveness of this project by giving trained parents an evaluation to receive feedback and comments on the activity training. The evaluation will be composed of questions, both circling the right answer and writing their answers. Some of the questions that will be in the evaluation are: did you find this training useful, what did you like best and least about this training, what can be changed about this training, please describe what you learned.

Project Results

In preparation for implementation of the oral health program training of Community Health Workers, a set of materials had to be developed. An oral health curriculum was created to educate a group of parents about the importance of oral health and why it is very important to care for their child's teeth. The curriculum covers necessary information about oral health and how to care for a child's mouth and teeth. Some of the topics covered in the curriculum are: How does oral health affect your overall health, what is a dental home, why are dental visits important, why is brushing and flossing important, what are cavities, what are dental sealants, what is fluoride and fluoride varnish, how to properly brush and floss your child's teeth, how to make healthy eating choices for your child.

After the curriculum was developed and approved by the program coordinator, the recruitment process of Community Health Workers began with contacting Esmeralda, the parent coordinator from Sherwood Elementary School. In collaboration with Sherwood Elementary School, a group of parents were recruited and trained.

On October 4, 2019, the oral health training was implemented. During the oral health training, a set of activities were designed to engage the group of parents. During the first part of the training everyone present was introduced, and the presenter gave an overview of the training. Then, parents were given an in-depth explanation of each topic and why each topic is important. After each topic was introduced and explained, parents were allowed to ask any questions regarding the training or something that was not clear to them. Parents were also allowed to share past experiences regarding oral health. The end of the training concluded with a seven-question evaluation form about the oral health training. The evaluation form contained four open-ended questions, one three word description of their experience, and two checkbox questions asking their readiness level to conduct a short presentation or workshop training. After

the oral health training, it was expected to have at least one community health worker ready to conduct short presentations on the basics they learned during the training, to other parents in the community, to raise awareness about the importance of oral health. It was expected for parents to learn how to care for their child's teeth properly, this includes parents, learning the proper way to brush and floss their child's teeth, and also know when is the right time to take their child to the dentist. Moreover, eventually, see a reduction in the rates of tooth decay among children in Monterey County.

Findings/Results

After the implementation of the oral health training, the group of parents filled out the evaluation form to measure their level of readiness to conduct a small oral health presentation or workshop. The evaluation was composed of seven questions: four open-ended questions, one three word description of their experience, and two checkbox question asking their readiness level to conduct a short presentation to other parents. A detailed evaluation form with questions can be seen in the Scope of Work in Appendix B.

The evaluations were then analyzed. A common theme that parents found most interesting about the training was that they had no idea that the CDC recommends that parents help their children brush their teeth until they are eight years old. Parents stated that overall, the training was very informative, eye-opening, and educational. The evaluation also showed that parents would not change anything from the training, but they recommended using visuals, for example, they recommended using the alligator toy with an open mouth to illustrate how to brush and floss the teeth properly. The most valuable information collected from the evaluation was the information learned from the training and readiness to conduct a small presentation or workshop. The parents trained stated that they learned a lot from the oral health training, see figure 1. The

evaluations concluded that all parents trained felt 100% ready to conduct a small presentation or workshop on oral health, see figure 2.

Figure 1. Overall Knowledge Learned in the Oral Health Training
2 responses



Figure 2. Level of Readiness to Give a Short Oral Health Presentation or Training
2 responses



Based on the evaluation form responses, the expected outcomes were met. With parents responding that they learned a lot during the training, and 100% of parents feeling ready to conduct a short oral health presentation or workshop.

Conclusion & Recommendations

Based on the results of the oral health training, it is concluded that the project was successful in getting community health workers educated to do a small presentation or workshop to other parents. The findings from the evaluation also concluded that the information provided was beneficial to the learning of the trainees. Due to having two community health workers who were very ready to conduct a small presentation or workshop after the oral health training, the project must continue. The program should also continue to build capacity to target all schools in Monterey County.

A recommendation for the program is hire more interns to continue implementing the oral health training in different schools across Monterey County. With hiring more interns, the program will target more schools in Monterey County, and the program will be a success because oral health awareness will spread faster. Another recommendation is to use visuals during the oral health training and add activities to the oral health curriculum. In the evaluations given to the trainees on October 4, 2019, after the oral health training, trainees reported that visuals should be used during the training to engage parents and show them the correct way to brush and floss their child's teeth.

The recommendations arise from reviewing the evaluations provided to parents in the oral health training on October 4, 2019.

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Appendices

Appendix A: Scope of Work

Activities	Deliverables	Timeline/Deadlines	Supporting Staff
Complete Oral Health Parent Training Curriculum	Curriculum	June-October 2019	None
Meet with Sherwood Elementary Schools supervisor to get approval	Get approval	May-June 2019	Mentor
Recruit a group of parents that have children in Sherwood Elementary School	Sherwood School	September 2019	Mentor
Training	School	October 4, 2019	Mentor
Compose a training evaluation for parents	School and classroom	June 2019	Mentor
Presentations to parents	Presentations, Powerpoints	August-November 2019	None
Develop activities	Activities	May-October 2019	None
Observe parents deliver the messages and give presentations to other parents or school workshops	None	August-December 2019	Mentor
Analyze evaluation	Spreadsheets, charts, graphs, excel	November 2019	Mentor

Appendix B: Evaluation Form

Oral Health Training

Date

Time

Instructions: Please answer the questions below by circling the correct response and/or writing your comments.

1. What did you like **the best** about the training? _____

2. What did you like **the least** about the training? _____

3. What would you **change** about this training activity? _____

4. In the box below, please enter 3 words that describe your experience during the training.

5. **Overall how much did you learn about oral health?**

Not Much I learned a few things I learned a lot

6. After this training, how **ready** do you feel talking to other parents about oral health?

Not Ready Somewhat Ready Very Ready

7. Please enter any other comments you may have about this training activity:

