



ADPIE

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ADPIE



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Introduction

Target Population: Preschool aged children in a preschool Culver City.

Goal: Develop an oral disease program to reduce childhood caries for 3-5 year olds in Culver City.

Problem Statement: Carious lesions are a common and preventable disease that affect school-aged children by, not only causing pain and discomfort, but also lead to malnourishment and lower school attendance.



Assessment

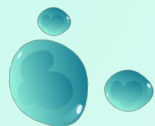


Why this population was chosen

- 3-5 year olds in a preschool in Culver City.
- Minimal understanding of oral health care.
- Minimal understanding of oral disease and its progression.
- Minimal dexterity to perform adequate self oral hygiene independently.

Research data

- According to the Los [Angeles County Smile Survey 2020](#) 46.8% of 3-5 year olds have a history of dental caries.
- In the United States 2013-2016 average of 27.9% children ages 3-5 with history of dental caries.
- On average elementary school- aged children miss 6 days of school per year, 2 out of the 6 days on average are due to dental problems (USC School of Dentistry).
- [Water fluoridation](#)
 - Content in Culver City average level is 0.7 mg/L
 - Optimal water fluoridation
 - Children have access to fluoridated water at school at meal times and during water breaks at play time.

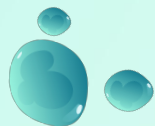


Assessment (cont.)

- Tools for data collection:

- Survey/verbal quiz assessing at-home brushing and dental care knowledge.
- Brushing log assessing daily brushing habits
- Interview preschool teachers to determine:
 - Children's snacks/meals during school hours.
 - Water source and consumption during school time.
 - Any and all outstanding lack of oral hygiene care that should be notated.

Do you brush your teeth everyday?	Yes (29/31) 93%, No (2/31) 7%
How many times do you brush your teeth everyday?	Once or less (23/31) 74% Twice or more (8/31) 26%
How long do you brush your teeth for?	<2 min (29/31) 93% > or equal to 2 mins (2/31) 7%
Do you floss?	Yes (5/31) 17%, No (26/31) 83%
Do you brush your tongue?	Yes (5/31) 17%, No (26/31) 83%
Do you have pain on any of your teeth?	Yes (0/31) 0% No (31/31) 100%
Do you drink water with your snacks?	Yes (16/31) 51%, No (15/31) 49%
Children's ability to list at least 3 healthy snacks	8 Kids were able to list at least 5 healthy snacks (8/31) 25%



Assessment (cont.)



Brushing Log				
Initials	Monday	Tuesday	Wednesday	Thursday
1.	☒ AM ☒ PM	☐ AM ☒ PM	☐ AM ☒ PM	☐ AM ☐ PM
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Home Sweet Home Snack Menu				
Monday	Tuesday	Wednesday	Thursday	Friday
Graham Cracker with banana	Quesadilla with oranges	Pancakes with banana	cereal mix with milk and banana	Toast and orange
Veggie Chips with apples	chips with cheese with apples	Round crackers with cheese and pears	Pretzels with melon	Veggie chips with watermelon

Diagnosis

Based on the assessment, the population was diagnosed with the following oral health needs:

- Increased risk for development of childhood caries due to:
 - Minimal understanding of proper oral health care and disease progression
 - Poor brushing habits and inadequate oral hygiene frequencies.
 - Lack of knowledge regarding alternative oral hygiene tools.
 - Consumption of sugary snacks during school hours
 - Fluoridated water intake/benefits
 - Minimal understanding of water's involvement with caries prevention

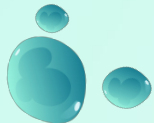


Planning



Program Objectives:

- Immediately after our child lesson plan presentation, the number of children who brush their teeth for 2 min will increase from 6.5% (2/31) to 70.9% (22/31).
- Immediately after our nutrition counseling, the number of children able to identify at least 3 healthy snacks will increase from 35.5%(11/31) to 100% (31/31).
- 1 week after our lesson plan implementation the number of children who brush twice or more a day consecutively each day every week will increase from 25.8% (8/31) to 80.6% (25/31) as portrayed on the tooth brushing log



Planning (cont.)

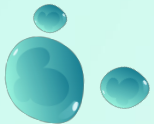


Demonstrate proper brushing and flossing techniques, engaging in activities that will allow children to participate and motivate them.

- Create engaging and child-friendly lesson plan
- Oral hygiene instructions (Tell-Show-Do Method)
- Nutritional counseling- obtain weekly snack menu from teachers and provide them with a list of non-cariogenic and healthy snack options.

Hands-on activities and demonstrations:

- Activity:
 - Brushing demonstration with colgate tooth model
 - Brush/erasing “sugar bugs” from laminated picture of teeth
 - Flossing activity using play-doh (plaque) and egg cartons
 - Snack time game (sorting healthy and unhealthy snacks)



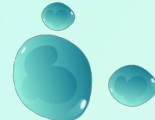
Hands-on activities and demonstrations:



Planning



Reward system: (during/after presentation)

- Give out oral health goodie bags
 - Xylitol lollipops for participation
 - 2 min sand timer for participation
 - Pass out a take home brushing log.
 - After brushing give a sticker (brushing log)
- 

Reward system



I BRUSHED MY TEETH!

	Morning	Night
MONDAY	☐	☐
TUESDAY	☐	☐
WEDNESDAY	☐	☐
THURSDAY	☐	☐
FRIDAY	☐	☐
SATURDAY	☐	☐
SUNDAY	☐	☐



Implementation

- Child lesson plan presentation (slideshow)
- Education
 - OHI
 - Nutritional Counseling
 - Hands-on activities.
 - Brush the plaque away (using colgate teeth models and laminated smiles)
 - Fun flossing with play-doh
 - Visually demonstrate effective plaque removal techniques utilizing tell-show-do-method
- Nutritional Counseling
 - Demonstrated healthy vs. cariogenic (bad) food
 - Supplied a "Tooth Snack Guide" chart with non-cariogenic snack options.
- Pass out a tooth-brushing log that tracks how often they are brushing at home
- Give goodie bags to kids (toothbrush, floss holders, toothpaste)
- Pass out sugar free lollipops (Xylitol) for participation while presenting.
- Pass our 2 min. sand timer for participation while presenting.

Tooth Snack Guide

Won't Cause Cavities*



(Low Carb foods)

Raw, Crunchy Vegetables
Raw, Leafy Vegetables
Cheese
Nuts
100% Nut butters
All Meats
All Fats
Water
Eggs

If you are thirsty, drink water!

Remember to give your child age appropriate food. Nuts, hot dogs, grapes, and sausages are common choking hazards, especially in children three years old and under.

* There are always exceptions, especially dry mouth, acid reflux, genetic anomalies, hypoplasia, and unforeseen circumstances.

(Usually) Won't Cause Cavities



Whole Milk
Fresh Fruit
Whole grain bread
Popcorn
Smoothies
Dark Chocolate (>70% Cacao)
Yogurt
Ice Cream
Dips & Sauces
Oatmeal

Crunchy is best

Don't get carried away, but it rinses away better than other desserts.

This list, including milk and fruit, has the potential to cause cavities quickly if you don't organize meal and snack times. The sugars won't stay in contact with teeth for long with organized eating habits.

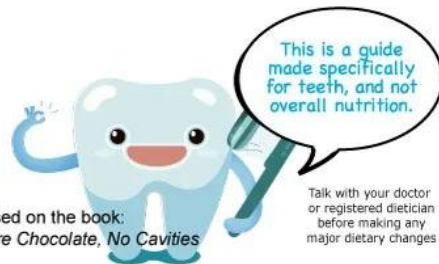
Causes Cavities Easily



Candies
Soda
Juice
Chocolate milk
Cookies
Dried fruit
Fruit snacks/strips
Dried flour cereals
Pretzels
Crackers
Oranges & Bananas
Sports Drinks

Please still eat them, just not all day long

Even some healthy foods can cause cavities quickly. Being processed and/or dried is not good for teeth. Fresh bread is better than dried flour for teeth.



Based on the book:
More Chocolate, No Cavities

Talk with your doctor or registered dietician before making any major dietary changes

Important Prevention Tips

- Always try to have a sip of water after every meal or snack!
- Give your child 4 to 6 organized "mini-meals" a day with only water in between.
- Disorganized eating or drinking will cause cavities even with healthy foods!
- Help your child brush their teeth daily until they are six or seven years old.
- Only have water after the night time brushing.
- Floss teeth if they are touching for additional protection.
- Schedule an infant screening exam with your dentist at age one.
- Fluoride application at your dentist every six months can also help reduce cavities by 20 to 30%.
- Never leave a bottle in bed with baby!
- Get enough Vitamin D!





Evaluation



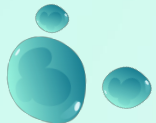
Baseline data is compared with assessment data

- Original survey is re-implemented
 - Multiple aspects show improvement
- Brushing log is re-evaluated
 - Brushing frequency shows improvement

Objective Comparisons:

- Immediately after our child lesson plan presentation, the number of children who brush their teeth for 2 min or more increased from 6.5% (2/31) to 48% (15/31).
- After the nutrition counseling, the number of children who can identify at least 3 healthy snacks increased from 35.5% (8/31) to 45% (14/31).
- 1 week after our lesson plan implementation the number of children who brush twice a day consecutively each day every week increased from 25.8% (8/31) to 61.3% (19/31) as portrayed on the tooth brushing log

Primary goal objectives display objective improvement despite failing to reach target numbers





Pre and Post Implementation Survey



Pre Survey

Do you brush your teeth everyday?	Yes (29/31) 93%, No (2/31) 7%
How many times do you brush your teeth everyday?	Once or less (23/31) 74% Twice or more (8/31) 26%
How long do you brush your teeth for?	<2 min (29/31) 93% > or equal to 2 mins (2/31) 7%
Do you floss?	Yes (5/31) 17%, No (26/31) 83%
Do you brush your tongue?	Yes (5/31) 17%, No (26/31) 83%
Do you have pain on any of your teeth?	Yes (0/31) 0%, No (31/31) 100%
Do you drink water with your snacks?	Yes (16/31) 51%, No (15/31) 49%
Children's ability to list at least 3 healthy snacks	8 Kids were able to list at least 3 healthy snacks (8/31) 25%

Post Survey

Do you brush your teeth everyday?	Yes (29/31) 93%, No (2/31) 7%
How many times do you brush your teeth everyday?	Once or less (12/31) 38% Twice or more (19/31) 62%
How long do you brush your teeth for?	<2 min (16/31) 51% > or equal to 2 mins (15/31) 49%
Do you floss?	Yes (9/31) 30%, No (22/31) 70%
Do you brush your tongue?	Yes (10/31) 33%, No (21/31) 67%
Do you have pain on any of your teeth?	Yes (0/31) 0%, No (31/31) 100%
Do you drink water with your snacks?	Yes (20/31) 64%, No (11/31) 35%
Children's ability to list at least 3 healthy snacks	14 Kids were able to list at least 3 healthy snacks (14/31) 45%

Evaluation (cont.)



Brushing Log

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Reflection and Outcome

- None of the objectives were met.
- Limitations
 - Population age
 - Parents not involved
 - No IRB
 - Dental indices were not performed.
- Overall, the program was successful in terms of increasing children's oral hygiene knowledge.



Team Roles:



- Jason Alcala:
 - Powerpoint presentation
 - Hands-on activities
- Marylin Garduno:
 - Powerpoint presentation
 - Hands-on activities
- Kathleen Silang:
 - Powerpoint presentation
 - OHI (tell show-do)
- Giselle Zuniga:
 - Powerpoint presentation
 - Hands-on activities
 - Coordinate school visits with admin.
- Jisu Choi:
 - Powerpoint presentation
 - OHI (tell show-do)
- Airl Harte:
 - Powerpoint presentation
 - OHI (tell show-do)
- Caroline Sone:
 - Powerpoint presentation
 - Goodie bag, Data Collection
- Paul Kim:
 - Powerpoint presentation
 - Goodie bag, Data Collection



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Thank You

