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# MySmileBuddy:

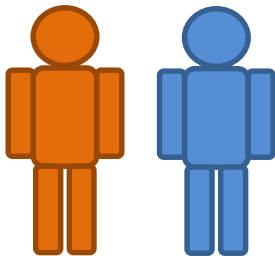
Combating ECC through Technology-  
Assisted Family Engagement

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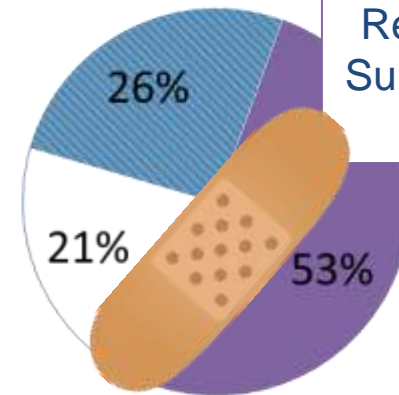
# Problem:

Current dental care alone is a Band-Aid solution  
Fillings can't stop decay. Engaged families can!

**Nearly 1-in-2 US children affected  
at age 5 (CDC)**



## Relapse Rates



**53-79%**  
Children  
Relapse After  
Surgical Dental  
Repair

**Dentists , Payers, & Parents** are all seeking to achieve the triple aim:  
better oral health outcomes, better patient experiences, at lower costs





# Solution: MySmileBuddy

The MySmileBuddy program is an iPad-based family-level intervention that seeks to eradicate Early Childhood Caries (ECC)

- Delivered by lay health workers
- Designed to engage families in managing children's oral health
- Targets the two key drivers of ECC: Diet and Oral Hygiene



# About MySmileBuddy

MySmileBuddy supports counseling between lay health workers and families through:

1. Parent Engagement, Education, and Training
2. ECC risk assessment
3. Individualized risk score analysis
4. Family-specific goal setting
5. Family-designed action planning
6. Wrap-around support



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# MySmileBuddy Development

- Developed by a multidisciplinary team of Columbia-affiliated faculty
  - Pediatric Dentistry
  - Pediatric medicine
  - Nursing
  - Social Work
  - Public Health
  - Nutrition and Health Behavior
  - Health Education
- Funded by a sequence of 3 NIH-sponsored grants
  - National Institute for Dental and Craniofacial Research U-54
  - National Center for Advancing Translational Science sub-award
  - National Institute on Minority Health and Health Disparities RC1



# Parent Engagement, Education, and Training



- Culturally appropriate videos and images
- Interactive assessment and educational modules



Family 483

Welcome to MySmileBuddy!



MySmileBuddy is a tool that helps you figure out if your child is at risk of getting cavities and what you can do to help keep them healthy. As we use MySmileBuddy, you'll answer questions about your child's habits - and some of your - to determine their risk of cavities. Along the way, you can watch videos and read more about what helps encourage healthy teeth and why. After you complete the risk assessment, MySmileBuddy will help you set goals and give you 25 activities that to lower your child's risk of cavities.

To get started, take a look at the introduction to MySmileBuddy video in the video library. When you're done watching, come back here and start the assessment!



## Getting your Children to Eat a Balanced Diet

### Why is This Important?

A balanced diet is important for overall health as well as oral health. Eating a balanced diet means eating foods from all food groups and eating everything in moderation.

- Dairy products provide calcium and vitamin D to help make teeth and bones stronger.
- Breads and cereals supply B vitamins for growth and iron for healthy blood which adds to healthy gum tissue.
- Fruits and vegetables have Vitamin C (and other important vitamins) that help maintain healthy gums.
- Lean meat, poultry and beans provide iron and protein for overall health, and magnesium and zinc for teeth and bones.

### Tips to Help Your Child Eat a Balanced Diet

#### Tip 1 - Set Times



Do not continually let your child snack throughout the day.

Children eat best with scheduled meals and snacks. Each time your child eats food that contains sugars or starches, their teeth are attacked by acids for 20 minutes or more.

#### Tip 2 - Offer Healthy Choices



Offer healthy snacks such as fruit, cheese and nuts.

The key to choosing foods wisely is to think before you eat. This means not just what your children eat but also how often and how long your children eat.



# ECC Risk Assessment

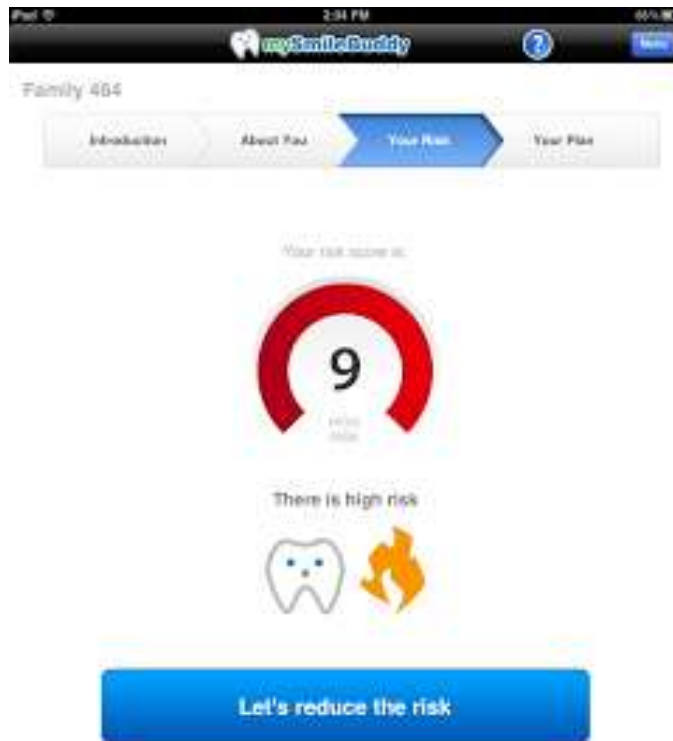


- A series of targeted questions
- Highly developed “diet widget” to score dietary cariogenicity



# Individualized risk score analysis

- Built-in modifiable science-based risk algorithm





# Family-specific goal setting

- Pre-populated list of goals tailored to current risk-related behaviors



# Family-designed action planning

- Open field space for parents, working with lay health workers, to develop individualized action plan by specifying who will do what, when, where, and how



mySmileBuddy

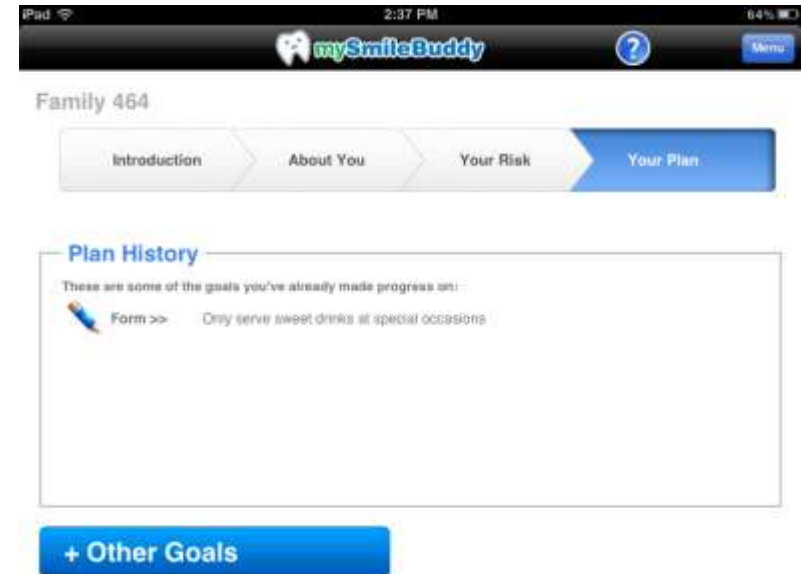
Only serve sweet drinks at special occasions

What is your goal?  
my daughter will only drink soda at birthday parties

What are the steps it will take to make it happen?  
1. we will stop sleeping soda in the house  
2. We will serve soda with meals

Who is responsible for the success?  
Mum, Grandma and daughter

When will this happen?  
1 month




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Family 464

Introduction About You Your Risk Your Plan

Plan History

These are some of the goals you've already made progress on:

 Form >> Only serve sweet drinks at special occasions



+ Other Goals



# Wrap-around Support

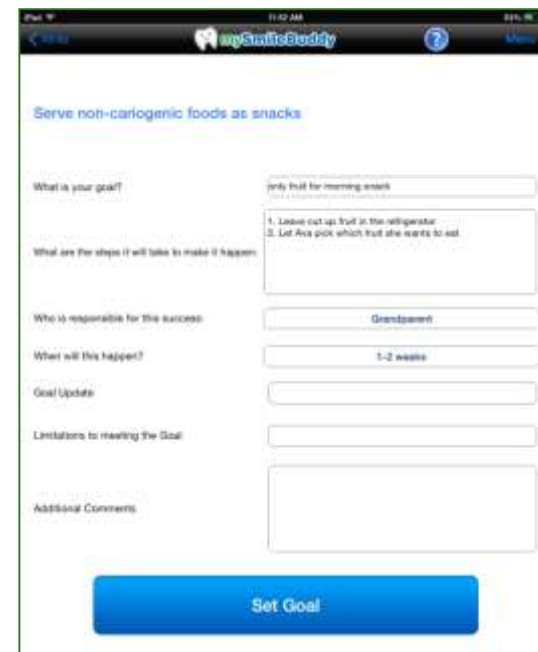


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- Health Worker Resources 
- Family Resources 
- Tracking and Follow-up



[Continue to About You](#)



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# Testing MySmileBuddy



## The Diet and Early Childhood Caries (DECC) Study

- Evaluated feasibility and acceptability with 108 parent/child dyads
- Tested concurrent criterion validity between MySmileBuddy risk assessment scores and physical indicators of ECC:
  - dmft/dfs Scores
  - Visible Plaque Levels\*
  - Mutans Streptococci Levels\*
  - White Spots (Decalcifications)
- Assessed preliminary impact of behavioral intervention
  - 1 month telephone follow-up survey
  - Self-reported behavior change (79.7%)
  - Recollection of goals and action plans (63.3%)

\* significant ( $p < .05$ )



# Current Projects & Future Directions



mySmileBuddy



ALASKA NATIVE TRIBAL HEALTH CONSORTIUM



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Learn more about MySmileBuddy:

<https://vimeo.com/114512516>

Password: smile



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