

TCU New Smiles Drive

Bridging the Gap in Oral Health: Education and Supplies for Underserved Communities

Primary Author: Kameryn Smudde. **Co-Authors:** Micah Tuthill, Sarina Schwarze, Ryleigh Vaughn, Tamara Ferreira, Rudaina Fattul
Faculty: Sarah Jung and Samantha Davis, Texas Christian University

Abstract

Oral health is an essential part of overall well-being, yet many children in underserved communities lack access to dental education and basic hygiene resources. Although cavities are completely preventable, they remain one of the most common chronic diseases affecting both children and adults. Early education is crucial for building lifelong habits and preventing future dental issues. The New Smiles initiative is a student-led outreach program focused on improving oral hygiene awareness and access to care among elementary students in the Fort Worth community.

Through interactive elementary school presentations, the program teaches proper brushing and flossing, healthy eating habits, and the importance of routine dental visits to kids. To reinforce these lessons, hygiene kits containing toothbrushes, toothpaste, floss, and educational materials were assembled in collaboration with Cook Children's and distributed to participating students. Additionally, a brief survey was administered to assess students' baseline knowledge of oral hygiene and evaluate the effectiveness of the educational presentation.

By combining hands-on education, community partnerships, and the distribution of essential hygiene supplies, the New Smiles program aims to promote preventive oral health practices at an early age. This initiative seeks to reduce oral health disparities while empowering children with the knowledge and resources needed to maintain lifelong dental health.

Introduction

Oral health disparities persist in communities due to financial barriers, limited access to care, and lack of education, leading to preventable dental disease. Establishing healthy habits early is critical, as childhood shapes lifelong hygiene and nutrition behaviors.

Our program addresses these gaps by prioritizing early, education-based intervention through Tooth Fairy presentations and community outreach efforts. We primarily target elementary school students, while also supporting underserved populations. Throughout this year, we collected data on oral health knowledge and access to care to better understand community needs and guide our initiatives.

Through interactive presentations, we engage students by reading children's books, teaching proper brushing and flossing techniques, and reinforcing the connection between nutrition and oral health. To support lasting behavior change, we provide hygiene kits through the support of Cook Children's Dental Integration along with our own educational materials so participants can apply these practices beyond the classroom.

Community Impact

- Delivered **7** presentations reaching **492** elementary students across several schools
- Distributed **195** educational materials to students and teachers
- Distributed **492** hygiene kits to these students

Community Feedback

Teacher from Westcliff Elementary School:

"Thank you for your willingness to share your career with our students. I truly believe for many of our students hearing from you helps to shape their dreams and futures even from a young age."

Housing & Residence Life Staff Member, TCU:

"Your 'Trick-or-Teeth' activity was fun, engaging, and helped make the event memorable for TCU families."

Heritage Elementary School Nurse:

"You guys were wonderful! Thank you so much for coming!"



← links to a survey collecting information on access to dental care, insurance, and oral hygiene resources.

Implementation

I. Elementary School Education and Tooth Fairy Presentations

Our 'Tooth Fairy' presentations aimed to improve elementary aged students' understanding of oral health through engaging and age-appropriate education.

In these presentations, we read and donated to the classrooms a children's book: *Stella the Shark has a Tooth Ache*, written by a former member of our organization, to introduce key concepts of dental care at a level comprehensible for young learners.

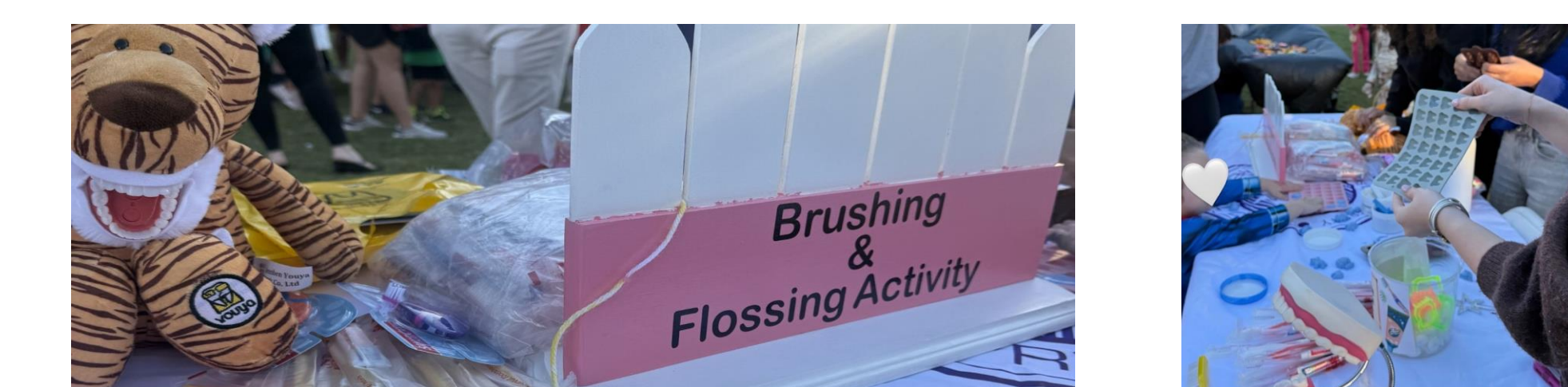


II. Educational Materials

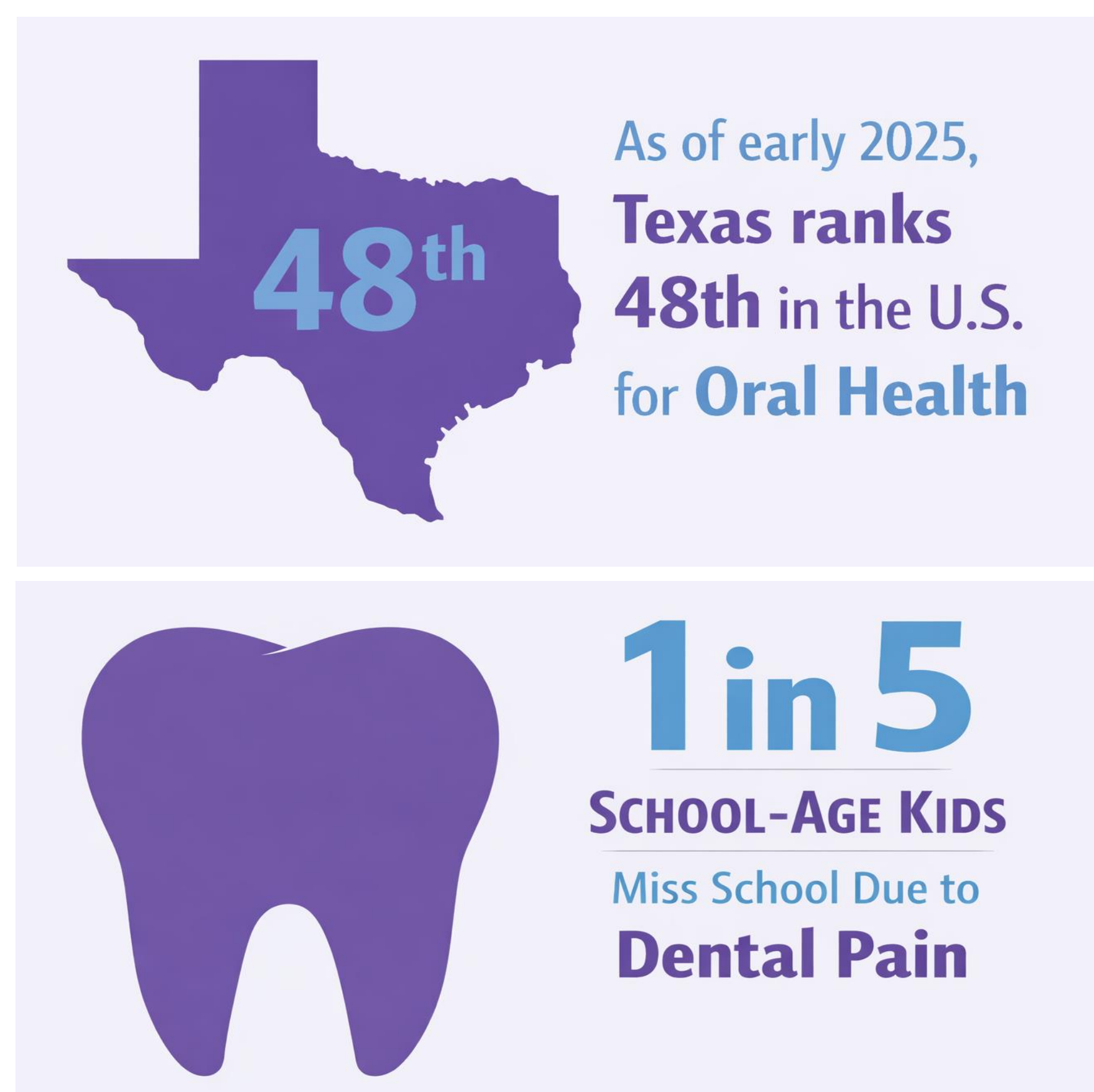
To create an engaging and hands-on experience for the kids we used a wide variety of educational materials to introduce and reinforce dental hygiene concepts.

Large-scale flossing models were used to demonstrate proper flossing techniques, and stuffed bears with a full set of teeth were used for brushing demonstrations, helping students learn correct methods in a fun and engaging way, along with a hands-on activity using dental impression putty and tooth molds and the donation of oral health coloring books for added interactive learning.

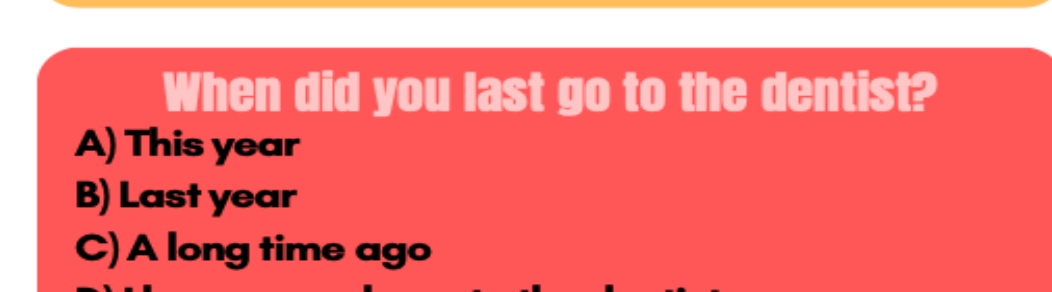
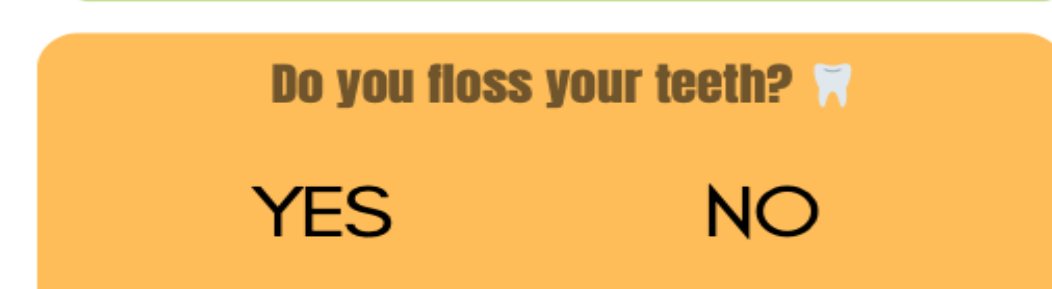
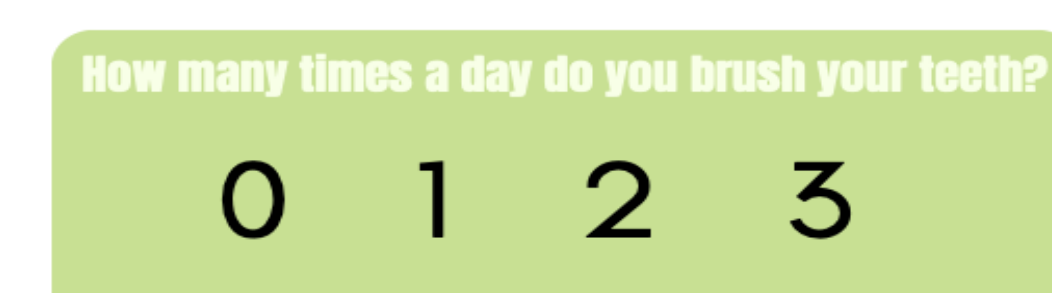
We used food sorting activities to highlight the difference between tooth-friendly and cavity-causing foods, along with a visual sugar activity demonstrating the sugar content in common snacks and drinks, helping reinforce the connection between nutrition and oral health.



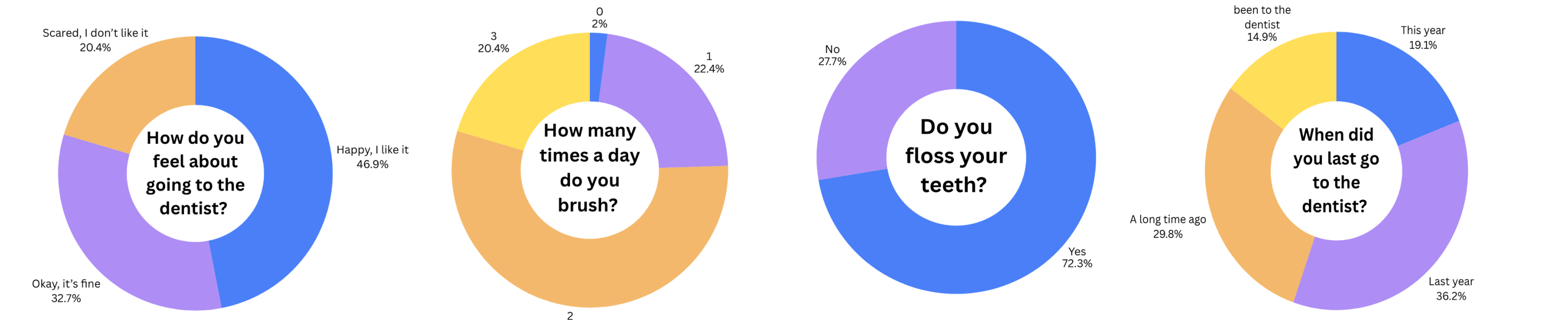
Texas Oral Health Statistics



Texas Dental Association. Texas ranks among worst states for dental health, survey finds. Texas Dental Association. Published 2023. Accessed March 25, 2026. <https://newsform.org/newsandinfo/some-of-the-states-with-the-worst-dental-health/>



To assess the effectiveness of our presentations, we collected student responses (pictured below) through a structured feedback form (pictured on the left). The feedback provides insight to the students' baseline knowledge and where we can expand upon in our future presentations to make them more effective.



Acknowledgements

- TCU Pre-Health EPIC (Experimental Projects that Impact the Community) Grant
- Sarah Jung, Dr. Matt Chumchal, and all TCU pre-health coordinators
- TCU Office of Community Engagement
- Professor Samantha Davis and TCU Nutrition Department
- Cook Children's Dental Integration, notably Dr. Tonya Fuqua, Elaine Vivens, Merari Hernandez, and Betsy Hillard