



# Children-Teaching-Children: A PA Student-Led Oral Health Education Program for at-risk Youth in Chicago

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## INTRODUCTION

Oral health may provide clinicians details about a patient's overall health, including nutritional status, infection, systemic disease and hydration status. Healthy People 2020 builds on the Surgeon General's National Call to Action to Promote Oral Health with the goal of preventing oral diseases and improving access to related services. According to the CDC, children ages 5-19 from low-income families are twice as likely to have dental caries compared to children from higher-income households. Funded by a nccPA Health Foundation grant, PA students facilitated a children-leading-children model which consisted of a month-long interactive curriculum for at-risk youth in Chicago. The project aimed to help fight oral disease in our community and equip PAs and the participants with the knowledge to continue this education for peers and patients.

## METHODS

Teen mentors attended three, one-hour interactive education sessions led by PA students. The teen mentors were guided through an oral health curriculum developed by PA students, who completed prerequisite training and adapted educational materials from Smiles for Life, Colgate Bright Smiles Bright Future®, and the American Dental Association (ADA®). (Table 1). During the first 3 sessions, interactive activities, group discussion, and lectures were used to reinforce topics including oral anatomy, physiology and preventive strategies for oral diseases. During the 4th week, teen mentors presented a one-hour educational session to a group of younger students (ages 7 to 12). Oral health knowledge and teaching confidence were again measured during or after the final session. A pre- and post- survey measuring oral health knowledge and teaching confidence of the teen mentors and PA students was conducted.. Data were collected and analyzed with the assistance of PA faculty.

Table 1: Participant data

How many PAs, PA students, and/or PA faculty were involved?	11 PA students (1 <sup>st</sup> years) 3 PA Faculty/Staff
How many patients/community members were impacted and in what ways by this project?	8 Teen Mentors (7 <sup>th</sup> -8 <sup>th</sup> grade) 12 Elementary school students
Estimate the number of volunteer hours for planning and execution of the project.	PA-S Preparation and Execution: 10 students x 6 hours each (average): 60 hours Planning, Organizing (M. Morrow): 40 hours Faculty/Staff: 20 hours

## RESULTS

Table 2: Teen Mentor Oral Health Knowledge and Teaching Confidence

(n=7)	Pre-Outreach	Post-Outreach	p value
Average Score	57.1%	87.1%	
Median Score	50%	90%	
Range	50-70%	80-100%	
Standard Deviation	9.51	7.56	
Self-Reported Oral Health Knowledge 0-10 (average, range)	5.0 (4-6)	9.3 (8-10)	p < 0.001
Self-Reported Confidence in Teaching Oral Health 0-10 (average, range)	4.1 (3-5)	9.6 (8-10)	p < 0.001

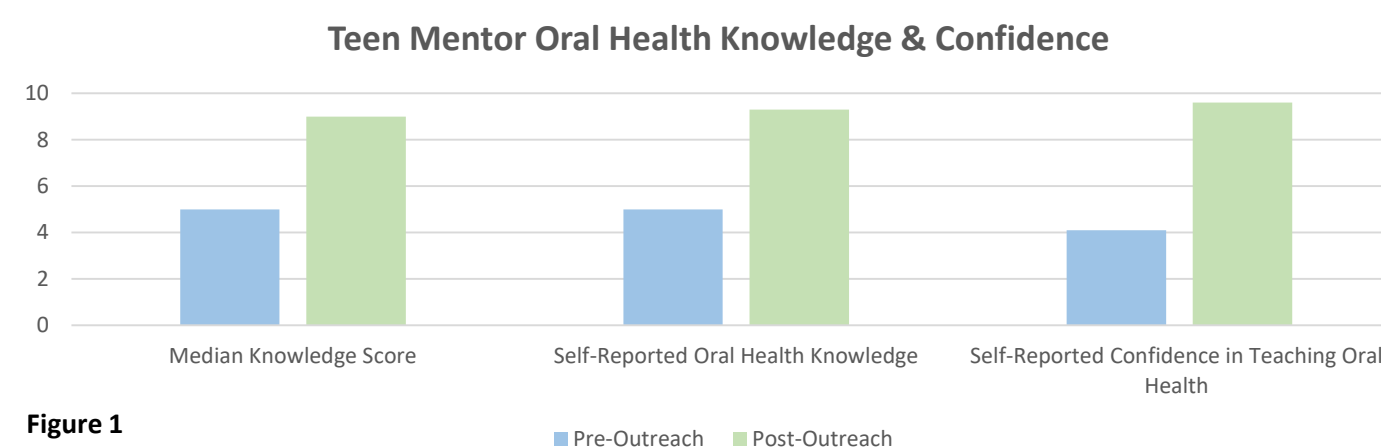


Figure 1

Table 3: PA Student Oral Health Knowledge and Confidence

	Pre-Outreach	Post-Outreach	p value
Average Score (n=10)	54.0%	74.3%	
Median Score	55%	80%	
Range	20-70%	60-90%	
Standard Deviation	13.60	13.97	
Self-Reported Oral Health Knowledge 0-10 (average, range)	3.9 (2-6)	8.7 (8-9)	p < 0.001
Self-Reported Confidence in Teaching Oral Health 0-10 (average, range)	2.7 (0-5)	8.6 (7-10)	p < 0.001

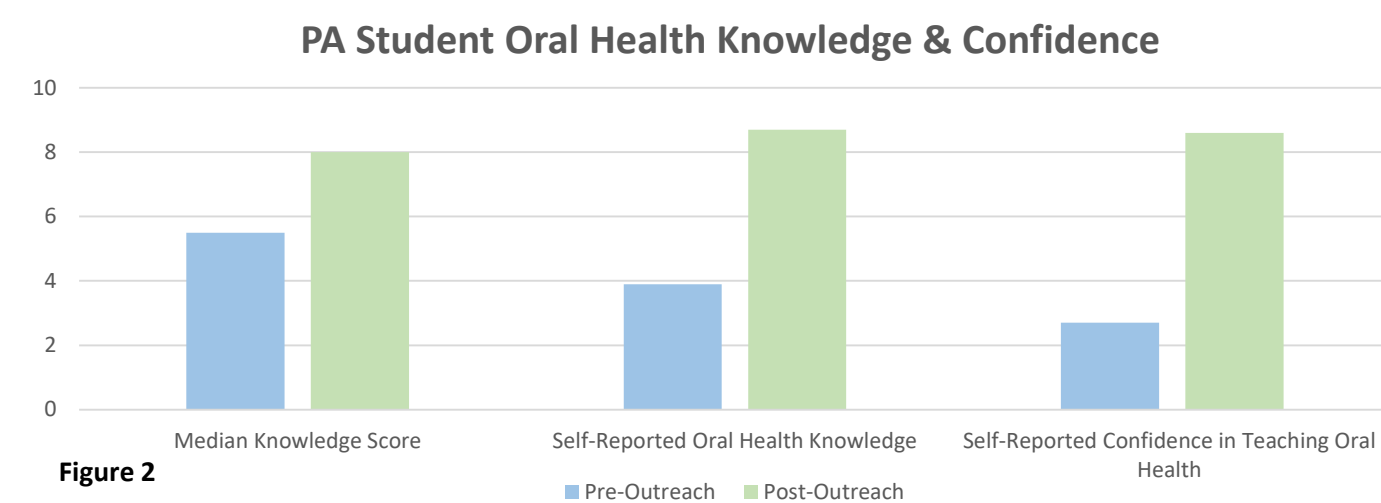


Figure 2

## DISCUSSION

Overall, the interactive oral health curriculum resulted in a high level of enthusiastic engagement from the teen mentors and increased knowledge and teaching confidence by all participants. (Tables 2,3; Figures 1,2) The outreach project was thus both enjoyable and informative for all participants involved. Additionally, objective assessments of participants' oral health knowledge illustrated that much of the program's learning objectives were retained by the end of the program.

Prior to the outreach activity, PA students were required to demonstrate completion of two CME-approved educational activities offered by Smiles for Life, a National Oral Health Curriculum. These activities included "Child Oral Health" and "Caries Risk Assessment, Fluoride Varnish and Counseling". PA students then engaged in weekly meetings outside of the PA program curriculum in order to review the learning modules, share educational materials, discuss relevant oral health topics, and develop the outreach curriculum. This information was reinforced through teaching the material to the teen mentors. The impact of these activities on PA student confidence in their oral health knowledge and ability supports that using peers to teach oral health may be a mutually beneficial, accessible and valuable mechanism to educate at-risk youth on oral health.

Several limitations to the program exist. Improvements are needed in expanding PA student oral health education activities, increasing interprofessional interaction, increasing participation of students and community constituents, and modifying objective assessments of oral health knowledge. We plan to continue offering and improving this oral health education program in future years.

## REFERENCES

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