

# Healthy Teeth, Healthy Me: Utilizing community engaged research to develop a community generated and interprofessional infant oral health program in Homewood

Cynthia Chew, DNP, CPNP-PC, IBCLC<sup>1</sup>, Daniel Rosen, MSW, PhD<sup>2</sup>, Katherine Watson, DO<sup>3</sup>, Alene D'Alesio, DMD<sup>4</sup>, Darren Ellerbee, MS<sup>5</sup>, Jerome Gloster, MD, MS<sup>6</sup>, Shannah Tharp-Gilliam, PhD<sup>7</sup>, Toni Beasley, AA<sup>8</sup>, Jacqueline M. Burgette DMD, PhD<sup>9</sup>

<sup>1</sup>Assistant Professor, Department of Health Promotion and Development, School of Nursing, University of Pittsburgh, <sup>2</sup>Professor, School of Social Work, University of Pittsburgh, <sup>3</sup>Assistant Professor and Co-Program Director of the Pediatric Medicine Residency, Division of General Academic Pediatrics, UPMC Children's Hospital of Pittsburgh, <sup>4</sup>Division Chief of Pediatric Dentistry, and Director of the CHP Pediatric Dentistry Residency, UPMC Children's Hospital of Pittsburgh, <sup>5</sup>Director, Community Engagement Center in Homewood, University of Pittsburgh, <sup>6</sup>Chief Executive Officer, Primary Care Health Services, Inc., Pittsburgh, PA, <sup>7</sup>Director, Homewood Children's Village, Pittsburgh, PA, <sup>8</sup>Director, Homewood Hub & Family Center, Trying Together, Pittsburgh, PA, <sup>9</sup>Assistant Professor, Departments of Dental Public Health and Pediatric Dentistry, School of Dental Medicine, University of Pittsburgh

## INTRODUCTION

Researchers partnered with the Homewood Community Engagement Center (HCEC) to develop a community generated infant oral health program "Healthy Teeth, Healthy Me" that met community needs by utilizing collaborator involvement and building community partnerships. The intervention was two-fold.

1. Interprofessional training sessions for health and social work trainees in infant oral health were developed and conducted.
2. Interprofessional trainees had the opportunity to observe virtual televisits for families with children under 3 years living in Homewood.

The training sessions and family televisit content was specific to the needs identified by community partners.

## BACKGROUND

Dental caries (tooth decay), the most common chronic disease of childhood, disproportionately affects children from low-income, minority communities.<sup>1,2</sup>

Successful community based participatory research involves collaboration between researchers with technical expertise and resources and community members with expertise of the community.<sup>3,4</sup>

Addressing oral health disparities requires involvement of disciplines outside of dentistry. Primary care providers can provide preventative services and oral health education.<sup>5-8</sup> Social workers can offer unique resources and interventions to patients.<sup>9</sup>

## DEVELOPING PARTNERSHIPS

Researchers leveraged an existing relationship with the HCEC to develop reciprocal relationships with multiple community collaborators.

Within the University, new relationships were established, and existing relationships strengthened between various Schools and with other University entities such as the Community Research Advisory Board (Figure 1).

## COMMUNITY & UNIVERSITY COLLABORATORS



Figure 1. The CEC was integral in connecting researchers from various schools within the University to key collaborators in the Homewood community.

## COMMUNITY SURVEY

11 of 20 community partners responded to a survey about infant oral health needs in Homewood. Respondents indicated:

- a need for infant oral health education in the community (n=11, 100%)
- infant oral health education would support their organization's mission (n=9, 82%)
- families in Homewood experience barriers or challenges related to child oral health (n=10, 91%)

Identified needs, challenges, and barriers became organizing principles and themes (Figure 2) for developing the interprofessional education sessions and virtual televisits.

### Most Frequently Identified Needs

- "When should children start going to the dentist?" (n=11, 100%)
- "How to keep teeth free from cavities" (n=10, 91%)
- "Toothbrushing assistance" (n=9, 82%)

### Community Identified Challenges & Barriers

- Food desserts prevent a healthy diet, and families need education about how a healthy diet is related to a healthy mouth
- Families need assistance with logistics of performing home oral hygiene activities
- Address families' lack of understanding of the importance of early intervention regarding dental care
- Families lack resources to access early dental services

Figure 2. Community identified needs, challenges and barriers.

## INTERPROFESSIONAL EDUCATION

*Session 1:* Interprofessional – pediatric medicine, pediatric dentistry, pediatric nurse practitioner, and social work trainees.

- learned about caries prevention and oral health assessment
- worked in interprofessional groups to discuss a case study based on a 2-year-old living in Homewood facing the needs and barriers identified by community survey

*Session 2:* Discipline-specific

- hands-on practice applying fluoride varnish
- practice discussing oral health with families
- Reinforced organizing principles and themes

*Session 3:* Optional opportunity to attend a virtual televisit with a family in Homewood.

### Contact Free Porch Drop-off Kit Contents

#### "When should my child start going to the dentist?"

- Infant Oral Health Referral Sheet (List of local providers who see children under 3 with Medicaid Insurance)

#### "How to keep teeth free from cavities"

- Healthy Drinks, Healthy Kids "Summary Flyer" of Cup Infographic (<https://healthydrinkshealthykids.org/professionals/>)
- National Maternal and Child Oral Health Resource Center "Coronavirus Disease and Oral Health: Information for Parents About Promoting Good Oral Health At Home" (<https://www.mchoralhealth.org/announcements/covid-handouts.php>)

#### "Toothbrushing assistance"

- Oral Health Supplies (Toothbrushes for family and fluoride toothpaste)
- AAP "Brush Book Bed" Poster and Parent Handout (<https://downloads.aap.org/AAP/PDF/BBBPoster.pdf>; [https://downloads.aap.org/AAP/PDF/BBB\\_Parent\\_Handout.pdf](https://downloads.aap.org/AAP/PDF/BBB_Parent_Handout.pdf))

Figure 3. Families participating in the virtual televisits were provided with a kit containing oral health supplies and information prior to the visit.

## COMMUNITY EDUCATION: VIRTUAL TELEVISITS

- Porch drop-off kit prior to visit (Figure 3)
- Televisit
  - Toothbrushing demonstration
  - Education specific to community identified needs

## RESULTS & CONCLUSIONS

Of trainees who completed the follow-up evaluation

- 85% (n=28/33) learned a new skill
- 97% (n=32/33) stated they were introduced to at least one new resource or tool
- 100% (n=10/10) indicated that they were very likely to promote children's oral health in their future practice

"I think the social work aspect that was discussed was very valuable. As providers, sometimes we get caught in the pattern of telling patients what they need to do without thinking about if it is possible (financially or otherwise) for them to do."

"I intend to change the method I use to apply varnish."

"I learned new ways of discussing oral health with parents."

"I work with pregnant and postpartum women. I intend to tell them about the importance of making an initial encounter with a dentist."

Figure 4. Selected student responses to open-ended questions on the post-session evaluations.

Collaborator engagement facilitated the development of an intervention that met the specific needs of the Homewood community.

Interprofessional training enriched the educational experience of trainees and instilled a deeper understanding of the role each profession can play in promoting infant oral health and preventing dental caries (Figure 4).

## ACKNOWLEDGEMENTS

Funding to support this project was awarded through the Pitt Seed Project.

## CONTACT

Cynthia Chew - [chewc@pitt.edu](mailto:chewc@pitt.edu)

## REFERENCES

1. Fleming, E., Afful, J., *Prevalence of total and untreated dental caries among youth: United States, 2015-2016*, in *NCHS Data Brief*. 2018, National Center for Health Statistics: Hyattsville, MD.
2. Institute of Medicine and National Research Council of the National Academies, *Improving Access to Oral Health Care for Vulnerable and Underserved Populations*. 2011, Washington, DC: The National Academies Press.
3. Wolff, T., Minkler, M., Wolfe, S., Berkowitz, B., Bowen, L., Dunn Butterfoss, F., Christen, B. D., Francisco, V. T., Himmelman, A. T., & Lee, K. S., *Collaborating for Equity and Justice: Moving Beyond Collective Impact*, in *Nonprofit Quarterly*. 2016.
4. Brush, B.L., et al., *Success in Long-Standing Community-Based Participatory Research (CBPR) Partnerships: A Scoping Literature Review*. *Health Educ Behav*. 2020. **47**(4): p. 556-568.
5. Braun, P.A., et al., *Impact of an interprofessional oral health education program on health care professional and practice behaviors: a RE-AIM analysis*. *Pediatric Health Med Ther*, 2015. **6**: p. 101-109.
6. Braun, P.A., et al., *Effectiveness on Early Childhood Caries of an Oral Health Promotion Program for Medical Providers*. *Am J Public Health*. 2017. **107**(S1): p. S97-S103.
7. Quinonez, R.B., et al., *Using Quality Improvement Methods to Implement an Early Childhood Oral Health Initiative: A Federally Qualified Health Center Pilot Study*. *J Clin Pediatr Dent*, 2017. **41**(5): p. 351-357.
8. Burgette, J.M., J.S. Preisser, and R.G. Rozier, *Access to preventive services after the integration of oral health care into early childhood education and medical care*. *J Am Dent Assoc*, 2018. **149**(12): p. 1024-1031.e2.
9. MacDougall, H., *Dental Disparities among Low-Income American Adults: A Social Work Perspective*. *Health Soc Work*, 2016. **41**(3): p. 208-210.