

# Building Capacity for PCOR to Reduce Early Childhood Obesity Inequities



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## INTRODUCTION

- Inequities in obesity for preschoolers are widening, placing young children in Detroit at particularly high-risk for excess weight gain as 80% of city residents identify as African-American and 43% children live in poverty.<sup>1,2</sup>
- Community-academic partnerships in Detroit are uniquely positioned to conduct patient-centered outcomes research (PCOR) to reduce preschool obesity inequities.
- Michigan HealthLink<sup>3</sup> is an established model for creating infrastructure to support community-academic partnerships to improve health equity but has not been applied to increase PCOR capacity to address obesity inequities during the preschool years.

## AIMS

Adapt the Michigan Cancer HealthLink model<sup>3</sup> to:

- Increase community capacity in Detroit for PCOR to address obesity inequities in early childhood
- Build community-academic partnerships to address community PCOR priorities

## STEP 1: ESTABLISH THE FPP-CAB

- The FPP-CAB was established in 2018 by 3 caregivers of preschoolers, 1 pediatrician, and the Greater Detroit Area Health Council.
- The mission of the Family-Pediatrician Partnership Community Advisory Board (FPP-CAB) is for families, pediatricians, and the community to work together in developing community-driven solutions for reducing obesity inequities in early childhood.
- Founding FPP-CAB members developed and implemented a plan for increasing membership:
  - Partner with Offices of Community Engaged Research and Cancer Equity and Community Engagement at Wayne State University
  - Recruit at health fairs, farmers markets, partnering community organizations see Figure 2
  - Developed an application and conducted interviews (see Table 1 for sample interview questions)
- Final membership (n=13)
  - 10 caregivers, 2 pediatricians, and representatives from Greater Detroit Area Health Council, Brilliant Detroit, and Detroit Parent Network
  - Two caregivers dropped out prior to the start of the pandemic
  - Descriptive characteristics for FPP-CAB members: all female, 80% African American, age 27-61 years-old

Figure 1. FPP-CAB Logo



Figure 2. FPP-CAB Recruitment at Farmer's Market



Table 1. Sample Interview Questions Developed by founding FPP-CAB members

| Interview Questions  |
|--|
| Why do you want to join the FPP-CAB?   |
| What is your past experience (if any) with community work? Have you ever been part of a community advisory board?  |
| How will you share the information you learn with your community?  |
| This is a 12-month commitment. Are you prepared to make that commitment? How are you able to make that commitment? |

## STEP 2: ADAPT PCOR CAPACITY BUILDING CURRICULUM FOR PRESCHOOL OBESITY

- Convened an Advisory & Oversight Committee (AOC) to adapt the Cancer PCOR "Building Your Capacity Curriculum"<sup>3,4</sup> for Preschool Obesity PCOR. Table 2 includes all modules in the adapted curriculum.
- AOC Membership (N=11)
  - Researchers from Cincinnati Children's Hospital Medical Center/University of Cincinnati, University of Colorado Anschutz Medical Center, Karmanos Cancer Institute/Office of Cancer Equity and Community Engagement, and the Department of Family Medicine and Public Health Sciences and College of Education at Wayne State University
  - FPP-CAB members
  - Representatives from Brilliant Detroit and Greater Detroit Area Health Council
- The AOC met monthly for 6 months (hybrid meetings). Meetings were two hours long and 1-2 modules were reviewed at each meeting.
- Adaptations included
  - New module: Communication & Group Dynamics
  - Added Boot Camp Translation<sup>2,3</sup> as another approach for generating priorities and research questions
  - Continued to make language more lay-friendly
  - Added more research examples
  - Added video clips to explain some research terms (e.g., what is a control group?)

Table 2. BYC for Preschool Obesity PCOR curriculum modules

| Module | Topic                                 | Module | Topic                              |
|--------|---------------------------------------|--------|------------------------------------|
| 1      | Obesity During the Preschool Years    | 7      | Literature Reviews                 |
| 2      | Obesity in Detroit                    | 8      | Research Design                    |
| 3      | Communication & Group Dynamics        | 9      | Quantitative & Qualitative Methods |
| 4      | Introduction to Research & Evaluation | 10     | Ethics & the IRB                   |
| 5      | Research, Power, & Politics           | 11     | Grant Writing                      |
| 6      | Developing Research Questions         | 12     | Policy & Advocacy                  |

## STEP 3: BUILD COMMUNITY PCOR CAPACITY

- FPP-CAB completed adapted curriculum over 12 months
  - 7 modules completed virtually due to pandemic
  - Average attendance = 11 (85%)
- Curriculum satisfaction survey
  - Completed at the conclusion of each module
  - 7 Likert scale questions, 3 open-ended questions (see Table 3 for select responses to one question)
  - Continuous feedback loop for improvement, particularly during transition to virtual learning
  - Overall satisfaction rated as very good to excellent for all modules.
  - Across modules, participants found modules interesting, easy to understand, that speakers were clear, information was relevant, there was ample opportunity to ask questions, and content presented increased their understanding of the topic being presented.
- The curriculum graduation ceremony was planned by a sub-committee of FPP-CAB members, occurred virtually, and included:
  - FPP-CAB members received a framed graduation certificate (see Figure 3), \$100 gift card for food delivery, balloons, and streamers
  - Divided into three teams and played Jeopardy (see Figure 4).

Table 3. Examples of Module Feedback

| Most important thing learned  |
|---|
| That research in a community can be a positive thing for everyone involved  |
| Our opinion matters, and we can get things done.  |
| There are specific ways to ask questions to get the best response.  |
| How to find reliable information  |
| I liked the information from previous studies and how they illustrated how to design a research project.            |
| The role of quantitative and qualitative research in our groups goal to decrease obesity in preschool aged children |
| Information about the Belmont Report  |
| better understanding of how writing grants work   |

Figure 3. BYC Curriculum Graduation Certificate



Figure 4. BYC Curriculum Jeopardy Board



## STEP 4: COMMUNITY-ACADEMIC PARTNERSHIPS

- The Community-Based Obesity Research Network was established to provide infrastructure to connect community members with researchers and explore partnerships to address community identified research priorities and questions.
- FPP-CAB members presented on their history, completion of the PCOR capacity building curriculum, and PCOR priorities and research questions for their top priority (Tables 4 & 5).
- Researchers from Wayne State University Departments of Family Medicine & Public Health Sciences and Psychiatry & Behavioral Neurosciences and the Merrill Palmer Skillman Institute attended to explore synergies.

Table 4. FPP-CAB Research Priorities

| Rank | Priorities   |
|------|--|
| 1.   | Decreasing sugary drink intake among preschoolers          |
| 2.   | Strategies for how to afford eating healthy                |
| 3.   | Teaching families healthy food management skills           |
| 4.   | Increasing physical activity for preschoolers and families |

Table 5. FPP-CAB Research Questions

| Research Questions   |
|--|
| How do addictive properties of sugary drinks affect young children?                              |
| What are the impacts of sugary drinks on emotional and behavioral functioning in young children? |
| How do you break sugary drink habits in young children without side effects of withdrawal?       |
| What strategies work best to reduce sugary drink consumption in young children?                  |

## CONCLUSIONS

- HealthLink model was successfully adapted for another community/patient stakeholder population.
- Engagement and retention were high.
- Community-academic partnership was successful in adapting the BYC curriculum to build capacity for PCOR to address obesity inequities in early childhood

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## PUBLIC HEALTH IMPLICATIONS

- Community engagement across the research continuum is imperative improving health equity.
- Partnerships and infrastructure established in this work provide a promising start towards reducing preschool obesity inequities.

## REFERENCES

1. United States Census Bureau. <https://www.census.gov/quickfacts/detroitcitymichigan>. Accessed April 6, 2022.
2. The Anne E. Casey Foundation. <https://datacenter.kidscount.org/data#MI/2/0/char/0> Accessed April 6, 2022.
3. Office of Cancer Health Equity and Community Engagement, Karmanos Cancer Institute. <https://www.karmanos.org/karmanos/healthlink-model>. Accessed April 5, 2022.
4. Leslie, L.K., Rubin, C.L., Mule, C.M., Mbawuike, V., Rios, M., Daudelin, D. & Allukian, N., Building Your Capacity Through Community Engagement. <https://www.tuftsctsi.org/wp-content/uploads/2015/08/Building-Your-Capacity-Curriculum-2012.pdf>. Accessed April 6, 2022.