



Published in final edited form as:

Health Promot Pract. 2021 January ; 22(1): 102–111. doi:10.1177/1524839919862251.

Capacity Development and Evaluation of a Parent Advisory Team Engaged in Childhood Obesity Research

Ramine Alexander, PhD, MPH¹, Paul Estabrooks, PhD², Donna-Jean P. Brock, MS³, Jennie L. Hill, PhD², Melicia C. Whitt-Glover, PhD⁴, Jamie Zoellner, RD, PhD³

¹North Carolina A&T State University, Greensboro, NC, USA

²University of Nebraska Medical Center, Omaha, NE

³University of Virginia, Charlottesville, VA, USA

⁴Gramercy Research Group, Winston-Salem, NC, USA

Abstract

Guided by community-based participatory research principles, this mixed-methods process evaluation explored the experience and capacity of a newly formed Parental Advisory Team (PAT) engaged in childhood obesity research in a medically underserved region. Following the successful completion of a 3-month evidence-based childhood obesity treatment program (iChoose), 13 parents/caregivers who completed iChoose consented to participate in the PAT. Between June 2015 and March 2016, the PAT had nine monthly meetings and completed mixed-methods capacity assessments. They engaged in activities related to understanding iChoose outcomes, defining their role and purpose as a partnership, initiating content development, and pilot testing maintenance intervention components for future iChoose efforts. Assessments included a quantitative survey administered at baseline and 9 months, and a qualitative interview completed at 9 months. Results indicated that PAT members' perceptions of the identified capacity dimensions were positive at baseline (3.8–4.3 on a 5-point scale) and remained positive at follow-up (3.9–4.4 on a 5-point scale); changes were not statistically significant. Qualitative data revealed that PAT members were satisfied with group participation and desired to enhance their role in subsequent iChoose research. Understanding and promoting parental engagement in the research process fills an important gap in childhood obesity literature.

Keywords

community-based participatory research; health research; obesity; chronic disease; child/adolescent health; partnerships/coalitions

INTRODUCTION

Although the prevalence of childhood obesity has stabilized over the past few years, it remains an American epidemic, affecting 18% of children nationwide (Skinner, Ravanbakht,

Address correspondence to Ramine Alexander, Assistant Professor, North Carolina A&T State University, 1601 East Market Street, Greensboro, NC 27410, USA; rcalexander@ncat.edu.

Skelton, Perrin, & Armstrong, 2018). Childhood obesity can have immediate and long-term effects on physical, social, and emotional health. Currently, the “golden standard” for childhood obesity treatment are multicomponent lifestyle interventions. These interventions provide weekly child and parent group sessions as well as individualized behavioral coaching for targeting family goals and barriers (Bergmann et al., 2019; Wilfley & Balantekin, 2018). Since parents and caregivers play a primary role in shaping their child’s eating and physical activity behaviors, it is not surprising that they are included in these multicomponent lifestyle interventions (Davison, Lawson, & Coatsworth, 2012; Golan, 2006). Parents and caregivers have a strong understanding of their family dynamics and ecological factors that influence daily activities related to diet and physical activity (Hingle, O’Connor, Dave, & Baranowski, 2010). Therefore, engaging parents in childhood obesity efforts can lead to a better integration of parental sociocultural context. It can also lead to improvements in program acceptability, cultural relevance, and program participation (Jurkowski et al., 2013). Despite the critical role parents and caregivers have in weight loss efforts among children, there is a limited amount of literature that engages them in the actual research and implementation of childhood obesity treatment interventions (Jurkowski et al., 2013).

One approach to including parents in the research process is through community-based participatory research (CBPR; Jurkowski et al., 2013). Overarching goals of CBPR are to combine knowledge and action for social change and to improve community health and eliminate health disparities (Minkler, Blackwell, Thompson, & Tamir, 2003). A CBPR approach also provides a channel for communities to express their needs and concerns, in addition to building their capacity (Wallerstein & Duran, 2010). CBPR has also been identified as a practical approach to increasing the participation of racial and ethnic minorities. Typically, in research interventions, engaging, recruiting, and retaining underrepresented minorities can be difficult due to mistrust of academic institutions and other barriers such as health literacy and sociocultural factors (George, Duran, & Norris, 2014; Killien et al., 2000). However, CBPR can address those challenges through participant engagement at each phase of the research process. Unfortunately, few studies engage actual participants in each phase of the research process. Rather, community stakeholders who serve intervention participants are usually engaged in CBPR efforts (Wallerstein & Duran, 2010). The actual involvement of the priority population in all phases of the research remains limited, including among childhood obesity initiatives.

Development of the iChoose Program

Located in south central Virginia and north central North Carolina, the Dan River Region is federally designated as a medically underserved region, home to severe educational, economic, and health inequalities (Byington, Naney, Hamilton, & Behringer, 2007; Virginia Department of Health, Office of Health Policy and Planning, 2006). Along with a high adult prevalence of obesity, diabetes, and cardiovascular disease, this region is home to some of the highest rates of childhood obesity in the country. To tackle childhood obesity in the region, a community–academic partnership consisting of the Pittsylvania/Danville Health District, Children’s Healthcare Center, Danville Parks Recreation & Tourism, and the Boys & Girls Club, along with investigators from the Translational Obesity Research

Program at Virginia Tech developed the Partnering for Obesity Planning and Sustainability Community Advisory Board (POPS-CAB). Through a 3-year planning process, CBPR, and systems-based approach, the POPS-CAB adapted, implemented, and evaluated a regional family-based childhood obesity treatment program, iChoose (Zoellner, Hill, Brock, et al., 2017; Zoellner, Hill, You, et al., 2017).

Pilot Testing of iChoose

The iChoose program was adapted from an evidenced-based program, Bright Bodies, which is a multicomponent 6- to 12-month long family-based lifestyle intervention for overweight and obese children (Savoye et al., 2007). During the planning process of the POPS-CAB, the decision was made to adapt and pilot test iChoose as a 3-month program due to the capacity of local program delivery partners and their perceptions of engaging families in an intensive lifestyle program.

After program selection and adaptations, the POPS-CAB implemented and evaluated iChoose with three cohorts of families. To promote sustainability efforts, each wave of iChoose differed by the delivery agent. Wave 1 was research-delivered, Wave 2 delivery was combined with research and community delivery agents, and Wave 3 was community/clinic-delivered. Following Waves 1 and 2, program improvements were made to enhance program effectiveness and promote successful delivery efforts for community/clinical agents. Among the 94 parents of 101 overweight and obese children 8 to 12 years of age, the iChoose program demonstrated promising reach and modest decreases in child BMI (body mass index) *z* scores immediately postprogram (Hill et al., 2014; Zoellner, Hill, You, et al., 2017). Unfortunately, the postprogram improvements were not maintained at 3-month follow-up. Based on these findings, the research team identified two opportunities to improve the iChoose program and to continue the overarching CBPR approach. First, expand the 3-month iChoose program into a more extended program, like the original 6- to 12-month Bright Bodies program. Second, engage actual and potential program participants representing the priority population (i.e., parents of overweight and obese children) in the extension of the iChoose program and the overall research efforts. Engaging families who represent iChoose families is necessary to understand the needs of program participants and to promote the sustainability of our CBPR efforts. Likewise, engaging families in the research processes may promote open communication, build trust, and break down hierarchical relationships (Jurkowski et al., 2013). This mixed-methods process evaluation explored the experience and capacity of a newly formed Parental Advisory Team (PAT) engaged in childhood obesity research in a medically underserved region.

The goal of this study was to extend the application of the CBPR approach to fully engage parents as key collaborators and equal partners in the subsequent phases of research, including the development of an iChoose maintenance phase. This article describes the formation, development, mixed-methods evaluation, and 1-year progress of the iChoose PAT.

METHOD

The institutional review board at Virginia Tech approved all study activities, and parents provided written consent. To compensate for the time involved in meeting participation, parents received a \$25.00 gift card following each meeting.

Parent Advisory Team Membership

Eligibility for PAT membership required completion of at least 50% (9 sessions) of the iChoose program during their wave of enrollment. The research team contacted parents who met this criterion via telephone to inform them about the PAT. Parents who expressed interest received an invitation letter and two additional phone calls from the research team to answer questions and encourage participation.

PAT Meeting Structure

The PAT had nine meetings between June 2015 and March 2016. Meetings were held in a local community center each lasting approximately 90 to 120 minutes. Meetings included small group activities, peer sharing, small and large group discussions, and the pilot testing of new lessons and activities identified by the PAT and intended for an iChoose maintenance phase. Initially, the meetings were facilitated by the research team, but PAT members helped facilitate group discussions as meetings progressed. During each meeting, a research team member compiled meeting minutes as well as any materials reviewed by the PAT. Following the first meeting, agenda items were co-identified by PAT participants and the research team. Since meetings were after work hours, dinner was served, and parents were encouraged to bring their children, especially when activities were being pilot tested. Table 1 details the objectives and activities accomplished at each meeting.

PAT Strategy Identification

During the initial PAT meetings, participants engaged in key activities related to defining their role as an advisory team and understanding iChoose program data. Since families had expressed interests in the continuation of iChoose, the goal of the PAT was to provide insight on program improvements and the development of an iChoose maintenance phase for future families. The research team informed the PAT regarding iChoose development and outcomes through presentations of data on recruitment, process evaluation, attendance/retention, and BMI changes. On defining their roles and identifying areas of improvement for the iChoose program, the PAT set the agenda and structure for future meetings. During their second meeting, the PAT prioritized their efforts by ranking areas of importance and feasibility related to recruitment, attendance/retention, and maintenance using a 5-point Likert-type scale (i.e., 1 = *not at all important or not at all feasible*; 5 = *extremely important or extremely feasible*). They also identified strategies to address each area of importance and feasibility that could be used in the maintenance phase of iChoose.

Capacity Evaluation Plan

In Meeting 2, the PAT also discussed how they would define partnership success over time. To define their success as a partnership, the PAT collaboratively engaged in developing a Community Capacity Evaluation Plan. During this process, the research team presented the

PAT with the same capacity and group dynamic dimensions used by the POPS-CAB as well as previously published community capacity and group dynamic measures (Goodman et al., 1998; Sandoval et al., 2012; Zoellner, Hill, Brock, et al., 2017). The PAT reflected and prioritized these capacity and group dynamic dimensions. Members selected seven dimensions that they perceived as the most relevant to their success during their first year. These included communication, problem assessment, participation and personal influence, leadership, community power, collective efficacy, and overall satisfaction. Based on these seven dimensions, a 42-item survey consisting of 39 quantitative items and 3 open-ended questions was established and administered at 3 months and 9 months following the PAT's initiation. Additionally, a 12-item semistructured qualitative interview was administered at 9 months and conducted via phone, audio-recorded, and transcribed verbatim. Interviews lasted approximately 60 minutes and were administered by a research team member.

iChoose Maintenance Development

The subsequent meetings consisted of the development and pilot testing of iChoose maintenance content. During this time, the PAT engaged in a resource identification process. Using the National Cancer Institute (2016) resource manual, *Using What Works: Adapting Evidence-Based Programs to Fit Your Needs* (Boyle & Homer, 2006), parents engaged in a collaborative decision-making and resource-mapping process. Throughout this process, the PAT identified resources within the community, POPS-CAB, and their own group that would support the implementation and sustainability of an iChoose maintenance phase. The PAT also identified strategies they thought would complement the iChoose curriculum and be appropriate for a weight maintenance phase. The top strategies prioritized by PAT members focused on skill-building activities and future strategies to support and engage new families in iChoose. The research team reviewed the family-based pediatric obesity literature and identified evidence-based strategies that aligned with recommendations of the PAT. As one example, the family-based program with similar strategies identified by the PAT was a 4-month maintenance program developed by Wilfley and colleagues (2007) that included behavioral skill maintenance and social facilitation strategies. Therefore, the PAT adopted similar strategies from Wilfley and colleagues that helped parents facilitate child peer networks that supported healthy eating and physical activity. During this process, the PAT also identified their role in the implementation of an iChoose maintenance phase.

Data Analysis

Meeting minutes, PAT outputs, and the analysis of the mixed-methods capacity evaluation was used to monitor Year 1 success of the PAT. Quantitative data were analyzed using SPSS 22.0, which included descriptive statistics and paired *t* tests to explore changes over time. Qualitative data were coded through semi-open coding by two independent researchers and was subsequently discussed for consensus and analyzed for emergent themes (Creswell & Poth, 2007).

RESULTS

Of the 94 parents involved in iChoose, 26 met the PAT eligibility criteria, and 13 parents agreed and consented to participate in the PAT. The PAT was all female and 46% were

African American and 54% were Caucasian, which was indicative of the overall iChoose parent demographics. Between June 2015 and March 2016, monthly meeting attendance ranged from five to seven parents in addition to the three research team members. After the iChoose data were presented to the PAT and thoroughly discussed, feasibility and importance rankings indicated three areas to focus their efforts: recruitment, attendance/retention, and maintenance. For the first year of the PAT, members agreed to prioritize working on the maintenance phase.

Table 1 outlines the PAT's nine objectives that led to more than 25 accomplishments in Year 1. Key accomplishments included familiarizing the PAT with iChoose data, establishing their role as an advisory team, developing and implementing a capacity evaluation plan, conducting the pilot testing of monthly maintenance lessons, and later engaging in grant development.

The capacity evaluation was completed at 3 months and 9 months by seven (70%) PAT members. Results indicated maintenance of positive perceptions of the capacity dimensions from baseline (3.8–4.3 on a 5-point scale) to follow-up (3.9–4.4 on a 5-point scale) with no statistically significant changes over time. The PAT also ranked overall satisfaction with their efforts highly at both baseline and follow-up. Open-ended survey items indicated that working together and the ability to gain new knowledge were aspects of the PAT that were going well. However, members were not as satisfied with inconsistent meeting participation, which they attributed to personal schedule conflicts.

Table 2 illustrates the emergent themes, facilitators, and barriers associated with the capacity dimensions from the PAT interviews. These findings added additional context to our quantitative findings. The organic development of the confidence and trust in the research team and the collective efficacy for group efforts were identified as strengths of the PAT that crosscut over capacity dimensions. Many PAT members appreciated guidance from the research team and desired training opportunities to further define their role as the PAT and to prepare them to lead intervention components in the subsequent phases of iChoose. The PAT also identified their group as cohesive and collaborative, yet scheduling conflicts related to work and other extracurricular activities were identified as a barrier that affected communication and participation. Furthermore, members acknowledged that there were many opportunities to lead, but personal scheduling conflicts impeded their ability to take on these roles. Qualitative findings further identified that the consistency of meetings and working relationships were positive aspects of the PAT and that the continuation of an iChoose maintenance phase could lead to future capacity improvements for the PAT.

Designed by the PAT, the proposed iChoose maintenance phase included monthly group classes, each lasting 2 hours, with opportunities for skill building and networking outside of class-based activities. Skill-building activities prioritized and pilot tested by the PAT included healthy snack preparation, exposure to new group-based physical activity opportunities (specifically POUND class and urban line dancing class), addressing body image concerns among youth, and healthy meal preparation. The PAT contributed to each of these skill-building activities by identifying community resources such as people who assist with program delivery (i.e., group exercise classes), new meeting locations, and providing

content that should be included in each of these sessions. The PAT also evaluated and revised each activity after pilot testing. To further encourage group capacity, the PAT met outside of an organized PAT meeting to engage in a group walking and zip-lining session. PAT members had the option to invite their family and friends to attend these sessions. Additionally, the PAT worked toward community power by nominating a PAT member to present their experience with participating in the iChoose program and engaging in the PAT at a Community Health Summit. The PAT engaged in the larger POPS-CAB advisory board's community celebration where they reported on their goals and engagement as an advisory team. They also engaged in grant development and refined their goals and future roles in subsequent iChoose research. Notably, the PAT members provided letters of support and committed interest to serve in roles related to recruitment, attendance/retention, and effectiveness testing of the iChoose maintenance phase.

DISCUSSION

We were able to utilize CBPR principles to fully engage parents as key collaborators and equal partners in the subsequent phases of the research process. The PAT accomplished their own Year 1 goals, with the majority of members remaining engaged in both the partnership development and the maintenance process. The PAT also defined their own capacity indicators and then maintained perceptions of their capacity through their first year of engagement. The accomplishments (Table 1) and feedback (Table 2) provided some support in the positive interpretation of our quantitative and qualitative findings.

Despite our many accomplishments, there were some notable limitations. It is possible that our sample was a biased sample as only 28% of parents involved in iChoose met the PAT eligibility criteria of attending at least 9 of 18 sessions; of those eligible, only 50% consented to participate in the PAT. Although PAT members volunteered to participate, attendance at regular meetings was somewhat low. Additional effort is needed to understand strategies for recruiting, engaging, and retaining a wider variety of PAT members to ensure that all perspectives are represented. Our findings were also consistent with those of past studies, which suggested that the uncertainty of roles, time constraints, and other factors can inhibit participation (Mendez, Carpenter, LaForett, & Cohen, 2009).

Nevertheless, strengths of this study included the use of CBPR, an established methodology to engage parents in the advisory team, the PAT development of intervention content, and the process evaluation used to understand the PAT's effectiveness in aiding in program retention and supporting positive results. PAT members were highly satisfied and remained engaged in the first year of the research process. During this time, the PAT enjoyed interacting with each other, engaging with the research team, and were motivated to become leaders in their community. Working with the PAT and seeing them develop individually and collectively were also rewarding to the research team. We attributed our satisfaction outcomes to the specific group dynamic strategies and CBPR principles used within PAT meetings and to the transparency of the research team regarding iChoose outcomes and future plans. To promote co-learning and parental empowerment, we employed strategies such as peer sharing, collaborative goal development, and small-group interactions. The research team also took into consideration the personal lives of the PAT, which is a critical aspect in CBPR.

We accommodated the job schedules of the PAT by scheduling our meetings after work hours, providing dinner for the PAT and their families during each meeting and providing child care activities so that PAT members could bring their children to each meeting. Gift cards were also provided after each meeting to compensate PAT members for their time and involvement. Through these various strategies, the research team was able to break down hierarchical relationships, engage parents as equal partners in the participatory process, build capacity, and facilitate the development of an iChoose maintenance phase (Estabrooks, Harden, & Burke, 2012).

Despite these positive outcomes, this study was not met without challenges and lessons learned. Scheduling conflicts was the primary cross-dimensional barrier among PAT members that ultimately affected participation and willingness to take on leadership roles. Scheduling also became a conflict because many parents had children who were engaged in extracurricular activities during the school year and summer break. To overcome these challenges, instead of having a fixed meeting schedule, each month the academic team contacted PAT members to vote on the best meeting date and time. However, there were still barriers for the PAT. The lack of consistent communication between meetings was also identified as a barrier that affected communication among PAT members, which we believe led to some confusion regarding group roles in the new phase of iChoose. Toward the latter part of Year 1, we encouraged the PAT members to exchange contact information and to communicate with each other outside of PAT meetings to continue in the relationship-building process.

When engaging underrepresented participants, researchers should also consider employing recruitment and retention strategies and theories targeted to underrepresented participants. Being consistent with the literature, establishing a partnership around a shared vision, engaging community members in every step of the research planning process, recognizing shared expertise, and applying group processes to promote team development and equity in decision-making power are additional practices that contribute to Year 1 accomplishments of the PAT (Zoellner, Hill, Brock, et al., 2017). Outlined by Newman and colleagues (2011) as a “best process” for evaluating partnership success, creating a Capacity Evaluation Plan and conducting qualitative interviews helped us explore changes in community capacity and group dynamics over time and aided in addressing partnership priorities. Collectively, these processes increase the likelihood that the partnership will be sustained (Butterfoss, 2009).

Recommendations for CBPR

- Establish continued engagement and a process for ongoing communication throughout the participatory process between the research and advisory team. This may address the challenges in the development of group roles
- Formulate group dynamic techniques and collaborative goal development to keep participants engaged as an advisory team
- Focus on efforts to better understand why some individuals agree to participate in a leadership group like the PAT and later discontinue engagement

- Develop a capacity evaluation plan that can support collective action and program sustainability goals

Next Steps

The foundational steps of parental engagement as partners in the research processes have contributed to our team successfully acquiring additional resources to expand our childhood obesity treatment initiative in the Dan River Region. More specifically, our team has been awarded a research contract from the Patient-Centered Outcomes Research Institute to test the comparative effectiveness of two childhood obesity treatment programs (i.e., iChoose vs. Family Connections). Importantly, this Patient-Centered Outcomes Research Institute contract has allowed us to further expand the roles and level of engagement of our PAT members, including a compensation framework for their increased level of contribution. Adapted from an existing community health advisor model, the PAT will work with community and research staff to optimize program enrollment, participation, and the retention of new families in the program. The PAT members will provide a social support “safety net” for future program families, attend monthly meetings and trainings, assist in family recruitment activities, and support program implementation. Program maintenance content developed by the PAT will be utilized in this new testing of iChoose. As we move forward, we will continue to engage the PAT in all phases of the participatory research process and will continue to execute our established Capacity Evaluation Plan on an annual basis. This will allow us to identify and address barriers to PAT engagement and success.

Recommendations for Practice

- Include former parent participants as “safety nets” in family-based interventions to optimize program participation and retain new participants in program efforts
- Engage community members who represent the priority population to help practitioners identify and address program barriers and facilitators that can lead to program sustainability and increase participation
- Promote parental engagement that can lead to a better integration of participants needs pertaining to the program

CONCLUSIONS

To our knowledge, this is the first study that has evaluated the capacity of a newly developed participant-driven advisory team in childhood obesity treatment research. Many advisory boards decline in the early stages because they neglect to engage in capacity-building activities that support a basis for collective action and sustainability (Alexander, Christianson, Hearld, Hurley, & Scanlon, 2010). However, as the demand for participant-driven research increases, there is a heightened need to better understand and document the development and progression of community capacity efforts (Sandoval et al., 2012). As public health practitioners and researchers focus on factors that improve health outcomes, community capacity should also be considered since it is a contributing factor to health outcomes at the individual and community level (Lempa, Goodman, Rice, & Becker, 2008). Despite our sample size, we were able to engage parents in childhood obesity research

processes and organize a PAT. This PAT was able to react to program data, set priorities, develop and pilot test maintenance activities, participate in grant development tasks, and remain engaged in subsequent childhood obesity research activities. In conclusion, our documented process of engaging parents as key collaborators and equal partners fills an essential gap in the childhood obesity treatment literature.

Authors' Note:

We thank our Parent Advisory Team who provided insight and expertise that greatly assisted this research. The National Institute on Minority Health and Health Disparities supported this research.

REFERENCES

- Alexander JA, Christianson JB, Hearld LR, Hurley R, & Scanlon DP (2010). Challenges of capacity building in multisector community health alliances. *Health Education & Behavior, 37*, 645–664. doi:10.1177/1090198110363883 [PubMed: 20696883]
- Bergmann K, Mestre Z, Strong D, Eichen DM, Rhee K, Crow S, & Boutelle KN (2019). Comparison of Two models of family-based treatment for childhood obesity: A pilot study. *Childhood Obesity, 15*, 116–122. [PubMed: 30720354]
- Boyle L, & Homer M (2006). *Using what works: Adapting evidence-based programs to fit your needs*. Bethesda, MD: National Cancer Institute.
- Butterfoss FD (2009). Evaluating partnerships to prevent and manage chronic disease. *Preventing Chronic Disease, 6*(2), A64. [PubMed: 19289007]
- Byington R, Naney C, Hamilton R, & Behringer B (2007). Changing the conversation: Regional assessments: Healthcare challenges and opportunities assessment of the Danville region Retrieved from Danville Regional Foundation website: http://www.drfonline.org/content/df/uploads/PDF/regional_reports/2008/2008-healthassessment.pdf
- Creswell JW, & Poth CN (2007). *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks, CA: SAGE Publications.
- Davison KK, Lawson HA, & Coatsworth JD (2012). The Family-centered Action Model of Intervention Layout and Implementation (FAMILI): The example of childhood obesity. *Health Promotion Practice, 13*, 454–461. doi:10.1177/1524839910377966 [PubMed: 21632465]
- Estabrooks PA, Harden SM, & Burke SM (2012). Group dynamics in physical activity promotion: What works? *Social and Personality Psychology Compass, 6*, 18–40. doi:10.1111/j.1751-9004.2011.00409.x
- George S, Duran N, & Norris K (2014). A systematic review of barriers and facilitators to minority research participation among African Americans, Latinos, Asian Americans, and Pacific Islanders. *American Journal of Public Health, 104*(2), e16–e31.
- Golan M (2006). Parents as agents of change in childhood obesity—from research to practice. *International Journal of Pediatric Obesity, 1*, 66–76. [PubMed: 17907317]
- Goodman RM, Speers MA, McLeroy K, Fawcett S, Kegler M, Parker E, & Wallerstein N (1998). Identifying and defining the dimensions of community capacity to provide a basis for measurement. *Health Education & Behavior, 25*, 258–278. doi:10.1177/109019819802500303 [PubMed: 9615238]
- Hill JL, You W, & Zoellner JM (2014). Disparities in obesity among rural and urban residents in a health disparate region. *BMC Public Health, 14*, 1051. doi:10.1186/1471-2458-14-1051 [PubMed: 25297840]
- Hingle MD, O'Connor TM, Dave JM, & Baranowski T (2010). Parental involvement in interventions to improve child dietary intake: A systematic review. *Preventive Medicine, 51*, 103–111. doi:10.1016/j.ypmed.2010.04.014 [PubMed: 20462509]
- Jurkowski JM, Green Mills LL, Lawson HA, Bovenzi MC, Quartimor R, & Davison KK (2013). Engaging low-income parents in childhood obesity prevention from start to finish: a case study. *Journal of Community Health, 38*, 1–11. doi:10.1007/s10900-012-9573-9 [PubMed: 22714670]

- Killien M, Bigby JA, Champion V, Fernandez-Repollet E, Jackson RD, Kagawa-Singer M, ... Prout M (2000). Involving minority and underrepresented women in clinical trials: The National Centers of Excellence in Women's Health. *Journal of Women's Health & Gender-Based Medicine*, 9, 1061–1070.
- Lempa M, Goodman RM, Rice J, & Becker AB (2008). Development of scales measuring the capacity of community-based initiatives. *Health Education & Behavior*, 35, 298–315. doi:10.1177/1090198106293525 [PubMed: 17200097]
- Mendez JL, Carpenter JL, LaForett DR, & Cohen JS (2009). Parental engagement and barriers to participation in a community-based preventive intervention. *American Journal of Community Psychology*, 44(1–2), 1–14. doi:10.1007/s10464-009-9252-x [PubMed: 19533328]
- Minkler M, Blackwell AG, Thompson M, & Tamir H (2003). Community-based participatory research: Implications for public health funding. *American Journal of Public Health*, 93, 1210–1213. doi:10.2105/AJPH.93.8.1210 [PubMed: 12893597]
- National Cancer Institute. (2016). Using what works: Adapting evidence-based programs to fit your needs Retrieved from https://cancercontrol.cancer.gov/use_what_works/start.htm
- Newman SD, Andrews JO, Magwood GS, Jenkins C, Cox MJ, & Williamson DC (2011). Community advisory boards in community-based participatory research: A synthesis of best processes. *Preventing Chronic Disease*, 8(3), A70. [PubMed: 21477510]
- Sandoval JA, Lucero J, Oetzel J, Avila M, Belone L, Mau M, & Wallerstein N (2012). Process and outcome constructs for evaluating community-based participatory research projects: A matrix of existing measures. *Health Education Research*, 27, 680–690. doi:10.1093/her/cyr087 [PubMed: 21940460]
- Savoie M, Shaw M, Dziura J, Tamborlane WV, Rose P, Guandalini C, & Caprio S (2007). Effects of a weight management program on body composition and metabolic parameters in overweight children: a randomized controlled trial. *JAMA Journal of the American Medical Association*, 297, 2697–2704. doi:10.1001/jama.297.24.2697 [PubMed: 17595270]
- Skinner AC, Ravanbakht SN, Skelton JA, Perrin EM, & Armstrong SC (2018). Prevalence of obesity and severe obesity in US children, 1999–2016. *Pediatrics*, 141(3), e20173459. doi:10.1542/peds.2017-3459 [PubMed: 29483202]
- Virginia Department of Health: Office of Health Policy and Planning. (2006). Virginia medically underserved areas (VMUAs) Retrieved from <http://www.vdh.virginia.gov/content/uploads/sites/76/2016/06/VMUA.pdf>
- Wallerstein N, & Duran B (2010). Community-based participatory research contributions to intervention research: The intersection of science and practice to improve health equity. *American Journal of Public Health*, 100(Suppl. 1), S40–S46. doi:10.2105/AJPH.2009.184036 [PubMed: 20147663]
- Wilfley DE, Stein RI, Saelens BE, Mockus DS, Matt GE, ... Epstein LH (2007). Efficacy of maintenance treatment approaches for childhood overweight: A randomized controlled trial. *JAMA Journal of the American Medical Association*, 298, 1661–1673. doi:10.1001/jama.298.14.1661 [PubMed: 17925518]
- Wilfley DE, Saelens BE, Stein RI, Best JR, Kolko RP, Schechtman KB, ... Epstein LH (2017). Dose, content, and mediators of family-based treatment for childhood obesity: A multisite randomized clinical trial. *JAMA Pediatrics*, 171, 1151–1159. doi:10.1001/jamapediatrics.2017.2960 [PubMed: 29084318]
- Zoellner J, Hill JL, Brock D, Barlow ML, Alexander R, Brito F, & Estabrooks PA (2017). One-year mixed-methods case study of a community-academic advisory board addressing childhood obesity. *Health Promotion Practice*, 18, 833–853. doi:10.1177/1524839916689550 [PubMed: 29039710]
- Zoellner JM, Hill J, You W, Brock D, Frisard M, Alexander R, & Estabrooks PA (2017). The influence of parental health literacy status on reach, attendance, retention, and outcomes in a family-based childhood obesity treatment program, Virginia, 2013–2015. *Preventing Chronic Disease*, 14, E87. doi:10.5888/pcd14.160421 [PubMed: 28957032]

TABLE 1

Year 1 Meeting Accomplishments of the PAT

<i>Objectives</i>	<i>Accomplished Activities</i>
Familiarize PAT with iChoose data and discuss meeting frequency. (June 2015)	<ul style="list-style-type: none"> • Described the history behind the iChoose program and need for a PAT. • Updated families on the iChoose program results. • Discussed the meaning of iChoose program results and brainstorm on the role of PAT members. • Discussed future meeting frequency, days, and times. • Established roles and shared vision as a PAT. • Established meeting structure of the PAT.
Familiarize PAT with iChoose data and establish role as an advisory team. (July 2015)	<ul style="list-style-type: none"> • Established roles and shared vision as a PAT • Collectively prioritized most important aspect of iChoose to improve. • Ranked areas of importance and feasibility related to recruitment, attendance/retention, and maintenance. • Defined partnership success of the PAT. • Ranked community capacity and group dynamic demission for a Capacity Evaluation Plan to define PAT success.
Develop plans for executing an iChoose maintenance phase. (August 2015)	<ul style="list-style-type: none"> • Using the NCI resource manual, <i>Using What Works: Adapting Evidence-Based Programs to Fit Your Needs</i>, parents engaged in a collaborative decision-making and resource-mapping process. • Developed a 6-month maintenance plan for future iChoose families. • Tailored maintenance structure and strategies from the literature to fit within the Dan River Region. • Completed mixed-methods evaluation and critical reflection.
PAT members reflect and present on their engagement in iChoose and PAT. (September 2015)	<ul style="list-style-type: none"> • PAT members presented at local Health Summit.
Identify evidence-based practices and strategies for a childhood obesity maintenance phase that would fit the needs of future iChoose families. (October 2015)	<ul style="list-style-type: none"> • Developed plans for executing an iChoose maintenance phase. • Applied and discussed skill-building strategy to create a general class structure, monthly themes, activities, and maintenance objectives matching iChoose objectives and activities.
Conduct pilot testing of maintenance month Lesson 1: Healthy Snack Prep. (November 2015)	<ul style="list-style-type: none"> • Pilot-tested maintenance month Lesson 1: Healthy Snack Prep.
Familiarize POPS-CAB on current work of the PAT. (December 2015)	<ul style="list-style-type: none"> • Presented to the POPS-CAB on the development and current work of the PAT.
Conduct pilot testing of maintenance month Lesson 2: Group Fitness and inform PAT of new grant opportunity. (February 2016)	<ul style="list-style-type: none"> • Pilot-tested maintenance month Lesson 2: Group Fitness • Explained upcoming grant opportunity for future iChoose families and the PAT. • Completed key informant interview with PAT. • Engaged in the development of a Patient Centered Outcomes Research Institute grant proposal. • PAT identified their role in future iChoose implementation.
Conduct pilot testing of maintenance month Lesson 3: Body Image and Media Messages. (March 2016)	<ul style="list-style-type: none"> • Pilot-tested new iChoose Lesson 3: Body Image and Media Messages. • Completed mixed-methods evaluation and critical reflection.

NOTE: PAT = Parent Advisory Team. POPS-CAB = Partnering for Obesity Planning and Sustainability Community Advisory Board; NCI = National Cancer Institute.

Emergent Themes and Sample Quotes Across Community Capacity and Group Dynamic Dimensions of the Parent Advisory Team

TABLE 2

Dimensions	Definition of Dimension	Facilitators	Barriers	Representative Quotes
Communication	The degree to which information is shared openly and regularly, including the ability to listen to one another.	<ul style="list-style-type: none"> Communication facilitated through small group work. Communication facilitated through pacing of relationship building (allowed to happen naturally). 	<ul style="list-style-type: none"> Scheduling conflicts affect communication and group meetings. Lack of consistent communication between meetings. 	<p>"I think it's [communication] great. I know I'm comfortable. I feel like I can say whatever I want and people seem to listen. And even if they don't agree, you know, they express their opinion as well."</p> <p>"I think that the main issue is when we do try to plan something as a Parent Advisory group like an outing other than our meetings. I think even the meetings sometimes it's difficult for everybody to have where [time] they can get together at the same time, basically. But other than that, it seems like communication is not an issue for us."</p>
Problem Assessment	The ability to identify, solve, and act on a problem, including detecting, defining, and solving problems as they arise.	<ul style="list-style-type: none"> Identified aspects of program and potential solutions to be tested. PAT's ability to look at the benefits and challenges to childhood obesity solutions. 	<ul style="list-style-type: none"> Issues around the practicality of ideas. Marketing iChoose for recruitment purpose. 	<p>"I think they're going really well because we're getting able to try those things out as they would be done, or kind of see what might work better when they're actually put to use during a phase with the program."</p> <p>"So I think just marketing is just going to be a big challenge. Because what I would think would work, you know, the numbers say otherwise."</p>
Participation and Personal Influence	The degree to which every member feels valued, heard, and has some influence on the group.	<ul style="list-style-type: none"> Leaders engaging in discussion—equity in viewpoints and value of input. Everybody has equal influence in the development of maintenance activities 	<ul style="list-style-type: none"> Overburdened in personal life roles and responsibilities causes lack in participation. Scheduling conflicts affect participation. 	<p>"I mean it's [pilot testing] great because it is pretty new and everyone is giving it a shot. Now some people might be open to the new things that we're piloting, but they might not be comfortable actually participating in it. But when there's an alternative activity to the main activity, that's really good, too; and that's kind of something that we're developing, you know, because everybody's not going to want to do the same thing."</p> <p>"The only obstacle there is, yet again, the same thing where everybody being available to come to the meetings at the same time. I know some people had to miss here and there because of activities and things."</p>
Leadership	The degree to which members are able to guide/direct the POPS-CAB including team working skills, leadership opportunities, and willingness of members to take on or share leadership responsibilities.	<ul style="list-style-type: none"> Confidence in research team's ability to lead. There are opportunities for PAT to have leadership roles. 	<ul style="list-style-type: none"> Unclear roles can affect leadership. Lack of training causes reluctance in taking on leadership role. 	<p>"... I think you just provide us with different areas of where we can lead or show our leadership."</p> <p>"I just think we just need a little more... we just need like the training materials and just, you know, the verbiage, you know, what we're supposed to say and what we're supposed to accomplish."</p>
Community Power	The ability to work together to influence decisions that affect the community, state, or nation.	<ul style="list-style-type: none"> Increased participant relationship. Doing something good for the community. 	<ul style="list-style-type: none"> Lack of community awareness. Lack of concern in the community regarding childhood obesity. 	<p>"It was always good to convene with one another and go to, you know, sit with one another and share ideas. Because I feel like it's a positive thing for this community all in all."</p> <p>"We'll have to ... I guess we have to get people to take this group and our organization seriously; because some folks ... and it's not just with iChoose. It's with a lot of things; a lot of self-improvement initiatives. Some people just don't care."</p>
Collective Efficacy	Level of group confidence in developing and sustaining the interventions.	<ul style="list-style-type: none"> Guidance from the research team has helped facilitate group confidence. Confident in groups ability to come up with program solutions. 	<ul style="list-style-type: none"> Confusion around group role affects confidence. Feeling of a lack of expertise in implementing maintenance programming. 	<p>"And as far as working together and coming up with ideas for the maintenance phase of the program, I don't see any issues with that at all. So I think the confidence level is very good with that."</p> <p>"I think we may have some confusion as to what actually happens when another phase is going and what our role would be in that."</p>

NOTE: PAT = Parent Advisory Team.