Case Study for a Research Capacity Building Initiative for Community-Based Organizations

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Abstract

The Research Center in Minority Institutions at Florida International University (FIU-RCMI) is dedicated to rigorous, community-partnered health disparities research and training. The FIU-RCMI's Community Engagement Core's Community Research Enhancement Grant (CREG) program is a unique funding opportunity specifically designed to bolster research capacity within community-based organizations (CBOs). The goal of this paper is to describe the process used to create the CREG initiative, with particular attention to how it was modified to meet the evolving needs of local CBOs. The 2023 CREG funding cycle was restructured based on Cooke's (2005) four-stage Research Capacity Building (RCB) framework. In direct response to the feedback from previous CREG awardees, CREG was reconceptualized as a capacity-building opportunity rather than a conventional grant. This paper contributes to the literature on community-engaged research by highlighting the value of an iterative feedback process involving diverse stakeholders, ensuring ongoing alignment with the dynamic needs of both CBOs and researchers when developing research capacity building initiatives.

Community-based organizations (CBOs) play a pivotal role in addressing urgent social and public health issues and driving positive change within communities. The extant literature on the involvement of CBOs in research often focuses on the challenges researchers face when attempting to implement research studies, such as navigating complex bureaucratic processes, securing community trust and consent, and addressing potential cultural and language barriers (Hardina, 2021; Li et al., 2019; O'Meara & Jaeger, 2019). Empowering CBOs through research capacity building ensures that research agendas are aligned with local priorities, and facilitates the creation of interventions that are culturally and contextually appropriate (Wallerstein & Duran, 2010), while also strengthening CBOs through the adoption of innovative methodologies and research infrastructures (Crisp et al., 2000). Community-based participatory research emphasizes collaboration between the community and researchers in the co-creation of knowledge and shared decision-making, ensuring that the research activities align closely with the community's needs, wisdom, insights, and expertise (Israel et al., 1998; Minkler et al., 2003). CBO involvement at all stages of research can not only strengthen their programs, but also foster community engagement and ensure the sustainability of initiatives (e.g., applying and securing grant funding), ultimately leading to better outcomes for their constituents.

This case study reviews the process of developing a training program aimed at building the capacity of CBOs to conduct health disparities research. This paper offers a detailed examination of the iterative community-engaged process employed to enhance one such initiative, integrating insights and feedback from previous awardees, researchers, community stakeholders, and administrative staff. Our objective is to offer valuable insights and practical lessons for researchers engaged in empowering CBOs with tools and knowledge to advance their research capabilities. We also highlight the importance of tailoring training interventions to align with the unique characteristics and needs of CBOs to foster meaningful and sustainable change within our communities.

Background Literature

Cooke's (2005) Research Capacity Building (RCB) model offers a useful framework for enhancing the capacity for CBOs to conduct and be involved in research, as demonstrated in more recent applications of the model (Cordrey et al., 2022; Slade et al., 2018). The model includes six basic principles that impact organizations at the individual, team, organizational, and supraorganizational levels. By laying out specific strategies and principles, Cooke's model ensures that CBOs not only engage in research activities but also sustain them in the long-term, thus playing a more active role in shaping policies and interventions that directly affect their communities. Derived from extensive analysis of literature, policy documents, empirical studies, and the practical experience of a UK-based

research and development support unit, RCB is intended to facilitate the production of practical research that informs healthcare practices and foster the growth of skills and structures essential for research endeavors.

Cooke's model operates on two dimensions: development activity (at the individual, team, organizational, and supra-organizational levels) and six guiding principles for capacity building. First, RCB is strengthened by developing appropriate skills and confidence through training and opportunities to apply those skills, which should be flexible and responsive to the background and learning styles of the professional group. Second, RCB should support research that is "close to practice," ensuring it is relevant to the needs and expertise of practitioners, policymakers, and service users. Third, RCB is enhanced through linkages, partnerships, and collaborations that facilitate the exchange of research skills and practical knowledge. Fourth, appropriate dissemination of research, via publications, presentations, and implementation tools, maximizes the impact of capacity-building efforts. Fifth, RCB should include elements of continuity and sustainability, such as opportunities for ongoing collaboration and skill application. Sixth, appropriate infrastructures (e.g., systems, resources, and structures) are necessary to reduce participation barriers and support effective project management (Cooke, 2005).

The RCB model considers these principles comprehensive but not exhaustive, meaning that the criteria can be developed and built further (Cooke, 2005). The present paper describes the process we used to modify a community-targeted funding opportunity intended to improve the research capacity of CBOs in South Florida. We describe how we applied the RCB framework and how we incorporated feedback from our first cohort of awardees, as well as from researchers, community stakeholders, and administrative staff. The ultimate goal of this paper is to improve the process of creating funding initiatives, such as the one discussed here, in alignment with the evolving needs of CBOs.

CREG Development and Strategy Formation

The Research Center in Minority Institutions at Florida International University (FIU-RCMI) is a center intended to enhance the research infrastructure necessary for state-of-the-art biomedical research, and foster the next generation of researchers from underrepresented populations at minority-serving institutions. A prominent feature of all RCMIs is their Community Engagement Core, which includes a group of researchers from the RCMI, who share the goal of fostering robust and lasting partnerships with local communities, organizers, leaders, and grassroots advocates—all working toward ending health disparities. A diverse team of faculty members with a strong background in public health research and experience with community-engaged research leads the core.

When originally founded in 2017, the Community Engagement Core at the FIU-RCMI convened a Community Advisory Board (CAB). The board was comprised of highly involved community leaders, some of whom had long term relationships with RCMI leadership during the previous decade. It became clear to the FIURCMI leadership that community partners were interested in funding opportunities to enhance their capacity for conducting health disparities research. In response to this, the FIURCMI initiated the first cycle of the Community Research Enhancement Grant (CREG) in 2019. Funding could be broadly used to promote client participation in research (e.g., strategies for recruiting and retaining study participants), needs assessments, secondary analysis of de-identified data, research on strategic planning, evaluation or dissemination of community-level programs, or service or system improvement planning and training—all in partnership with an academic research partner of their choosing. We received funding applications from 16 CBOs during the first application cycle. Ultimately, six CBOs were selected for funding in the first cycle, working on addressing local community needs that included:

- Support for individuals and families impacted by HIV/AIDS (1 CBO)
- Providing healthcare services to uninsured and underserved populations (2 CBOs)
- Enhancing maternal and infant health outcomes (1 CBO)
- Reducing vaping among public high school students (1 CBO)
- Empowering low-income children to achieve their full potential through an ensemble-based music program (1 CBO)

Applications were reviewed by FIU-RCMI researchers and awarded based on the following criteria: 1) alignment with FIU-RCMI purpose (reducing health disparities, building research capacity in the community); 2) capacity, evidence of experience, and potential of the organization

to complete the proposed project; 3) logic and feasibility of proposed methods/approach; 4) realistic timeline; 5) appropriate evaluation plan; and 6) adequate and appropriate budget for stated goals. Each organization was awarded $5,000 to complete the proposed work in collaboration with an FIU-RCMI research partner to conduct their project.

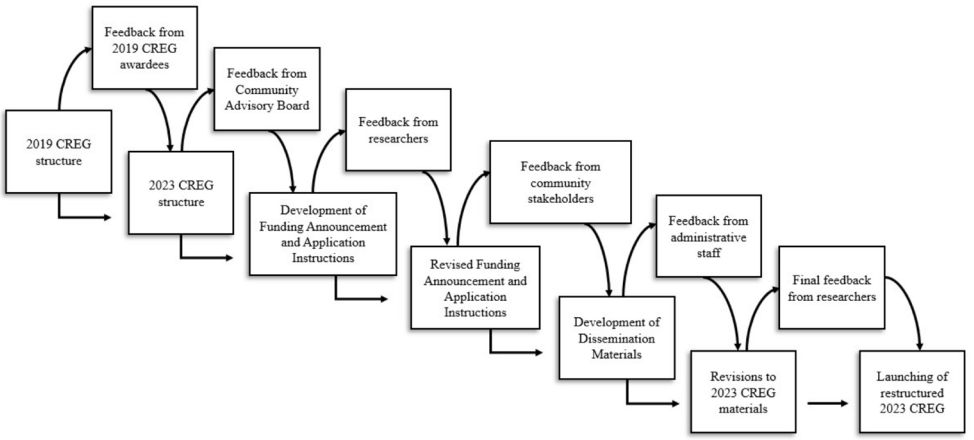
We interviewed all six 2019 CREG awardees and their respective FIU-RCMI researcher partners at the conclusion of the funding cycle. All six CBOs rated their CREG collaboration as "very helpful" on a Likert-type scale (from 1 "not helpful at all" to 5 "very helpful"), and indicated they were "very satisfied" (from 1 "very dissatisfied" to 5 "very satisfied"). The CBOs also mentioned benefiting from learning about areas of improvement for their operations, sustaining a reciprocal partnership, and having a greater understanding of social determinants of health vis-a-vis health disparities research.

We directly asked for feedback from the 2019 CREG awardees on how to improve the CREG program going forward. They told us the CREG parameters were too broad, and that designing a budget and conducting a research project was too much, given their existing capacities. Overall, participants recommended that the CREG program provide more training and guidance in research capacity building.

Based on this feedback, we employed an iterative feedback process model (see Figure 1) to redesign the 2023 CREG initiative and its corresponding application procedure through a cyclical process of feedback and refinement (Rees Lewis et al., 2020). To ensure a multifaceted understanding of the CREG program's strengths and weaknesses, we solicited input from diverse stakeholders: academic researchers, community representatives, research center administrative personnel, and members of the research center's CAB. This comprehensive community-engaged feedback strategy aimed to incorporate a variety of viewpoints, thereby multiplying the relevance and community impact of our CREG program.

After interviewing the 2019 CREG awardees, FIU-RCMI Community Engagement Core members modified the 2019 CREG structure to narrow the parameters of the funding initiative and create a simplified structure with four activities. Informed by the RCB model (Cooke, 2005) the four activities proposed for the new 2023 CREG cycle were: 1) attendance at an in person training orientation at the research center in which participants were introduced to the activities involved in CREG; 2) completion of the Collaborative Institutional Training Initiative (CITI), a web-based training on conducting ethical research in diverse areas; 3) attendance at a virtual development training on how to create a Research Strategic Plan and select research partners (collaborative partnerships were established between the CBO and a researcher from FIURCMI); and 4) production and virtual presentation of a Research Strategic Plan to the research center leaders. We planned for the 2023

Figure 1. Iterative Feedback Process Model



Note. Figure created by the authors.

CREG funding cycle to award three $10,000 grants, and funding was contingent upon the timely submission of deliverables. We included the RCB components by implementing a flexible learning style to account for the skill level and background of the awardees (Principle 1), including personnel certification in general research skills through CITI so the CBOs could tailor their research questions to their organizational goals (Principle 2). We also intentionally created opportunities for the awardees to connect with one another as well as with investigators affiliated with our research center (Principle 3).

We held a June 2023 CAB meeting in which we presented the revised CREG four step structure. The CAB members had positive remarks and feedback regarding the modifications and streamlined application process. This led us to Iteration 1, where we developed the 2023 CREG Notice of Funding Opportunity (NOFO) and application. The NOFO provided an overview of the 2023 CREG, including links to the application instructions, the application form, and the FIU-RCMI web page. The NOFO detailed the four activities and timeline of the 2023 CREG, and outlined the eligibility criteria, review process, grantee requirements, and grant awards. The application instructions included general guidelines, deadlines for submission, the award announcement timeline , and frequently asked questions. The application had three parts: 1) 14 questions seeking general information about the applicant organization; 2) 7 open ended questions about research capacity and expertise; 3) 14 open ended questions regarding the organization's research priorities and goals. The open-ended questions had no word limit, and the estimated time for completion was around 60 minutes.

Iteration 1 of the 2023 CREG NOFO and application was reviewed by our center researchers with community-engaged research expertise. The feedback from these researchers led to Iteration 2, which entailed language modifications and a contingency-based funding schedule based on the four CREG activities. The first funding increment ($3,000) would be distributed after completion of the first three steps, while the second increment ($7,000) would be distributed after completion of step four.

Next, we asked community stakeholders for their input on the 2023 CREG program. Their feedback led to modifications to increase language accessibility and clarity. The community stakeholders mentioned that there was no need to include questions regarding the organization's research experience since this was not an eligibility criterion, and they suggested we remove these questions from the application since these could be asked directly to the awardees at a later time. They also mentioned that we should include a specific section with the benefits of participating in the 2023 CREG.

Iteration 3 incorporated the suggested modifications. We also streamlined our assessment of research expertise to include the following prompts:

- Please select the statement that best represents your organizational interest/ involvement with research at this time from (1) interested in learning to (3) already involved.
- Has your agency/organization ever collaborated with a university on a funded research study? If yes, please briefly describe the type of research partnership(s), funder, university affiliation(s), and topic(s).
- How experienced is your agency with conducting or participating in NIH-funded research? From not at all experienced (1) to very experienced (3).

We strategically designed the funding application process to be user-friendly and completed in 30 minutes or less, in consideration of the time constraints often faced by CBOs. Our final version included 10 questions regarding general information about the applicant (including name, email address, phone number, number of years in the CBO) and about the CBO (including for-profit or non-profit, a rough estimate of the annual number of clients/patients, geographic area and populations served, and focus of the organization). There were also 8 questions regarding the mission of the CBO, how a research partnership would contribute to their mission and goals, the names of the individuals who would be participating in the training, how training these individuals in research would benefit the organization, and proposed strategies to ensure the sustainability of the RCB strategies.

We next developed a web page (Figure 2) that outlined all the information needed to apply to the 2023 CREG. We included a brief description of the CREG initiative; a visual timeline that included the application deadline, award announcement, and the four required activities of the 2023 CREG; and links to the NOFO, the application instructions, and the Qualtrics survey they could use to apply. The web page also

included a 12-slide overview presentation with key elements from the NOFO.

Iteration 4 involved the researchers' final review and approval of the NOFO and the application instructions. Final touches included minor visual adjustments to the CREG web page, streamlining our CREG application, and assurances of relative bureaucratic ease should an award be won. Once finalized, we launched the restructured 2023 CREG and invited all the FIU-RCMI CAB members to apply.

Figure 2. The CREG Web Page

Note. Figure created by the authors.

Discussion and Future Directions

The modifications we made to the 2023 CREG initiative were strengthened by incorporating feedback from prior awardees, the FIU-RCMI CAB members, FIU-RCMI administrative core researchers, community stakeholders, and the FIU-RCMI administrative staff. Previous awardees offered valuable insights based on their experience, shedding light on what worked well and could be improved, ultimately enriching future applicants' opportunities. CAB members, who represented the community's voice and perspectives, ensured that the CREG supported local CBO needs. Researchers brought valuable expertise, ensuring the CREG aligns with current research trends and addresses pertinent academic concerns. Community stakeholders provided essential insights into the practical, on-the-ground implications of the CREG, assuring its relevance and feasibility within the community context. Administrative staff played a crucial role in fine-tuning logistical and operational aspects, ensuring a seamless implementation process. Involving these diverse participants in the process ensured a comprehensive, well-informed, and community-centered approach, attuned to the real-world needs and capabilities of CBOs.

Our process for developing the 2023 CREG embodied each of the six principles of RCB (Cooke, 2005):

Principle 1: *Research capacity is built by developing appropriate skills and confidence through training and creating opportunities to apply skills.* Skill development and confidence-building were central to the development of the 2023 CREG initiative, evidenced by the tailored training sessions and practical application opportunities offered to participants. We structured the CREG for flexible learning styles to accommodate diverse professional backgrounds, and we designed a streamlined and accessible application process to ensure CBOs could easily apply.

Principle 2: *Research capacity building should support research that is "close to practice" in order for it to be useful.* In designing the 2023 CREG, we prioritized the CBO's practical needs, emphasizing research that is directly applicable to practice. Having key personnel from each CBO complete a research ethics training program (CITI training) enhances the CBO's capacity to not only increase staff knowledge about conducting ethical human subjects research, but also facilitate the process of conducting research since this certification is required by Institutional Review Boards (IRBs) for anyone engaged in the conduct of research. Additionally, asking CBOs to develop a Research Strategic Plan allows them to apply their practical knowledge and experience with their communities to co-create meaningful research questions.

Principle 3: *Linkages, partnerships, and collaborations enhance research capacity building.* The 2023 CREG highlights the importance of partnerships and collaborations between researchers and CBOs. The applicants were asked to identify a research partner to collaborate in developing their Research Strategic Plan, which we hope will foster increased research partnerships, network development, and university affiliations for the participants. This emphasizes the benefits of academic-CBO collaboration, such as the exchange of knowledge and expertise between researchers and community members, leading to mutual learning and skill development and strengthening the competitiveness of grant proposals.

Principle 4: *Research capacity building should*

ensure appropriate dissemination to maximize impact. At the end of the CREG cycle, the awardees are informed that a follow-up survey will be conducted a year after the completion of the funding opportunity. During this follow-up, we ask questions about implementing their Research Strategic Plan. Future iterations of the CREG could include this step as part of the NOFO.

Principle 5: *Research capacity building should include elements of continuity and sustainability.* We designed the 2023 CREG initiative to ensure the long-term viability of RCB efforts by providing the participants with ethical research training (via CITI) and a research partnership that, if both parties agree, can extend beyond their participation in the program.

Principle 6: *Appropriate infrastructures enhance research capacity building.* Infrastructure includes structures and processes that enable smooth and effective research project execution, reducing barriers to participation and fostering skill development. The financial support provided by the CREG initiative aims to mitigate obstacles to participation in research training and planning by providing resources to cover personnel, thereby allowing individuals to dedicate time and effort toward developing their skills and Research Strategic Plans.

Overall, the 2023 CREG initiative took a comprehensive approach to research capacity building, encompassing skill development, alignment with practical needs, fostering partnerships, targeting sustainability, and providing supportive infrastructures. This corresponds well with the findings of a recent scoping review (King et al., 2024) which found that successful capacity-building programs often include education components and the facilitation of experiential and collaborative learning—targeting individual, team, organizational, or supra-organizational levels of impact (Cooke, 2005).

Our next task is evaluating the effectiveness of the 2023 CREG. This evaluation will provide insights into the short-term outcomes and inform future iterations of the funding opportunity, ensuring its continued alignment with the evolving needs and goals of both researchers and CBOs. We aim to contribute to the broader literature on funding opportunity development and refinement, shedding light on the value of incorporating an iterative, collaborative, multi-stakeholder feedback process to enhance the relevance and effectiveness of research capacity building initiatives for CBOs. We underscore the need for research centers to invest directly in communities, providing CBOs with the necessary resources to offset the time and effort required for meaningful collaboration. Too often, we expect communities to collaborate without offering reciprocal support, underscoring the importance of a community-based participatory research approach in fostering equitable partnerships.

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