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## Community-Based Participatory Research from the Margin to the Mainstream: Are Researchers Prepared?

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### Background

In recent decades, efforts to improve health have concentrated in academic institutions, producing outstanding basic science and clinical investigators and clinicians through well-established training, research and clinical programs. Without question, the effective therapies developed and tested through research and disseminated through ever-improving quality of care have significantly contributed to the improving life expectancy of Americans of all racial and ethnic backgrounds. Yet, these diagnostic and therapeutic breakthroughs and unprecedented healthcare spending have not eliminated health disparities for the majority of health conditions, even among populations with equal access to care.<sup>1</sup> Nor have they reversed the poorer health of Americans as compared with people in other nations who spend far less on health services.<sup>2,3</sup>

Scientists and healthcare providers have begun to recognize that prevention and control of complex conditions including cardiovascular diseases necessitate assessing and addressing the array of non-clinical issues not traditionally in their purview. These social determinants of health are the social, economic, political and environmental conditions to which a great share of health problems are attributed.<sup>4</sup> Researchers, outside experts, are also rejecting the idea that scientific objectivity demands creating a distance between themselves and their research subjects,<sup>5</sup> and are partnering with inside experts, community members who live with the problems being studied. In this way, they are embodying the kind of local voice, participation and action that can ignite new initiatives and approaches and lead to sustainable long-term results.<sup>6,7</sup>

Community-based participatory research (CBPR) engages the multiple stakeholders, including the public and community providers, who impact, and are impacted by a problem of concern. This collaborative approach to research equitably involves all partners in the research process, and recognizes the unique strengths that each brings.<sup>8</sup> CBPR begins with a research topic of importance to the community and aims to combine knowledge with taking actions, including social change, to improve health.<sup>9</sup>

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Let us, for example, examine hypertension. Despite scores of research studies addressing hypertension management, its prevalence is increasing and two thirds of those diagnosed are not controlled.<sup>10</sup> Blacks have a higher prevalence of hypertension and its adverse outcomes, are more intensely treated for it, and yet more poorly controlled.<sup>11</sup> Commonly described barriers to control include individual, clinician and systems problems (i.e., medication adherence, physician practice patterns, access to care).<sup>12 13 14 15</sup> More recently, investigators have described environmental factors, such as living in a neighborhood with poorer safety, walkability, social cohesion and food availability, that correlate with a higher prevalence of hypertension.<sup>16</sup> The fact that our increasingly sophisticated understanding of factors contributing to adverse outcomes is accompanied by a failure of current approaches to widely prevent or control hypertension, begs new approaches. CBPR may uncover new reasons for poor control, ways to more effectively address factors correlated with poor control, or develop completely novel clinically or community-based initiatives.

While many academics are concerned about shrinking opportunities and overwhelmingly competitive hurdles to funding and publishing their work, CBPR is a new and expanding frontier, particularly in newer areas of focus, such as cardiovascular research. Evidence emerging of CBPR generating new ideas and approaches, a host of CBPR fellowships and training programs, well-established and new journals interested in publishing CBPR, and emerging paths for academic advancement, have piqued interest in this approach.<sup>17 18</sup> The National Institutes of Health (NIH) is helping blaze the trail with its new focus on translational research, an increasing number of funding applications that require participatory research, special CBPR review panels, and an NIH-wide Scientific Interest Group (including the National Heart, Lung and Blood Institute) that aims to increase awareness, career-development, use, and funding vehicles for CBPR.<sup>19 20</sup> Community members are increasingly serving as reviewers on study sections and for peer-reviewed journals, so that their priorities and visions will help form the future of research.

Translational research signifies a progression in research in two blocks. “T1” translates basic understandings of disease mechanisms into development of new methods for diagnosis, therapy, and prevention in a pre-clinical realm. “T2” translates results from studies into routine clinical practice and decision making.<sup>21</sup> CBPR may be the ultimate form of translational research, sometimes labeled “T3,” moving discoveries bi-directionally, from bench, to bedside, to el barrio (the community), to organizations and policymakers. CBPR’s time has come. For readers who aim to begin new partnered research programs, or those who are already conducting clinical and translational research, and want to benefit from this approach, we will introduce CBPR, its benefits and challenges, and provide concrete steps for how to proceed, using hypertension research as an example.

## What is CBPR?

CBPR is an approach or orientation to conducting research, not a method. As summarized in Table 1, it provides a structure and mechanism for collaborative and rigorous research, using well-established or emerging methods, with a community focus. CBPR challenges researchers to listen to, learn from, solicit and respect the contributions of, and share power, information and credit for accomplishments with the groups they are trying learn about and help.<sup>22 23</sup> Mutually respectful relationships, shared responsibilities and an emphasis on local capacity building, can promote environments in which communities increase their ability to uncover local barriers and harness local assets to build healthier neighborhoods.<sup>24</sup> Communities can be armed to advocate for what they need, combining arguments based on evidence and ethics: doing what works and doing what is right. Scholarship and community action are not an either-or, they go hand in hand. Resulting grants and publications are midpoints on a path that

encourages researchers to reflect with community partners on how to use the knowledge gained to directly, meaningfully and sustainably benefit the community being studied.

Community should be interpreted broadly as all who will be affected by the research. It could be geographic (i.e., a “hot spot” of poorly controlled hypertension); a group with a common identity, illness or situation (i.e., an ethnic or practitioner group, or homeless men with hypertension and depression); or a community group with specific concerns or interests (i.e., a coalition of churches concerned about increasing stress and its correlates including hypertension amongst parishioners). Many factors influencing health are beyond the scope of any single intervention, but are embedded in specific communities that each have a specific set of resources and characteristics.<sup>25</sup> It is within this community context that participatory research takes place.

## What is Different about a CBPR Approach?

Nyden compares traditional research to an old-fashioned marriage, where the husband (like the university) has more power and control over resources and decisions than the wife (or community).<sup>26</sup> CBPR, in contrast, resembles a more modern, egalitarian marriage, in which the two partners (akin to researcher and community member) recognize and build on each other's strengths, and share resources and responsibilities. Women's rights and their contributions have evolved from being discounted to having an essential and unquestioned value. Similarly, there is a fundamental shift in academics' views of people in communities, from patients and research subjects who are beneficiaries of medical advances and care, into invaluable partners and experts who can shed light on the root causes of illness, and galvanize their communities to develop effective, novel, sustainable interventions to improve health and eliminate disparities. Just as it is difficult to conceive of improving clinical care without substantive clinician involvement, participatory researchers consider it difficult to conceive of improving the health of communities without substantive and sustained community involvement.

There are great diversities within both traditional research and CBPR, but Table 2 outlines some common distinctions between these approaches. Participatory projects incorporate varying degrees of partnership in project development, design, implementation, evaluation and dissemination. However, CBPR should be clearly distinguished from community-placed research, located in, but not substantively involving the community, so that community representatives are passive participants in studies, react to researchers as part of community-advisory boards, or merely assist with recruitment. As partnered research proceeds, lines between researcher and research subject become blurred. Academics become part of the community and community members become part of the research team.<sup>27</sup>

## Why is a New Approach Needed?

### Failure of Current Approaches

Despite the large body of research documenting racial and ethnic and socioeconomic disparities in life expectancy, health care and health across a wide variety of different conditions, interventions to improve health have lagged behind.<sup>28,29</sup> The few successful interventions often disappear with the cessation of the funding used to document their effectiveness. CBPR offers a new approach. In the case of hypertension, our ability to diagnose and prescribe effective medications is outpaced by the rapid rise in prevalence of hypertension and the low rates of blood pressure control, even amongst persons who regularly visit clinicians.

### Need for Insider Perspective

Many programs to improve health are developed by, and from viewpoint of persons outside the target communities. Interventions created solely by outsiders, may perpetuate the inequalities that well-informed and well-meaning researchers aim to address, create an atmosphere that discourages community experts from sharing invaluable perspectives and ideas, and thwart entry of researchers and their work into communities.<sup>30</sup> To improve hypertension outcomes, interventions will likely need to impact clinicians' practicing styles or patterns, the beliefs, behaviors or environment of persons with hypertension, or coordination of care.<sup>31</sup> Including these "targets" as partners may facilitate research. Who would know better whether the research methods and tools are sensible and engaging, and how to structure recruitment so participants want to take part, than those very targets?

### Opportunity for Novel Partnerships

There are numerous, large scale community development programs and policies in place that aim to address non-medical factors, such as improving local services, housing, education or safety. Most do not focus on, or measure their impact on health.<sup>32,33</sup> Researchers may not yet recognize the tremendous impact developers and policymakers have on communities and are therefore missing significant opportunities to work together to address health in novel ways.<sup>34</sup> The public health community has not yet risen to the challenge of bridging health care delivery and communities in need.<sup>35</sup> CBPR may allow for the use of "hybrid" approaches that empower and mobilize community resources and residents, and simultaneously implement systematic and clinically sound approaches to prevention, promotion and treatment of hypertension and other common health problems.<sup>36</sup> Recent initiatives include screening for hypertension in barbershops, designing buildings to foster health, and offering job training and housing services to help control blood pressure in Black men.<sup>37,38,39</sup>

### Chance to Build Trust, Generate Ideas

Community members have a "healthy paranoia" of researchers and outside organizations, given a history of racism, marginalization of minority communities by healthcare systems, and past experiences of having researchers enter communities or health centers, collect data, provide no direct benefits, and leave without giving feedback or taking noticeable actions.<sup>40</sup> Negative perceptions of research and researchers have led some community leaders to decline to work with researchers and public health workers on so-called "helicopter projects," or "drive-by research." Researchers are naturally loath to share ideas and strategies with colleagues they do not trust. Similarly, if community members are to share their ideas and strategies with researchers, they will need to have confidence that researchers will use the ideas wisely and in partnership with local individuals. Community participation can help ensure that study goals are relevant to the population, that the means of accomplishing them are sensible, that program considers the knowledge, attitudes, beliefs, and practices of the target group, and that results are shared, sustained, and used for the good of the community (Table 3).<sup>68</sup> Researchers will have hypotheses of what will improve hypertension outcomes. However, it may prove difficult to develop effective, durable interventions targeting clinicians or patients, both of whom may be skeptical of initiatives developed without their input, and therefore hesitant to provide crucial feedback and use their influence to institutionalize successful programs.

### Is CBPR Effective?

The use of CBPR in cardiovascular research is relatively new, and primarily focused on prevention and promotion (i.e., through lifestyle changes and via lay educators), uncovering barriers to care and self-management and developing culturally appropriate programs.<sup>41,42,43,44,45,46,47,48</sup> More generally, CBPR succeeds in:

- Developing and sustaining trusting community-researcher relationships.<sup>849505152</sup>
- Enhancing community input, building community capacity, expanding local resources and bringing forth a robust social justice agenda.<sup>8243253</sup>
- Sparking novel ideas and approaches, facilitating intervention development and community buy-in, recruiting and retaining study participants who have historically been underrepresented in research.<sup>545556</sup>
- Assessing barriers to and assets for achieving better health.<sup>5758596061</sup>
- Disseminating findings and translating research into changes in practice and policy.<sup>6263</sup>
- Improving health outcomes.<sup>38454664656667</sup> Earlier CBPR trials often lacked strong evaluative components,<sup>51</sup> but evidence of the effectiveness of the effectiveness of CBPR is growing. As funding and training opportunities expand, participatory approaches to research will be more frequently and rigorously tested.

## Conducting CBPR

Here, we detail steps for conducting CBPR, following the outline in Table 2. Most steps are applicable for researchers at any point along the CBPR continuum, from just beginning to incorporate substantive partnership into their existing work, through academic-community partnerships that begin a study as equals. It is rarely too late to incorporate community input. Even when a study is already underway, this can enhance its relevance, feasibility, impact and sustainability.<sup>68</sup> At all stages, researchers should reflect on what parts of their research are amenable to adaptation, and candidly explain to community partners any constraints they may have. For example, if enrollment in a study is underway and the design cannot be changed, there may be ample room for improvements in recruitment, retention, analysis and dissemination. And, at any stage, there can be joint ownership of those aspects of the study (if not the entire study) that are the fruits of collaboration.

## Getting Started; Team-Building

CBPR emanates from community members who approach academics with a problem or idea, academics who approach community members, or from existing partnerships. To form teams, researchers must supplement their scientific skills with humility, patience, curiosity, interpersonal skills, and the abilities to mentor, inspire, share control, and focus on community concerns. Researchers will need to rely on community partners to teach them about the community, and point out if they inadvertently offend or discount community partners.<sup>856</sup>  
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## Building a partnership

Researchers can turn to people in their institutions with existing partnerships (academics, educators, or individuals in community outreach units) for guidance and introductions to the community. Extra-institutional resources- local public health units, organizations, agencies, and coalitions with interests that may intersect with those of a researcher- are also assets. Partnerships commonly form boards whose size and composition vary and may include a combination of grass-roots citizens/front-line clinicians, and representatives of organizations.  
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Generally, partnerships have members that represent the spectrum of age, race, ethnicity, gender, socioeconomic status, and levels of power in a community, and have specific interest or expertise relevant to the chosen topic or focus. Boards need members with sophisticated understanding of and influence in the community, and who will be doers, not just thinkers.

Community partners include: (1) Bridge builders, who have experience with research and community cultures and can moderate, mediate, interpret and mentor others. (2) Bringers, who help identify new members or resources that can benefit the project. (3) Historians, who understand the neighborhood, its culture, its traditions and the myths that guide behaviors, and thus can shed light on the challenges of improving health. Envision broadly all people who could influence development or control of hypertension within a given target population, just as one would if conducting a quality improvement initiative. The board for the project would include just such people.

### **Developing a structure and rules of operation and decision-making**

Key community and academic leaders steer the development of rules and operating procedures to promote coalition effectiveness.<sup>669</sup> The group must have regular, transparent communication and agreed upon goals, roles and rules of engagement.<sup>277</sup> Conflicts and disputes are inevitable and should be seen as necessary elements of growth.<sup>598</sup> Many partnerships form subcommittees to work on specific tasks, such as community outreach and evaluation. Partners have equal power for making decisions and co-plan all activities. Some groups take years of negotiations with a very strong focus on process.<sup>70</sup> Others adapt principles of engagement developed by experienced groups,<sup>7172</sup> and are action-oriented from their inception.

In the case of hypertension, researchers could approach clinicians, lay health workers, individuals with hypertension, or people at risk for hypertension. A relationship may begin when academics are volunteering at a local screening, or when a leader of a neighborhood coalition approaches a hospital outreach worker with concerns about increasing numbers of adults with cardiovascular disease. A clinician could become curious about the potential for others, such as home attendants, to improve adherence to medications or medical visits among those with uncontrolled hypertension. These encounters can lead to sharing ideas, building relationships and deciding to move forward with a research idea, or utilize the new relationship to modify research in development or in progress.

### **Study Selection, Design**

Together, partners determine research questions or modify existing questions, based on joint interest and expertise. In a “best of both worlds” scenario, academic expertise ensures studies are designed and implemented to rigorously test hypotheses and incorporate state of the art evidence-based practices. Community experts generate new hypotheses, new intervention ideas, and guide recruitment and retention strategies that ensure robust participation and take into account social, cultural, economic and practical realities of potential participants. There will be compromises. If community partners want to offer interventions that, unbeknownst to them, have been proven ineffective,<sup>73</sup> academics can suggest testing new ideas, or adapting the intervention to address earlier shortcomings. If academics want to conduct a randomized-controlled trial, community members may suggest offering the control group a deferred intervention. Community partners have introduced novel hypertension research designs, including a community-created documentary about problems with hypertension control; creating data maps about prevalence, outcomes and local factors to be used for research and advocacy; screening children to identify families at increased risk for hypertension; and structuring curriculum for lay health education and multimedia community interventions.<sup>42</sup>

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### **Funding and Ethics Review**

Grant writing should be collaborative. Community members who are involved with the grant from its very inception will accurately state “we got the grant,” instead of “they got the grant,”

which will can lead to a cascade of ideas and active support. CBPR grants contain flexibility for developing and testing ideas that emanate from the partnership. Researchers often expect that to receive funding, every step of a grant must be planned out with great specificity. However, there are opportunities to be funded to conduct CBPR where the process is very clearly outlined, but there is room to take different directions based on earlier work.

In terms of budgeting, community partners should receive financial and other resources that facilitate their participation, just as their academic partners do.<sup>8</sup> When possible, research assistants should be recruited from within the community under investigation. Community members can also suggest suitable stipends for research participants that are appropriate but not coercive. Through funding personnel and programs, researchers are building and enhancing community capacity and assets. Funding agencies are increasingly investing in CBPR (Table 4).

Principles guiding the Institutional Review Board (IRB) may not cover the scope of ethical considerations that arise in CBPR.<sup>78</sup> It is incumbent upon CBPR researchers to initiate a discussion with their IRB prior to submitting a proposal for review, and to use the proposal as a tool for educating IRB members about CBPR. Researchers should also be aware that community groups are increasingly establishing their own ethics review processes that may need to approve a study. A study, for example may envision having a community board decide the optimal way to recruit patients to a study in which peer educators provide a lifestyle intervention for weight loss. In this case, funding will need be flexible to allow for emergent strategies, such as hosting recruitment parties and church breakfasts,<sup>55</sup> and researchers will need to work with the IRB to understand and approve of processes as they emerge.

## Research Conduct and Analysis

Different stakeholders often take leads in different phases of research. If a survey about the reasons for adherence to hypertension medicines is planned, community members may list key questions, researchers may suggest appropriate scales or methods of inquiry; the community may choose among possible instruments, test some in their neighborhood and share feedback, lead recruitment efforts and guide trained surveyors; researchers may clean data and run analyses; and community may interpret and disseminate the results, and make recommendations for next steps. It is important to use designs, methods, and approaches that are sensitive to the sociocultural backgrounds of the “community,” be it a local ethnic group such as Asian Indians with high cardiovascular mortality but whose behaviors are largely unexplored,<sup>79</sup> or a group of primary care clinicians. Researchers' confidence in conducting traditional studies should not preclude leaving ample room for community partners to steer the process.<sup>588</sup> Community-based recruiting, for instance, may be far more successful when people within local organizations introduce the research and its potential benefits to people in their own organization, church, or hospital, who already know and trust them, than if researchers try to garner interest at the site.<sup>56</sup>

All partners should agree on goals and tools to evaluate processes and outcomes.<sup>8</sup> Process evaluation may employ qualitative methods (i.e., interviews, focus groups) and quantitative methods (i.e., surveys) of partners, community members and others impacted by the work. In this way, coalitions have documentation of their activities, can carefully and critically reflect on their work.<sup>6</sup>

## Disseminate Findings, Translate Research into Policy and Practice

CBPR findings are disseminated by and to all partners. Academic and community authors and presenters learn how to communicate effectively with each other's audiences, expanding their

insights and further strengthening relationships and opening avenues for collaboration and sharing ideas. Such efforts equip all partners to conduct future research. It is important to share results with scientific audiences through presentations and peer-reviewed publications. CBPR challenges partners to expand this traditional dissemination in three ways:

### **Community Input in Dissemination**

Community members should play a key role in the analysis and interpretation of data, presentations and manuscript preparation, and determining how the results will be distributed.<sup>80</sup> If partners view the process as “creating” rather than “writing,” the role of partners with essential insights and contributions but less comfort writing is clear, and their participation can be encouraged through having manuscript preparation meetings, having note takers, or recording and transcribing their words.

### **Local Dissemination**

Partners should disseminate findings to the communities where the research was conducted, to other communities and to the research subjects themselves, who deserve to know what was learned from the study they took part in. Feedback from these stakeholders can shed light on what did and did not work in the research, leading to better research down the road and strengthening relationships, as researchers are proving that local input is critical for current and future work. Through this work, communities can learn the importance of research, and perhaps become optimistic that research will benefit them, not just the researchers. Strategies for dissemination include town hall meetings, presentations at local venues, newsletters, brochures and video summaries.

### **Translating Findings into Practice and Policy**

To inform and influence policy, teams must decide what specifically they want to advocate for, how to frame the issue to make it compelling, which policymakers are sympathetic, receptive and influential in that area, and plan a strategy to approach them. Unified recommendations from a trio of community advocates, clinicians and researchers may prove quite persuasive in garnering resources, continuing proven effective programs, and disseminating key problems, solutions and approaches. The NHLBI, for example, is establishing a nationwide network of community-based organizations implementing targeted, culturally sensitive heart health education strategies aimed at changing local physician practices and patient behaviors.<sup>81</sup> Building relationships with funders can help partnerships learn about future opportunities and influence future funding priorities. Tangible community benefits can include employment, new skills, individual and community-level empowerment, and accessible, effective programs that improve health.<sup>82</sup>

### **Sustain Research Partnerships, Benefits, Resources**

Sustainability of programs and resources is a core element of CBPR. Partners should embed plans to maintain benefits and partnerships as early on as grant writing, asking, “If this works, what do we need to build to make sure it continues?” This may include clinical leaders who can institutionalize programs, local leaders to lobby for programs,<sup>83</sup> or data and publications to inform policy, advocate for resources or influence current practices. Partnerships that have built trust, respect, formed bonds of friendship, shared humor, successes, failures, and learned from each other, may be more likely to outlast disagreements, and fluctuations in funding and work intensity.<sup>8</sup> Community champions are critical, but academics must lead by example. For example, if researchers become too busy to attend regular meetings, they cannot ask more of their community partners.



## Challenges of CBPR and Potential Solutions

While CBPR can enhance research, it can be complicated and quite challenging. Here, we describe common issues in conducting partnered research and ways to approach them.

### Conducting CBPR on Traditional Research Timeframe: Creativity and Compromise

Most grants leave little time to build relationships, recruit key partners, and co-develop goals and ideas, in addition to conducting high quality research, all of which CBPR requires. Fortunately, funding is increasingly available for this key formative work. Community members have many competing priorities, such as job creation and crime reduction, which make their consistent participation in CBPR projects challenging. It is important to respect the time partners have to give and to be flexible, so people do not have to give up their existing roles in the community to be partners. Creative research can incorporate community concerns and constraints, i.e., by employing local people as study personnel.

### Crossing Cultures: Communicating and Revolving Conflicts, Aligning Objectives

Understanding and addressing common conflicts in partnerships may, in fact, lead to stronger and more productive collaborations. We review these here.

#### Mistrust

Historically, research has often not directly benefited and sometimes actually harmed the communities involved and excluded them from influence over the research process.<sup>84</sup> Community members can become the conscience of investigations and researchers must be aware that community members have placed their credibility on the line through the partnership. Partners often harbor stereotypes about each other that can pose obstacles to healthy and efficient teamwork. If groups do not devote adequate time and energy to relationship building, they may find the challenges posed by the process of CBPR to be overwhelming or self-defeating. Through honest discussions and a process marked by transparency, groups can stay on task.<sup>59</sup> A cautionary note: growing attention to and funding for CBPR can lead to a surge in name-only CBPR. These endeavors have a high risk of damaging partnerships and trust, which could spread through a community and even negatively impact well-functioning partnerships.

#### Culture and Social Class

Traditional research by nature is competitive, and can be exclusive, CBPR is collaborative and by definition inclusive.<sup>277</sup> Much CPBR takes place with relatively low-income communities and communities of color and the majority of researchers receive relatively high incomes and are not persons of color. Typically, researchers have evaluative competency, community members have cultural competency. Thus, CBPR partnerships are cross-cultural and cross-social class by nature, and issues of power and conflict arise.<sup>52</sup> Researchers should be aware of these issues and view them as opportunities for growth and expanding their perspectives, rather than reasons partnered research is too hard to take on.

#### Differing Objectives and Perspectives

Partners may differ in their emphasis on research versus service delivery, policy versus publication, building infrastructure versus developing new scientific knowledge, the importance of processes versus outcomes, and different styles of communication and decision-

making.<sup>8</sup> These must be discussed openly, so the team can meet individual and group needs, especially as the partnership solidifies and partners genuinely want not only to further their group cause, but also help each other.<sup>5</sup>

### **Financial Inequities**

Not surprisingly, funding disputes can prove toxic to partnerships. Community members may have trouble reconciling multi-million dollar research budgets that are enrolling hundreds of patients, when they could to use that budget for service delivery to thousands. Since academics tend to have significantly higher salaries, community partners can feel relatively underfunded for contributing the same amount of effort. Budget discussions should become part of the CBPR education process: community learning the cost of research, academics learning the cost of delivering community services, and partners searching for ways to be more cost effective in order to sustain programs.<sup>277</sup>

### **Sharing Power, Resources and Decision-Making**

Core values of CBPR are mutual respect and a belief that each partner has the potential to contribute something of equal worth to the project at hand. Some researchers may view their involving laypersons in their research as doing the community a favor by including them. This kind of thinking can undermine the integrity of any project. We must be careful not to offer a “token” or marginal involvement, but realistic and vital engagement in research. Researchers must genuinely be convinced that community partners have something to offer.

### **Conflict Resolution**

Academics need community mentors to avoid taking missteps that damage partnerships, and to have a person who is comfortable providing them feedback when they inadvertently make a mistake. Conflict resolution is necessary for growth and resolution creates a legacy of problem-solving strategies and stronger bonds.<sup>30</sup> Taking time to regularly meet as a team, and having clear and written rules for decision-making will be critical. Through this work, partners can recognize each other's strengths and overcome academic stereotypes that community partners lack capacity and infrastructure to be full research partners, and community cynicism that academics only partner to enhance their careers and their research. At times, partners must simply agree to disagree. CBPR calls for every person involved to be willing to take a long, hard look at his or her fundamental assumptions about people from different walks of life.

### **Balancing Scientific Rigor and Community Acceptability**

Traditional research is focused on “R,” and much of CBPR to date had been focused on process, or “CBP.”<sup>51</sup> Partners are now challenged with blending CBP and R, while retaining advantages and benefits of both. Community partners may resent an emphasis on “R,” especially if they feel a program's effectiveness is obvious. However, community-based organizations increasingly need to demonstrate their impact, and lack of evaluative expertise and concrete data hamper their efforts to advocate for programs.<sup>85</sup> Partnered research can generate the data and impart the skills in evaluation, dissemination and grant-writing critically needed by organizations. Teams will need to find ways to adhere to evidence-based principles, ensuring all work is evaluated, and learning lessons from earlier programs in which resources were poured into communities and community members did not appear to benefit.<sup>73</sup>

Overemphasis on research could make CBPR inflexible. Researchers can feel pressured to take control of the research to adhere to a timetable and traditional standards of first author publications and principal-investigator grant awards necessary for career advancement. Academics should balance community timelines and need for shared control with relevant research, acknowledging constraints and pressures up-front so they become shared goals and

do not lead to misgivings. New mechanisms for co-principal investigators, opportunities for multiple manuscripts with rotating first authors and having evaluators and community members at the table at every phase of research may help researchers merge “CBP” and “R.”

## Future Opportunities

CBPR is an approach whose time has come. The challenges to CBPR notwithstanding, all signs indicate that CBPR is moving from the margin to the mainstream: a growing evidence base supporting its effectiveness; growing numbers of fellowship programs, minicourses and workshops, numerous peer-reviewed articles and journal theme issues; increased funding opportunities, universities with career paths for CBPR faculty, more community organizations that recognize CBPR's role in building capacity and local resources and national membership organizations that support CBPR practitioners and advance the field. In times of stagnant or shrinking research funding, concerns about finding novel ideas for investigation, and a need to break the impasses thwarting translation of the latest advances in cardiovascular research to benefit populations in need, CBPR is a great new frontier. It may be advantageous for researchers aiming to maximize the relevance, rigor and results of their work to take a closer look.

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**Table 1**  
**Characteristics of CBPR**

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- |   |  |
|---|--|
| 1 | Community members and researchers contribute equally and in all phases of research.  |
| 2 | Trust, collaboration, shared decision-making, shared ownership of the research; findings and knowledge benefit all partners. |
| 3 | Researchers and community members recognize each others' expertise in bi-directional, co-learning process.                   |
| 4 | Balance rigorous research and tangible community action.   |
| 5 | Embrace skills, strengths, resources and assets of local individuals and organizations.                                      |
| 6 | Community recognized as a unit of identity.  |
| 7 | Emphasis on multiple determinants of health.   |
| 8 | Partners commit to long-term research relationships.   |
| 9 | Core elements include local capacity building, systems development, empowerment, sustainability.                             |
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**Table 2**  
**Traditional Research versus CBPR**

Research Phase	Traditional Approach	CBPR Approach
Team-Building	Researchers plan project, form team including researchers, staff ± clinicians.	Community and Academic (C&A) partners plan project, form team, develop shared mission, decision-making structure.
Study Selection/Design	Researchers choose topic and design based on scientific theory, academic interest, evidence, data, methodologic feasibility.	C&A also incorporate community priorities, insights, assets, emphasizing rigor and community feasibility, acceptability, context, cultural factors, local knowledge.
Funding	Grant written by researchers, funds go to researchers.	C&A co-develop grant, equitable division of funds based on contributions to project.
Implement Study, Analyze and Interpret Data	Researchers solely responsible for study conduct, analyses.	C&A collaborate on all efforts. Traditional analysis supplemented with community-driven questions and local relevance of findings.
Disseminate Findings	Disseminate to academic audiences.	C&A are co-authors and co-presenters, disseminate to academics, research participants, involved communities, policymakers.
Translate Research into Practice & Policy	Research often ends with publication of results.	C&A partners mobilize community to use findings to advocate for policy change, enhance local resources, improve local practices.
Sustain Team, Benefits, Resources	When grant ends, researchers often move to new project.	Sustainability built into work from inception, partners honor initial commitment to continue partnership and work beyond funding cycle.

**Table 3**  
**Potential Benefits CBPR**

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**Formative Stage**

- Diverse skills, knowledge and expertise lead to new hypotheses, approaches.
- Enhanced trust and sharing ideas between communities and researchers.
- Researchers gain entry into communities.
- More accountability of researchers to communities they study.

**Study Design**

- Increased relevance of research questions, data and programs devised and implemented in concert with those directly affected by the disease.
- Greater community interest, support.
- Increased likelihood high-priority issues addressed in a manner that recognizes and incorporates key contextual factors and influences outside the clinical setting.

**Funding, Implementation, Analysis**

- Funded research may enhance local capacity, assets and sustainability.
- Improved quantity, quality, validity and reliability of data.
- Novel approaches to recruitment, retention; participants want to be part of studies.
- New analytic questions posed by community, more accurate and culturally appropriate interpretation of findings.

**Dissemination**

- Enhanced relevance and usefulness of data for all partners.
- Fundamental fairness of sharing research findings with subjects and community members.
- Community and academic partners gain expertise through collaborative writing, presenting.

**Translation, Sustaining**

- Research more likely leads to tangible health and community benefits.
  - Build infrastructure to maximize impact of research and capitalize on benefits beyond specific project.
  - Improved sustainability, dissemination, replication, policy impact; benefits outlast research.
  - Strengthen research and program development capacity of all involved.
  - Additional funds, research and employment opportunities.
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**Table 4**  
**Federal Funding Sources for CBPR\***

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- CDC
    - Prevention Research Centers.
    - Racial and Ethnic Approaches to Community Health Programs (REACH).
  - NIH
    - NIH-wide funding announcements explicitly supporting CBPR.
    - Agency-wide scientific interest group on CBPR.
    - NIH Roadmap emphasizes CBPR, to accelerate clinical and translational research.
    - Clinical and Translational Science Awards require community engagement component.
    - The National Center on Minority Health and Health Disparities has Office of CBPR and outreach and several active CBPR funding mechanisms.
  - Agency for Healthcare Research and Quality
  - Housing and Urban Development
  - The Environmental Protection Agency
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\*Funding updates available at: <http://depts.washington.edu/ccph/fundingopps.html> (CBPR Grants Listed) [www.grants.gov](http://www.grants.gov) (Federal funding opportunities)