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Evaluating Community-Based Participatory Research to Improve Community-Partnered Science and Community Health

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Abstract

Background—Since 2007, the National Congress of American Indians (NCAI) Policy Research Center (PRC) has partnered with the Universities of New Mexico and Washington to study the science of community-based participatory research (CBPR). Our goal is to identify facilitators and barriers to effective community–academic partnerships in American Indian and other communities, which face health disparities.

Objectives—We have described herein the scientific design of our National Institutes of Health (NIH)-funded study (2009–2013) and lessons learned by having a strong community partner leading the research efforts.

Methods—The research team is implementing a mixed-methods study involving a survey of principal investigators (PIs) and partners across the nation and in-depth case studies of CBPR projects.

Results—We present preliminary findings on methods and measures for community-engaged research and eight lessons learned thus far regarding partnership evaluation, advisory councils, historical trust, research capacity development of community partner, advocacy, honoring each other, messaging, and funding.

Conclusions—Study methodologies and lessons learned can help community–academic research partnerships translate research in communities.

Keywords

Community-based participatory research; community health research; health disparities; process issues

Over the last two decades, CBPR strategies have gained prominence in the NIH for their contribution to eliminating racial/ethnic health disparities^{1–5} and for their resonance with communities who have increasingly demanded an active role in research. CBPR and community-engaged research more broadly have become viable research strategies that address challenges of translational science and have become a social movement to make research meaningful to community partners. By translational science, we mean bidirectional translational processes that include community and academic negotiation and feedback loops, as well as translating research findings into practical steps communities can take, such as policy, practice, or program changes, to improve their own health. Communities of color especially have demanded that research include community voice and culturally centered methodologies.^{6–10} The Institute of Medicine’s recognition that evidence is necessary but insufficient to improve health provides a key to addressing both the challenges of translational science and of community expectations; it takes research findings as well as advocacy, constituency building, and community ownership to support translation into policies, practices, and interventions that can make a difference to improve health.¹¹

The NCAI, a well-trusted and longstanding advocacy institution in “Indian Country,” with its PRC, has taken a leadership role in promoting research led and prioritized by American Indian and Alaska Native (AI/AN) communities. “Indian Country” is a term used by many American Indians to refer both to the geographic spaces where they live and to a collective identity for individuals who identify with the idea of “Indian Country.” In its “sociopolitical sense,” the term “Indian Country is the Indian equivalent of terms like ‘African American community,’ ‘Hispanic community,’ ‘Jewish community,’ etc., and is frequently used to refer to the national American Indian population.”¹² We use the term in this sense. However, the term “Indian Country” also has a legal definition,¹² which describes geographic areas under the jurisdiction of tribal and federal law but not state law.¹³

The NCAI PRC’s approach to tribally driven research aligns with the philosophy of past NCAI Executive Director Vine Deloria (1995), who wrote *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact*, articulating the importance of decolonizing and Indigenizing research.¹⁴ Embracing the power of community to define identity and create space for envisioning change, “Indigenizing research” positions communities as foundational partners and places significant weight on communities’ benefit from research.¹⁵

Although community voice in research is increasingly valued, a challenge of CBPR science remains: To better specify how community–academic partnerships create added value for research and how partnering practices best contribute to improved health outcomes. Recognizing the diversity of CBPR and community-engaged research, the question becomes: Under what conditions and with which characteristics can partnerships produce effective and sustainable CBPR and community-engaged research, leading to changes in practices, policies, and improved health equity?

A partnership between the NCAI PRC, the Indigenous Wellness Research Institute at the University of Washington, and the Center for Participatory Research at the University of New Mexico is asking these very questions in a current NIH study, “Research for Improved Health: A Study of Community–Academic Partnerships.” Launched under the Native American Research Centers for Health (NARCH) V mechanism (available from <http://www.ihs.gov/Research/index.cfm?module=narch>), this 4-year, national, mixed-methods study of diverse CBPR partnerships seeks to assess facilitators and barriers of effective CBPR and the relationships between partnering practices and CBPR/health outcomes. It is based on the premise that a better understanding of the science of CBPR can revolutionize the field, resulting in quicker uptake of proven practices, more effective community/

academic partnerships, better understanding of research implementation contexts, strategic funding of promising studies, and improvements in population-level health. With both universities within the National Center for Research Resources' Clinical and Translation Science Awards consortium, the dissemination of study results will be facilitated, providing an opportunity to influence community-engaged research practices in health science centers nationwide.

The NCAI—serving as the lead institution—is the oldest (since 1944), largest, and most representative Indian organization, serving as the unified voice of AI/AN tribal governments. A membership organization, located in Washington, DC, the NCAI functions as the “United Nations” for Indian Country, advocating around issues that affect tribal governments and Native peoples—from education and health to economic development and natural resources management. In 2004, the NCAI established its PRC, as a think tank of seven staff members, to “support Indian Country in shaping its own future” and to equip tribal leaders with data and policy-oriented products to forecast and support policy development.

Consistent with NARCH policy, the NCAI PRC receives 30% of the budget and oversees project operations, convenes the Scientific and Community Advisory Council (SCAC), and participates in the research to promote tribal research capacity building. The SCAC, composed of academic and community members with experience in CBPR, provides general consultation on the project. The UNM oversees the qualitative and UW oversees the quantitative design. Together, the partners will collaborate on data analyses and translate findings into practice and policy, with a particular focus on dissemination in AI/AN communities.

The purpose of this essay is twofold: (1) To describe the study origins, aims, design, methods, and early accomplishments and (2) to discuss the early lessons learned from our NCAI/UNM/UW partnership, particularly how a strong community partner can employ CBPR to transform science so communities gain research capacities and benefits. Our objective here is to assist community-engaged/CBPR researchers and practitioners with their efforts to evaluate partnership effectiveness toward advancing translational science.

PARTNERSHIP HISTORY AND PROCESSES

In 2006, with funding from the National Institute of Minority Health and Health Disparities, UNM partnered with UW to launch a 3-year, national, pilot research project, with oversight by a national CBPR advisory council of academic and community experts, to study how CBPR partnership and participation can improve health outcomes. The pilot produced an updated literature review of CBPR processes and outcomes, a new CBPR research conceptual model proposing linkages between CBPR processes and outcomes (Figure 1),¹⁶ community consultations on the model to strengthen face validity for partnership evaluations, a new literature review of measurement instruments related to model constructs,¹⁷ and a “think tank” of nationally recognized academic and community partners.

In 2007, UW invited the NCAI PRC to collaborate on studying the variability of CBPR in AI/AN communities and other communities of color with the goal of determining promising practices, partnership assessment tools, and other resources. Given the increasing demand for information from tribal leaders about research methodologies and tribal models of research regulation, NCAI PRC felt this study was aligned with its mission, including community-driven research, the value of Indigenous knowledge, and capacity building (available from: <http://ncaiprc.org/core-values>); and fit with its other projects, including a five-module curriculum, designed to assist tribal leaders with overseeing research and

evaluation—and its annual Tribal Leader/Scholar Forum for advancing ethical and meaningful policy research.

Early conversations between the NCAI PRC, UNM, and UW focused on identifying shared values and developing a collective agenda. To formalize the collaboration, the Director of the NCAI PRC joined the national pilot CBPR advisory council. The partners began communicating regularly and met in person four times to shape a NARCH V proposal for a multisite CBPR project, including feedback from the CBPR pilot advisory council. This process focused on the twin goals of strong science in testing the CBPR model and on development of research as a social change force for communities that would benefit tribal communities. Whereas the funder was primarily concerned with research with AI/AN communities, we made an early decision to include non-AI/AN communities to increase the variability of governance structures, allowing comparisons between communities with formal tribal government approval structures and those with more diffuse leadership.

Funded in 2009, the NARCH V CBPR study goal is to conduct an in-depth investigation of factors that contribute to and detract from meaningful and effective community–academic partnerships in AI/AN communities, other communities of color, and other communities that face health disparities. Specific aims are to (1) describe the variability of CBPR characteristics across dimensions in the CBPR conceptual model (Figure 1) to identify differences and commonalities across partnerships (e.g., ethnic/racial, urban/rural, sovereign nations/other governance, health issue); (2) describe and assess the impact of governance on CBPR processes and outcomes across AI/AN and other communities of color; (3) examine the associations among diverse contexts and partnering processes with major CBPR outcomes, such as culturally centered interventions, health-enhancing policies, and community capacities, found to be linked to health disparities, by testing the CBPR conceptual model; and (4) identify, translate, and disseminate best practices in CBPR for tribal leaders and other community and academic partners to improve health status and health equity.

Consistent with the principles of CBPR, in the first year the research team refined the study design, with consultation from the SCAC, and from qualitative and quantitative Special Interest Groups (SPIGs). The SCAC was initially budgeted for annual meetings, although severe budget cuts in year 2 prevented further face-to-face meetings. The SPIGs, which included four to six academic and community members with CBPR expertise, met more often by phone, especially in the first year, to provide research design input. A research ethics SPIG was convened to inform research approvals and ethical issues. With regard to human participant protection, the University of New Mexico granted IRB approval of qualitative research protocols (10–186, approved 4/19/11) and the University of Washington granted IRB approval of quantitative protocols (40692EC, approved 7/6/11). Additional community-level approvals may need to be sought for case study participants.

For the three partners, the inclusive communication process that started during grant writing was maintained and helped to solidify roles (Table 1). We utilized biweekly phone meetings of the executive committee and annual face-to-face meetings, and developed our own protocols on research integrity, publications, student contributions, and communication (see project website: <http://narch.ncaiprc.org>).^{18–21}

RESEARCH METHODS

The study design was conceived early on as a simultaneous mixed-methods design, with data from case studies to be triangulated with internet surveys of partnerships nationwide. Both research teams developed instruments based on the four dimensions in the model (context, equitable partnerships, research design/interventions, and outcomes). Using the

literature review of existing instruments, the quantitative team created a variable matrix to select available measures and to identify what new items needed to be created.²² The case study team concentrated inquiry on the less-explored “context” factors and the dynamic interaction between partnering practices (i.e., decision-making power, trust) and their contexts and capacity to produce outcomes. Table 2 provides an overview of the mixed-methods research design, including purpose, selected hypotheses and research questions, sampling, data collection, and analysis methods. The first two case studies also informed the final survey instrument development.

RESULTS

Measurement Methodologies Developed Thus Far

After 2 years, we have considerable results, both in study design and implementation, as well as a better understanding of our NCAI PRC/UW/UNM partnership. We designed a mixed-methods study that tests, and likely extends, Wallerstein and colleagues’ (2008) CBPR conceptual model. We developed an interactive version of the model linked to variables and measures (<http://hsc.unm.edu/SOM/fcm/cpr/research.shtml>), new survey and interview tools which have the potential to be used nationally to evaluate partnership processes and outcomes, and our own partnership protocols.^{18–21}

We have completed five case studies: A substance abuse prevention partnership with Northwestern tribes; a colorectal cancer screening project in Chinatown, San Francisco; a rural African-American economic development and cardiovascular disease project; a NARCH Lakota cancer control project; and a Latino environmental justice policy partnership. The Internet survey was piloted and launched in late 2011 using an innovative two-stage recruitment strategy to recruit 318 federally funded, community-engaged projects.

Lessons Learned

Midway through the study, we found ourselves dealing with issues that reflected aspects of our conceptual model related to “context,” “partnership dynamics,” “intervention/research design,” and “outcomes.” Although we do not conduct regular, formal evaluations of our partnership, the executive committee has engaged in continual self-reflection and assessment, deliberately building this time into meetings and conference calls. The “lessons learned” described were discussed by the executive committee, and may be helpful to other partnerships, funders, and consumers of community-engaged research.

Evaluating CBPR and Community-Engaged Science—We are learning about the challenges of evaluating the diversity of relationships that empower communities to participate in authentic research partnerships. We have encountered the challenges of developing new measures for variables that did not have previous measures, including even well-accepted indicators, such as alignment with CBPR principles, for which we created a new Likert scale. Working with a prominent postcolonial communications scholar,²³ we also developed a culture-centeredness scale as a potential outcome measure of authentic CBPR. Our case studies have identified the especially critical role of “contextual” variables, which have been least explored in the literature, for example, the role of multi-generations of history for influencing how communities enter partnerships; and the importance of mixed methods to uncover what matters most under diverse conditions to produce real levers for change.

Effective Use of Advisory Committees—Advisory committees are unquestioned structures within “equitable partnerships,” but we faced paradoxical challenges, as experienced CBPR researchers, with our SCAC and SPIGs. On the one hand, our SCAC and

SPIG members guided important decisions, challenging us to be scientifically rigorous. With substantial budget decreases eliminating our annual SCAC meeting, however, we struggled to engage them meaningfully. We decided on semi-annual written reports, annual webinars, and consultation as needed; however, these arrangements did not completely satisfy our advisory committee or our team's desire for their expertise. This indicates that stakeholder involvement needs to be meaningful, and continually honored and negotiated, on even the most basic of participatory expectations.

Honoring Each Other—Our team has learned lessons in building respectful relationships that can withstand mistakes and offenses, benefiting from intentional focus on “relational dynamics” as well as on “structural” agreements to build trust and team effectiveness. By starting with open communication, especially in difficult conversations about diminishing budgets, evolving team capacity, and ensuring community benefit, we were able to express our true feelings to one another, even surfacing differing perspectives within the three teams. We practice the art of diplomacy, especially when we disagree, staying in an uncomfortable space to talk through the issue instead of “taking our ball and going home.”

These practices served us well as we developed and implemented our structural agreements and protocols. Despite an established publications protocol, about a year into the grant we struggled with properly crediting contributors as we created our first products. Although we generally agreed with who should be first author for each publication, questions abounded about who else within our team and, more broadly, among our SCAC and SPIGs, should be listed as authors. Some felt everyone who participated in our project in any way should be listed; others felt that this detracted from the hard work put in by the members who drafted and revised publications. We discussed whether the threshold for being listed as an author ought to be whether someone reviewed and provided feedback, either written or verbal. One research team member considered removing herself from the list of authors, even though she had contributed significantly, because the need to “get credit” was inconsistent with her Native values. The team finally agreed to list the research team, *CBPR Research for Improved Health Study Team*, as the protocols' author, because we intend to publish them in CES4Health, which is flexible about authorship. For journals, we intend to list primary authors followed by team and advisory group members who substantively contribute to each publication in alphabetical order, acknowledging other team members and our SCAC and SPIG members by name.

Capacity Development of New Community PI and Partner—Because this was the first multimillion dollar, federally funded research grant for the NCAI PRC, the PI had the challenge of dramatically increasing administrative capacity within a community-based nonprofit. The PI was cautious about the NCAI PRC's role and what kind of contribution it could make. In addition, it was important that the NCAI PRC's role was not solely providing university partners “access” to tribal leaders and citizens. As the NCAI PRC created processes for ongoing communications with partners, tracking the work, managing complex finances, and reporting to funders, the team became capable of contributing more to research. As needs were identified that aligned with PRC skills, the PRC was able to lead the development of project protocols and the construction of context measures for governance and leadership, in comparing AI/AN and non-AI/AN partnerships. This meant intentionally focusing on developing the research capacity of the community partner, rather than assuming it would just occur. As the role and capacity of PRC grew, the PRC challenged the prevalent “science/community dichotomy,” serving as a valuable partner in the science in addition to representing community.

Role of Advocacy With a Strong Community Partner—Despite these challenges, NCAI PRC's lead role as PI has shaped this project in important ways. As an AI/AN

organizational partner, the NCAI understood that, in many ways, tribes represent the forefront of CBPR to promote “outcomes” of social justice.⁸ Through their sovereign status, tribes can regulate research as equal partners, welcoming or excluding studies that occur on their lands and with their citizens, and can share their approaches with non-AI/AN communities. We have learned the power of having a policy-savvy partner, the NCAI, as we work to transform translational science to be a mutual enterprise that highlights community decision making and ownership to produce sustainable health outcomes.

That said, the PRC faced the challenge of positioning this research within the NCAI’s advocacy to advance tribal sovereignty, which plays out in different arenas and with much quicker pace than our research project. To navigate this terrain most effectively within the NCAI, members of the PRC’s national advisory council joined the SCAC, the project is profiled in various NCAI events and publications, and PRC staff brief the NCAI executive director regularly.

Working to Overcome Historical Trust Issues Within Community Research Partnerships—With an AI/AN partner as the lead institution, this study was shaped by an understanding of historical research abuses, from research texts that have painted indigenous peoples as savage, without knowledge and science,^{14,24,25} to well-known studies like Tuskegee and the less well-known but damaging case of research conducted with the Havasupai Tribe.^{26,27} CBPR seeks to transform this historical experience by setting new standards for community control of research, pioneering joint interpretation and use of research results, and promoting community benefit. With the NCAI as the PI, our study has paid particular attention to indigenous ways of knowing, integration of local beliefs and practices into interventions, standards of evidence,²⁸ and ethical guidelines from tribal approval processes.^{29–39} We operated under the assumption that instead of assuming trust (as an important variable in the model) as a given, we had to generate trust through our actions; this has been especially critical as we have established memorandums of understanding and expectations that incorporate data ownership, community benefit, and joint publication with our case study partners.

Messaging: The Language of Community Benefit—Shortly after we convened our first SCAC meeting, a community SCAC member who had participated warmly in the meeting sent an email expressing concern about our project’s intention and questioning the eventual value it would have to her community’s and family’s health; she ultimately withdrew from the SCAC. From this experience, we realized the importance of messaging within the research design, and drafted a communications guide to help consistently explain community benefit, and to “translate the study and its goals [to] connect with community needs and not academic discourse.”¹⁹ We reminded ourselves that we needed to tell the story behind what we are doing. In short:

For us, it is ... often easy to get ‘lost in the weeds’ of the specific objectives we are trying to meet. Most of our stakeholders want to know the whole story behind what we are doing: what was the impetus for this project? Why are we doing it the way we are? Why is Indian Country leading the way in a multi-cultural project? How will tribes and other participating communities and partnerships benefit? Why do we hope to achieve what we do?¹⁹

We consistently introduced and described our research as follows:

In an effort to improve the health of American Indian/Alaska Native tribal communities, other communities of color, and other communities that face health disparities, this project seeks to understand the range of ways that communities are engaged as partners in their own health research and intervention projects. Using

quantitative and qualitative methods, we will partner over the course of four years with community and academic health research and intervention partnerships across the country to better understand the factors that contribute to and detract from meaningful and effective community-academic partnerships. AI/AN tribal communities have taken a strong lead in this area of work because they face some of the most significant health disparities in the nation and have similarly suffered some of the greatest documented research abuses.¹⁹

We also decided to change the name of our project from our NARCH V grant application title to clarify the study outcome that we valued most, to become: “Research for Improved Health.” Finally, in our publications guidelines we place equal value on disseminating information in academic, practitioner, and community-oriented outlets. Although we do not yet have findings to disseminate, we have identified specific products beyond academic venues, including fact sheets, toolkits, and self-administered partnership assessments.

Benefits and Challenges of NARCH Funding—The NARCH mechanism has played a vital role in getting tribes and Native investigators “in the door” to the NIH, although funding for AI/AN and other investigators from underrepresented groups remains poor. NARCH requirements for tribes or tribal entities to be PIs/lead grantees provide a dedicated funding stream to support research of interest to Native communities. Despite the cumulative NARCH investment of over \$44 million to tribally controlled organizations by 2008, significant challenges in the funding stream remain.⁴⁰ Although NARCH applicants submit proposals intended to focus on tribally determined priorities, they must, in practice, secure funds from individual NIH institutes with institute-driven priorities. It is worth noting that, although our application received the highest score of all applications in NARCH V, significant advocacy to secure adequate funding was required. The study was funded at 75% of its budget in year one, and, through additional budget cuts unrelated to performance, only 50% in year two. In year three, our own funding advocacy retained our 50%, yet with year 4, we anticipate slightly over 40%. The PIs spent hundreds of hours strategizing about funding, reaching out to NIH institute contacts, and writing targeted concept papers. Although necessary to carrying out our work, this scramble for funding placed considerable burden on the research team, detracting from the research and necessitating significant modification to our case study and survey design. Whereas NIH/Indian Health Service consultation with NARCH grantees and tribal leaders could yield important insight as to how to improve these funding uncertainties, the value of having a strong community partner serve as the PI has been abundantly clear for ensuring shared power within research and accountability to communities.

CONCLUSION

Scientifically and relationally, our study has accomplished much in the last 2 years. In the next 2 years, the survey and continued case study data collection, triangulation of analyses, and our ongoing working relationships with each other and the SCAC and SPIGs will teach us much more about the conditions and characteristics of effective and sustainable CBPR and community-engaged research. Through democratic participation in research, CBPR as a translational science can become a movement for social change desired by communities in promoting their own health.

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Finally, the research team welcomes a new Principal Investigator to this project, Dr. Malia Villegas, director of the NCAI Policy Research Center, as Dr. Sarah Hicks Kastelic transitions to a new position at the National Indian Child Welfare Association.

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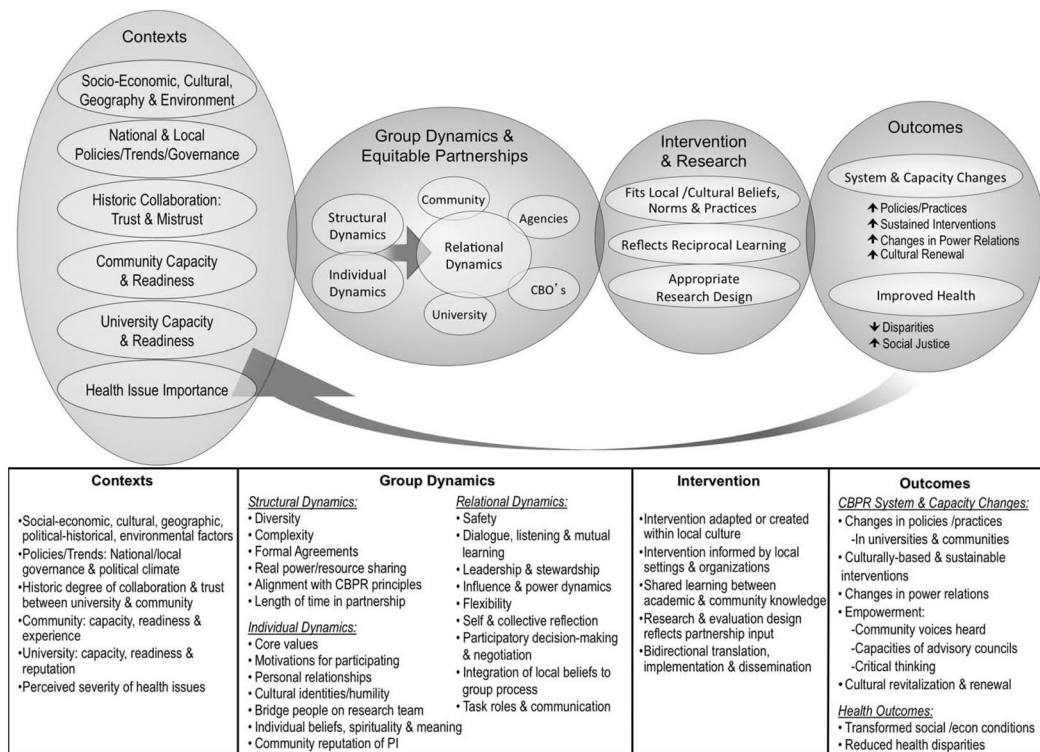


Figure 1. CBPR Conceptual Logic Model

Adapted from: Wallerstein, Oetzel, Duran, Tafoya, Belone, & Rae, “What Predicts Outcomes In CBPR,” in *CBPR for health from process to outcomes*, Minkler & Wallerstein (eds.). San Francisco, CA, Jossey-Bass, 2008; and Wallerstein & Duran, CBPR contributions to intervention research: The intersection of science and practice to improve health equity. *Am J Public Health; S1, 2010:100;S40-S46.*

Table 1

Partner Organization's Mission and Role

| Organization | Mission | Project Role |
|---|--|--|
| National Congress of American Indians Policy Research Center (NCAI PRC) | To provide tribal leaders with the best available knowledge to make strategically proactive policy decisions in a framework of Native wisdom that positively impact the future of Native peoples | Overall grant management: Convene executive team and SCAC; participate in research teams; provide support for AI research approvals; lead research ethics advisory committee; and lead instrument development and analysis on governance variable. |
| University of New Mexico Center for Participatory Research (UNM-CPR) | To support networks of research with community partners addressing health disparities, through a participatory and partnership approach | Qualitative lead: Conceptualize, design, recruit sites, and implement 6–7 case studies; analyze data; lead dissemination of results. |
| University of Washington Indigenous Wellness Research Institute (UW-IWRI) | To marshal community, tribal, academic, and governmental resources toward innovative, culture-centered interdisciplinary collaborative social and behavioral research and education | Quantitative lead: Conceptualize, design, recruit participants, and implement key informant interviews and national web-based surveys; analyze data; lead dissemination of results. |

Table 2

Research Design and Methods Based on CBPR Conceptual Model

| | Survey Design | Case Study Design |
|---|---|--|
| Purpose | To quantify the variability of community-engaged research and to identify associations among constructs in the model between Contexts, CBPR Partnership Dynamics, Intervention and Research Design, and Outcomes. | To probe more deeply into similarities and differences across diverse partnerships. To link stakeholder interpretations and actions to historical-cultural-political contexts, to selection of research methods, and to implementation of interventions to better understand partnering contributions to diverse outcomes. |
| Examples of Hypotheses and Research Questions | The more a project is aligned with CBPR principles, the better the system and capacity outcomes, i.e., intervention sustainability, community capacity, or policy/practice changes. The more resources are shared among partners, the better the system and capacity outcomes. The more a partnership integrates local beliefs, the more the project will fit within local social structures and will support cultural renewal. | Which contextual factors most affect partnership functioning and ability to produce CBPR and health outcomes? What is the relationship between structural characteristics, such as formal agreements; and relational characteristics, such as trust and decision making, in building effective partnerships? How does power affect partnerships? Which researcher characteristics most matter to assure effective partnerships? |
| Data Collection Methods | Two Internet Surveys: "Key informant" for PI (15 min) and "Community engagement" for PI, 1 other key academic representative, and 2 community partners (30 min) | Predominantly Qualitative Academic and community stakeholder interviews (8–12), and focus groups (1–2) Observation of partnership meeting Document review Historical timelines of partnership within community Brief partner survey |
| Sample | <i>N</i> = 318 Inclusion: Universe of federally funded CBPR research projects in 2009 RePORTer database + 30 NARCH projects, with at least 2 years of additional funding Exclusion: Pilot, RO3, R21, and Training Grants | 6–7 Case Studies Inclusion: Diverse partnerships (by race/ethnicity/other social identity) with community advisory structures; a minimum history of 3 years; evidence of ongoing intervention or policy research. To explore governance, comparisons between AI/AN and non-AI/AN communities. |
| Select Instrument Questions | PI Key Informant Survey Questions: Specific roles, distribution of funds, formal agreements, diversity of teams, etc. Community Engagement Survey: Perceptions on context, e.g., governance and capacity; group dynamics, e.g., alignment with CBPR principles, trust, power, decision making, and leadership); and outcomes (e.g., system/capacity changes, sustainability, cultural renewal, and health outcomes). | Focus Group and Interview Questions: Importance of different contexts, partner motivations and actions related to CBPR project, impacts of partnering and community and cultural context on research and intervention design, and on capacities, policies, and other outcomes. |
| Analyses | Confirmatory factor analysis for measurement and hierarchical modeling for testing hypotheses. With a 60% minimum response rate, the 190 partnerships (including 950 individuals) allow power effect size of .80 given the planned data analyses. | Using Atlas.ti, identify codes from existing model constructs and from emerging themes grounded in the data Triangulate with quantitative data to create a critical analysis of participatory research processes and outcomes. |