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Applying Indigenous Community-Based Participatory Research Principles to Partnership Development in Health Disparities Research

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This case study of community and university research partnerships utilizes previously developed principles for conducting research in the context of Native American communities to consider how partners understand and apply the principles in developing community-based participatory research partnerships to reduce health disparities. The 7 partnership projects are coordinated through a National Institutes of Health–funded center and involve a variety of tribal members, including both health care professionals and lay persons and native and nonnative university researchers. This article provides detailed examples of how these principles are applied to the projects and discusses the overarching and interrelated emergent themes of sharing power and building trust. **Key words:** *community-based participatory research, health status disparities, Indians, North American*

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COMMUNITY-BASED PARTICIPATORY RESEARCH (CBPR) is increasingly recognized as a promising approach to understanding and addressing the wide range of health inequalities that exist in Native American communities.[1-3] The CBPR may also serve to transform the way research has historically been conducted with tribal nations. In developing successful CBPR partnerships between tribal and non-Indian academic communities and organizations, it is important to consider the unique social, political, historical, cultural, and geographic contexts of tribal communities.[2,4]

Although there are strategies for developing research partnerships,[5] less is known about effective strategies in the contexts of Native American communities.[6] Few studies provide insights into such partnership development processes and even fewer evaluate those partnerships.[1,6,7] In 1998, Israel and colleagues[8] published 9 principles for conducting research by using a CBPR approach. LaVeaux and Christopher[9] subsequently contextualized Israel's principles of working within Native American communities, and 9 additional principles were developed as considerations for researchers interested in using a CBPR approach with tribal communities. The 9 additional principles came from published research with tribal communities and from the authors' experiences. The 9 principles are as follows: (1) acknowledge historical experience with research and with health issues and work to overcome the negative image of research; (2) recognize tribal sovereignty; (3) differentiate between tribal and community membership; (4) understand tribal diversity and its implications; (5) plan for extended timelines; (6) recognize key gatekeepers; (7) prepare for leadership turnover; (8) interpret data within the cultural context; and (9) utilize indigenous ways of knowing.

In this article, we examine the experiences and insight of 7 partnerships of community and university research partners. Both oral and written statements of participants sharing their perspectives on the process of developing CBPR projects to reduce health disparities in Native American communities in Montana are used. Our contribution was to take LaVeaux and Christopher's[9] work 1 step forward by providing a context and examples to the 9 principles and their relevance to partnership development in particular. We also present preliminary outcomes from some of the partnerships and comment on the benefit and value of a network or collective of partnerships working in concert. Finally, consistent with the CBPR principle of fostering colearning and cocreation of knowledge, this article was written collaboratively, which occurs infrequently.[3,7,10,11]

THE CENTER FOR NATIVE HEALTH PARTNERSHIPS

The Center for Native Health Partnerships (CNHP) is an exploratory center of excellence funded by the National Institute on Minority Health and Health Disparities and is located at Montana State University. The purpose of CNHP is to create an environment to address health inequalities among Native Americans in Montana through CBPR. More than 60 000 Native Americans living on or off reservations in Montana comprise one of the largest percentages (6.4%) of Native American state populations in the United States.[12] Furthermore, Native Americans in Montana experience significant health disparities and die at a much younger median age than whites.[13]

A critical variable in CBPR project success lies in partners (academic researchers and community members) having the resources to take the time necessary to develop relationships and trust.[14-16] The CNHP provides resources and support for partnerships to develop from an initial interest in CBPR to becoming a fully engaged partnership, where all partners work together in all stages of the research process. In addition to providing information and technical assistance to potential partners, we fund 3 levels of partnership and support them according to their needs and our abilities: interested partners; engaged partnerships; and fully engaged partnerships.

Interested partners are those who have been linked with a potential partner and have received a 1-year planning grant from CNHP (ranging from $8000 to $11 000). Engaged partnerships receive 1-year pilot grants (ranging from $25 000 to $50 000) and may come from interested partners who have spent 1 year in partnership development or they may be partners. The Center funded 1 fully engaged partnership for 5 years averaging $231 360 per year. This partnership was established before CNHP funding, and partners were engaged in all stages of the research. Funded partnerships participate in group teleconference seminars held monthly and individual partnership technical assistance calls held quarterly and are supported by CNHP staff on an as-needed basis. Authors of this article include various partnerships involved in diverse health disparities research in many tribal contexts across Montana (Table 1).

Community partners are located across the 7 reservations in Montana and represent several of the 12 culturally unique and politically distinct tribes in Montana. University partners are faculty members at Montana State University-Bozeman, The University of Montana in Missoula, and Little Big Horn College in Crow Agency. All university partners are non-Native. All community partners are Native American.

Project histories

Many partnerships began before CNHP received funding; there has been much variety in how partners were introduced. The fully engaged project began when community members recruited a faculty member at the local tribal college to research local water contamination issues. Another partnership began after members of a tribal council invited university researchers to begin working on a CBPR project together after hearing the researcher's presentation on the prevalence of a disease and interest in working with tribal communities. Three other projects began via introductions made by CNHP staff to community members and university researchers who were interested in working on similar health topic areas. Two partnerships emerged as a result of researcher involvement with tribal college faculty, students, and community members while teaching at the college.

STUDY DESIGN AND METHODS

A multiple-case study research design, in which each project is treated as a case, was used.[17] This design allowed us to examine partnership development processes for each case individually and across all cases, such that the multiple cases were developed into a single case. For a multiple-case study design, the unit of analysis is the case, and for this research, it includes each of the various community-university partnerships. Since each partnership is partly facilitated by CNHP, individual partnerships can be seen as embedded within a larger single-case study.

To develop our multiple-case study, we facilitated a collaborative process with 7 sets of partners and the Center staff, whereby community and university partners wrote narrative descriptions about their partnership development by responding to 5 topic areas. This process involved 2 group phone conferences, individual phone interviews, and e-mail exchanges with community and university partners. Five topics emerged from the dialog, including the following: (1) institutional and political barriers; (2) lessons, experiences, and strategies for tribal community involvement and partnership building; (3) the role of history in partnership development; (4) experiences of approval processes of tribal communities and universities; and (5) processes for building trust in communities and with the partnership.

Open-ended questions on the 5 topic areas were sent to community and university partners from each of the 7 partnerships. Participants ($n = 14$) in partnership teams wrote and submitted narratives that included examples from their local context. A content analysis of the synthesis of questionnaire responses was conducted by using LaVeaux and

Table 1. Overview of Case Studies Showing Projects, Partnerships, Project Goals, and Stage of Partnership

Project Title	Partnerships	Goals/Purpose	Stage of Partnership
Blackfeet Child Asthma and Healthy Homes Partnership	Indian Health Service, University Environmental Science Faculty	Evaluation of environmental intervention for families with children with asthma (in-home health education and housing/indoor environmental quality improvements)	Interested and then engaged partnership
Crow Environmental Health Risk Assessment	Tribal College, College of Engineering	Determine risk of exposure to environmental contaminants and pathogens via water sources, local foods, and home environments and find ways to reduce health disparities and build community capacity to address environmental health issues	Fully engaged partnership
Crow Men's Health Project	Tribal Nation, University Political Science and Health and Human Development Faculty	Study men's health needs and identify appropriate treatments and interventions among Crow community members with an emphasis on cancer	Engaged partnership
Testing a Culturally Appropriate Commercial Tobacco Cessation Intervention	Tribal College, University Public Health Faculty	Help tribal college students quit smoking, gather data to plan and apply for funding for the first large, full-scale study of commercial tobacco-cessation intervention among tribal college students	Engaged partnership
Pediatric Environmental Health Care Provider Initiative	Tribal Health, Tribal College, University Nursing Faculty	Engage health care providers in education, identification, and prioritization of pediatric environmental exposures to reduce fetal/infant/child mortality and morbidity	Engaged partnership
Fort Peck Hepatitis C and HIV Prevention Project	Tribal Health, University Health and Human Development Faculty	Implement a harm reduction program on the Fort Peck Indian Reservation to reduce the risk of transmission of Hepatitis C virus and HIV	Engaged partnership
End-of-Life Decision Making and Quality Care for Blackfeet Indians	Community Researcher, University Nursing Faculty	Address issues related to chronic illness and ways to improve quality of end-of-life care and decision making	Engaged partnership

Abbreviation: HIV, human immunodeficiency virus.

Christopher's[9] 9 principles. Results were verified with the partnerships.

RESULTS

Our results are presented with reference to each of the aforementioned principles based on the principles of LaVeaux and Christopher.[9] Specific examples from each case are provided. Partnerships are referenced without distinguishing names or places to maintain anonymity and confidentiality.

Principle 1: Acknowledge historical experience

LaVeaux and Christopher's[9] first principle is to acknowledge historical experience with research and health issues and to work to overcome the negative image of research. LaVeaux and Christopher[9] say that 1 method for assuring that tribes' benefits are protected from outside research is for tribes to have restrictions and oversight on research, including tribal institutional review boards (IRBs) and research protocols and codes. Of the 7 reservations, 1 has a tribal IRB that has been alternatively active and inactive. Tribal colleges on 2 other reservations have active IRB committees in place.

There are no known written research codes or protocols to guide research partnership development or maintenance. To overcome historical experiences, building trust was seen as a critical component of partnership success. An example of actions 1 project cited to build trust early in the partnership was to "find small ways to collaborate (and test our relationship) prior to starting the project. In our case, we conducted a few smaller projects." Another project mentioned frequent phone calls between community and university partners; routine meetings with the tribal health director, tribal council, and agencies in the communities that were related to the project topic; and the "involvement of community members and agencies on the reservation through the Community Advisory Board." One project said that having the project director on site three-quarters time helped the trust and partnership building. In summary, the different partnerships developed many useful tools and techniques to build trust and move beyond negative historical experiences.

Principle 2: Recognize tribal sovereignty

The second principle is to recognize tribal sovereignty. Tribes are exerting increasing research oversight of university researchers and developing more formal institutional arrangements, whereby researchers must work with tribal governments and adhere to tribal protocols and tribal IRBs.

The importance of this principle in the CNHP projects varied across projects and communities and required significant levels of trust to be developed before seeking approvals. Developing an IRB application before the project begins can be a barrier for CBPR projects, where data collection instruments and methods are often developed in partnership during the grant period.

Several partnerships mentioned that seeking project approval, forming and negotiating contractual relationships, and seeking IRB approval at multiple institutions were barriers to project development. Some projects must receive approvals at the tribal level, university level, and through the Indian Health Service. Projects also had to receive approval from the National Institutes of Health. The principle of acknowledging tribal sovereignty played out in project development primarily through formal institutional arrangements that projects had to develop.

Principle 3: Differentiate between tribal and community membership and Principle 6: Recognize key gatekeepers

Coders found substantial overlap in the data regarding the application of principle 3 and principle 6. Regarding principle 3, LaVeaux and Christopher state that "because Native Americans are the only race or ethnic group in the United States that must prove their membership through enrollment, defining who is a member of a tribal community is more

complicated than for other minority groups."[9(p13)] In addition to holding the key to official approvals, many gatekeepers can play an informal role in partnership development by helping outside researchers understand cultural protocols, identify community partners, make introductions to tribal leaders, and build mutual understandings.

Tribal councils and tribal chairs are key gatekeepers who often play an approval role. Many of our projects received formal tribal approval, though this happened differently for each project. Partners of 1 project described the steps of the approval process, as

> The process began with initial individual conversations with the Director of Tribal Health, the Service Unit Director of Indian Health Services, members of law enforcement and the Tribal Courts, and members of the Tribal Council. The Tribal Council passed a tribal resolution in support of the project.

Three projects received formal approval and support from their respective tribal chairs. One of these projects also received approval through a resolution introduced in the tribal legislature and another had a "Memorandum of Understanding" signed by the tribal chair, the tribal college president, and the university president. Another project described numerous attempts to gain approval from the tribal council, and that approval by 1 councilwoman—a gatekeeper—was key in obtaining full tribal council approval. One partnership said that once they applied for CNHP funding, they "were able to use the potential for grant coming partly to and benefiting the community to persuade tribal council" to approve the project. Several partnerships discussed that having both the community and university partner at tribal council meetings assisted in the process. Partnerships said that these formal approvals lent credibility to the project and promoted the project to individuals associated with various levels of tribal government.

Several projects discussed culture committees and tribal elders as gatekeepers. One partnership, after providing a series of training workshops for students at a tribal college, set up a series of meetings with college administrators and the tribal housing department to discuss a different proposed project. It was at these meetings that they received support for their work and gained commitments from the community partners, which were instrumental in gaining tribal council approval.

LaVeaux and Christopher[9] point out that unlike in many other CBPR project locations, tribal communities often do not have many community-based organizations. The community-based organizations can serve as key gatekeepers or community representatives in CBPR projects. Partners discussed the importance of understanding the interests and views of relevant stakeholders in the community and demonstrating benefits to the tribal community. They did this by meeting with and/or partnering with tribal administrations, the local Indian Health Service, tribal colleges, and agencies directly affiliated with their project such as housing, law enforcement, tribal courts, treatment centers, community health representatives, the tribal health promotion specialist, the administrator at the nursing home, and officers at the Tribal Planning Office.

Almost all partnerships mentioned the value of having a community advisory committee or community advisory board (CAB). Partners received input and advice from CABs, and CABs assisted in building trust in their partnership and keeping partners informed and updated. The partners used CABs to guide and provide oversight for their project. The CABs provided assistance such as developing project design, timelines, and incentives for project participants, planning community events, advertisement/recruitment for the project, review of project documents, providing input on who should be involved in the project and how to involve them, discussing next steps for the project, and deciding on the project name. Partners mentioned that it is helpful for their CABs to have knowledge of a wide array of areas such as the health topic addressed in the project, local community and tribal culture, and research. One partnership stated, "Forming an advisory committee has

had added value in bringing the community partners together, involving other community members and organizations." Key gatekeepers can include many different tribal and community individuals and organizations and are vital in assisting project development.

Principle 4: Understand tribal diversity and its implications

The CNHP partnerships learned that tribal communities, tribal community research partners, and tribal colleges were diverse with respect to their experience with research and dominant culture research approaches. Tribal colleges are first and foremost teaching, rather than research institutions. Barriers in 1 specific instance included underequipped science classrooms and a meager budget for laboratory supplies and no budget for equipment. The partner shared that these barriers are decreasing because of additional support and funding from community members, the college administration, university administrators, university faculty, and especially federal agencies.

Also, university faculty members are diverse with respect to their experience and preparation for research. However, during their training, all university partners in this case study had hands-on research experience, received research mentoring, and took coursework on research methodologies. The experiences and understandings of community research partners regarding research may be very different from what is taught in an academic setting and should carry equal weight in the joint work.

In addition to community diversity in experience in research and preparation for research was the diversity in ability for community members to become involved in research. Institutions employing university partners involved in this case study require involvement in research. Faculty members who choose to participate in CBPR research mention the additional time that CBPR research takes versus other types of research. This 2-way dedication to project work is an important part of CBPR, and it was mentioned by both university and community partners.

LaVeaux and Christopher discuss the "importance of becoming familiar with the common values, ideas, and practices important for the specific group with whom researchers partner"[9(p14)] due to diversity among and within tribes. Research partners for many of the cases in the study discussed this topic, what the university partner has done to become familiar, and the barriers to this happening. Strategies included phone calls, where partners shared concerns and issues, visits to the reservation community and attendance at important community events by the university partner, recruiting students from the local community to assist with the project, attending conferences together, sharing meals, working with the university and tribal college, and collaborating to write about early and intermediate processes as well as final results. Understanding tribal diversity includes the diversity in research experience and preparation, ability for community members to become involved in research, interest in and comfort level with working on specific topic areas, and the processes and actions taken by partners to become familiar with specific tribal nations.

Principle 5: Plan for extended timelines

Planning for extended timelines is often important in research partnerships with tribal communities to allow for multiple review and approval processes, to provide time to establish trust and crosscultural understanding, and to respect local activities. Time barriers occur for a variety of reasons in CBPR projects and may be further complicated by political barriers when the project is based in a tribal community setting. For example, 1 community partner mentioned the need to respect the standstill that might occur on a reservation for a funeral of a community member.

Principle 7: Prepare for leadership turnover

Principle 7 is to prepare for leadership turnover. LaVeaux and Christopher[9] note that

some tribes hold elections for tribal government annually. None of the projects in this case study directly mentioned difficulties in their partnership or research due to changes in leadership. However, projects did mention a strategy for overcoming some of the institutional and political barriers included, securing approval for projects through a tribal resolution and maintaining formal/official support for the project in the tribal community. Projects reported that the community partner is valuable in introducing the university partner in this setting and lending legitimacy and credibility to a project—this was also mentioned under principles 3 and 6.

Community partner relationships with tribal leaders and the tribal community are an important asset. The continuity of contact and updates through the community partner were an invaluable strategy.

Principle 8: Interpret data within the cultural context

One project said that the data they collected were shared and discussed with the community to determine their meaning. They went on to say that the communities explained what lens to use when looking at the data, so a more culturally appropriate interpretation of the information occurred.

Principle 9: Utilize indigenous ways of knowing

Indigenous ways of knowing include culturally, tribal-specific knowledge, including "unique spiritual and philosophical beliefs."[9(p17)] Using indigenous knowledge can assist in avoiding past research mistakes and can be learned through building trusting relationships. The application of using indigenous ways of knowing in past projects included viewing time differently and the benefits of native researchers in partnerships and related to the first principle of acknowledging historical experiences with research and with health issues and working to overcome tribes' negative images of research and researchers through building trusting relationships.

Indigenous ways of knowing can involve different perspectives on time compared to academia, and this can affect the timeline of projects. For instance, the partnerships mentioned that indigenous time may involve starting meetings at organic, "naturally occurring" times rather than at specific scheduled times.

Recently, more native people have entered the academic research arena through higher education, resulting in a greater likelihood of research partnerships involving native academic partners. In this collaboration, several community partners have had research experience in the academic environment. These individuals have the unique and valuable perspective of having learned the Western approach and perspective to research and of having lived the native experience of research within the tribal community environment.

For all partnerships, building trust in communities and within the partnership took time and dedication. Through building trusting relationships, partners were further able to proactively attend to possible barriers to their research project. One project stated that their 2 institutions worked together to remove barriers whenever they could, and this facilitated the work of the partnership. Several partnerships mentioned developing realistic timelines, remaining flexible and sensitive to emerging issues in the community, and focusing on community priorities as important strategies.

Principle 9 relates back to principle 1, acknowledging the historical experiences with research and with health issues and working to overcome research's negative image. One partnership described the importance of recognizing that trust is circular, builds in both directions, and can be easily squandered. One example of how community trust was built was by actively recruiting and including members of the community, who were affected by the health issue in the needs assessment

phase of the project. Another partnership discussed community trainings that imparted new skills and understandings that had been important for the development of trust. Community trainings were also seen as important, because they provided an opportunity for staff and students from the community to learn and share local indigenous knowledge with the university partner.

CONCLUSIONS

Our case study of CNHP partnerships analyzed community and university partners' written statements about partnership development processes and applied the statements to the new principles. These statements were developed through dialog and reflection involving research partners and Center staff. We learned that the principles are salient in the practice of developing partnerships and that some principles are more prominent than others. This is because of questions/topic areas that drove the data, the location/context of partnerships, content of the research, and the stage of partnership.

We also saw 3 areas of overarching information across the partnerships and principles. First, partnerships have improved relationships across various individuals and institutions in the state. Partners report that access to this diverse spectrum of research experiences and outcomes across partnerships through the different reporting schemes, phone calls and web conferences, face-to-face conferences, and informal interactions has served to strengthen each partnership. Second, interest in this effort has created a groundswell of attention and awareness as a result of the novel approach of the CNHP. Third, the state of Montana has a history of problems and issues associated with mistrust between researchers and tribal members with regard to research design, program implementation and monitoring, and evaluation. This effort shows early positive outcomes in terms of changes in the type of strategic planning, the quality of the dialog, and the level of trust between university and tribal partners.

There is growing evidence to suggest that capacity building for the partnerships is well underway. In 1 partnership, a recent CAB meeting facilitated an individual who had worked on water resource research for many years to comment that the new partnership had empowered community members and created a sense of optimism for positive change. One last example involves the sensitive topic of end-of-life care and decision making. As a result of several tribal members who were recruited by the partnership to speak publicly at a health fair to increase awareness on the topic, about 15 additional tribal members agreed to be interviewed on their experience and background.

The CBPR approach, both with regard to each individual tribal—university partnership and across all of the partnerships—has many short-term tangible successes. Our case study of CNHP partnerships also revealed a strong shared belief that more can be accomplished to reduce health disparities when information and power are shared, not only between the tribal community members and university partners, but also when all of the communities and universities share in the investment and outcome of this collective endeavor.

The CBPR in Native American communities is a relatively recent approach to addressing health disparities. By providing examples of applications of the 9 principles for conducting CBPR in Native American research contexts, we have provided shared insights on the partnership development process of 7 partnerships that are part of a statewide capacity-building effort. Studies of even larger numbers of partnerships are needed, and no doubt, this will yield additional understandings of effective approaches in the contexts of Native American communities. Our insights and strategies can contribute to the growing literature on conducting collaborative research in Native American communities.

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