



Lessons Shared: Implementation of a Randomized Clinical Trial for Alcohol Use Disorders with Five American Indian and Alaska Native Communities

**UNIVERSITY-
COMMUNITY
COLLABORATIONS
PORTAL
(COMMUNITY
PORTAL)**

KATHERINE A. HIRCHAK 

KELLEY JANSEN

ABRAM J. LYONS 

JALENE HERRON

DUSTIN BERGERSON

JENNIFER SHAW

LISA G. DIRKS

JAEDON AVEY

DARREN CALHOUN

CANDY JACKSON

LINDA LAUCH

DENNIS DONOVAN

STERLING M. MCPHERSON

ABIGAIL ECHO-HAWK

DENISE DILLARD

KATE LILLIE

JOHN ROLL

DEDRA BUCHWALD

MICHAEL MCDONELL

The HONOR Study Team



CORRESPONDING AUTHOR:

Katherine A. Hirschak

Washington State University, US

katherine.hirschak@wsu.edu

**Author affiliations can be found in the back matter of this article*

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ABSTRACT

This paper examines how five Tribal communities and an academic institution developed the Helping Our Native Ongoing Recovery Project. The goal of this study was to conduct a large randomized controlled trial using contingency management as an intervention for alcohol use disorders among 400 American Indian and Alaska Native (AI/AN) people. Using a community-engaged approach, including tenants of community-based participatory research and the Quality Implementation Framework, close collaboration between Tribal community and academic partners was essential to the research design and implementation. The process described has enhanced trust, positive relationships, and the successful cultural adaptation and implementation of the contingency management intervention with two of the five partnering communities. This work may provide insight for dissemination and implementation science among AI/AN communities and a process template for researchers who want to partner with Tribal communities to positively impact health outcomes.

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ALCOHOL TREATMENT RESEARCH AMONG AMERICAN INDIAN AND ALASKA NATIVE COMMUNITIES

Despite high rates of alcohol abstinence among American Indian and Alaska Native (AI/AN) adults, problematic alcohol use and alcohol-related consequences continue to disproportionately impact AI/AN communities (Cunningham et al., 2016). Evidence suggests that AI/AN people and other groups do not complete substance use treatment as frequently as the general population (Evans, Spear, Huang & Hser, 2006). Research with AI/AN communities suggests that this may be due to a lack of treatment acceptability or cultural appropriateness (Gone & Trimble, 2012). Coupled with hundreds of years of colonization, genocide, and historical trauma, Indigenous communities are justifiably apprehensive of Western institutional approaches, which include models of alcohol use disorder (AUD) treatment (Larios et al., 2011).

Indigenous models of health contain elements that differ from a Western approach (Duran, 2006; Duran & Duran, 1995). Although there is much diversity among the 574 federally recognized Tribal communities in the United States, most share a holistic view of mental and physical health. For example, healing practices among communities may include spiritual elements of prayer and ceremony (Gone, 2010). Because there is a divide between Indigenous belief systems and Western models of health, the numerous interventions and counseling techniques for AUD developed in a Western conceptual framework may require adaptation to increase engagement, retention, and effectiveness with AI/AN people (Prussing, 2008; Tonigan et al., 2020; Villanueva et al., 2007; Whitbeck, 2006).

Integrating AI/AN knowledge and culture with Western medical interventions has yielded positive outcomes (e.g., motivational interviewing and community reinforcement approach; Venner et al., 2016; Venner et al., 2021). Furthermore, effectively engaging Tribal communities in research to develop and/or adapt interventions for AUD may result in greater trust in the research process, higher patient activation, and improved treatment outcomes (Hiratsuka et al., 2017; Burlew, Copeland, Ahuama-Jonas & Calsyn, 2013). Research to develop AUD treatments for AI/AN people should, therefore, include community stakeholder ownership and voice to increase engagement, cultural relevance, acceptability, and utility (Chino & DeBruyn, 2006; Israel et al., 2005; Mariella et al., 2009; Wallerstein & Duran, 2010). Community-Based Participatory Research (CBPR) is a collaborative approach to research that identifies the community as the expert and enhances community strengths to address their specific needs (Wallerstein & Duran, 2010). In the present study we report on an integrated community-engaged approach, using select

CBPR principles (i.e., the project was not a pure application of the CBPR framework).

COMMUNITY-ENGAGED PROCESS

Aligning dissemination and implementation science among Tribal communities is an important area in need of additional research. Implementation efforts have not always considered AI/AN social, cultural, and historical contextual factors when maintaining strict fidelity, or incorporated the community input necessary to achieve acceptability and sustainability (Blue Bird Jernigan, D'Amico, Duran, & Buchwald, 2020; Blue Bird Jernigan, D'Amico, & Keawe'aimoku Kaholokula, 2020; Rasmus et al., 2019). As part of a CBPR framework which has been utilized by other university-Tribal partnerships, The River of Life process was retrospectively employed in Year 4 to describe the origins of each partnership, where there were successes or flows, and rapids or boulders, that required careful navigation (Sanchez-Youngman & Wallerstein, 2018). The River of Life is an important partnership reflection tool used as an exercise in CBPR and resulted in the identification of ways to strengthen current and future collaborations. For example, after the University researchers and two of the partnering sites completed the half-day exercise, reflexivity (e.g., a quality improvement process to address challenges in privilege, power, and equity among partners) was identified as an area for continued assessment at the weekly and annual Community Advisory Board meetings.

In addition to the River of Life, during the final phase of the research, the university research team and partnering sites considered the Quality Implementation Framework (QIF) to be appropriate for describing the facilitators and barriers to implementation and for conceptualizing the implementation of the research activities within each community setting. Fourteen steps identified in the QIF enhance implementation within four phases, including the initial assessment of the setting, enhancing the structure of implementation, maintaining the implementation structure, and improving future applications (Meyers et al., 2012). The application of the framework here included determining community and organization buy-in and support, capacity building in each partnering site, and pre-intervention training of staff members, many of whom were Tribal community members. The framework fits well within a community-engaged approach as it integrates multiple interactive systems along with stakeholder voice (Belone et al., 2020). Using the QIF, we identified some of the activities, while others were unique to this project but recognized by the partnering communities and the university research team as an important process template for implementation of research with AI/AN communities (e.g., description of the Tribal research approval processes and CBPR).

CONTINGENCY MANAGEMENT AND THE HELPING OUR NATIVE ONGOING RECOVERY PROJECT

Contingency management (CM) is a behavioral intervention that uses principles of operant conditioning to treat substance use disorders (Higgins & Petry, 1999; Peck & Ranaldi, 2014; Roll et al., 2009). CM positively reinforces desired behaviors by progressively rewarding a person for achieving a goal, such as abstinence from alcohol use each week. CM has been tested in numerous and diverse populations (Benishek et al., 2014; McDonnell et al., 2017; Miguel et al., 2017), and has been found to be effective for initiating abstinence from a variety of substances (Lussier et al., 2006; Prendergast et al., 2006). Prior to the study reported here, no studies had culturally adapted or tested CM for achieving abstinence from alcohol use with AI/AN adults.

The first phase of the Helping Our Native Ongoing Recovery Project (HONOR) was qualitative and engaged stakeholders to culturally-tailor the CM protocol for AUDs. The second phase was the implementation of the randomized controlled trial of the tailored intervention in three different geographic locations. The third and final phase focuses on dissemination with the application of lessons learned through a culturally congruent and responsive process. Our partners include: two Tribes in the Northern Plains (Partner Site 1); a non-profit Title V Indian Health Service Contract Clinic (Partner Site 2); a rural reservation in the Southwest (Partner Site 3 that, for reasons described below, were unable to continue participation); Southcentral Foundation, a large healthcare organization providing services in the Anchorage Borough, the Matanuska-Susitna Borough, and 55 rural villages (Partner Site 4) and an Indian Center in a metropolitan area (Partner Site 5). Some partner sites chose to remain anonymous. Study procedures and adaptations were detailed previously to increase the acceptability of the CM research (McDonnell et al., 2016; Hirchak et al., 2018). The purpose of this paper is to examine the implementation of HONOR, and the partnership between the communities and university researchers that made this study possible, to inform future research implementation among AI/AN people.

COMMUNITY PARTNERING, INTERVENTION SELECTION, PLANNED ADAPTATION, AND FUNDING

The initial conceptualization of HONOR began in 2012 when three university-based researchers developed a grant proposal. The junior researcher was a member of Partner Site 1. In a community-engaged approach, the university-researchers spent six months during the project development period gathering input on project aims and

study methods from Tribal community members before submitting the grant. Information was collected through preliminary discussions via telephone and video calls, emails, and trips to the partnering community.

Three university researchers (including the researcher with the dual role of researcher and enrolled Tribal member of the community), traveled to Partner Site 1. For a one-week period, they hosted two events, open to the public, to assess interest in pursuing the project. Fifty key stakeholders attended, including individuals who were in recovery, treatment counselors, providers employed by the Indian Health Service, Tribal health and social service agencies, and behavioral health specialists. In addition to the community events, university researchers met with 12 Tribal government leaders to discuss the proposed project and assess their interest in forming a partnership.

University researchers presented for each event at Partner Site 1. Although the senior-researchers had specific research interests using CM to address AUDs, the community was presented with a menu of potential interventions that could be tested. These options included offering CM alongside other behavioral interventions and medication management, to ensure CM was truly an appropriate fit and another intervention was not preferred. There was consensus that CM was an appropriate intervention to adapt and implement. In addition, Partner Site 1 stated that alcohol use and misuse continued to be a primary concern and should be specifically targeted.

During the community discussions, the director of one of the outpatient treatment facilities located on the reservation became an active champion of the project, facilitating and enhancing trust between the Tribal-academic collaboration. The two outpatient treatment facilities located on the reservation were in their final year of Substance Abuse and Mental Health Services and Administration funding for a project called Access to Recovery. The project had been well-regarded for providing care coordination and monetary support for work- or health-related needs to individuals in recovery and CM was regarded as a natural segue. Tribal Business Council members, outpatient treatment counselors, physicians working at Indian Health Service, and interested community members stressed the importance of adapting CM to reflect the local culture and service ecology to create a sustainable and successful intervention that met the needs of stakeholders. The randomized controlled trial was also determined to be acceptable since everyone enrolled in the study would receive prizes for their participation by providing a urine sample. CM was determined to be suitable for reinforcing abstinence by removing prizes if the urine sample was positive (for adults randomized to the treatment condition), because the overall CM approach was primarily strength-based, and the reinforcement would resume once the individual had stopped drinking. In addition,

treatment-as-usual was also available. Treatment-as-usual included cultural activities (e.g., sweatlodge) and adapted Western models (e.g., Wellbriety).

After receiving positive feedback from the community events, researchers identified two additional potential partners, Partner Sites 2 and 3. Partner Site 2 did not provide alcohol or substance use disorder intervention or treatment services, but the location and practice of sacred hospitality and an Indigenized patient-centered, medical home model of care was determined to be an appropriate fit by the health clinic director and research team. The health clinic had a staff of approximately 50 providers, administrators, care coordinators and health and fitness educators, and the necessary infrastructure to implement the intervention. This agency had a strong working relationship with the senior researcher of more than 10 years but had never been a part of an alcohol treatment study.

Partner Site 3 also expressed enthusiasm for partnering on the project. Partner Site 3 had an existing relationship with one of the senior university-researchers on an existing health services grant. The addiction treatment services on the reservation were extensive, including intensive outpatient addiction treatment, mental health care, veterans' services, and other social services, making the proposed project an acceptable add-on by the Tribal council and leadership at the outpatient treatment facility.

After a year of planning, the three senior researchers submitted an R01 grant to the National Institute on Alcohol Abuse and Alcoholism in 2012 and the project was subsequently funded, with all research and dissemination activities receiving Washington State University Institutional Review Board (IRB), Tribal IRB, and Tribal approval. The proposal was novel in several ways. It was the largest alcohol use intervention study for adults in multiple AI/AN communities. It was also the largest study to examine if CM for alcohol consumption, using the alcohol biomarker ethyl glucuronide (EtG; which can detect heavy drinking in the past five days and light drinking for the past three days; Jatlow et al., 2015), was an effective intervention for AUD.

RESEARCH STRATEGY AND PROJECT IMPLEMENTATION

During the first year, representatives from Partner Sites 1, 2, and 3 kicked off the Community Advisory Board (CAB) in Seattle, Washington. The CAB included at least two key stakeholders that had demonstrated positive leadership in their communities. The partners nominated AI/AN CAB members and the university team set-up meetings to determine their commitment level, interest, and availability to contribute. The CAB convened to guide the study and recruitment efforts in local settings, assisting in the adaptation of the CM intervention and research

protocols to ensure that they were appropriate for each community, sharing local information, raising awareness, and disseminating study-related content.

Along with the CAB members, organizational leadership and research coordinators from each community attended the kickoff meeting. A graduate student at the university who was also a descendant and community member of Partner Site 1, had joined the university team during the first quarter of the project to assist with planning and implementation. The purpose of the meeting was to educate members from each partnering site about the CM process, brand the project in each community with a logo and a name, identify appropriate measures to use or adapt existing measures, develop focus group questions to increase the cultural acceptability of the intervention in each community, and finalize study procedures.

CAB members created a culturally appropriate project title for the study and the research team and partnering sites agreed that it was appropriate for each community. The group also finalized a single logo for use across all sites. Another outcome of the meeting was the adaptation of items on the American Indian and Enculturation Scale (Winterowd et al., 2008) to better fit the cultural characteristics of each community. Suggestions included the removal of certain questions from measures deemed inappropriate or irrelevant to the communities where the study was being implemented.

One implementation hurdle discussed during the meeting was the Indiko desktop urine analyzer used to assess EtG. Each community purchased an Indiko analyzer through their subcontract so it could be utilized after study completion; however, the analyzers required a large office area to store the machine, the supplies and to conduct the assessments. The university-based research coordinator visited each site to train staff on calibrating and operating the analyzer, on conducting study assessments, data entry and management, troubleshooting technical issues, and calculating the prize draws for the CM condition. Partner Sites 1, 2, and 4 conducted focus groups to inform cultural adaptation and provide appropriate practical and cultural prizes to participants (Hirchak et al., 2018). In addition, during the third year, an opportunity arose to hire an additional university-based research coordinator. University researchers made a concerted effort to hire an individual who was connected to AI/AN communities, culminating in hiring a tribally-enrolled AN individual, which increased AI/AN representation on the university team.

OPPORTUNITIES FOR PARTNERSHIP REFLECTION

During Year 4, Partner Sites 1 and 4 completed the River of Life process to examine the project's history, successful

collaborations, and areas for improvement (**Figure 1**; Sanchez-Youngman & Wallerstein, 2018). Partner Sites 1 and 4 were responsible for recruiting more than 85% of the study participants. In addition to the River of Life evaluation, **Table 1** (adapted from Meyers et al., 2012)

identifies the phases and activities completed within each partnering community (e.g., capacity building) in addition to barriers that may have hindered successful implementation of the research project in specific partnering sites (e.g., an implementation plan was not

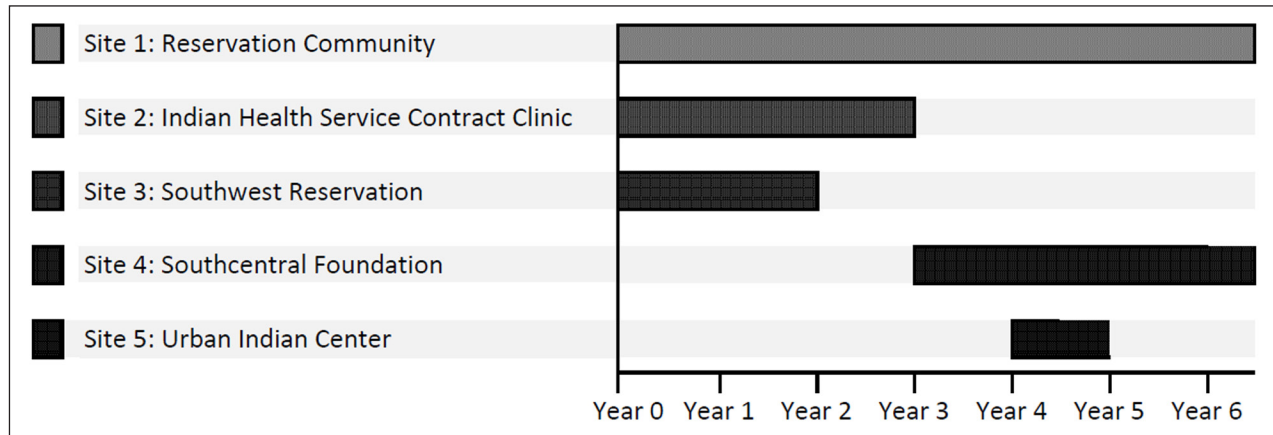


Figure 1 Site Participation Timeline.

RELEVANT ACTIVITIES QIF AND HONOR	HONOR COMPLETED PHASE	FACILITATORS TO IMPLEMENTATION	BARRIERS TO IMPLEMENTATION
QIF			
Initial Considerations			
Needs assessment			X
Fit assessment			X
Capacity/readiness assessment	X	X	
Possibility for adaptation	X	X	
Buy-in supportive climate	X	X	
General org. capacity building	X	X	
Staff recruitment/maintenance	X	X	
Pre-intervention training	X	X	
Structure for implementation			
Implementation teams	X	X	
Implementation plan			X
Ongoing support strategies			
TA/coaching/supervision	X	X	
Process evaluations		X	
Feedback mechanism	X	X	
Improving future applications			
Learning from experience	X	X	
HONOR Specific Activities			
Community-engaged, CBPR approach	X	X	
Tribal resolutions, data-sharing agreements, university, and Tribal IRBs	X	X	

(Contd.)

RELEVANT ACTIVITIES QIF AND HONOR	HONOR COMPLETED PHASE	FACILITATORS TO IMPLEMENTATION	BARRIERS TO IMPLEMENTATION
Formed an active CAB	X	X	
Subawards to each community	X	X	
Intervention delivered by community members	X	X	
University was not involved with hiring	X		X
University research team also included community members from partnering sites	X	X	
Conducted focus groups to increase cultural acceptability and community fit	X	X	
Ability to determine in advance which communities would have ongoing capacity to deliver intervention			X
Community partners co-authors on publications/presentations/dissemination	X	X	

Table 1 Facilitators and Barriers to Implementation of Contingency Management among Tribal Communities Using the Quality Implementation Framework.

developed). These two activities provided the opportunity to examine strengths of the research collaboration and areas for continued quality improvement.

Reassessment and reflection around staffing and site feasibility between Partner Sites 2 and 3 also became necessary. The research coordinator at Partner Site 2 accepted a position elsewhere. The Director of the site and the Principal Investigators agreed that conducting an AUD intervention in a primary care setting that did not offer AUD treatment services was very challenging (e.g., only 36 participants were recruited over two years). At the same time, the senior researchers moved to a new university, which created obstacles related to the transfer of a large grant between institutions, as well as notifying Tribal partners, re-assessment of data-sharing agreements, and new Institutional Review Board protocols. Delays in reissuing subcontracts at the Principal Investigators' new institution also contributed to the decision to withdraw from the project. Interestingly, a major strength of this collaboration was that Site 2 had the highest retention rates. Moreover, the CAB member associated with Partner Site 2 continued to provide guidance through the duration of the project. In addition to Partner Site 2, after returning from the initial CAB meeting, leadership changed at Partner Site 3. This change resulted in diminished interest, changes in priorities, and in the second year, formal notification from the Tribal Council of discontinuation of the project (**Figure 2**). The senior university researchers, therefore, began querying other AI/AN organizations that might be interested in partnering.

Despite the loss of partners on the project, the senior university-researcher had many existing relationships with Tribal communities, including Partner Site 4. The senior investigator contacted a PI at the site who facilitated internal discussions and the organization became a partner. The site has a research department

and a Tribal research approval process that makes it unique among the partnering sites (Hiratsuka et al., 2017). The Partner Site 4 PI initially met with behavioral health service leadership to determine interest in participating in the study. Reducing substance misuse in the service population is an organizational objective and CM was being used informally in the substance use intensive outpatient program, in which it had not been adapted or studied among Alaska Native consumers, making the project of interest. After, the site PI and other local research staff obtained local IRB and Tribal approvals, the team began logistical planning for implementation, including identifying a location for the study, ordering equipment, and training staff. The board of directors and the researchers held discussions regarding the use of measures that were scientifically and culturally rigorous. The study was housed in Partner Site 4's Intensive Outpatient Program, located on the Alaska Native Health Campus in Anchorage.

In addition to partnering with Site 4, Partner Site 5, an urban Indian Center, expressed interest in joining the research project. This site offered cultural activities, community events, and other social services. The Indian Center was in the process of developing outpatient treatment services, and this created a synergistic opportunity to partner. The Indian Center leadership and staff were enthusiastic about CM adding value to their existing services. This partnership lasted a year but was ultimately not sustainable due to low recruitment (less than 10 new participants). The university research team theorized lack of existing services and resources for urban AI/AN adult treatment-seekers made reach very difficult since there was not a centralized location to recruit from. The intervention was most successful when treatment-as-usual was available, and when it was not, recruitment was inadequate to sustain the partnership.

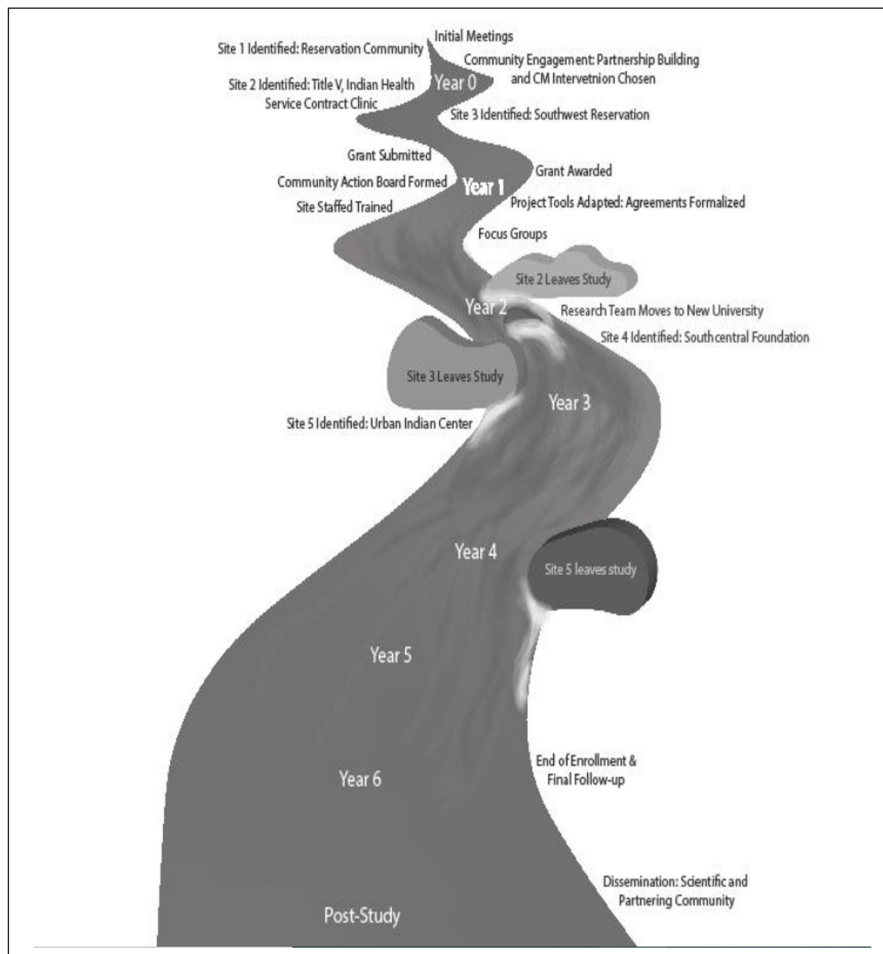


Figure 2 River of Life Partnership.

There were additional important reflections from the perspective of the university team. Study implementation was successful when respected community leaders in positions of power and influence championed the project. The community leaders ensured the study's success by adjusting recruitment strategies to fit site-specific characteristics and by sustaining the study's positive reputation among Tribal leadership. The ability for each community to adapt the intervention to local needs is another crucial aspect of the community-engaged approach. The intervention did not undergo major changes, but adaptations were mainly related to logistical or quality assurance, such as offering transportation or having an exit interview with participants to identify areas for ongoing modifications. In alignment with the existing literature on adaptation and implementation of multi-site substance use disorder interventions, for the partnering sites where CM was acceptable and maintained, the low barriers to staff training and high levels of staff retention, stability in leadership, and retention of Site PIs, as well as fidelity to CM, were significant strengths (Hirschak et al., 2020).

Members of the university team became better community focused researchers because of this collaboration. For example, data interpretation with the CAB highlighted how many of the Western based models

of health do not focus on factors that influence substance use beyond the individual-level (e.g., the role of family and community in recovery). Although the university researchers intellectually understood this point, the weekly discussions with the Partner Sites contextualized site-specific barriers and innovative strategies to address them. Subsequently, the university researchers have pursued studies that include housing, family, and social support interventions. In response to these reflections, the university researchers and Partner Site 1 have received funding to integrate cultural activities and involve the community as part of alcohol recovery strategies not always typical to a clinic-based model. Additionally, it was stated that abstinence is not the only important outcome. Constructs related to culture (e.g., spirituality, engagement, historical trauma) should also be assessed as an important research outcome. To address this point, future research might consider including more holistic or culturally specific measures validated among AI/AN communities (Venner et al., 2021).

TRIBAL REVIEW PROCESSES AND RESOURCE SHARING

Throughout the project, Tribal resolutions, data-sharing agreements, Tribal research review committees, and Indian Health Service or Tribal IRBs required careful

consideration and were unique to each community. In Partner Site 1, Tribes signed Tribal resolutions by each respective Tribal Chairman, giving the university legal permission to conduct the proposed study with Tribal members. Across the sites, the research team procured three Tribal approvals, four data-sharing agreements, and three IRB approvals. Each data sharing agreement and IRB had different stipulations and processes that required in-depth and ongoing consultation with community partners. For example, publications and presentations on research activities must obtain five Tribal approvals and one Tribal IRB approval before they are submitted for publication. This approval process improves scientific rigor, as it involves each community contributing to the interpretation and presentation of data to represent study findings more accurately.

Additionally, Partner Site 4 has a Tribal research review committee and an Indian Health Service Area IRB. Tensions between the community and university researchers about procuring required and timely approvals for presentations and publications surfaced in the third year. The trust, good communication, and patience that were previously established enabled Partner Site 4 and the university team to resolve this issue by jointly creating a workflow document that detailed the necessary approvals for disseminating study results.

The university and community research teams also collaborated to build research capacity in each community through the development of subawards, rather than having all study funds controlled by the university team. These awards allowed each site to develop a budget with community members who could administer the grant and implement the intervention as well as offering additional support for trainings and travel for grant-related meetings. Each site had a large budget to implement the study activities and training, including approximately \$1.8 million over six years. Transparency and resource sharing improved the relationships between the partners. Tribal partners ultimately identified these characteristics as major strengths of the collaboration.

SUSTAINED PARTNERSHIPS FOLLOWING STUDY COMPLETION

Partner Site 1 created a protocol for conducting CM for AUDs in their facility integrated into the existing substance use disorder outpatient treatment program. Partner Site 1 has explored the sustainability of using the EtG testing equipment and the implementation of CM. Agencies such as Tribal Police and Tribal Courts have inquired about the potential of hiring and training personnel to conduct the random drug testing of inmates, detained individuals, and individuals participating in the Drug/Wellness Court.

Clients would provide a urinalysis at their first visit at the substance use disorder outpatient treatment facility, with subsequent testing every 28 days in conjunction with CM. The relationships created with the university has resulted in additional grant writing opportunities related to opioid use disorders and a study to culturally adapt and test a technology-enhanced CM intervention for younger AI/AN adults.

LESSONS SHARED

The completion of the Helping Our Native Ongoing Recovery marks an end to the largest CM randomized controlled trial conducted for AUDs and the only CM alcohol trial among AI/AN adults. Findings from the study revealed that relative to controls, participants that received prizes for alcohol abstinence were 70% more likely to submit an alcohol-negative urine test (McDonnell et al., 2021). In addition to greater rates of abstinence, participants also noted the positive impact of CM on their lives more generally, such as increased feelings of confidence and support. Similar feedback was echoed in another study of CM completed in a single rural reservation community in the Northern Plains (McDonnell et al., 2021).

There were many implementation strategies that contributed to the success of the study. Having individuals from, employed by, or familiar with, the partnering communities involved in all study activities (e.g., design, implementation, data collection, and dissemination) allowed for capacity building, successful implementation, and sustainability. The hiring and training of community members to implement the CM intervention as well as the two AI/AN researchers on the university team, an AI/AN pre-doctoral student and Alaska Native research coordinator with personal cultural and geographic connections to each of the sites, was instrumental to study completion. The capacity building that occurred at Partner Site 1 has also led to additional research projects and funding opportunities.

The study also strengthened the capacity of four junior AI/AN researchers. The pre-doctoral student received a diversity supplement through the National Institute on Alcoholism and Alcohol Abuse for their dissertation work and was later awarded a career development grant. Three AN research coordinators also pursued doctoral degrees at prestigious programs, two in clinical psychology and the other in information science. Regular and transparent communication with the sites through email, weekly video conferencing, and phone calls were also essential to implementation and data management. In addition, the study-maintained fidelity and accountability through an active CAB. Barriers to successful implementation in the three locations (Partner Sites 2, 3, and 5) included the research study not being a good fit at the site (e.g., lack of recovery support in a primary care clinic) as well as mismatch between the study and lack of buy-in from leadership. Amicable exit strategies with these partners

were achieved through the support of the CAB and the university research team that had already fostered trust, allowing the partnerships to continue with different research projects.

University researchers' ability and willingness to provide support by traveling to sites for extended periods of time throughout the year in the event of staff-shortages or technical issues enhanced implementation. Providing this timely support assisted the research coordinators in each location with the ability to continue to independently implement the study protocol. Rapport and partnership building were also key and transcended work-specific topics including countless shared meals, family gatherings, and social events. The university team was committed to ensuring that the community visits were equally focused on the work and engaged with the communities to build long-term relationships.

CONCLUSION

The research team and partnering communities identified several topics for reflection and discussion during the study regarding the Tribal community-academic partnership, such as the unique approval processes at different Tribal sites, distrust of research within many Tribal communities, and considerations for successfully implementing the research. The strengths of the project included increasing the capacity of the Tribal communities to conduct research and implement an AUD intervention that was culturally appropriate, engaging, and decreased barriers to care. Another major strength was the financial resources and power-sharing between the Partner Sites and the University, which supported community research autonomy and capacity building by enabling each site to hire and supervise local staff. This also increased scientific rigor by ensuring that study procedures and communication with participants were culturally acceptable and appropriate. By using a CBPR approach alongside QIF, we offer strategies to other communities looking to enhance their research activities and university collaborations. The River of Life was a useful tool integrated as a quality improvement process along with QIF to map the community-university partnership over the five-year grant. This allowed team members from both the community and the university to identify and address facilitators and barriers in real-time, thereby enhancing trust, implementation success, and partnership sustainability.

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COMPETING INTERESTS

The authors report no conflicts of interest. The views expressed do not necessarily represent the views of any participating Tribe or partnering organization.

AUTHOR AFFILIATIONS

Katherine A. Hirchak  orcid.org/0000-0002-2469-660X
Washington State University, US

Kelley Jansen
Southcentral Foundation, US

Abram J. Lyons  orcid.org/0000-0002-3340-0612
Washington State University, US

Jalene Herron
University of New Mexico, US

Dustin Bergerson
Southcentral Foundation, US

Jennifer Shaw
Southcentral Foundation, US

Lisa G. Dirks
University of Washington, US

Jaedon Avey
Southcentral Foundation, US

Darren Calhoun
MedStar Research Institute, US

Candy Jackson
Indian Health Service Contract Clinic, US

Linda Lauch
American Indian Community Center, US

Dennis Donovan
University of Washington, US

Sterling M. McPherson
Washington State University, US

Abigail Echo-Hawk
Urban Indian Health Institute, US

Denise Dillard
Southcentral Foundation, US

Kate Lillie
Southcentral Foundation, US

John Roll
Washington State University, US

Dedra Buchwald
Washington State University, US

Michael McDonell
Washington State University, US

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