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Collaboration as a Catalyst for Change: Reducing Commercial Tobacco Use Among American Indian Youth Through Dedication to Community, Youth-Led Interventions, and Tradition

Chase Kornacki (Navajo), BS, Justin Rodriguez (Luiseño, Haliwa-Saponi), BS, Joseph Rodriguez (Luiseño, Haliwa-Saponi), BS, Anthony Hurtado (Luiseño, Tohono O'odham), BS, Juliet P. Lee, PhD, Roland S. Moore, PhD, Lisa Brucks, MPH, Jennifer Geisler (Kumeyaay), RN/BS, Valerie Boyle (Kumeyaay), Diana Martinez (Kumeyaay), Ami Admire (Luiseño), Monah Hanson (Choctaw), MSW, Rachel Reif (Shoshone), MEd, Michelle Nielson, MEd, Camille Henry-Walford, MPH, and Daniel J. Calac (Luiseño), MD

Abstract

American Indian and Alaska Native (AI/AN) youth have the highest commercial tobacco smoking rate of any group in the United States. Unified by the aim to reduce AI/AN youth commercial tobacco use, six separately funded tobacco prevention programs serving Southern California tribes formed the Southern California Tribal Tobacco Coalition (SCTTC). Since joining forces, the SCTTC has hosted various activities and events that encourage community involvement, youth leadership, and commitment to tradition. The SCTTC's pinnacle event, the annual Inter-Tribal Tobacco Prevention Youth Summit, is an inspiring example of the organization's collaborative efforts, as it features youth- and elder-led activities and presentations by local tribal members. These community events have grown in participation from year to year and are widely supported by the surrounding AI/AN communities. This paper includes narratives from several coalition members, including youth activity organizers, that showcase the power of collaboration through the SCTTC's partnership and its success to date. The purpose of this paper is to share the SCTTC's positive impact in Southern California tribes and encourage similar programs across the nation to amplify their program impacts by forming a coalition of their own and embracing youth-led interventions.

INTRODUCTION

Despite overall reductions in smoking in California, American Indian and Alaska Native (AI/AN) people smoke more frequently than other population groups (Satter et al., 2012), and more AI/AN youth report commercial tobacco use than any other group (Vuong et al., 2019). For AI/AN and other Indigenous people, higher rates of smoking are directly related to the impacts of colonization on all aspects of life (Nez Henderson et al., 2022). Colonization impacts on California Natives intensified during the Spanish Mission period, escalated as a result of the "Gold Rush," and continued through the Indian boarding school era; however, California tribes have worked hard to defend, reclaim, and strengthen their lands, languages, and cultures (Akins & Bauer, 2021). The majority of California AI/AN people who smoke begin to do so in early adolescence (Hodge & Nandy, 2011; Hodge, 2001); therefore, youth smoking prevention is a top priority for tribal tobacco programs. Tobacco prevention programs designed to be "universally" effective have been found to lack effects for Indigenous peoples, while better responses are shown for programs that are designed and directed by and for Indigenous peoples (Boudreau et al., 2016; Chamberlain et al., 2017; Hodge & Nandy, 2011; Lee et al., 2020; Maddox, Bovill, et al., 2022). Comprehensive, multi-level smoking interventions for AI/AN people are rare, and tribal health organizations may be limited in their ability to offer comprehensive programs and services.

Habitual and heavy smoking are attributed to a number of factors interacting at multiple levels, including psycho-behavioral traits (e.g., impulsivity), physical characteristics (e.g., dependence), family and peer contexts (e.g., acceptability and normativity of smoking), and social-political environments (e.g., physical and economic availability of commercial tobacco products). Therefore, comprehensive tobacco control programs, such as those implemented in the state of California, that combine health education, denormalization, taxes, and sales restrictions (Messer et al., 2007), as well as cessation services that offer brief interventions, counseling, and pharmacotherapy, are most effective in reducing rates of smoking at population levels (Raw et al., 2002). Exposure to California's comprehensive tobacco program was associated with home smoking bans, which were in turn associated with better cessation outcomes among people who smoked (Norman et al., 2000).

In this paper we describe how separately funded tribal organizations in Southern California successfully partnered to collectively address many aspects of tobacco use to maximize their prevention work with AI/AN youth**.** Tribes and tribal entities were invited to compete for state

tobacco grants. The competitive funding structure represented a potential challenge to the collaborative way of life that has supported and sustained the tribes, and no single grant was sufficient for a comprehensive, Indigenous-led intervention. We describe how the tribal grantees have creatively combined resources to amplify program impacts in seeking to reduce harms related to commercial tobacco (mass-produced and mass-marketed) and to honor ceremonial tobacco (grown or harvested and used by AI/AN people for ceremonial or medicinal purposes). Our hope is to encourage similar tribal programs across the nation to form a coalition of their own to best support their community.

Southern California Tribes

Tribes of Southern California have thrived on the coasts, mountains, valleys, and deserts for millennia (Heizer, 1978; Heizer & Elsasser, 1980; Sparkman, 1908). Since pre-colonial times, the tribes have relied on inter-tribal connections based on family and mutual aid to maintain social and customary relationships (Margolin, 1993; Phillips, 2014). Inter-tribal socialization was at the heart of the community that tied the strands of their traditional territories together (Bean, 1976). Today, the many different bands spread across Southern California possess a deep sense of community. In one way or another, there is a sense that everybody knows everybody through family or friend connections. It is pertinent that each young person knows where they come from and to whom they are related, so as to have that large network of connection, resources, and family throughout their life. Knowledge and resources are pulled together in this fashion of community living, which has protected the people from utter extermination under historic and on-going colonization (Lightfoot et al., 2013).

Today, these tribes exist as sovereign nations with working governments that orchestrate the unique intricacies and daily operations of their peoples. Between culture, family ties, and schools, individuals embrace their close-knit community in many ways. An excellent example of this is the ability to hold community gatherings. When one tribe holds an event, it is often advertised to other tribes in the surrounding area. A more formal example of collaboration between tribes is the Tribal Chairpersons Association. Just like any other community, there are challenges pertaining to health that affect the wellbeing of the people, wildlife, and the environment. Among these challenges are the negative health effects of commercial tobacco use on the reservations. Not only are people who smoke negatively affecting their health, use of commercial tobacco products also endangers the health of the people, wildlife, and natural public spaces around them. Recently,

several tribes in San Diego County, along with more tribes throughout the state of California, are taking the initiative to actively combat the tobacco industry and their negative impacts on these communities, their people, and land. Much of this is possible through sources of funding coming directly from the state.

State Tobacco Funds

The California Tobacco Tax and Health Protection Act (Proposition 99) taxed tobacco products $0.25 per pack (or equivalent for other tobacco products) and dedicates a portion of the revenues from this tax to support California's tobacco control efforts. Specifically, the Act provides grant funds to programs aiming to reduce smoking, provide health care services to those in need, support tobacco-related research, and resource programs for the environment. In 2016 voters approved Proposition 56 which imposed an additional $2.00/per pack or equivalent tax on commercial tobacco products, with revenues again dedicated to tobacco control. There are three tobacco control funding streams:

- The *California Tobacco Control Program* (CTCP) through the California Department of Public Health strives to keep tobacco out of the hands of youth, help users quit, and create tobacco-free environments. Funds from this program had been typically granted to county health departments. Due to extensive feedback from tribal community stakeholders, CTCP created a separate program to grant funds directly to tribes. The *California Tribal Grants to Reduce Tobacco-Related Disparities* aims to address commercial tobacco-related disparities affecting the American Indian population by directly funding and assisting California Tribal Governments and Tribal Government Agencies (LA n Sync, 2020).
- The University Office of the President's *Tobacco-Related Disease Research Program* (TRDRP) funds research towards reducing commercial tobacco-use and tobacco-related diseases and informs public policy to benefit California's diverse populations (TRDRP, 2023).
- *Tobacco-Use Prevention Education* (TUPE) funds a California Department of Education program for youth that provides tobacco-specific instruction, reinforcement activities, special events, and intervention and cessation programs for students (TUPE, 2023).

These three funding streams support direct-to-tribe funding which allows control of programs and resources to the tribes who know best what their members need and want.

METHODS

In partnership with a nonprofit public health research institute, a tribal health clinic serving a consortium of nine Southern California tribes applied for and was awarded funds under the TRDRP research award mechanism and proposed to include a Youth Advisory Council. Around the same time, four of these nine tribes applied for and were awarded California Tribal Tobacco Grants, all focusing on youth outreach and including youth groups. In addition, a youth education program operated by one of the nine tribes applied for and was awarded funds through the TUPE program.

Acknowledging the similarities of these programs, although via different funding streams, what started as conversations evolved into committed collaboration throughout the entirety of the programs. The connection that unifies these funded tribal grant programs is the commitment to tobacco prevention, especially in youth populations. Given that all programs had the same goal, a coalition was formed: the Southern California Tribal Tobacco Coalition (SCTTC). Coalition members serve as a support team, focusing on combined efforts to create a larger impact. The SCTCC established monthly meetings to review grant progress, share and discuss events and recruitment strategies, and help each other reach their respective goals and objectives. Just as the tribes work together in many other domains of life, the SCTTC works collaboratively to hold community activities and events for Southern California tribes.

Following wise and ethical practices in Indigenous tobacco research (Maddox et al., 2023), the authors represent coalition members and research partners, including members of tribal youth advisory groups. To report on this collective work, we first created a conference presentation, which was approved by all coalition members. We then organized ourselves into a writing team, discussed reporting goals, reviewed relevant literature and available data, and drafted a manuscript using the conference presentation as a framework. We met every other week intensively for several months to review and refine drafts. A final draft was reviewed and approved by the coalition members and by the Tribal Institutional Review Board overseeing the TRDRP-funded research study.

RESULTS

As a result of joining together, the tribal communities benefit by the collective activities offered by each of the grantees. Together, their activities form a comprehensive tobacco prevention and control program for the nine tribes. The program elements include the following key areas.

Cultural or Ceremonial Tobacco

Native people have had a spiritual and medicinal connection to tobacco since the beginning. For some, it is believed to be one of the first people who did its part in uplifting the tribe to what it is today. Native people have always known the many health benefits of tobacco when used as a remedy (Margalit et al., 2013). Furthermore, the spirituality of the plant dives even deeper, and the uses for ceremony and kinship are widespread among many tribal communities on Turtle Island, including California Natives (Cuthrell et al., 2016; Harrington, 1932; Lightfoot & Parrish, 2009). Even then, each tribe has their own unique reasons for the use of traditional Native tobacco (Boudreau et al., 2016; Struthers & Hodge, 2004). All of this goes to why the coalition members are committed to teaching youth this knowledge so as to instill inspiration for them to continue seeking that knowledge within their own communities. The education grantee, in particular, has focused on youth-centered and youth-led learning about the tobacco plant: the local varieties found in Southern California; the ceremonial, cultural, and medicinal uses of the plant by California Natives; and the intertwined histories of colonization on Turtle Island and the commercialization of the tobacco plant.

Commercial Tobacco Use Among AI/AN Youth and Teens

United States youth and teens face several factors known to lead to commercial tobacco use, such as youth-targeted tobacco marketing campaigns (Hébert et al., 2017; Stanley et al., 2022) and peer influences (Kobus, 2003). Through advertisements, social media, and peer groups, youth and teens are increasingly susceptible to the idea of "everyone else is doing it," adding additional stress to start using commercial tobacco at a young age. AI/AN youth and teens encounter additional factors that lead to commercial tobacco use. The tobacco industry exploits AI/AN tradition and ceremonial tobacco, using AI/AN imagery and symbolism to market their products (Carroll et al., 2020; D'Silva et al., 2018; Maddox, Kennedy, et al., 2022). Although California voters have approved higher taxes on commercial tobacco products, these products are nevertheless readily available in convenience and other small stores on and near tribal lands (Begay

et al., 2020; Smiley et al., 2020). The education grant has prioritized combatting the marketing of tobacco products to youth, including social media and other youth-specific forms of marketing. By educating youth on misleading marketing tactics employed by the tobacco industry, they become better equipped to resist these marketing efforts. The clinic-based research grantee has been working with local tribal leaders to sign tribal resolutions in support of a Reward and Reminder program which aims to enhance compliance with underage tobacco sales restrictions in stores that sell these products on and near tribal lands.

Impacts of Adult Smoking on Youth

Given high rates of commercial tobacco use among AI/AN adults, AI/AN youth and teens are more likely to be exposed to commercial tobacco use by adult family members than other youth. Family member tobacco use may signal to youth that smoking is acceptable and normal (Kegler et al., 2000), as well as provide access to tobacco products in the home. The tribal health clinic has been developing the capacity of its staff to provide smoking cessation services, including expanded screening and referrals to treatment for commercial tobacco use in all clinics (e.g., dental, primary care). The aim of this adult cessation program is two-fold: to improve the lives of adult community members and to support denormalization of tobacco product use for youth. Coalition members refer and recommend this clinical service to community members in their outreach materials. Given high rates of adult smoking, AI/AN youth are also more likely to be exposed to secondhand smoke in their homes. Some studies have found high support for smokefree home policies among AI/AN people (Berg et al., 2012; Kegler et al., 2019), while a study of attitudes among AI/AN people in California showed little or no support for such policies (Soto et al., 2022). The tribal tobacco grantees have all included smokefree home goals in their workplans, including voluntary smokefree home pledges for tribal members and their families to adopt.

Commercial Tobacco Waste Clean-Ups

Tobacco waste products—cigarette butts, wrappers, and packages—are the most common form of litter in coastal and urban areas (Novotny & Slaughter, 2014). Tobacco waste products include highly toxic chemicals which can leach into the environment, poisoning water and earth, as well as the plants and animals that exist there (Novotny & Slaughter, 2014; World Health Organization, 2017). Caring for the earth and the lands that the AI/AN community calls home, members of the coalition found it necessary to pay respect by clearing up toxic commercial tobacco

products littering it. Some of the first SCTTC collective activities were co-organized and co-sponsored commercial tobacco product clean-ups at community facilities on tribal lands. At the first Summit, the SCTTC organized a commercial tobacco waste clean-up. This effort not only emphasized the environmental dangers of commercial tobacco waste but allowed attendees to honor tribal lands. This tobacco waste clean-up covered over 30,000 square feet. A total of 483 various tobacco waste products were collected and appropriately disposed of or recycled. This demonstrated to youth the palpable impacts of commercial tobacco waste and steps to reduce its environmental harms.

Collective Efforts: Annual Inter-Tribal Tobacco Prevention Youth Summits

The 2021 Summit was organized as a daylong event, hosted by a participating tribe outdoors on their land. A total of 67 people attended, including youth, parents, project staff, and community elders. Convening on tribal land contributed to the importance of the presentations and activities based on the sacredness of traditional plants and their differences with commercial tobacco. Practicing culture where culture was born enabled youth to understand that Native people and culture is still very much alive and local to where they live. With this understanding, youth were able to more efficiently absorb the knowledge provided by tribal leaders, elders, and culture bearers in higher education and within their communities. Presentations ranged from the traditional uses of plants native to Southern California to the chemical breakdowns of what is contained in cigarettes and vaping products. Also, alarming statistics of tobacco and nicotine use within youth communities was mentioned to acknowledge the importance of having the Summit. A goal of the Summit was to create a sense of understanding that tribes are united knowing the importance of traditional plants, making the harms of commercial tobacco more discernible for youth.

The 2022 Summit was again organized as a daylong event, hosted by another of the participating tribes and, again, outdoors on tribal land. A total of 96 people attended, including youth, parents, project staff, community elders, and staff from affiliated agencies and programs. Like the first annual Summit, the focus was to create a more significant cultural impact on youth, hence it being hosted on tribal land. The day started early with a 5K Run and Walk, which also promoted physical activity and togetherness. Afterwards, the space was opened with a blessing. The opening prayer was meant to acknowledge ancestors, elders, and youth that are continuing to uphold Native traditions. Youth groups that were participating then presented unique perspectives, each about commercial tobacco and how it relates to bodily harm, addiction, or environmental

damage. This permitted those in attendance to see the more encompassing dangers of commercial tobacco and that it affects more than just the body. The Summit also included Bird Singers (California Native traditional singing group), who sang and offered an opportunity to build unity and support amongst the community for those participating in tobacco prevention as well as those in attendance going through their own tobacco cessation journeys. Lessons about traditional and commercial tobacco were beautifully told by groups of youth themselves, elevating the presentations to a more personable and impactful statement. These teachings were also meant to empower all of the youth, so they know they are sacred, and they are the bearers of the great people whose knowledge and connection to the Earth is immeasurable.

Through both collaboration and diligent individual work, each youth coalition equally contributed to the planning of the Inter-Tribal Tobacco Prevention Youth Summit; work and ideas were equally spread across the coalitions, preventing one coalition from taking on all of the work. Examples of the SCTTC collaboration efforts are listed below:

- Logo design and theme: The SCTTC logo represents tribal lands and respect to cultural tobacco ways. A theme for each Summit was decided. The theme of the 2021 Summit was "Creator - Customs - Culture." The theme of the 2022 Summit was "Native Tradition is Wellness."
- T-shirts: Each program was responsible for selecting and purchasing shirts for their own tribal members. Each program selected a unique color, creating a mosaic of shirt colors worn on the day of the Summit.
- Giveaways: Each coalition member contributed one or more items to the youth giveaway backpacks. Youth participants received promotional flyers, wristbands, water bottles, resource materials, and more.
- Tabling health topics: Coalition members invited other organizations to table and promote resources. Allied organizations also offered information on a wide variety of topics. During Summit breaks and lunch, youth participants explored tabling attractions and received additional giveaways. This example of collaboration provided youth with a well-rounded and informative Summit experience.
- Raffle items: Youth participants were automatically entered into a raffle. From gift cards to local handmade items, each coalition contributed items to be raffled.

- Food: At the first annual Summit, one coalition partner provided food while other coalition partners helped serve and clean up. At the second annual Summit, the host coalition partner donated supplies and local firefighters grilled burgers, while other coalition partners helped serve and clean up.

Content of Summit Activities and Presentations' Focus on Youth and Tobacco

Activities, presentations, and keynote speakers from the 2021 Summit and the 2022 Summit are listed in Table 1 and Table 2, respectively. We provide some detailed examples of activities organized by coalition members.

Refusal Skills Activity

One presentation that looked to promote conversation among Native youth across tribes was focused on strategies on how to refuse commercial tobacco. Refusal strategies are methods to say "no" to something when put in a situation where peer pressure can affect decision-making (Elder et al., 1993; Katz et al., 1989). These strategies are often verbal but involve important body language to effectively refuse any given thing. Part of refusing something is being able to have a firm tone of voice, a reason to refuse, and a rejection of the offer that is clear (Katz et al., 1989). Refusal strategies do more than saying "no," as suggestions for alternative activities or withdrawal from the subject can be ways to soundly refuse something as well (Elder et al., 1993). During the presentation at the Summit, youth leaders acted out different scenarios where one could refuse tobacco, providing the opportunity for a refusal strategy for each one to be explained to youth. This process was enhanced by a mnemonic called STARS, which was essential to fostering better memory and use of the strategies among youth. The STARS mnemonic was created prior to the Summit and was specifically tailored to AI/AN youth. The mnemonic represented five key scenarios as follows:

1. Say "no"
2. Tell a joke
3. Avoid the conversation
4. Remind others of harms
5. Share other plans

After the presentation was over, youth were equipped with the mnemonic to remember and given a chance to practice refusal strategies themselves. In addition to the presentation, organizers of this activity prepared cards with scenarios for youth to be able to refuse tobacco using the strategies they learned. Youth paired up with partners and practiced back and forth, going beyond just listening to actually practicing the strategies and interacting with one another in realistic situations. The creation and presentation of these strategies by young adults within the local California Native community proved essential, as there was positive feedback from attending youth via pre- and post-program surveys.

Modern Marketing Presentation

In preparation for the Youth Summit, staff members of one of the tribal tobacco programs were motivated to talk about the ways in which tobacco and vaping companies market their products online and on social media, places where youth are largely present and active. This came after a real-life experience in which a young family member of the staff saw an ad on the popular platform Instagram promoting use of a melatonin vape for its purported ability to help those who have a hard time falling asleep. This was just one instance of a young person seeing such content online, but it was enough to make it clear that it is ubiquitously being exerted onto the youth. A presentation was made to list some of those marketing tactics and what it could look like online. Some of the topics that were mentioned in the presentation were:

- Greenwashing: a devious tactic used by some large companies to appear environmentally conscious when in reality their production further pollutes the environment (de Freitas Netto et al., 2020; Houghton et al., 2018).
- Melatonin vapes: a device purported to help with insomnia, but in a way that could be damaging to the lungs, as melatonin is normally ingested (King, 2020).
- Social media influencers and brand deals involved in advertising vaping and smoke devices, especially flavored ones, to their mostly young audiences (Kong et al., 2019; Vassey et al., 2022).

Other brief topics included emerging health consequences of tobacco use, what tobacco products are and are not approved by the Food and Drug Administration, and the misleading information about vapes on product websites. Gladly, much of the audience seemed to be engaged, especially regarding the topics about which they didn't know much previously.

Table 1
Youth Summit 2021 activities

Coalition	Activity	Goals	Impact
Coalition Member #1 Youth Advisory Council	Ice breaker	♦ Prepare participants for the day through activities to increase engagement and comfortability with other participants	♦ Youth were more engaged during other coalitions' presentations
TUPE	Guest speaker	♦ Educate participants about medicinal plants	♦ Traditional forms of plant healing and ceremony
Elder of Coalition #2	Cultural activity	♦ Share the cultural importance of traditional medicine pouches	♦ Youth created their own medicine pouch
Coalition Member #3	Tobacco waste pick-up	♦ Educate youth and volunteers on what tobacco waste products look like ♦ Demonstrate safe pick-up procedures and conduct waste pick up	♦ Covered 30,146 square feet ♦ Found 483 various tobacco waste products
Coalition Member #4 Youth Program	Youth skit	♦ Inform participants about the dangers of smoking	♦ Displayed poster demonstrating toxins found in cigarettes

Table 2
Youth Summit 2022 activities

Coalition	Activity	Goals	Impact
Coalition Member #1	Guest Speaker	♦ Commercial vs. ceremonial tobacco	♦ Cultural understanding, modern use implications
Coalition Member #4	Youth skit, traditional tobacco use	♦ Share Southern California tribal stories about traditional tobacco	♦ Cultural education through storytelling
Coalition Member #5	Modern marketing tactics	♦ Inform how tobacco companies market their products and image online	♦ Increased awareness and judge tobacco or vaping related content anywhere online
Coalition Member #1 Youth Advisory Council	Refusal strategies	♦ Share refusal strategies specific to youth conversations or interactions ♦ Lead activity that allows youth participants to meet youth from other areas and try using refusal strategies	♦ Provided handout for future reference with refusal strategies ♦ Youth participants met new peers and used refusal strategies given different scenarios
Coalition Member #3	Environmental tobacco waste	♦ Educate youth and parents about specific tobacco waste products and their harmful effects on our environment	♦ Provided handout for future reference of tobacco waste products and their harmful effects on our environment

Accounts from Youth Activity Leaders

Joseph, a Youth Advisory Council member, and Refusal Strategies Activity organizer, shares his remarks about the Refusal Strategies Activity:

> As a member of the team that drafted and presented these strategies, I found it important that Native youth hear/learn about important issues in their community from individuals they can relate with. Creating these strategies took time and effort, but needfully so as targeting an audience of Native youth was the main goal. Moreover, being in a position of leadership and collaboration with other programs at the Summit made me hopeful for the direction our communities are heading.

Anthony, a community engagement coordinator, and leader of the Modern Marketing presentation, shares his thoughts on the presentation's impact:

> I was glad I was able to open that door for them so they can do more research on their own and become well versed in how these companies operate for money. It's important that youth and everyone else are aware of these tactics so they can identify and disengage from them.

Justin and Joseph, Youth Advisory Council members, provide their feelings and appreciation for the first Summit:

> As members of the Youth Advisory Council, we saw the importance of allowing younger people to implement education on tobacco prevention. Doing this work establishes early on that using commercial tobacco is harmful, and it helps prevent more youth like us from going down that path. We enjoyed the Summit's sentiment on keeping tobacco sacred, and with that, that we as Natives are sacred. On that topic, we learned about other plants that Native Americans have traditionally used, giving us a great sense of pride in the traditional ways of our ancestors and relatives today, allowing us to see the great disparity it has with commercial tobacco. We also enjoyed the closing activity where attendees participated in cleaning up cigarette butts and other trash from the land. It was a moment to take care of the land and acknowledge it with respect as the home of Indigenous peoples since time immemorial.

Justin and Joseph, Youth Advisory Council members, share their contributions to the second Summit:

> I felt great about a second Summit happening, showing me that the work over the years has made it possible for an impactful event like this to happen annually. Themes that were touched on in the first Summit, such as the bodily harms of tobacco or environmental damage of tobacco products, were important to address again. I found value in other ways to address commercial tobacco, such as stories on the traditional use of tobacco that tie youth closer to their identity as Natives and the relationships we share with plants of this Earth. It makes traditional tobacco more accessible to youth who have otherwise been saturated with media advertising commercial products. I felt that the presentation to educate youth about ways to learn strategies to refuse commercial tobacco and an activity to practice themselves was beneficial. As an older youth, it made me smile to see younger ones be able to know about this so early on, hopefully making the Summit even more impactful.

DISCUSSION

The SCTTC members all recognized that informing youth about tobacco-related harms and actively working to reduce and prevent those harms are essential to maintaining resilient and healthy AI/AN communities. With limited funds, and the potential for competing programs, the coalition members wisely chose to combine their efforts. Healthy community-based coalitions bring people together, expand resources, and achieve better results than any one organization could achieve (Butterfoss & Kegler, 2012). Coalitions have been shown to be effective in promoting tobacco prevention and cessation (Kuhn et al., 1999), in particular managing funding challenges (Carver et al., 2007) and conforming to and reflecting values, structures, and social-political contexts unique to specific communities (Lee et al., 2012). While there are reports of tribally specific coalitions addressing other domains of health and wellness [e.g., emergency response (Tall Chief et al., 2014), food sovereignty (Frank-Buckner & Coalition, 2019), and physical activity (Pargee et al., 1999)], there are few public reports on ways that tribal tobacco coalitions meet the unique interests and circumstances of their communities.

By working together, the coalition in our report has been able to establish and build momentum for a comprehensive, tribally specific tobacco prevention program. Like the State of California's comprehensive tobacco prevention program, the coalition actively works toward denormalizing smoking and vaping, restricting the availability of smoking and vaping products,

and educating the community about harms related to smoking and vaping. Different from the state's tobacco prevention program, the SCTTC members collectively provide unique emphases and interests in differentiating ceremonial and cultural tobacco from commercial mass-produced tobacco by affirming and educating the community about the value of ceremonial cultural tobacco, while also educating about and rejecting the commercialization of the sacred tobacco plant. The coalition also educates and takes action to affirm the value of reclaiming and strengthening the tribal communities' connections to the earth and water by meeting on tribal lands and taking steps to learn about and reduce environmental harms causes by commercial tobacco products. Bringing the people together on the sovereign lands of the member tribes recognizes and affirms tribal sovereignty, as well as strengthens the ties among and between tribes that have sustained the people over time and through many challenges. The coalition focuses on youth as the most critical age group in efforts to prevent tobacco uptake as well as uplift youth as members of the community to be cherished, supported, and guided into leadership with the help of elders and other adults from the community. The coalition members all recognize the importance of families in potentially contributing to the smoking and vaping risks for youth, but are also a part of the solution to the commercial tobacco epidemic. Coalition programs invite family members to make their homes smokefree and to take steps to reduce and quit smoking for the sake of their children as well as their own health and wellbeing. Finally, the coalition activities engage with tribal leaders in recognition of sovereignty, on tribal lands, and connecting youths to their cultures and histories. In these ways, and unlike other local or state tobacco programs, the coalition's tobacco prevention is not only comprehensive but also holistic, tribal-family-centered, assets-based, and strengths-building.

With programming and events designed for Native youth, it is beneficial and proactive to include the knowledge of youth themselves in the planning and overall delivery of education on the topic of commercial tobacco. Commercial tobacco has potential to harm them more substantially than other age groups. Through the coalition and with the help of older members of the community dedicated to commercial tobacco prevention, youth are able to uniquely participate in teaching youth like themselves about commercial tobacco and in turn receive different perspectives from collaborating youth organizations. This creates a strong relationship that builds the more that coalitions work together, developing a precedent for Native youth to engage in commercial tobacco prevention that is for their benefit when it is enhanced by their valuable perspectives. Collaborating with Native youth across tribes also contributes to an overall sense of

unity that allows youth to foresee collaborations in the future regarding community health and wellness. Youth participation is a step in the right direction that keeps Native nations in productive conversation in a noteworthy regard, that is, among their generations of youth that will take charge and responsibility for their tribes in the future.

CONCLUSION

The SCTTC joined forces and organized various community activities and events, effectively mobilizing Southern California Indigenous communities to reduce commercial tobacco use. The multiple programs that are part of this larger effort ensure that our networking and visibility in the community is growing. Although each program within the coalition may have slight differences in project aims, this unique alliance is united by their dedication to community-based efforts and youth-led interactive interventions. Given the success of the first and second annual youth Summit, the SCTTC proudly views youth as a catalyst for positive change in Indigenous communities.

The results of the SCTTC's collaborative events like the youth Summit serve as an example and guide for other tribal communities across the country. Forming a coalition like the SCTTC would foster new connections, expand outreach efforts, and create larger community impacts. The SCTTC's commitment to youth-led activities and programming is another recommendation for other tribal communities. From its creation, the coalition relied on youth advisory councils and youth leadership for input on programming. This method of youth designing programming for youth ensures a sense of heightened ownership and higher youth engagement, which in turn instills confidence in their own understanding, comfort in learning from their peers, and most importantly, the domino effect of sharing their knowledge with others in their community. Coming together as a community and understanding the multiple relationships with commercial tobacco, whether youth learn how to refuse commercial tobacco or adults begin their journeys to stop using commercial tobacco, is crucial to healing together. Collaborating on commercial tobacco prevention is important because the harms of commercial tobacco span many generations, with the most profound impacts being on future generations.

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CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

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AUTHOR INFORMATION

Chase Kornacki (Navajo), BS, is the Project Coordinator for the Southern California American Indian Health Center (SCAIHC; pseudonym) in Southern California (The Tribal IRB requests that the specific community and organization not be named).

Justin Rodriguez (Luiseño, Haliwa-Saponi), BS, is a Research Assistant for the SCAIHC in Southern California.

Joseph Rodriguez (Luiseño, Haliwa-Saponi), BS, is a Research Assistant for the SCAIHC in Southern California.

Anthony Hurtado (Luiseño, Tohono O'odham), BS, was the Community Engagement Coordinator of a California Tribal Tobacco Program in Southern California.

Juliet P. Lee, PhD, is a Senior Research Scientist at the Pacific Institute for Research and Evaluation in Berkeley, California.

Roland S. Moore, PhD, is the Center Director and Senior Research Scientist at the Pacific Institute for Research and Evaluation in Berkeley, California.

Lisa Brucks, MPH, is the Research Director at the SCAIHC in Southern California.

Jennifer Geisler (Kumeyaay), RN/BS, was the Project Director of a California Tribal Tobacco Program in Southern California.

Valerie Boyle (Kumeyaay) was the Project Director of a California Tribal Tobacco Program in Southern California.

Diana Martinez (Kumeyaay) was the Project Director of a California Tribal Tobacco Program in Southern California.

Ami Admire (Luiseño) is the Executive Director of ‘ataaxum Pomkwaan in Southern California.

Monah Hanson (Choctaw), MSW, was the Project Director of a California Tribal Tobacco Program in Southern California.

Rachel Reif (Shoshone), MEd, was the Community Engagement Coordinator of a California Tribal Tobacco Program in Southern California.

Michelle Nielson, MEd, was the Project Director of a California Tribal Tobacco Program in Southern California.

Camille Henry-Walford, MPH, was the Community Engagement Coordinator of a California Tribal Tobacco Program in Southern California.

Daniel J. Calac (Luiseño), MD, is the Chief Medical Officer of the SCAIHC in Southern California.

Development of a Diabetes Prevention Intervention Utilizing Gardening for Urban American Indian/Alaska Native Adults Receiving Mental Health Treatment: A Focus Group Study

Daniel Dickerson (Inupiaq), DO, MPH, Melanie Cain (Santa Clara Pueblo & Jicarilla), PhD, and Belinda Najera (Non-registered San Carlos Apache), PsyD

Abstract

Gardening for Health Utilizing Traditions (GHUTS) is a new diabetes prevention intervention for urban American Indian and Alaska Native (AI/AN) adults receiving mental health treatment in Los Angeles County. The two main objectives of this study are to: 1) further our understanding of diabetes prevention and the role of gardening for urban AI/AN adults receiving mental health treatment and 2) finalize the development of GHUTS. To inform the feasibility of the intervention and to gain perspective, three focus groups were conducted among urban AI/AN adults receiving mental health treatment (n = 7), providers who serve urban AI/AN people (n = 7), and the GHUTS Community Advisory Board (n = 5). Three overarching conceptual themes emerged: 1) Diabetes is an important issue among urban AI/AN people receiving mental health treatment, 2) AI/AN traditional practices have an important role in diabetes prevention among urban AI/AN adults receiving mental health treatment, and 3) Gardening is beneficial for AI/AN people. Feedback on the GHUTS curriculum featured diabetes education, cultural elements, concerns specific to AI/AN people in Los Angeles County, cooking, physical exercise and diet, prayer and mindfulness, community sharing, and field trips. This study highlights the process of developing a community-grounded diabetes prevention intervention for urban AI/AN adults receiving mental health treatment.

INTRODUCTION

American Indian and Alaska Native (AI/AN) people are more likely to be diagnosed with type 2 diabetes mellitus (T2DM) compared to other ethnic and racial groups in the United States (CDC, 2018; USDHHS, n.d.). In addition, AI/AN people were 2.3 times more likely to die from diabetes compared to non-Hispanic whites in 2018 (UIHI/SIHB, 2013). Compared to general population samples, urban AI/AN people demonstrate higher rates of diabetes (Jacobs-Wingo et al., 2016; Katon et al., 2005). Studies demonstrate a relationship between T2DM and co-occurring mental health issues (Carson et al., 2015; Boyko et al., 2010; Goodwin & Davidson, 2005; Grigsby et al., 2002). Although the majority of AI/AN people reside in urban areas (USCB, 2010), there are few evidence-based diabetes prevention interventions available for urban AI/AN adults receiving mental health treatment.

Psychiatric disorders are a risk factor in the development of T2DM and may accelerate the onset of T2DM complications (Anderson et al., 2001; de Groot et al., 2001; Molife, 2010). For example, among patients with T2DM, minor and major depression is strongly associated with increased mortality (Katon et al., 2005). Other research findings indicate a relationship between psychological trauma and T2DM, including the sharing of biological origins (Boyko et al., 2010; Goodwin & Davidson, 2005; Grigsby et al., 2002; Moulton et al., 2015). Concerning trends regarding this association have been identified among AI/AN people (Walls et al., 2014; Carson et al., 2015). In a study conducted among a sample of Indigenous adults diagnosed with T2DM in two Indigenous reservation communities, reports of greater numbers of mental/emotional health problems were associated with increases in self-reported hyperglycemia (Walls et al., 2014).

Historical trauma provides context as it relates to health disparities and urban AI/AN people. Historical trauma, including forced relocations from Native lands, numerous broken treaties, forced placement into boarding schools, and laws made to prohibit the use of spiritual practices contribute to disrupted AI/AN communities and numerous health disparities among AI/AN people (Duran & Duran, 1995; Johnson, 2006). The Relocation Act of 1954 has been

postulated as a root cause of various health disparities experienced by urban AI/AN people (Campbell & Walters, 2006). The relocation of AI/AN people to large urban areas has been suggested to affect their cultural, social, familial, and community support networks within urban areas (Weaver, 2012). Relocation placed AI/ANs in potentially stressful, urban environments where traditional ways of life and diet were non-existent. Due to decreased opportunities to participate in gardening and traditional activities, struggles to adjust to urban life led to higher poverty rates and decreased opportunities for engaging in physical exercise (Pollak, 2021). As a result, disruptions in living a healthy and balanced life in urban areas have contributed to an increase in diabetes (Pollak, 2021; McLaughlin, 2010). Within urban areas, access to cultural and social support systems may be more challenging for AI/AN people than in rural or tribal areas (Clements & Rhynard, 2018), resulting in fewer opportunities to engage in culturally centered, health-promoting activities. This is important to recognize since a growing body of research demonstrates the robust positive effect social support has on health (Holt-Lunstad et al., 2010; Nyqvist et al., 2013) and T2DM management (Bardach et al., 2011; Nicklett et al., 2013).

Traditional practices historically utilized by AI/AN people, such as gardening, drumming, dancing, beading, sage preparation, and basket making have been proposed by AI/AN community leaders in California as showing promise in decreasing the burden of health disparities among AI/AN individuals in California (Dickerson et al., 2012; NAHC, 2012). However, the effects of historical trauma, including removal from traditional lands and relocation to urban areas, have disrupted this traditional practice. Many AI/AN communities are reclaiming traditional foods as part of a wider effort to “decolonize” their diets and ways of caring for self and community to repair the economic and cultural damage inflicted by European Americans (Mertens, 2021). The use of gardening has been gaining popularity among AI/AN people (Lombard et al., 2006), within urban settings (Palar et al., 2019), and within diabetes prevention programs focusing on physical activity (Hamasaki, 2016). Due to tribal variation within urban areas, inclusive interventions tend to focus on common values amongst Native people, placing emphasis on community, cultural engagement, and nature (SAMHSA, 2016).

Gardening as an AI/AN traditional activity may have benefits in the four domains of wellness, recognized by many AI/AN tribes through the Medicine Wheel, including the spiritual, physical, emotional, and mental domains of wellness (Tanner et al., 2022). Thus, gardening presents the potential to benefit *whole person health*. Gardening addresses physical health by emphasizing eating a well-balanced diet and increasing physical activity level. It recognizes the emotional wellness domain by providing the opportunity to engage in a mindful activity which fosters increased awareness of one's mood or experience while engaging in gardening. Mental health is addressed by promoting self-efficacy, competence, and hope in managing diet and chronic health issues. Gardening helps to enhance spirituality by offering the opportunity to connect with the land, honor ancestors, and potentially contribute to the betterment of the community.

Gardening for Health Utilizing Traditions (GHUTS)

Gardening for Health Utilizing Traditions (GHUTS) is a new diabetes prevention intervention for urban AI/AN people receiving mental health treatment within the Los Angeles County Department of Mental Health (LACDMH). GHUTS was inspired by community members and clients of an LACDMH agency who formed a client-run garden in March 2017. This garden was led by a client advisory board and incorporated gardening activities and guest speakers to increase client socialization, knowledge about gardening, and integration of culturally traditional foods. This garden was a quality improvement project within the Transforming Clinical Practice Initiative (TCPI), an initiative implemented by LACDMH. Tenets of TCPI guided the methodology for the implementation of GHUTS, such as utilizing the Patient Health Questionnaire (PHQ-9) and Body Mass Index (BMI) to assess both mental and physical health. As the TCPI was implemented across the larger Department, there was increased administrative support among the larger mental health system for a smaller clinic to implement a garden on site, along with a non-Westernized approach for diabetes prevention among urban AI/AN people receiving mental health services in Los Angeles County.

GHUTS utilizes elements of three theoretical constructs to inform the development of this program. First, we use elements of the CREATION Model (Anderson et al., 2020). This model

helps people to implement and recognize needed health behavior changes. It recognizes the relationship between chronic diseases and lifestyle factors, including nutrition and physical activity. It recognizes *whole person health* and describes a wellness model that complements AI/AN definitions of wellness, helping to enhance coping skills and mental well-being.

We also use elements from the Indigenous Standpoint Theory (Cox et al., 2021). This approach integrates Indigenous knowledge by incorporating holistic, contextualist approaches that help to combat the effects of colonization linked to structural inequalities for AI/AN communities. This theory recognizes the wide diversity of Indigenous knowledge and cultural practices as well as general characteristics relating to Indigenous traditions. We also utilize elements of the National Health Service Diabetes Prevention Program (NHS-DPP). This theoretical construct influences behavioral change intentions including changing diet and activity behaviors (Hawkes et al., 2020).

Utilizing community-based interests and procedures and the three theoretical constructs, we formulated an initial outline of GHUTS that builds upon the effectiveness of culturally responsive education to help create healthy lifestyles and behavioral change (see Table 1). This program aims to improve physical, emotional, spiritual, and mental health outcomes, and to achieve adequate glucose control.

The preliminary GHUTS intervention consists of eight sessions (See Figure 1). These workshops provide a fundamental template and may be adapted for each tribal community per their local gardening and cultural traditions. Each session is 1 hour in length. The first half-hour of each workshop is focused on education addressing fundamental knowledge/facts of diabetes, gardening basics and instructions, AI/AN traditions, and Medicine Wheel education. The second half-hour is comprised of gardening activities and focuses on maintaining and developing a garden in a culturally relevant manner. The program is provided by a gardener/facilitator who has been trained in the GHUTS curriculum, fundamentals of diabetes and mental health disorders, and who is knowledgeable about AI/AN traditional practices.

Table 1
Gardening for Health Utilizing Traditions (GHUTS) intervention outline

Session #	Session Focus	Classroom and Gardening Activities
1	Spiritual focus	Classroom: Introduction to spirituality Gardening activity: Using drumming and prayer to bless the garden in a good way
2		Classroom: Diabetes education, "A river runs through us" introduction Gardening activity: Introduction to gardening
3	Physical focus	Classroom: Good meat video (focusing on traditional diet and the buffalo) Gardening activity: Learn how to plant traditional plants at home
4		Classroom: AI/AN traditional diets, blood sugar education Gardening activity: Elder guest teachings and gardening
5	Mental focus	Classroom: Introduction to yoga for stress reduction and coping Gardening activity: Reconnecting with Creator and gardening activities
6		Classroom: Reconnecting with community for support Gardening activity: Connecting gardening to your mental well-being
7	Emotional focus	Classroom: Connecting with plants for emotional well-being Gardening activities: Sacred Medicines & planting for wellness for enhancing mood
8		Classroom: Socially connecting with others for emotional well-being Gardening activity: Elder guest teachings and gardening

Note. Each session is 1-hour and consists of a ½ hour classroom component held outdoors and a ½ gardening activity. Each gardening segment begins with a 5-minute walk.

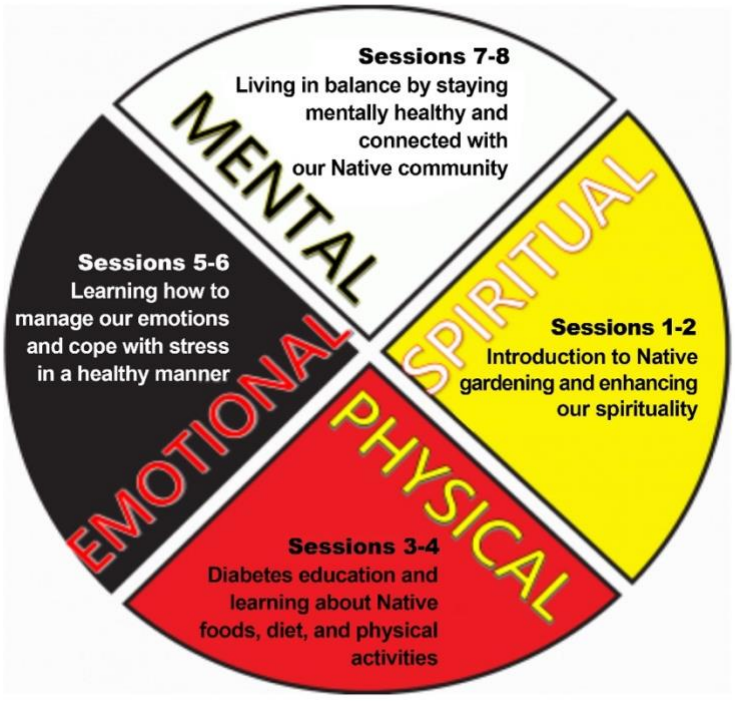

Figure 1. Gardening for Health Utilizing Traditions (GHUTS) Medicine Wheel

Purpose of Study

The purpose of this qualitative study is to further our understanding of diabetes prevention and the role of gardening for urban AI/AN adults receiving mental health treatment and to finalize the development of GHUTS by addressing the four domains of health (physical, emotional, mental, and spiritual) and social connectedness to help address potential thematic outcomes of this intervention. This information was retrieved from focus groups conducted among urban AI/AN adults receiving mental health services, physical and mental health providers who serve urban AI/AN adults, and the GHUTS Community Advisory Board (CAB).

METHODS

Study Site

Los Angeles County is the site for this study. The U.S. Census in 2019 estimated that the Los Angeles County population has the largest concentration of individuals claiming to fully or partly be of AI/AN descent (L.A. Almanac, n.d.). Thus, this setting serves as an appropriate venue to address diabetes prevention for urban AI/AN adults receiving mental health services. Focus groups were conducted at a LACDMH-funded agency that provides services primarily for AI/AN people. Since 1987, this clinic has provided comprehensive mental health services to AI/AN community members, families, and children throughout Los Angeles County.

Design

Three focus groups were conducted among (1) urban AI/ANs receiving mental health services in an urban area in southern California, (2) physical and mental health providers serving urban AI/AN adults, and (3) the GHUTS CAB. The purpose of the focus groups was to further our understanding of diabetes prevention and the role of gardening for urban AI/AN adults receiving mental health treatment and to finalize the development of GHUTS. Inclusion criteria for urban AI/AN adults with mental health disorders consisted of those currently receiving services through the LACDMH, self-identifying as AI/AN, being at least 18 years old, and reporting no psychiatric

conditions that would preclude focus group participation. We recruited urban AI/AN adults receiving mental health treatment and physical health and mental health providers via flyers in mental health service provider agencies in a large urban area in California. Eight AI/ANs responded, all of whom met the eligibility criteria. The group of multidisciplinary providers included certified alcohol and drug counselors, social workers, counselors, psychologists, and physicians with experience providing medical or mental health services to urban AI/AN adults. Five AI/AN cultural leaders who have expertise in the health needs of urban AI/ANs were invited to serve on the CAB. These individuals are well-respected community leaders who have substantial knowledge and/or expertise regarding AI/AN gardening and are recognized by the AI/AN community for their understanding of health issues among AI/AN people.

Each urban AI/AN adult receiving mental health treatment was provided with a $10 gift card for participation and an additional $25 gift card was provided via a raffle. For the provider focus group and the CAB focus group, facilitators raffled one $25 gift card for each focus group. All participants provided oral consent. The focus groups were audio recorded, and recording began following participants' determination of pseudonyms. The LACDMH Human Subjects Research Committee (342) approved this study, and this study was determined as IRB-exempt by the University of California, Los Angeles (UCLA), Institutional Review Board (#18-000540). Focus groups were conducted in February, June, and July 2020.

Participants

Table 2 shows the demographic characteristics of the focus group participants. Females constitute most urban AI/AN adults receiving mental health services (71%), physical health/mental health providers (100%), and the GHUTS CAB (60%). Among the three focus groups, the average age ranged from 38.3 to 51.8 years. All clients receiving mental health treatment self-identified as AI/AN. Also, 57% of providers and 80% of GHUTS CAB identified as AI/AN. Other ethnicities/races reported across focus groups included White or Caucasian, Asian or Asian American, Latinx, and Other.

Table 2.
Urban American Indian/Alaska Native (AI/AN) adults, providers, and Gardening for Health Utilizing Traditions (GHUTS) Community Advisory Board (CAB) characteristics

	Urban AI/AN adults (n=7)	Providers (n=7)	GHUTS CAB (n=5)
	M	*M*	*M*
Age, years	48.1	51.8	38.3
	n	*n*	*n*
Sex assigned at birth			
Male	2	0	2
Female	5	7	3
Intersex/other	0	0	0
Transgender			
Yes	0	0	0
No	7	7	5
Race/ethnicity			
AI/AN	7	4	4
Asian or Asian American	0	1	1
Black or African American	0	0	0
Latinx	1	2	1
White or Caucasian	1	0	1
Other	0	1	0

Data Collection

We conducted the first focus group among urban AI/AN adults with mental health disorders, in person, at a mental health clinic. The next focus group, conducted among providers and the GHUTS CAB focus groups, were conducted virtually due to COVID-19 restrictions. The lead author, an Alaska Native licensed psychiatrist, employed by LACDMH who has worked with the AI/AN population for the last 16 years, led the three focus groups. The second author, program head at the LACDMH-funded agency, and the third author, a licensed psychologist at the LACDMH-funded agency, co-facilitated the focus groups. At the introduction, facilitators reviewed limitations of confidentiality when discussing information as a group and discussed steps investigators would take to maintain anonymity (i.e., use of pseudonyms). The facilitators informed all participants that the purpose of the focus groups was to assist in the development of GHUTS protocol to explore multiple perspectives.

To inform the development of this program, we asked questions focusing on creating a culturally responsive intervention by obtaining feedback about traditional practices, physical health, emotional and mental health, and spirituality and the role of social support to help prevent diabetes and achieve overall health and wellness. We sought to obtain additional information regarding specific gardening interests and choices of participants as well as logistical considerations to help with enhancing the ease of workshop attendance. Following an overview of the GHUTS protocol, focus group questions focused on participant perceptions of diabetes among urban AI/AN people receiving mental health treatment, service needs, the role of AI/AN traditional practices in diabetes prevention programs, the role of gardening in diabetes prevention for urban AI/AN adults receiving mental health treatment, and logistical considerations.

During the focus group conducted among urban AI/ANs receiving mental health services, a wellness journal published by the Indian Health Service (IHS) was presented to gain insights into the usefulness of the journal as part of the GHUTS curriculum. The journal, "A River Runs Through Us," was published by IHS Division of Diabetes Treatment and Prevention (IHS, n.d.). and includes daily messages, a section to identify feelings and thoughts, and a place to track one's self-care activities on their wellness journey.

We conducted the first focus group among urban AI/AN adults receiving mental health services, followed by providers and then the GHUTS CAB. This order was intentional to build upon feedback starting with client perspectives and leading to a final discussion among the GHUTS CAB. Based on feedback from the urban AI/AN adults receiving mental health services, we developed open-ended questions for AI/AN providers such as, "What are your thoughts about current approaches to consumers diagnosed with both diabetes and mental health concerns?" and "As a treatment provider, how important is it that you provide traditional practices along with interventions taught in your training?" As new issues and suggestions were raised by participants, we incorporated their feedback into subsequent focus group discussions. Each focus group lasted approximately 2 hours.

Data Analysis

Facilitators took notes during the focus groups and audio recorded all focus groups. Transcripts and audio files were reviewed for categories, identifying patterns and themes across the focus groups. All authors reviewed the notes and audio tapes for completeness and accuracy. A code list was developed, guided by the focus group topics (e.g., gardening, traditional practices, and depression). All authors then discussed the overarching themes until reaching consensus. Due to technical issues, the full recording of the focus group conducted among urban AI/AN adults receiving mental health treatment was not retrievable. Feedback and quotes retrieved from this focus group were retrieved from notes taken during the focus group. We do provide quotes from clients regarding diabetes education, physical exercise/diet, and prayer/mindfulness. For additional topics raised by urban AI/AN adults receiving mental health treatment, authors provide summaries derived from notes taken during their focus group.

RESULTS

Three overarching conceptual themes emerged across the focus groups including 1) Diabetes is an important issue among urban AI/AN people receiving mental health treatment, 2) AI/AN traditional practices have an important role in diabetes prevention among urban AI/AN adults receiving mental health treatment, and 3) Gardening is beneficial for AI/AN people. Feedback on the GHUTS protocol focused on diabetes education, cultural elements, concerns specific to AI/AN people in Los Angeles County, cooking, physical exercise and diet, prayer and mindfulness, community sharing, and field trips. Results obtained help the researchers understand how to enhance physical, spiritual, mental, and emotional health within the GHUTS protocol.

Overarching Conceptual Themes

Diabetes is an important issue among urban AI/AN people receiving mental health treatment. Across focus groups, diabetes was an important issue among urban AI/AN adults receiving mental health services in urban areas. For example, one provider stated, “I think that this

study (developing a diabetes prevention intervention) is extremely important." Providers further emphasized the inter-relationship of mental health symptoms and diabetes. For example, one provider stated,

> I'm thinking of a patient who has very uncontrolled diabetes and is on insulin and is wondering why he's feeling more depressed and so I try to explain to him, well these things are very interconnected…but I think when people are feeling a little doubt about their mental and physical health, programs like this (GHUTS) are crucial to help reframe it in a way that is culturally important to them.

The potential benefits of building an AI/AN community were emphasized through the development of a diabetes prevention intervention. For example, one provider stated, "I grew up where they have those (diabetes) programs, but it seems like a really positive thing and I think too that way to be connected and build a community."

AI/AN traditional practices have an important role in diabetes prevention among urban AI/AN adults receiving mental health treatment. Numerous respondents stated that it is critical to incorporate AI/AN traditions in diabetes prevention interventions for urban AI/AN adults receiving mental health treatment. One CAB member stated, "I just think it's very important for the traditional practices to be included because we do have a lot of our own traditional Medicine but also just being very present with what we are dealing with as far as when it's our physical and our mental health." A provider mentioned an interest of AI/AN people learning more about AI/AN traditional ways, but of not being aware of opportunities to learn more about their culture.

> There's a lot of curiosity that our urban Natives have…(and) no way of finding that out, sometimes they don't know what Native American Alaska Native resources that they have here in the city, here in the county…cause some of them don't like meds, they don't like the pills, they don't like the side effects so just emphasizing

> the traditional ways you know, looping together mind, spirit…we might be able to help them.

Also, recognizing various levels in cultural identity such as the importance of addressing spiritual practices, and tribal history were mentioned by focus group participants. Urban AI/AN adults receiving mental health treatment expressed interests with sage/smudging ceremony, prayer, medication, healing crystals, and traditional herbs and Medicines. Urban AI/AN adults receiving mental health treatment also expressed interest in AI/AN traditional ways of handling stress (no specific quotes available).

Gardening is beneficial for AI/ANs. The benefits of gardening for AI/ANs living in urban areas were expressed across focus groups. For example, one provider stated,

> I think it's very important to have a way to be able to connect and think because we are all here in an urban setting, it is difficult to do that, and so a garden is a place where we will be able to do a connection…so, I know for example, we had some of the beans, the tepary beans that are good for reducing diabetes and reducing your sugar intake it's a helpful medicine that comes from my reservation and my background…so I think it's a way to connect.

Regarding gardening, one CAB member stated, "Once you get your hands in soil, you really feel, you really feel Mother Earth, and the connection between and what the ground can provide."

Feedback on GHUTS

Feedback on the GHUTS intervention focused on diabetes education, cultural elements, concerns specific to AI/AN people in Los Angeles County, cooking, physical exercise and diet, prayer and mindfulness, community sharing, and field trips.

Diabetes Education. Urban AI/ANs adults receiving mental health services expressed the desire to learn more about diabetes. Clients expressed wanting to receive educational materials

that were understandable and easy-to-read. They also stated that due to poor eyesight among some individuals with diabetes, materials provided to participants must be easy to read (e.g., large font, pdf online). A desire to learn more about nutrition was expressed by urban AI/AN adults receiving mental health treatment. For example, one participant stated, "Well education…basic nutritional understanding of simple ways, you know little simple foods that we can cut back on and also natural herbal teas and plants that we can use that are simple little things that we can begin (with)."

Several urban AI/AN adults receiving mental health treatment suggested that the GHUTS curriculum includes education to understand nutrition labels. For example, one participant stated, "Education with how to read labels, a lot of things say sugar-free or that they're healthy for you but if you read the label, umm, I think a lot of times they're not actually healthy for you."

Regarding "A River Runs Through Us," providers stated that using this journal can help participants keep track of their diet, exercise, and blood sugars throughout the program. For example, one provider stated, "That's an amazing idea that we can even include what they're designing for their physical activities, for their exercise. When there is a pad there, then everything's gonna be in one place."

Cultural elements. Acknowledgement of the sacredness and spiritual meaning of the garden was emphasized. A CAB Member stated:

> Back home (tribal community), they do have a big ceremony to bless the ground and ask Creator to help us to grow healthy food, and nourishment and for our education…I think if we did that, if we had ceremony, when it comes to garden…maybe we can incorporate that.

Participants also provided feedback regarding the garden design and involvement of elders in the gardening activities. For example, one CAB member stated:

> Were participants going to have a say in the design of the garden space? ... I know that Native gardeners have done Medicine Wheel designs to kind of keep like a lot

> of the Indigenous plants on one side…cared for differently than the other, than what might be added to it.…

Urban AI/AN adults receiving mental health treatment emphasized the importance of outreaching to other reservations to learn more about traditional foods and what their Native families eat. They emphasized the importance of learning more about traditional diets and how to utilize the garden, cooking, and physical exercise to live healthier lives.

Concerns specific to AI/AN people in Los Angeles County. Creating a culturally appropriate community garden specifically for AI/AN people in Los Angeles was identified by participants as important. One provider stated, "specific plans for specific times of the year" should be considered when selecting plants to account for distinct levels of sun exposure needed for identified plants to germinate.

At the current clinical site, it was expressed that being outdoors in Los Angeles would be the most appropriate space for the educational component of GHUTS. One provider stated:

> I think being stuffed up in a room with other people is uncomfortable, for whatever reasons I have reservations about being inside. So, I think it's just being closer to nature and being part of the garden where you want them to feel connected.

Instructions for developing one's own personal garden at home were suggested for participants residing in the Los Angeles area. One provider shared a story of gardening at home in another urban area:

> I have a cousin who is in (another large urban area) and she lives in a little tiny apartment, but she grew…a little kind of balcony garden that she grew with just, she got soil and she cut, um, plastic jugs in half and she had tomatoes and cucumbers and peppers and all kinds of things growing in them. So, I think it could be pretty non-expensive for a lot of people.

Cooking. Learning how to cook traditional, healthy foods was emphasized for urban AI/AN adults receiving mental health treatment. Suggestions were made to utilize a kitchen within the clinic to demonstrate basic cooking techniques. One CAB member stated:

> You find joy (in cooking) …and you know it's very healthful, in the traditional way, we really don't fry anything, we roast or put in an oven… the traditional way of cooking you put things together in the adobe oven. Those things that need more heat go on the top…and teaching these things as we are cooking.

Physical exercise and diet. Participating in physical activities and learning more about eating a healthier diet was emphasized across focus groups. Assessing and recognizing everyone's physical abilities and limitations was asked about by one CAB member: "If someone is not able to do that [specific physical exercise activity], is that like taken into consideration? Like if they have accessibility issues or any sort of disability, limiting their mobility?" One provider recommended a stepwise approach to exercise: "I feel that it would work if we keep it simple and basic at first (intensity of exercise/physical activities)…maybe you have a bum knee, you can't do walking-only 10 minutes…give them options what they are going to do, and then they can design their own."

Urban AI/AN adults receiving mental health treatment expressed the importance of learning more about ways of eating healthier and being more physically healthy. One urban AI/AN adult receiving mental health treatment stated:

> Well education, education through, I don't know games or something of that nature where the community can be involved and you can teach, teach… basic nutritional understanding of simple ways, you know little simple foods that we can cut back on and also natural herbal teas and plants that we can use that are, simple little things that we can begin.

Prayer and mindfulness. The importance of addressing spirituality was highlighted across focus groups. The incorporation of prayer and mindfulness were suggested for the GHUTS intervention. One provider expressed the benefits of tai chi and yoga: "In a very focused activity like tai chi or yoga where you are following certain protocol to be able to gain the benefits of relaxation, mindfulness…healing, so I think it's a great, wonderful idea." Another provider stated:

> I think it's really good cause it's like grounding and soothing because prayers…will lower depression, it creates hope and faith, and grounding, it keeps us safe in our mind, it can change our perception which will lower anxiety and depression…and schizophrenia psychosis.

Urban AI/AN adults receiving mental health treatment also expressed interest in connecting spiritually. Urban AI/AN adults receiving mental health treatment expressed the importance of providing blessings and giving back to their AI/AN community. They expressed the importance of connecting with the pow-wow circuit and other agencies.

Community sharing. Sharing the program and outcomes of GHUTS were also suggested. For example, one CAB member stated:

> I would like some of the outcomes for new clients, new families coming into our agency and say here is something the community put together. Here are their gardening highlights, some foods that they learned to make using healthy options, healthy living skills, I would like to resource back to it.

Urban AI/AN adults receiving mental health treatment stated that having the garden on the clinical site would facilitate "bringing people together." They stated that starting a garden club and creating organizational duties and activities for the garden would help to strengthen the sense of community.

Field trips. Field trips to local farms and other places where participants could harvest plants were suggested by focus groups participants to learn more about the benefits of gardening. One provider recommended field trips to nature settings: "An environmental walk, somewhere in a nearby forest, I don't think people go to the mountains that much. I think that's a nice place, they can see eagles and native plants, and yah, like a nature walk." Another provider suggested field trips to nearby reservations.

DISCUSSION

Results from this study fill a critical gap in the literature regarding the development of an integrated, culturally centered diabetes prevention intervention for urban AI/AN adults receiving mental health services. Overall, GHUTS was viewed as a potentially beneficial, enjoyable, and educational program that could help prevent the development of diabetes among this population. Participants in this study felt this program could strengthen social connectedness within their urban AI/AN community. The main conceptual themes expressed across the focus groups were diabetes is an important issue among urban AI/AN adults receiving mental health treatment, AI/AN traditional practices have an important role in diabetes prevention among urban AI/AN adults receiving mental health treatment, and gardening is beneficial for AI/AN people. Suggestions for enhancing the GHUTS curriculum focused on diabetes education, cultural elements, concerns specific to AI/AN people in Los Angeles County, cooking, physical exercise and diet, prayer and mindfulness, community sharing, and field trips. These suggestions highlight the need for integrated approaches that address the physical, mental, emotional, and spiritual well-being of this population while tailoring gardening approaches that resonate with AI/AN urban adults in Los Angeles County.

Regarding diabetes education, diabetes was reported as an important issue facing urban AI/AN adults receiving mental health treatment. Providers acknowledged the need for more diabetes education for their urban AI/AN clients receiving mental health treatment. Urban AI/AN adults receiving mental health treatment expressed an interest in learning more about diabetes and

how to manage a healthier diet and lifestyle. However, they report that resources to learn more about diabetes were difficult to obtain within their community. Based on this feedback, we plan to incorporate a "Diabetes 101" educational segment into our manual (in development) that will help participants learn more about diabetes, better manage their blood sugars, and decrease their risk of developing diabetes.

Feedback obtained in this study helped to further our understanding of the level of interest in AI/AN traditional practices and provided us with recommendations regarding cultural elements to be implemented within the GHUTS program. First, utilization of AI/AN traditional practices, including AI/AN gardening, were expressed as having the potential to prevent the development of diabetes among urban AI/AN adults receiving mental health treatment. Participants felt including AI/AN traditional components could help them increase their social connections within their community. However, it was noted that although AI/AN people who reside in urban areas may be interested in learning more about traditional ways, there were few opportunities to learn more about their AI/AN culture. Thus, we plan to utilize an approach that will resonate with urban AI/AN adults from a wide variety of cultural identities and tribal backgrounds by adhering to a protocol built upon fundamental AI/AN ideals of wellness and traditions. In the GHUTS manual, there will be examples of AI/AN traditions as they relate to gardening, plants, and sacred Medicines. We will also plan gardening activities that will help participants learn about AI/AN plants used by local tribes and plants that can be successfully grown in Los Angeles County.

An integrated comprehensive approach for GHUTS to help participants achieve and sustain overall wellness was recommended across focus groups. To help address the physical domain of health, participants felt that incorporating physical exercise, diet, and AI/AN traditional practices would enhance this program. Based on feedback retrieved from this study, we plan to introduce and incorporate physical exercise in a careful and stepwise manner, such as a walking program utilizing mindfulness exercises, to address the physical and emotional domains. We plan to include cooking lessons which focus on preparing healthy AI/AN dishes. We will incorporate a cooking workshop where we will cook dishes, such as Three Sisters Stews, that utilize vegetables participants have grown in their home gardens or on-site. To offer a more personalized experience,

participants will have the opportunity to prepare their own healthy foods using plants they have grown and harvested within this program. The IHS "A River Runs Through Us" journal is a way participants will track their own progress in the program.

To address the mental and emotional dimension of well-being, we plan to incorporate teachings on how to best cope with stress within the GHUTS curriculum. We intend to inform the way in which participation in gardening allows one to socially connect with community members and improve their mental and emotional well-being. We will emphasize the importance of receiving culturally appropriate mental health treatment, including counseling and psychiatric treatment.

To address the spiritual component of well-being, we will incorporate prayer and sage/smudging education. We will provide education regarding the spiritual component of gardening-connecting with Mother earth, the land, and the animals, and will encourage clients to learn more about their own tribal beliefs and teachings.

As recommended, the GHUTS intervention will be tailored specifically for AI/AN adults in Los Angeles County. We plan to raise plants that can grow without much seasonal variation in Los Angeles County due to the consistent weather patterns year-round. Based on feedback retrieved from this study, we plan to provide most of our program outdoors within a large canopy adjacent to the garden. This will help to create less of a "classroom feel," while providing privacy and confidentiality. Furthermore, due to shortages of outdoor space within urban areas, we will teach participants how to create their own balcony garden at home. We will hold community gatherings and coordinate with other local events (e.g., Indigenous Peoples' Day activities) to highlight this program and promote community cohesion within this urban area.

Various limitations exist in this study. First, this study is focused only in one urban area in the United States and is not representative of all urban AI/AN communities and is not generalizable to one specific tribal community. Also, we had fewer quotes from urban AI/AN adults receiving mental health treatment since our audio tape recording from the focus group conducted among this group was not fully retrievable. Despite these limitations, valuable information as it relates to community-based perspectives in the development of a new culturally centered diabetes

prevention program were gathered, which hopefully will result in a well-received and integrated approach.

CONCLUSION

Qualitative data generated from this study helps to finalize the development of an integrated culturally grounded and community-informed program that can help prevent diabetes among urban AI/AN adults receiving mental health treatment in Los Angeles County. Feedback provided by participants in this study aids in the creation of an intervention manual that will address the four dimensions of well-being recognized by AI/AN people, provide valuable educational background and resources, as well as offer ways to help participants track their own goals for living a healthy and balanced life. Work conducted in this study will inform the design of a future study that helps to understand how GHUTS can benefit urban AI/AN adults receiving mental health treatment in Los Angeles County.

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CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

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AUTHOR INFORMATION

Daniel Dickerson (Inupiaq), DO, MPH is an Associate Research Psychiatrist at UCLA, Integrated Substance Use and Addictions Programs (ISAP), and an addiction psychiatrist at a LACDMH-funded agency that provides services primarily for AI/AN people in Los Angeles County, CA.

Melanie Cain (Santa Clara Pueblo & Jicarilla), PhD is a private practice clinician with Blue Joy Psychology and served as Program Head at a LACDMH-funded agency that provides services primarily for AI/AN people in Los Angeles County, CA.

Belinda Najera (non-registered San Carlos Apache), PsyD is a Supervising Psychologist and served as a Clinical Psychologist II at a LACDMH-funded agency that provides services primarily for AI/AN people in Los Angeles County, CA.

Measuring Implementation Fidelity for the Gathering of Native Americans (GONA)

Barbara Aragon (Laguna Pueblo/Crow), MSW, Albert Titman, Sr. (Nisenan, Miwuk, Maidu, Pit River), CADC-II, Julie Fuentes (Hopland Band of Pomo Indians), BA, Crystal Salas (Mescalero Apache/Lakota), Anthony Lopez (Manchester Point Arena Band of Pomo Indians), BA, Ruben Garcia (Manchester Point Arena Band of Pomo Indians), BA, Arianna Antone-Ramirez (Tohono O'odham), BA, Candace Fleming (Oneida/Kickapoo/Cherokee Nation), PhD, and Jami Bartgis (Cherokee Nation), PhD

Abstract

This article releases the Gathering of Native Americans (GONA) Fidelity Tool to the public. The paper describes the methods in the development of the GONA Fidelity Tool and how it is used in planning, implementing, evaluating, and in further tailoring the GONA process more precisely to the community's needs and strengths. Development and revision of the tool occurred over 10 years with participation and input from 7 Urban Indian Health Organizations funded under Title V of the Indian Health Care Improvement Act, using the tool to advance local GONAs across the state of California. Participating organizations used the tool in partnership with Indigenous evaluators to measure GONA implementation. Process evaluations were conducted to support tool advancements over time and an Annual GONA Training of Facilitators provided a forum for consensus building of GONA best practices for tool revisions. Results indicate that the tool is useful in the planning, implementation, and quality improvement to advance local GONAs over time. The most effective use of the tool is when the items are adapted to the local culture, context, and spiritual practices of the community(ies) served. The tool is now being used nationally and has become an important resource for measuring practice-based evidence and community-defined evidence in the implementation of GONA for Indigenous communities.

INTRODUCTION

The Gathering of Native Americans (GONA) Curriculum was first published in 1999, with funding from the Center for Substance Abuse Prevention as a substance abuse prevention program for American Indian and Alaska Native peoples (Kauffman & Associates, 1999). The purpose of the Gathering of Native Americans (GONA) curriculum is to foster healing, resilience, and community empowerment through culturally grounded activities that address historical and contemporary challenges faced by Native communities. The purpose of the GONA curriculum is to foster healing, resilience, and community empowerment through culturally grounded activities that address historical and contemporary challenges faced by Native communities. Since that time, GONA has been effectively used and replicated across tribal nations in the United States and with Indigenous groups in other countries to also address mental health-related challenges, like suicide and violence prevention, with a core focus on healing from historical trauma (SAMHSA Tribal Training and Technical Assistance Center, 2016).

While the curriculum has been widely used across tribal nations and urban Indigenous communities for nearly two decades, there has never been a systematic evaluation of the GONA to understand more about the process, outcomes, and impact. In 2012, urban Indian health organizations began working with national partners and the Substance Abuse and Mental Health Services Administration (SAMHSA) Native American Center for Excellence to advance GONA evaluation and research. This partnership resulted in the creation of the first GONA Fidelity Tool that was developed to support the implementation of GONA consistently across sites so that youth outcome data could be confidently pooled and aggregated in an effort to increase sample size for quantitative study (King & Kraus, 2017; Kraus et al., 2017). This article releases the first GONA Fidelity Tool in the public domain, describes the methods and results of developing and refining the fidelity tool over time, and discusses effective and ethical uses of the tool (see Supplemental File: GONA Fidelity Tool).

Literature Review

Implementation fidelity is the degree to which an intervention is delivered as intended (Carroll et al., 2007) and is important to improve the reliability and validity in interpreting outcomes in research studies and in the effective replication of an intervention for reducing the science to practice gap (An et al., 2020). When an intervention is not implemented as it was

intended, researchers may end up erroneously attributing outcomes to an intervention that did not actually occur; therefore, the measurement of implementation fidelity is necessary in research. Four (4) primary components have been identified as important to measuring program fidelity, which include: 1) Adherence to the intervention as it was intended, with all the key elements being delivered to the population of focus by effectively trained staff implementing the intervention with the right resources in the right context or environment; 2) Exposure or dosage (i.e., number of sessions, length, frequency of intervention); 3) Quality of program delivery by individuals demonstrating effective skills and techniques defined in the intervention and also the personal characteristics a person brings, like a positive attitude and preparation; and 4) Participant responsiveness, which is the degree to which the participants are responding and engaging in the intervention (Dane & Schneider, 1998; Mihalic, 2004; Mihalic et al., 2004).

Implementation research, also referred to as implementation science, is the scientific study of methods that advance implementation of research and/or evidence-based interventions into practice in a way that improves quality and effectiveness of care (Eccles & Mittman, 2006; Mihalic et al., 2004). On a provider level, Fixen and colleagues (2005) described implementation fidelity assessment as an interactive assessment of the selection of providers, the training provided, and the coaching and supervision offered to achieve the greatest outcomes. Much of the implementation research has focused on the implementation of practices deemed 'evidence-based' by highly controlled studies in university-based settings to the 'real world' in community-based settings (Breitenstein et al., 2010; Eccles & Mittman, 2006; Stains & Vickrey, 2017). However, implementation research can also be used when researching an intervention that has not yet been deemed evidence-based to increase confidence in attributing outcomes to the intervention.

Carroll and colleagues (2007) proposed a conceptual framework for measuring implementation fidelity, where an intervention's outcomes are influenced by moderating factors such as policy, pre-intervention strategies to facilitate implementation, the quality of delivery, and participants' responsiveness. The intervention then goes through evaluation of implementation with focus on adherence to the details of the content, the coverage, frequency, and duration of the implementation. Outcomes are then measured, and through that evaluation process, essential components are identified.

Implementation science to serve Indigenous populations has been advancing with the need to quickly and efficiently support dissemination and implementation (D&I) strategies that work to

address the many health and health-related disparities that exist for Indigenous peoples (Blue Bird Jernigan et al., 2020). However, a number of challenges exist in the implementation of D&I strategies for Indigenous populations, including defining what practices have evidence bases for Indigenous populations, such as the geographical, cultural, and political diversity that exists between and within Indigenous groups, and sustainability after grant or research funding ends. A promising Indigenous model, the He Pikinga Waiora (HPW) implementation framework, developed with the Māori community, offers a way for researchers to measure implementation of interventions with Indigenous communities that includes attention to four core elements: cultural-centeredness, community engagement, systems thinking, and integrated knowledge translation (Oetzel et al., 2017). With this model, researchers can assess whether their application of an intervention aligns with high, medium, low, or negative levels of fidelity to the four core elements: cultural-centeredness, community engagement, systems thinking, and integrated knowledge translation. A systematic review of the literature was conducted by Harding and Oetzel (2019) to determine to what extent the HPW's four core elements were attended to within health interventions of non-communicable diseases in Indigenous communities across mostly English dominant speaking countries. This review identified that implementation research studies with Indigenous populations most often had high levels of community engagement and moderate to high levels of cultural centeredness. The authors conclude that long term sustainability through effective translation of knowledge into practice may be more limited because of limitations in systems thinking and integrated knowledge translation.

While there has been a focus on implementation science for Indigenous communities to address disparities, there has also been decades of criticism about the implementation of mostly western-based practices defined as evidence-based that are most often imposed upon tribal nations and Indigenous peoples (Bartgis, 2016; Walker & Bigelow, 2011; Walker et al., 2015) and the continued lack of inclusion of Indigenous knowledge and wisdom (Blue Bird et al., 2020; Naquin et al., 2008; Ninomiya et al., 2022). Solutions for addressing these challenges have included the advancement of concepts like practice-based evidence and community-defined evidence. Practice-based evidence has been defined as interventions driven by the culture that reflect the community values, beliefs, and practices for healing and wellness (Isaacs et al., 2005). For Indigenous communities, many of these interventions have been used for centuries before western practices

and still exist today. Many practice-based evidence models do not have research evidence but practice evidence (Isaacs et al., 2008).

Similarly, community-defined evidence originates in 'from the ground up' interventions that come from the community (Martinez et al., 2010). Community-defined evidence has been defined as "knowledge accumulated through the ongoing successful implementation and/or evaluation of practices developed locally with significant community input" (Martinez et al., 2010, pg. 12) and is a direct response to the need to examine community-based practices that 'work' using culturally acceptable and appropriate research methods.

GONA is a framework in which practice-based and community-defined evidence interventions exist. While GONA is a manualized curriculum for the implementation of a healing framework, each tribal nation/Indigenous community brings their own local healing and wellness practices to the GONA event. This could result in a sweat lodge in one community, a stomp dance in another community, and a canoe journey in yet another. While they may be using diverse practices, they are all using traditional knowledge for healing and wellness, which are the local practice-based evidence interventions.

The development and refinement of the GONA Fidelity Tool is a tangible example of practice-based and community-defined evidence. Over 10 years of community-driven evaluation, this tool has been refined through practice and improvements using methods that were acceptable and appropriate for the communities being served. The outcome has been so impactful that Indigenous elders, youth, and their families have continued to participate in and support the sustainability of GONA in the same community for more than 20 years (Deetz, June 12, 2019; Nebelkopf et al., 2011). This paper will describe the methods for developing, implementing, testing, and revising the GONA Fidelity Tool over time; the results in using the tool, including ethical uses and limitations; and a proposed Indigenous model for implementation fidelity that incorporates practice-based and community-defined evidence.

METHODS

A community-based participatory research (CBPR) model was selected from the beginning to guide the project and was used throughout the project including in the writing of this manuscript (Bordeaux et al., 2007). Engagement with community leaders resulted in core guiding principles of the evaluation to be relational, community-focused, strength-based, holistic, and youth friendly.

The project also followed principles established by Indigenous scholars to decolonize and re-indigenize the evaluation and research process (Walters et al., 2009). Both formal and informal advisory groups represented local youth and community members who helped develop, implement, and evaluate the GONAs locally and across organizations.

Development of the GONA Fidelity Tool

The GONA Fidelity Tool was originally developed through the SAMHSA Native American Center for Excellence, Service to Science initiative. SAMHSA funded two Indigenous technical experts, one with experience in fidelity measurement with tribes (Holly Echo-Hawk) and the other being a skilled GONA facilitator with 25 years of experience (first author). Through a 3-day, in-person meeting, a team of local GONA facilitators and Indigenous community members (which included second and fourth author) from three organizations and an Indigenous research partner (last author) worked together with technical experts to 1) identify key components in the GONA curriculum that were demonstrating positive outcomes with youth in practice; 2) develop a quantitative scale of measurement; 3) begin testing the tool through use at each site; and 4) evaluate and advance quality improvement.

The first iteration of the GONA Fidelity Tool consisted of five sections, which remain in the 2022 revision, and that include the Core GONA Elements and the elements of Belonging, Mastery, Interdependence, and Generosity. Core GONA Elements were identified as important to occur across the entire GONA 4-day event. Each of these five sections is organized by fidelity item names and descriptions, which are rated on a 4-point scale from Exceeds Intentions +1 to Intentions Not Met -2, with a Not Applicable (NA) category in case that fidelity item is inappropriate or culturally incongruent for a specific culture. The number of fidelity items within each of the five sections are reported in Table 1 by year.

Table 1
Number of fidelity items by GONA Fidelity Tool section by year

Year	2013 (original)	2017	2018	2022
Core Elements	11	13	13	22
Belonging Day 1	7	6	6	10
Mastery Day 2	8	8	8	9
Interdependence Day 3	5	5	5	5
Generosity Day 4	4	5	5	7
Total Fidelity Items	**35**	**37**	**37**	**53**

From the original tool to the 2017 revision, the primary changes included 1) the addition of the Belmont Process to the Core Element; 2) the adjustment of an item in the Interdependence section to broaden the concept of the use of a local Healing Model that is used to teach about balance and wellness in the community (i.e., medicine wheel, canoe journey, or many other models; 3) a Commitment Ceremony using local practices in the Generosity section; and 4) the moving of Risk Tokens from the Belonging section to a Core Element that should be present across all 4 days of the GONA.

Changes from 2017 to 2018 reflected changes to the introduction to include disclaimers that the fidelity elements should be adapted to meet the unique cultural needs and context of diverse communities and implemented in partnership with GONA facilitators and local youth/community member experts in their own culture and community. The instructions also included the use of the GONA Fidelity Tool in planning, as a checklist for GONA facilitators in implementation and as a research tool. Further, the instructions included a disclaimer that the tool should not be used to penalize individuals or organizations, acknowledging that there are many ways in which a community could implement an effective GONA. Another change included the addition of a row at the end of each section to calculate a total and average score. This was added to support the research study that had begun through funding from the California Reducing Disparities Project.

Changes from 2018 to 2022 reflected the addition of 16 more items, nine of which were identified as Core Elements as shown in the Word Cloud (See Figure 1).

Figure 1. Word cloud of new Core Elements in 2022 GONA Fidelity Tool revision

Four (4) new elements were added to Belonging including Creating a Safe Space, Tuckman's Stages of Group Development, Conflict Resolution Plan and Team, and a Trauma Informed Transition to Mastery. Only one item was added to the section on Mastery, and that was to support a Trauma Informed Transition to Interdependence. Two items were added to the section on Generosity which included Honoring GONA Family and Follow-Up. Additionally, the row added in 2018 for tallying a total score and average for each section was removed completely. The scale of measurement also changed from using the word "standard" to using the word "intention" with an emphasis on the intention of the community as the most important frame of reference for scoring the GONA Fidelity Tool (see Table 2).

Table 2
GONA fidelity item rating rubric

Rating	**Definition of Rating:** ***"During the GONA event …"***
Exceeds Intention	…you have gone beyond just meeting this GONA intention; it is achieved with advancements.
Meets Intention	…you are currently doing this.
Approaching Intention	…you are taking steps to achieve this intention.
Intention Not Met	…no effort is being made yet to reach this intention.
Not Applicable	…if an element does not apply to your community and document why it does not apply.

There was also an inclusion of a box to write in a description of how the fidelity items were culturally adapted or enhanced to indicate the importance of adaptation as a best practice for each community. The GONA Fidelity Tool was intended and designed to be a flexible tool to be adapted to meet local language, culture, and context. Engaging local cultural/spiritual leaders and youth in planning, implementation, and evaluation is critical for ensuring that the GONA is implemented in a way that reflects as much as possible the local language and cultures. It is important that the leadership, staff, and even evaluators trust in community members as experts in their own languages and cultures.

GONA Local Process Evaluations

A total of 20 process evaluations were conducted at local GONAs from 2012 to 2021. The methods included 1) ongoing observation and tracking of the curriculum intervention using the GONA Fidelity Tool across all 4 days, 2) documenting observations made by facilitators, Clan

Elders, youth Peacekeepers, providers, evaluators, and other helpers and support staff during live observations and daily "Debriefings," and 3) for some sites, documenting debriefing discussions that occurred 2-4 weeks post GONA with event helpers and the staff of the participating organizations. The process evaluations were conducted by the lead evaluator, agency staff, and/or local community members, all of whom had been trained in research ethics and methods. These local process evaluations resulted in evaluation reports that summarized findings, best-practices, and lessons learned.

Annual GONA Training of Facilitators and Peer Virtual Calls

Each time the tool was revised, it was included in an annual GONA Training of Facilitators (TOF) supported by a SAMHSA Garrett Lee Smith funded initiative, and with technical support from the SAMHSA Tribal Training and Technical Assistance Center. The GONA TOF served as a way for seven partnering urban Indian health organizations' leaders, staff, and community members to join together for training and practice in GONA facilitation. At these TOFs, the GONA Fidelity Tool was used for training and role-playing feedback. The GONA Fidelity Tool was then tested at the next year's GONAs with the seven participating urban Indian health organizations. Ongoing virtual calls were used to support and track peer-to-peer learning in implementation, and an annual GONA TOF report supported cross-cutting best practices and lessons learned.

The following model adapts Carroll and colleagues (2007) conceptual framework for measuring fidelity as depicted in Figure 2.

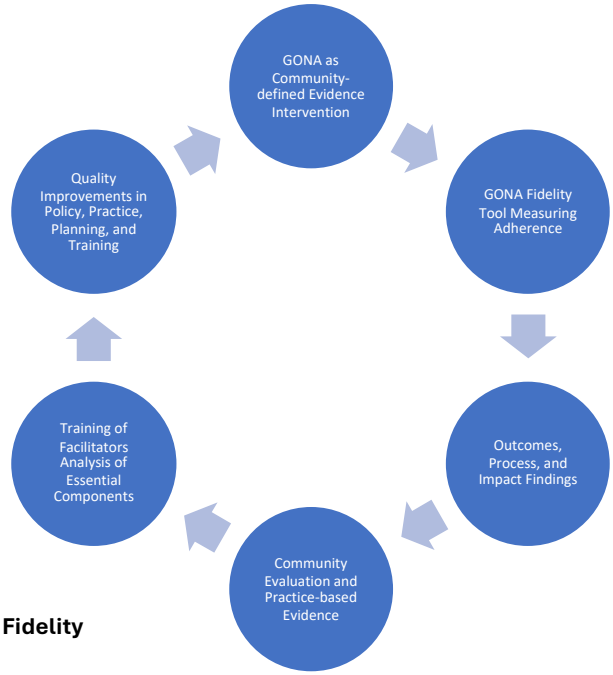

Figure 2. GONA Conceptual Framework for Measuring Fidelity

RESULTS

The GONA Fidelity Tool has been defined by community team members as a "labor of love" through the documentation of 10 years of experience that has led to a deeper understanding of GONA and its impact. The GONA Fidelity Tool brings greater clarity to the GONA process. However, the intent for achieving fidelity and what fidelity looks like for the community is best coming from the community's perspective. Therefore, the "measuring stick," or locus of evaluation, is the community evaluating themselves. The "Spirit of GONA" is one and the same with the "Spirit of Community." Therefore, adaptations should happen to make the GONA relevant to meet the community's intent.

> *What we know today about fidelity is what we learned across the GONA Collaborative in California. What we learned might be true for others, but maybe not. We do not know if the GONA Fidelity Tool would generalize to all situations and communities or if every fidelity item would be a right fit for that community. The sharing of the GONA Fidelity Tool is like sharing a blueprint for a house that we built together.*
>
> —GONA Facilitator, Fresno, California

Initial discussions in the development of the original GONA Fidelity Tool identified concerns about "being evaluated" by outsiders who did not understand the culture and context of the community and concerns that it would make GONA inflexible. Indeed, one process evaluation documented this case when an outsider to the community attempted to apply the tool with some rigidity. This created conflict, and community members vocalized concerns about the frame of reference for the metric and the importance of adaptations based on culture and context. However, when GONA is used in a flexible way in which local adaptations are consistently made to tailor the intervention and the metric is from the community's point of view (i.e., youth receiving GONA, their families, staff members, and helpers who are also members of the community), the GONA Fidelity Tool has been embraced as an effective resource.

Another new challenge in the process of implementing the GONA Fidelity Tool was the inclusion of an evaluator at local GONA events. It is important that evaluators are also participants in the process to the extent possible. There are no observers in GONA, so an evaluator must be a participant/observer. It was documented that when the evaluator was introduced as a helper to the

facilitators in tracking the GONA process, youth and adults present were more quickly accepting and at ease with the participant observer. It is also important that the notes being taken on the fidelity tool do not include names of people or other identifiers as the tool should be open for review by any participant at the event. This demonstrates more transparency as a tool for the community. Ideally, trained evaluators from the community are supporting the observation and tracking using the GONA Fidelity Tool; however, it has also been used effectively by some Indigenous external evaluators with GONA experience who actively participate/join in and demonstrate ability to work across cultures.

Additional strategies were used to support the building of a relationship between the evaluator and the GONA facilitators in the implementation of the tool. A phrase was often used that the GONA Fidelity Tool is an "I've got your back tool" not an "I've got you tool!" The tool was to support the GONA facilitators in touching on the important elements of GONA as the curriculum is deep and has many layers of interventions within. In fact, most communities select 2-3 trained facilitators to work together to plan and implement GONA, as it can be difficult for one person to facilitate alone. The evaluator tracking the process and content of the GONA served as a feedback loop to GONA facilitators in real time. For example, during "head huddles" with GONA facilitators and/or daily debriefs, it is best when the evaluator is also present to review what was observed already and what had not been observed yet. Risk Tokens, used as a behavioral strategy to increase healthy participation of participants, are often a fidelity item that gets overlooked, yet this simple action has a big impact in positively reinforcing healthy participation, especially at youth GONAs where some may be nervous about speaking up. With this feedback loop the facilitators could make quick decisions, like asking a GONA helper to observe, praise, and disseminate Risk Tokens at the end of large group sessions. With a strong feedback loop between the evaluator as participant observer and the facilitators, the GONA Fidelity Tool works to increase fidelity to the curriculum in a way that meets the culture and context of the community.

Over the course of the project, GONA facilitators began asking for a one-page sheet that had a list of the names of each fidelity item (i.e., Spirit Place, Risk Tokens, Affirmations, Gift Giving, etc.) for them to put in their pocket, as they felt it was valuable for them to be able to review the items at a glance throughout the facilitation. The GONA Fidelity Tool and the GONA Pocket Checklist that was ultimately developed was also used by Master GONA Facilitators

working with the SAMHSA Tribal Training and Technical Assistance Center and is now being used in tribes and urban programs nationwide.

Through the course of the project, the GONA facilitators began using the GONA Fidelity Tool in the **Planning Phase**. Community teams start planning many months in advance of the GONA event. Some communities plan GONA all year. The fidelity tool is used to plan the GONA Agenda to make sure there is space, resources, and a procedure to include each of the fidelity items. In many ways, the GONA Fidelity Tool became a pre-implementation checklist. Each element needs human or material resources for its implementation, and the planning team can begin lining up what is needed and determine who will be the lead using what process to what outcome. If a resource turns out to not be available, the team has time to work out another plan. This also allowed for making changes based on the context. Referring to the GONA Fidelity Tool often also helps the team keep the focus on the purpose and philosophy of holding a GONA event for the participant group selected, and to understand how one's role fits in with those of others. If the team has new members, discussion on how attendees and facilitators experienced a previous GONA can enhance new member engagement and can be a preview of how the activities will adapted for the next GONA.

The GONA Fidelity Tool is also used in the **Implementation Phase** by the implementation team. The implementation team often includes individuals from the planning team, facilitators from the community or facilitators from the outside, community members who assist with an element, local clinicians, trained youth Peacekeepers, and/or an evaluator. A hard copy of the GONA Fidelity Tool is given to the team members to keep their attention on the elements for each day, in addition to the shortened GONA Pocket Checklist. Throughout the day, brief team huddles can be held to adjust how the elements are completed based on the responses of the event participants and any circumstances that arise that might challenge the flow of the day. At the end of the day, the implementation team caucus to give assessment and comment on each element. Rating at the end of each day is advised when the observations are fresh. Decisions about adjustments for the next day are made at that debriefing. One can see how the frequent conversation and decision-making enhances fidelity to the desired process as it supports real time quality improvement as driven by a team approach.

The **Post-Implementation Phase** begins with the last debriefing session and can be the time to document proposed changes to the GONA process and to identify post-GONA tasks. This

is the time for community evaluation of the practices that demonstrated the most evidence as effective.

The tool has a description of what to look for to determine that an element is present and how developed it is at that time. When community planning teams begin their work, some of the elements cannot be present or implemented as developed by the intention listed. The reasons for this vary and could be circumstantial, such as an illness experienced by a community member who was asked to provide a talk about healing. Another reason can be the fact that the culture of the community is revitalized in an uneven way. Maybe no one yet knows their Creation story, so they borrow one from another tribe, which was gifted to the GONA curriculum for this purpose. There also may be contextual issues that require adaptations, for example in areas where elders have to work to afford to live, identifying youth as elders to those younger than them can build youth leadership and mentorship. The hope is that the community can identify elements to strengthen for the next GONA or to develop in an ad hoc way as a step toward community healing. Each element is rated, and two questions are asked: 1) Please explain your rationale for this rating, and 2) How was this element culturally adapted or enhanced? Table 3 demonstrates how GONA fidelity items may be adapted for each community culture and context.

Table 3
Examples of rating an element by community

Item	Rating	How was this item culturally adapted/enhanced?	Rational for Rating
Spirit/ Quiet Table/ House/ Place/ Resources: An area was provided for the youth to meditate and/or pray with spiritual resources (medicines and sacred items) that represent the diversity of the community spiritualities and is incorporated into ceremony at GONA.	[X] Exceeds Intention [ ] Meets Intention [ ] Approaching Intention [ ] Intention Not Met [ ] N/A	Tribal elders identified that spirit 'place' was within each person, 7th direction, and therefore each youth was given a medicine pouch to wear around their neck as a constant reminder, and this was referred to and used during the sessions.	The GONA team believed that they exceeded in connecting youth to spirituality in such a personal way by using the tribal creation story and ways of knowing that we do not have to look for spirituality outside of ourselves; it is in each one of us. Youth expressed and demonstrated much pride in their medicine pouches that were gifted to them in ceremony. A traditional practitioner participated in the entire event using local medicines ,and a sweat lodge was made available for those who wanted that medicine for healing and wellness.

Table 3 continued below

Table 3 continued
Examples of rating an element by community

Item	Rating	How was this item culturally adapted/enhanced?	Rational for Rating
Elders: The generations of elders were introduced and engaged; trained Clan Elders stayed with the Clans throughout the GONA.	[ ] Exceeds Intention [X] Meets Intention [ ] Approaching Intention [ ] Intention Not Met [ ] N/A	Due to economic conditions, many elders in the community had to work, and few could participate. Elders present were introduced, and aged-up youth were also identified as 'elders to the youth.' These young adults provided support to each of the Clans throughout the event.	There was much discussion among the team on this rating. The team worked diligently to invite elders, but with serious inflation in housing costs, there were not enough elders to cover each of the Clans. If the team had stopped there and just asked the 1 or 2 elders rotating, it would limit elder support for each of the 7 Clans. By identifying young adults as elders to the youth, it allowed this teaching to be in place and created additional support to Clans for problem solving, since these aged-up youth had been trained in Peacekeeping.

In order for GONA to become a sustainable healing movement, as it has been for many of the California communities, it is vital that GONA is supported at the top level of leadership and is woven into organizational values, policies, and procedures. Everyone within the organization should have at least some "dose" of GONA in onboarding and ongoing education, both upstream to leadership and downstream to staff and communities. Effective policies are also needed to ensure GONA can operate and continue quality improvement over time. The GONA Fidelity Tool has helped advance such policies, such as formalization of a conflict resolution team and process that includes spiritual/cultural leaders, mental health providers, and youth Peacekeepers; the availability of mental health providers on site 24/7 during the event; and the shifting to restorative justice models to support community healing.

Strengths and Limitations

The implementation of the GONA Training of Facilitators each year during the project and the ongoing support from expert GONA facilitators was a major strength in the implementation of high fidelity GONAs with youth and families for the purposes of healing. Many of the participating sites are planning, preparing, and training for GONA year-round, with monthly meetings in the first 6 months after the last GONA ends, with increasing frequency to weekly as the GONA event

date gets closer. It is important that planning, preparation, and training are ongoing to ensure that those who will fill important GONA roles are prepared. Important roles include spiritual leaders, GONA facilitators, Peacekeepers, Clan Elders, evaluators, mental health providers, and other Natural Helpers, like Mountain Movers, who work in Fresno to support transitions and to make sure the facilitators are prepared for what is needed to implement the GONA event. In GONA everyone present with a helping role needs training and re-training. The GONA Fidelity Tool also helps to incorporate all of these roles working together. However, it is unsure how the GONA Fidelity Tool generalizes to other communities doing other types of GONAs, like GONAs primarily for strategic planning purposes, although the authors recognize youth GONAs have contributed greatly to local strategic planning.

There has been a core group of committed community members, organizational leaders, and staff participating in this 10-year journey; however, much turnover occurred across the participating organizations. This turnover had an impact on invested community members who commonly reported increased frustration with turnover but also increased responsibility to keep the GONA going in their communities. Turnover also impacted continuity, required much onboarding and retraining, and reduced opportunities to 'train up' under a mentorship model at the GONA.

The GONA Fidelity Tool represents the “ideal” based on the lessons and experiences of those communities contributing over 10 years. The authors want to express that the GONA Fidelity Tool is not meant to overwhelm or make communities feel like they are inadequate when first starting out. For the first GONA in a community, it is common to use an expert GONA facilitator from another community, and in this project, the participating organizations were accessing Indigenous GONA experts connected to the SAMHSA Tribal Training and Technical Assistance Center. In years 2-5 of implementing annual GONAs, it is common for expert GONA facilitators to be training, coaching, and mentoring on site local community healing champions as they take on more and more GONA facilitation responsibility. In years 5-10, these local GONA facilitators then begin training others coming up (and also in other communities) to facilitate keeping the training, coaching, and mentorship going.

There are also concerns that the GONA Fidelity Tool might be used to shame communities starting out with lower fidelity; that some organizational authority, like a state Medicaid program, might try to use the tool to pass judgements on communities for funding; or that some individual

or organization may try to capitalize from the tool. These are not the intent or appropriate uses of the GONA Fidelity Tool. Each community has its own developmental path with cultural adaptations that may change based on resources and context. For example, during the pandemic, participating communities shifted to virtual GONAs, and it was difficult to implement some of the fidelity tool items to a great extent (for example, connection to a fire). Yet, organizations and their communities did their creative best in the context, and these virtual GONAs documented similar outcomes of increasing hope, connectedness, cultural identity, and linkages to community mentors/helpers and mental health providers.

DISCUSSION

The GONA has been an important driving change tool for the participating communities, and the GONA Fidelity Tool has supported the emphasis that GONA is a healing process to help community groups or entire populations to heal from historical and intergenerational trauma. The greatest impacts centered around the mobilization of communities for healing, the growing of local leaders and workforce, and broader advocacy in the community as GONA communities have taken on local issues like Missing and Murdered Indigenous Women (MMIW), tribal youth in foster care, and Indian mascots. The GONA Fidelity Tool reflects the collection of lessons learned and best practices in GONA implementation across these Collaborative sites. However, it is important that this tool be used in an ethical way to support the healing and growth of very diverse Indigenous communities. The tool should be used for planning and implementation of GONA for beginning communities. As skills and capacity grow, the tool can be used for community-driven evaluation and quality improvement planning.

It is expected that the tool will grow and change over time, both for the GONA Collaborative, as well as for other communities who might begin to use the tool when communities continue to advance locally driven implementation research of practice-based and community-defined evidence. However, it is important that the intent of healing the community from historical and intergenerational trauma always be at the forefront when making decisions about changes to the tool which could impact the therapeutic effectiveness.

The California GONA Collaborative has already been sharing the GONA Fidelity Tool with tribes and other Indigenous organizations to support implementation in the United States and in Canada, Australia, and now, Guatemala, where a Spanish version is in development. It is

expected that the GONA framework can be used as a common healing language across Indigenous communities and across borders to advance healing for Mother Earth and us as one in the same. The GONA Fidelity Tool has become an important resource for measuring practice-based evidence and community-defined evidence in the implementation of GONA.

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CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

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AUTHOR INFORMATION

Barbara Aragon (Laguna Pueblo/Crow), MSW, is on the Board of Directors at the Sacramento Native American Health Center (SNAHC) in Sacramento, CA.

Albert Titman, Sr. (Nisenan, Miwuk, Maidu, Pit River), CADC-II, served as a Behavioral Health Manager and Drug and Alcohol Counselor at SNAHC and currently serves as Deputy Director of the Native Dads Network in Sacramento, CA.

Julie Fuentes (Hopland Band of Pomo Indians), BA, served as a Care Coordinator Supervisor at SNAHC in Sacramento, CA.

Crystal Salas (Mescalero Apache/Lakota) is the Director of Youth Services at Native American Health Center, Inc. (NAHC) in Oakland, CA.

Anthony Lopez (Manchester Point Arena Band of Pomo Indians), BA, is a Fresno Community Member in Fresno, CA.

Ruben Garcia, (Manchester Point Arena Band of Pomo Indians), BA, is Director of Native Wellness at the Fresno American Indian Health Center (FAIHP) in Fresno, CA.

Arianna Antone-Ramirez (Tohono O'odham), BA, served as a Health Policy Analyst at the California Consortium of Urban Indian Health (CCUIH) in San Francisco, CA.

Candace Fleming (Oneida/Kickapoo/Cherokee Nation), PhD, is a Senior Research Director at One Fire Associates in Sand Springs, OK.

Jami Bartgis (Cherokee Nation), PhD, is President and CEO at One Fire Associates in Sand Springs, OK.