Designing and Evaluating Culturally Specific Smoking Cessation Interventions for American Indian Communities

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ABSTRACT

Introduction: American Indians have the highest smoking rates in the United States, yet few randomized controlled trials of culturally specific interventions exist. This study assessed American Indians’ opinions about evidence-based treatment and attitudes toward participating in clinical trials.

Methods: Six focus groups were conducted based on smoking status (current/former smoker), sex, and elder status (55 years and older or younger). Meetings were held at local American Indian community organizations. This project was accomplished in partnership with the American Indian Community Tobacco Projects, a community–academic research partnership at the University of Minnesota. Thematic qualitative data analyses were conducted.

Results: Participants desired the following: (a) programs led by trained American Indian community members, (b) the opportunity to connect with other American Indian smokers interested in quitting, and (c) programs promoting healthy lifestyles. Strategies desired for treatment included (a) free pharmacotherapy, including nicotine replacement therapy (NRT); (b) nominal incentives, e.g., gift cards for groceries; and (c) culturally specific program components such as American Indian images, education on traditional tobacco use, and quit-smoking messages that target the value of family and include narratives or story telling in recruitment and program materials. Biochemical verification of smoking abstinence, such as salivary cotinine or carbon monoxide breathalyzers, is likely acceptable. Standard treatment or delayed treatment control groups were viewed as potentially acceptable for randomized study designs.

Conclusions: Rigorously conducted randomized controlled trials of culturally specific smoking cessation interventions are sorely needed but will only be accomplished with the commitment of funders, researchers, and collaborative trusting relationships with the community.

INTRODUCTION

Cigarette smoking rates among Indigenous populations of developed countries are dramatically higher than non-Indigenous populations. Smoking rates among the Indigenous populations of Australia, Canada, and New Zealand are two to three times the smoking rates of non-Indigenous populations (DiGiacomo et al., 2011). In the United States, despite significant advances in tobacco control, smoking rates among American Indians are the highest of any U.S. population group. In 2010, the smoking prevalence rate was 31.4% for American Indians compared with 19.3% for the U.S. general population (DiGiacomo et al., 2011). Further, the published smoking rate for American Indians masks variation among tribes (U.S. Department of Health and Human Services, 1998; Nez Henderson, Jacobsen, & Beals; AI-SUPERPFP Team, 2005), with rates as high as 62% reported among American Indians in the U.S. Upper Midwest (Forster et al., 2007). And in contrast to the U.S. general population, where smoking is less common among women compared with men, American Indian males and females report similarly high levels of tobacco use (CDC, 2008).

The reasons for Indigenous populations not benefiting from the remarkable advances in tobacco control strategies (e.g., policies, behavioral support, and pharmacological treatments) are complex. Among American Indians, obstacles include changing patterns in earlier age of smoking initiation that are associated with greater nicotine dependence and more difficulty
with quitting (Nez Henderson et al., 2009), and the infiltration of commercial cigarette smoking into ceremonies, funerals, and powwows instead of traditional sacred tobacco (Burgess et al., 2007), which contributes to the social acceptance and pervasiveness of cigarette smoking (i.e., tobacco misuse) in American Indian communities (Gryczynski et al., 2010).

Another critical issue is the limited access to evidence-based tobacco cessation treatments, which leads to low utilization rates despite most American Indians smokers wanting to quit (Forster et al., 2007). Data from the 2005 U.S. National Health Interview Survey (NHIS) demonstrate that American Indians/Alaskan Natives have the lowest rate of quit aid use of any U.S. racial/ethnic group in the past year (17.4% vs. 34.3% for Whites among current smokers) (Stahre, Okuyemi, Joseph, & Fu, 2010). Factors contributing to low rates of tobacco cessation treatment use include negative feelings and mistrust of doctors and mainstream health care providers; lack of knowledge about the safety, effectiveness, and functional benefits of pharmacotherapy; and a lack of disposable income and costs associated with treatment (Burgess et al., 2007; Fu et al., 2007).

Culturally specific interventions offer great promise for engaging Indigenous smokers in evidence-based smoking cessation treatment, but few have been rigorously tested in controlled trials. There is also a lack of research and evidence on the development of culturally specific antitobacco media messages to promote smoking cessation attempts and participation in treatment (Gould, McEwen, Watters, Clough, & van der Zwan, 2013). Compared with standard interventions, culturally specific interventions may be more acceptable and salient to Indigenous smokers, thereby increasing participation in treatment and decreasing discontinuation rates. The purpose of this study was to gauge American Indians’ opinions about strategies for engaging American Indian smokers in evidence-based treatment. We assessed attitudes toward participation in clinical trials comparing smoking cessation treatments including (a) reasons and motivations for quitting smoking, (b) barriers to quitting, (c) elements for inclusion in a culturally specific smoking cessation program, and (d) views on participating in smoking cessation intervention research. The goal of this research is to inform the development and evaluation of culturally specific smoking cessation programs for American Indians.

METHODS

Focus group participants were recruited through advertisements posted at 13 American Indian community organizations in the Minneapolis/St. Paul, MN, metropolitan area. Six focus groups, separated by smoking status (current or former smoker), sex (male or female), and elder status (55 years and older or younger), were held in meeting rooms of an American Indian community organization. The project was accomplished in partnership with the American Indian Community Tobacco Projects (AICTP), an established community–academic research partnership based within the University of Minnesota. Two American Indian women from the AICTP recruited and enrolled participants and facilitated all focus groups. Furthermore, the AICTP logo and contact information were included on recruitment materials. Focus group participants received a $50 gift card. This study was approved by the Institutional Review Boards of the University of Minnesota and the Minneapolis Veterans Affairs Medical Center.

Focus groups consisted of semistructured interviews. The moderators asked specific questions and probes with allotted time limits for each set of questions. Questions were asked such that participants would explore the following: (a) specific motivations and barriers for quitting, (b) ideas about the types of support they would like in a quit smoking program (group, individual, phone, peer, counselor, pharmacotherapy, and location), (c) reactions to recruitment strategies for quit smoking programs, and (d) acceptability of potential research interventions (contact person, institution, study designs, and biochemical testing). The focus groups were audio recorded and transcribed by the one of the moderators.

A convenience sample of six focus groups were completed in 2009 (N = 45). We conducted one male (current smokers, n = 8) and five female groups (two groups of current smokers; one group of former smokers; two groups with both current and former smokers; total females, n = 37). Two of the female groups were elders only (55 years and older; n = 13), and one group comprised only young adult females (under 30 years; n = 4).

Analysis

Typed transcriptions of each audio recording were prepared by one of the focus group moderators and checked for accuracy against the audio recording. Two members of the research team, trained in qualitative methods, analyzed the focus group findings using an inductive method of analysis through which meaning units or themes were extracted from the participants’ interview data (Patton, 2002). This involved a process of reading the transcripts a minimum of two times and identifying recurring patterns that emerged in response to the focus group questions. As themes or patterns emerged, they were recorded in a table for further analysis. Discussions were held with the entire research team, which included an American Indian researcher to reach consensus on the themes and organize the themes into subthemes (Creswell, 2009). Salient quotes, which captured the essence of the themes, were identified to illustrate the subthemes and to present the participants’ own voices.

RESULTS

Attitudes About Smoking

Family Issues

Issues related to family were by far the most prevalent motivator for quitting smoking (see Table 1). Many participants expressed wanting to quit for their children or grandchildren. Participants did not want their younger children to see them smoking for fear that they would start to smoke and expressed wanting to be alive to see their children/grandchildren grow up. They also wanted to be present at major life events and to set a good example for their grown children who they wished would quit smoking. In some families, children or grandchildren pressured family members to quit because of the smell of smoke or the children’s perception that the smoke affected their health. Several participants reported guilt related to the impact of their smoking on their children as a reason for quitting.
**Smoking cessation interventions for American Indian communities**

One participant cited smoking as taking away from family time. The fear of losing family members to smoking-related diseases was also raised.

**Health**

Health issues were frequently cited as a reason for wanting to quit (see Table 1). Many participants reported asthma and breathing problems among themselves or their family members. Several people shared stories of their close friends or relatives who had died from emphysema, lung cancer, or other smoking-related illness. Other participants discussed the prevalence of unhealthy lifestyles among friends and family and of wanting to improve their own personal health. The idea of having more energy, not having difficulty breathing or wheezing, and feeling better overall was enticing. Participants reported having been active when they were younger but no longer being able to do participate in sports and exercise. In general, participants agreed that regaining an overall healthy lifestyle was a strong source of motivation.

**Expense**

The cost of smoking was raised repeatedly. For one participant, the idea of giving more money “to the White man” through increased cigarette taxes when purchasing cigarettes was reason enough to quit.

**American Indian Culture**

Some participants were conflicted about smoking given that traditional teachings limit tobacco use to spiritual use. One participant described the guilt associated with participating in a ceremony one day and standing around smoking cigarettes the next day. Another said he felt like a hypocrite because he teaches Native youth that tobacco is only for medicinal and ceremonial purposes yet he smokes. This participant suggested that American Indians should go back to only “using tobacco traditionally instead of the way they do now.” Many other participants voiced these same concerns and brought attention to the lack of consistency between traditional/sacred teachings and tobacco use within the American Indian community.

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**Table 1. Attitudes and Barriers Toward Smoking and Quitting**

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<thead>
<tr>
<th>Attitudes</th>
<th>Family issues</th>
<th>Mixed messages</th>
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<tbody>
<tr>
<td>Family time</td>
<td>“... and that’s another thing about the time. Every bad habit takes time to have so you’re taking time away from your family, your kids, yourself and you could do something with it that’s different.” (Adult female smoker)</td>
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| Guilt | “I have these horrible guilt feelings of raising my kids in all this smoke, especially when they were little babies. And I just cringe when I think about it, you know.” (Younger adult female smoker) |

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<th>Health</th>
<th>Fear of the future</th>
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<td>“I don’t want somebody to have to take care of me because of cigarette smoking, you know. Pushing me around in a wheelchair because I can’t walk and I’m on a lung, iron lung, or one of them respirators. You know, I don’t want nobody to care of me like that.” (Male smoker)</td>
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| Change in lifestyle | “… just being around good people that’s getting their stuff together. I’m comin’ out of kind of a bad spot in my life so just being around healthy people and everything makes it really easy. It gives you something to look forward to so that makes it easy. I used to smoke two packs a day and I’m down to about maybe two cigarettes a day and sometimes none.” (Male smoker) |

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<tr>
<th>Barriers</th>
<th>Social context</th>
<th>Community/Family</th>
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<tr>
<td>“It’s not just family members… the community is so small so everyone is smoking. And little kids, little bitty kids are finding half cigarettes on the ground and smoking them. It’s like everybody is smoking.” “It’s hard when one has so many family and friends that smoke. It’s all over in our community.” (Younger adult female smoker)</td>
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<th>Stress</th>
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<td>“I have more stress in my life than any of you know. I would rather go through the pain that the smoke the cigarettes causes, than to deal with… You know, that’s the way to deal with my stress.” (Elder female smoker)</td>
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<th>Other</th>
<th>Concern about quit smoking medications</th>
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<tr>
<td>“I know a lot of people that are taking those things [medications], umm, maybe a year or so. Within that first year, they all had heart attacks.” (Male smoker)</td>
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| Mistrust of doctor | “I think for some people the doctor, you know nobody likes to listen to what the doctor’s got to say anyways. They kind of disregard it, you know… I don’t like the doctor.” (Adult female smoker) |
Societal and Family Pressure
For some, wanting or needing to quit came from pressure from external sources. Some participants noted that clean indoor air policies at workplaces or at home helped them to cut back or quit because smoking is inconvenient. Others felt external pressure from family members to quit often because of the children in the house.

Barriers to Quitting
The greatest barriers to quitting that participants cited were (a) community/family, (b) stress, and (c) other barriers experienced by smokers.

Community/Family
The social acceptance and high prevalence of cigarette smoking in the community were the most frequently cited barriers to quitting (see Table 1). Smoking is a common social activity at community events such as funerals, wakes, powwows, and ceremonies and at gathering places such as community centers and casinos. Participants described difficulties escaping cigarettes regardless of location (e.g., work, home, car, and bus stop).

Stress
Smokers commonly use nicotine as a stress reliever and many expressed reluctance at relinquishing this calming safety net. Within the American Indian community, very high levels of stress exist due to the challenges accompanying socioeconomic strain and traumatic events. Focus group participants from four out of the six groups overwhelmingly identified stress as a barrier to quitting. Participants discussed an omnipresent level of stress in their lives and many shared their personal experiences with the recent deaths of family members and friends.

Other Barriers
Participants cited other common barriers. These included (a) fear of the side effects of pharmacotherapy, (b) concerns about weight gain, and (c) not wanting to go to the doctor to get help quitting. Participants also cited the need for assistance with avoiding common individual triggers such as alcohol, coffee, and boredom.

General Smoking Cessation Program Components
As an exploration of how to increase engagement in evidence-based treatments, participants were asked about what they would like in a quit smoking program. The general elements that were most commonly raised include the following: education and option of free pharmacotherapy/NRT; telephone quit lines (such as QUITPLAN, 1-800-QUITNOW); a support group model; incentives for quitting; and printed materials with reminders of the effects of smoking on one’s physical health. However, the reactions to free medications were mixed. Some requested free NRT, whereas others expressed an unwillingness or hesitance to try medications. Participants expressed interest in accessing a quit smoking “hotline” or support group where they could get suggestions on how to deal with cravings. In addition, it is important that the program can be easily accessed within one’s community or via public transportation and offer childcare during group meetings.

Community and Culturally Specific Smoking Cessation Program Elements
These included components that would specifically address the goal of designing and implementing culturally specific smoking cessation programs for American Indian communities (see Table 2).

American Indian–Led Program
Although some were open to programs led by organizations outside the community, most participants preferred programs to be led by an American Indian expert respected in the community. Furthermore, many preferred programs that are specifically designed for American Indians with identifiable American Indian images, language, artwork, and content relevant to American Indian issues.

Connecting With Community
Participants stated that programs specific for American Indians would allow participants to be more comfortable and to connect with others in the group. One participant focused on the story telling nature of the American Indian culture and suggested that recruitment brochures for the program feature a picture or story from a well-known person in the community. The incorporation of cultural values and a clear understanding of traditional tobacco teachings were cited as essential elements. Spiritual techniques were mentioned as helpful (meditation, prayer, and spiritually connected activities, such as making prayer ties). Others suggested looking to traditional healing practices, such as working with a traditional healer or using traditional plant-based medicines for overcoming addiction.

Peer Support
There was a resounding request for peer support options within the community, which would allow for individuals to communicate with each other about their quit smoking efforts. The most common suggestion was a sponsor type program where someone trying to quit would be paired with someone who has already quit. Other suggestions ranged from daily morning phone calls encouraging each other not to smoke to monthly check-ins to see whether the quit smoking efforts had been successful. Participants spoke of the tight-knit nature of the American Indian community and made suggestions about quitting in partnership with a friend or relative. Others suggested program participants join each other as fitness partners to increase their physical activity.

Focus on Healthy Living to Change the Culture of Smoking
Many participants described a lack of support for smoke-free living in the community and cited the high prevalence of smoking among family, friends, and the community at large as a major problem. The idea of creating a new lifestyle and connecting with others with similar goals was voiced repeatedly. Many complained they had few peers living healthy lifestyles and expressed a need for healthy social support networks with others engaging in healthy living and smoke-free activities. This sentiment was not restricted to smoking. Participants also wanted to be able to connect with others with whom they might exercise as opposed to engaging in activities related to drinking, smoking, or drugs. As one male participant stated, a quit smoking group
was a way of “connecting me culturally and spiritually and also realize getting a new lifestyle, changing the ways.”

Several culturally focused activities arose as suggestions. One woman spoke of a t-shirt that she received at a powwow honoring smoke-free American Indians and how that connected her as a part of a larger group of smoke-free American Indians. Another proposed handing out lollipops at community events with affirmations in English or an American Indian language. Others spoke of a recent initiative in which individuals displayed window banners to support smoke-free homes.

Traditional Cultural Practices Versus Smoking
The need to address the dichotomy of traditional tobacco teachings and the systemic misuse of tobacco in American Indian communities was clearly voiced. Participants discussed how tobacco is central to American Indian spirituality as it is used in ceremonies by many tribes. Participants repeatedly expressed remorse that tobacco is no longer reserved for this sacred use but that tobacco use, most commonly in the form of cigarettes, has become a central component of the social fabric of American Indian life at community and family gatherings, casinos, powwows, and private homes. Cigarettes have become commonplace within some ceremonies because of the convenience and availability of commercial tobacco in comparison to traditional tobacco, which would take more effort to obtain. Elders recognized the mixed messages they are sending to children and, some expressed guilt about their smoking addiction while having the responsibility to teach that tobacco is only to be used ceremonially. Participants pointed out some ways in which tribal tobacco teachings have been distorted. One is related to being generous with your tobacco. This traditional teaching has been distorted in such a way that many people

| American Indian–led program | “If you have a group like this, see, Natives will open up cause it’s their people, you know. They can sit there and say whatever. Somebody in the room can easily relate, I mean, compared to if it’s a mixed color group. Certain people are going to feel uneasy about speaking up or they’ll keep quiet. A group like this, though… It’s nothing but Natives here. Everybody can open up more and relate.” (Male smoker) |
| American Indian–led program | “Natives like to talk to each other, you know… There’s an invisible wall between Natives and any other kind of group and when you go sit down… There’s a wall there, automatically goes up.” (Male smoker) |
| American Indian–led program | “I would say Native Organization too because [it would] incorporate culture. When you’re in a program that… they’re talking about your culture and you feel more in tune with it ‘cause you’re there with your own people.” (Younger adult female smoker) |
| Connecting with community | “And so we’re about story telling culturally. If I were to pick up a pamphlet and I were to see somebody’s face that I know, I would be inclined to read this. Maybe your story could be one page or whatever. Just her story about hugging the grandkid and the hair smells like smoke. Somebody might be able to relate to that.” (Elder female former smoker) |
| Peer support | “I would need other people to support me… maybe struggle through it with other people.” “I think some sort of meditation or exercise program, especially in our age groups would be helpful.” “Maybe a reading club or something.” (Adult female smoker) |
| Focus on healthy living to change the culture of smoking | “That was really powerful to see all those Indian people not smoking and we had those shirts. I like that public recognition of people who don’t smoke.” (Elder female former smoker) |
| Traditional cultural practices vs. smoking | “Smoking like that is not our traditional way… I try to teach my grandkids the stories that my grandmother taught [me]… tobacco should only be used for medicine.” (Elder female smoker) |
| Traditional cultural practices vs. smoking | “I also agree about the traditional use of tobacco… if you have to go out and make tobacco… gather the red willow and make it yourself it is much more sacred to you.” (Elder female smoker) |
| Traditional cultural practices vs. smoking | “We’re missing it by telling our kids that the cigarettes are our sacred tobacco because they’re not, they’re not, they’re not our sacred tobacco.” (Adult female smoker) |
| Reaching the youth | “I was thinking when I first got in here that… it’s really important that you reach the young people. I see them walking and smoking and I think, “oh, if only you knew what it’s gonna do to your body… I see these young healthy teenagers and… it makes me feel bad when I see them smoking.” “One of the saddest things that you see [in our community] is… I see the kids do smoke, and I see them at a very young age.” (Elder female former smoker) |
| Reaching the youth | “I didn’t want to disappoint the kids and so I wanted to be a role model, for the kids and so I just, I just didn’t smoke anymore… but they still ask me if I’m smoke free and I proudly tell them I am… I was looking for them. I’m not sure how. This was kind of a mutual thing. I knew that they were watching and that was pretty powerful to know that I’d be watched in the community and that made it easier because I knew that I didn’t want to let them down.” (Elder female former smoker) |
believe that if approached and asked for tobacco, one is culturally bound to be generous and offer it. As a result, many are willing to share their cigarettes with others.

Reaching the Youth
A recommendation of many was the need to include American Indian youth in quit smoking efforts. Concerns included the high number of youth who smoke, the mixed messages that youth receive about cigarette smoking and tribal tobacco teachings, and the prevalent use of cigarettes among American Indians. Participants felt it was important for children to be educated on the harms of smoking and for there to be a community-wide campaign encouraging healthier living specifically for American Indian children.

Attitudes Toward Research and Participation in Clinical Trials
American Indian Researchers
Because of issues of fear and trust, many participants preferred to be contacted by another American Indian for participation in a quit smoking program or a research study. As one participant said, “It’s a trust issue for me. Historically our people don’t trust European American with all that’s happened. I think that’s why it’s such a comfort, a more comforting atmosphere…And we know that there’s been research done on Native people in the past that’s been pretty awful—sometimes even without our knowledge.”

Some preferred the research or intervention program to be associated with a well-known and respected organization such as a university, hospital, or a local American Indian clinic or community organization. In fact, some participants preferred being contacted by bigger organization due to the close-knit community within which they live and the desire to maintain their privacy.

Phone Versus In-Person Recruitment
Overall, participants preferred to be approached in person rather than by mail or phone. Many were averse to receiving unsolicited phone calls as a form of program recruitment. Participants stated they “don’t do phones,” they have limited cell phone minutes, and unsolicited phone calls can be disruptive and annoying. Several people stated they would not answer or would hang up on the person if they received an unsolicited phone call. “I don’t think it would make a difference [who it was doing the calling]. I don’t think I would want anybody to call me or approach me…I’d be like who do you think you are, trying to tell me to do this.”

Biochemical Markers
One of the questions asked about attitudes regarding collecting samples of blood, breath, urine, hair, or saliva from individuals to measure the nicotine levels. Most participants were not in favor of needles and therefore did not want blood drawn. Others felt fine with any method. Breath and saliva were the most appealing options. Some had cultural objections to taking hair samples as some tribes have specific beliefs related to hair.

Control Group Study Design
Three types of studies were described to participants: (a) a study that had no-treatment comparison group versus a new intervention, (b) a study that had a standard treatment comparison group versus a new intervention, and (c) a study that utilized a control group but later offered the new intervention to the control groups. Participants were asked to respond to these options. The majority of the participants expressed displeasure in a no-treatment study design. Some felt they would feel “cheated,” “rejected,” or that they were “wasting their time.” Others expressed indignation and responded in a manner like “I’d have to show them that I could do it without their help.” The majority felt that their disapproval of a no-treatment group would change if the no-treatment group were to receive services after completing the waiting period. Of the three options presented, the majority preferred the delayed intervention after completing the waiting period but would be willing to consider participating in a clinical trial to which they would be randomized to either standard treatment or the new intervention. It was important to participants that all would ultimately have the option to benefit from the new intervention.

DISCUSSION
Our findings suggest several strategies and considerations for the development and implementation of culturally specific smoking cessation interventions among American Indian communities in order to meet their specific needs in a respectful and meaningful manner. First, smoking cessation programs should be led by American Indian community members who are trained to be quit smoking experts. Second, American Indian smoking cessation programs should promote a healthy living lifestyle and consider facilitating connections with other American Indian smokers interested in quitting. Given the significance of “talking circles” in American Indian cultures, peer group-based smoking cessation counseling may be a viable component. In contrast to the general population, where group programs have limited reach due to logistical barriers, American Indian group or peer-based programs may have greater reach because they capitalize on the inherent close-knit nature of the American Indian community. Third, promotion and advertisement of the smoking cessation programs should reach out at the community level and the interpersonal level. For example, programs could provide recruitment information in person at community events, health fairs, or American Indian organizations and clinics. Phone or mail contact is acceptable after a positive in-person interaction. Unsolicited contact was viewed much less favorably. Additional strategies to enhance engagement in evidence-based treatment include provision of free pharmacotherapy, including NRT, and nominal incentives (preferably gift cards to assist with daily living expenses, such as transportation, food, or household supplies). Finally, culturally specific program components include identifiable American Indian images, education on traditional tobacco use, quit smoking messages that capitalize on the intrinsic value of family including extended family, and the use of narratives or story telling in both recruitment and program materials.

In our previous research among American Indians in the U.S. Midwest, we suggested various strategies to develop acceptable smoking cessation interventions that included peer-based approaches, use of “talking circles,” embedding smoking cessation programs in broader wellness programs, and using a community-based participatory approach with accurate information.
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provided by trusted sources (Burgess et al., 2007; Fu et al., 2007). Our current findings are consistent with these recommendations and in addition provide recommendations to enhance recruitment and engagement in treatment using culturally specific program elements. Our findings are also consistent with other focus group research conducted among American Indians in Maryland that concluded that smoking cessation programs and health promotion efforts may be better received and more effective if they incorporate an understanding of the social and cultural facets of smoking in American Indian communities (Gryczynski et al., 2010). Others have recommended that American Indian smoking cessation programs acknowledge and incorporate traditional tobacco use (Daley et al., 2006) while distinguishing between sacred or ceremonial use versus tobacco misuse (Gryczynski et al., 2010). For some American Indian smokers, the incompatibility of traditional tobacco and addictive tobacco use may be a reason to quit smoking (Choi et al., 2006).

There is an emerging empirical literature evaluating tobacco cessation interventions in American Indians and other indigenous populations (Cox, Okuyemi, Choi, & Ahluwalia, 2010; DiGiacomo et al., 2011; Johnston et al., 2013). For example, a 2012 Cochrane review of randomized and nonrandomized controlled trials for smoking cessation interventions in Indigenous populations identified four studies that met the review’s eligibility criteria (Carson et al., 2012). Two were conducted among the Maori population (New Zealand), one among the Aboriginals (Australia), and one among American Indians (United States). Although pooling the smoking cessation outcome data across the four studies revealed a clinically significant effect in favor of smoking cessation intervention, only one study utilized and evaluated culturally specific program elements for the Maori that consisted of mobile text messaging to support quit attempts (Bramley et al., 2005).

Recently, two culturally tailored smoking cessation programs for American Indians have been reported in the literature: Fond du Lac Band of Lake Superior Chippewa’s Wiidookawishin (Help Me) QUITPLAN program (D’Silva, Schillo, Sandman, Leonard, & Boyle, 2011) and Kansas University Medical Center’s All Nations Breath of Life (Choi et al., 2011). The Wiidookawishin program consists of a culturally tailored curriculum based on the American Lung Association’s “Freedom From Smoking” curriculum, free pharmacotherapy and four behavioral counseling sessions led by a trained American Indian smoking cessation expert (in person group, in person individual, or by phone) over a 1-month period, free pharmacotherapy, and program incentives. A single-group design (no control group) evaluation of the Wiidookawishin program found 7-day point prevalence abstinence rates of 21.8% at 90 days and decreased consumption of cigarettes by continuing smokers. The All Nations Breath of Life program consists of five components: (a) group behavioral support sessions led by American Indian community facilitators (eight sessions over 3 months), (b) weekly telephone calls with motivational interviewing, (c) free pharmacotherapy, (d) culturally tailored educational curriculum, and (e) program incentives. A pilot evaluation of All Nations Breath of Life reported quit rates of 25% at 6 months (Daley et al., 2010). The efficacy of All Nations Breath of Life is currently being evaluated in a group randomized controlled trial (Choi et al., 2011).

Our study should be interpreted with caution because this qualitative analysis is a level 3, descriptive study according to Daly’s hierarchy of evidence for qualitative research (Daly et al., 2007). Additionally, it may have limited generalizability as it was conducted among American Indians in a single metropolitan area in the U.S. Upper Midwest. Nonetheless, findings from this research may be relevant and inform culturally specific programs for other Indigenous populations in developed countries (e.g., Canada, Australia, and New Zealand).

Culturally specific interventions have great promise for increasing engagement in and the effectiveness of tobacco cessation treatment, but as previously described few have been tested. Two important methodological issues related to the conduct of smoking cessation clinical trials in American Indians and other Indigenous populations are (a) biochemical verification of smoking abstinence and (b) use of a comparison or control group. Based on our focus groups of American Indians, we conclude that the use of biochemical verification of smoking abstinence is likely to be acceptable and feasible using salivary cotinine or carbon monoxide breathalyzers. Opinions on the use of urinary samples for cotinine were neutral (not strongly endorsed or strongly objected). The use of a no-treatment control group will likely raise strong objections and potentially lead to further mistrust of researchers. However, standard treatment or delayed treatment control groups were viewed as potentially acceptable. In conclusion, rigorously conducted randomized controlled trials of culturally specific smoking cessation interventions are sorely needed but will only be accomplished with the commitment of funders, researchers, and community to provide the resources to establish collaborative relationships based on trust and credibility, critical to successfully conducting research with American Indian communities.

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DECLARATION OF INTERESTS

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