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Understanding the Impact of Tobacco Control Interventions: An Evaluation of the
American Indian Tobacco Initiative

A thesis submitted in partial satisfaction of the requirements for the Master of Public Health

in

Epidemiology

by

Ana Peng Zhao

Committee in charge:

Professor Wael Al-Delaimy, Chair
Professor Chadwick Campbell
Professor Becky Marquez

2024

The Thesis of Ana Peng Zhao is approved, and it is acceptable in quality and form for publication on microfilm and electronically.

University of California San Diego

2024

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ABSTRACT OF THE THESIS

Understanding the Impact of Tobacco Control Interventions: An Evaluation of the
American Indian Tobacco Initiative

By

Ana Peng Zhao

Master of Public Health

University of California San Diego, 2024

Professor Wael Al-Delaimy, Chair

Commercial tobacco use remains a critical public health challenge in the United States, particularly among American Indian (AI) communities, where smoking rates significantly exceed national averages. In addition to high smoking prevalence, AI populations face substantial exposure to secondhand smoke, leading to severe health outcomes such as cardiovascular disease, lung cancer, and type 2 diabetes.

This study aims to evaluate the effectiveness of core objectives implemented by grantees of the California Department of Public Health, California Tobacco Prevention Program's American Indian Initiative in reducing commercial tobacco use and exposure among California

American Indians. The evaluation focuses on activities aligned with AII goals, challenges faced, and the overall impact on tobacco-related health disparities. The study analyzed qualitative data from key informant interviews conducted during the follow-up period of the California American Indian Tobacco Initiative Evaluation. Interviews were transcribed and coded using descriptive and evaluation coding to assess the alignment of activities with program objectives, their implementation success, challenges, and impact.

Key findings reveal the success of various objectives, including Youth Coalitions, Smoke-Free Households, Tobacco Product Waste initiatives, and Excise Tax implementation. Youth Coalitions were particularly impactful, engaging young community members in tobacco prevention activities and fostering leadership. Despite challenges such as fluctuating participation and funding constraints, these coalitions empowered youth to advocate for tobacco-free lifestyles. Smoke-free household pledges increased significantly, demonstrating growing community commitment, though ideological resistance posed challenges. Tobacco product waste initiatives effectively raised environmental awareness and involved the community in clean-up efforts. Excise tax implementation faced allocation challenges but provided crucial funding for tobacco prevention programs.

The evaluation highlights the importance of culturally relevant and community-driven approaches in tobacco control. Engaging youth, addressing ideological resistance, and ensuring flexible funding allocation are critical for the success of tobacco prevention initiatives. Future programs should continue to integrate traditional cultural elements and foster community involvement to effectively reduce tobacco-related health disparities among American Indian populations.

Introduction

Background

Commercial tobacco use remains a significant public health issue in the United States, with notable disparities across different racial and ethnic groups. While the national prevalence of smoking among U.S. adults has decreased from 42.4% in 1965 to 12.5% in 2020, this decline has not been uniformly experienced across all groups (Arrazola et al., 2023). For instance, the smoking prevalence among American Indian (AI) adults has remained alarmingly high, with estimates around 27% from 2011 to 2020, despite significant decreases in other populations such as non-Hispanic Whites, Blacks, and Hispanics (Arrazola et al., 2023). In California, commercial tobacco use rates among AI adults was 14.8 %, in comparison to statewide rates of 11.4 % in 2022 (California Department of Public Health, 2023).

In addition to high rates of tobacco use, secondhand smoke poses a serious health risk in American Indian communities. Evidence shows that American Indian and Alaska Native (AI/AN) individuals are exposed to significant levels of secondhand smoke, even if they do not smoke themselves. For instance, a study of Northern Plains American Indians who did not smoke found their levels of cotinine, a biomarker for tobacco smoke exposure, were 28% higher than expected for non-smokers in the general population (Centers for Disease Control and Prevention, 2024a). According to survey data from the Centers for Disease Control and Prevention (2024b) and Satter et al. (2010), one in ten California American Indian youth live in homes where they are exposed to secondhand smoke.

The high prevalence of tobacco use and secondhand smoke exposure among the American Indian population puts them at greater risk for tobacco-related morbidity and mortality. Cardiovascular disease, driven by cigarette smoking, stands as the primary cause of

death among American Indian populations (Centers for Disease Control and Prevention, 2024a). Lung cancer, attributed to both smoking and secondhand smoke exposure, is the leading cause of cancer-related mortality among AI/AN people, who are often diagnosed at more advanced stages and at younger ages (American Cancer Society, 2024). Previous studies also indicate that AI/AN adults report lower knowledge about cancer screening recommendations, and their uptake for and adherence to screening are consistently lower (Welch et al., 2024). Furthermore, the risk of developing type 2 diabetes is 30% to 40% higher for people who smoke than for those who do not smoke, and smoking can worsen complications from diabetes (Centers for Disease Control and Prevention, 2024a).

American Indians encounter unique challenges that influence their smoking behaviors, extending beyond the commonly recognized social determinants of health, such as stable housing, transportation, medical literacy, and healthcare access (Rusk et al., 2023). For many Tribes, tobacco is not merely a plant but a traditional element with profound spiritual, medicinal, and cultural significance, maintaining its importance in many communities today. Mainstream cessation interventions often fail to acknowledge this traditional role, instead creating a negative image of tobacco that clashes with Indigenous perspectives (Rusk et al., 2023). Research indicates that American Indian smoking patterns differ significantly from those of the general population, making many standard cessation programs ineffective for this group (Hodge & Nandy, 2011). Furthermore, targeted marketing by the tobacco industry has led to high rates of commercial tobacco use among AI/AN population (Carroll et al., 2020). In the 1980s, cigarette sales became a crucial revenue source for tribes, largely encouraged by tobacco companies exploiting tribal sovereignty to boost sales (Scott et al., 2017). The sovereignty of Tribal lands exempts many AI communities from state-level smoke-free laws and tobacco taxes, complicating

tobacco control efforts (Carroll et al., 2019). These complex, intertwined factors highlight the inefficacy of many mainstream smoking cessation programs for this population, underscoring the urgent need for culturally relevant resources and interventions tailored to the unique needs and traditions of American Indian communities.

Literature Review

Disparities in Commercial Tobacco Use Among American Indian Tribes

For years, tobacco smoking has remained a pervasive public health issue across the US with some remarkably high disparities between different ethnicities and races. AI/AN communities in specific, exhibit a very high rates of tobacco addiction and secondhand smoke exposure (Arrazola et al., 2023). This section examines the prevalence of tobacco smoking among AI/AN populations, comparing the findings with other ethnicities and races, with emphasis on social, economic, and cultural factors that compound the high rates and prevalence of the situation across the United States.

In comparison to other communities, commercial tobacco addiction among AI/AN communities is alarmingly high and swiftly growing. According to the American Lung Association (2020), American Indians and Alaska Natives have the highest smoking rate of any racial or ethnic group, with at least 21.9% of the AI/AN population in the US being active smokers. This rate is significantly higher compared to other groups: 16.8% in African Americans, 16.6% in non-Hispanic whites, 10.1% in Hispanics, and 7.0% in Asian Americans.

In the same context, AI/AN women have a higher prevalence of smoking compared to women from other communities across the U.S. According to a study conducted by the Centers for Disease Control and Prevention (2024c), 16.7% of AI/AN women smoke tobacco during their pregnancies, compared to approximately 10% of White women, 6% of African American

women, 1.8% of Hispanic women, and about 0.6% of Asian American women. Gender and culture-specific factors, such as the overloading of AI/AN women with domestic responsibilities and roles, exacerbate the situation, leading to higher rates of depression and recurrent stress. To cope with these pressures, many AI/AN women turn to smoking (Torres & O'Dell, 2018).

A myriad of social and economic factors contribute to the high tobacco use among AI/AN in the US. One of the key factors is the high poverty rate within AI/AN communities. AI/AN and other marginalized populations experience disproportionately higher poverty levels compared to other racial and ethnic groups, with poverty rates at 24.1%, which is almost double the national poverty rate of 12.8% and similar to the levels observed in African American communities (The National Council on Aging, 2023). Similarly, in 2019, 18.7% of the AI/AN adult population lived below the poverty line, almost double the rate for all U.S. adults at 8.9% (U.S. Administration for Community Living, 2020). Based on these figures, it is conclusive that AI/AN populations encounter regular economic hardships, which can inevitably lead to greater psychological stress levels. As a result of higher stress among this minority group, the U.S. Administration for Community Living (2020) reported that many of the affected AI/AN communities and individual resolve to tobacco smoking as a coping mechanism.

Limited access to healthcare and other relevant cessation resources among the AI/AN communities heightens the likelihood of smoking. The majority of AI/AN populations live in remote areas with very limited healthcare services and associated infrastructure, which significantly denies them the equal opportunities to access tobacco smoking cessation programs and other support services (Kaplan, 2023). The Indian Health Service, a body designed to provide timely healthcare to the American Indians and Alaska Natives also frequently encounters funding limitations from the Federal government (Warne & Frizzell, 2022). These factors hinder

the efforts of the American Indian Tobacco Initiative (AITI) to contain and minimize commercial tobacco smoking among the targeted, affected groups—AI/AN.

Cultural Implications of Tobacco on American Indian Populations

Generally, tobacco holds a very vital place in the culture and traditions of many AI/AN tribes. Unlike commercial tobacco which has very high addiction rates among the AI/AN communities, traditional tobacco is considered medicinal, spiritual, and cultural (MN Dept. of Health, 2022; Daley et al., 2011; D’Silva et al., 2018). American Indians use traditional tobacco to represent societal values within their cultural heritage and as an emblem of identity.

Traditionally, tobacco is used in these communities to conduct rituals, and is believed to be the best way of communicating with the spiritual and ancestral world (Milwaukee Public Museum, 2019; MN Dept. of Health, 2022). As established by Bruguier and Hinzi (1993), AI/AN tribes such as the Lakota people have traditionally used tobacco during “sacred pipe ceremonies” as an offering to their Creator. On the same note, the Ojibwe people also use tobacco during such ceremonies before initiating culturally important gatherings, discussions and meetings (Sadik, 2014). These cultural practices still exist to date and play a pivotal role in the status quo of tobacco use in the AI/AN communities and tribes.

Distinctively, traditional tobacco is always considered relatively pure as it is unprocessed and does not contain the various unhealthy additives and related chemicals that are in commercial tobacco (McDaniel & Malone, 2017; Alberta Health Services, 2024). Despite the publics’ distinction of the two, the use of commercial tobacco among the active smokers from the AI/AN communities remains high despite the related risks, as the marketers of commercial tobacco capitalize on the target communities’ cultural, spiritual, and traditional beliefs (Carroll et al., 2019; National Cancer Institute, 2022; Centers for Disease Control and Prevention, 2018b).

In most cases, tobacco cessation programs fail to fully distinguish between the spiritual and cultural use of traditional tobacco and the risks associated with consuming commercial tobacco (Kong et al., 2012). While these programs aim to reduce tobacco smoking among AI/AN populations with well-intentioned policies, they fall short in fully integrating and understanding the cultural significance of traditional tobacco (Bafunno et al., 2020). This gap leads to cultural misunderstandings. For instance, tobacco cessation programs frequently emphasize the negative health effects of tobacco smoking, portraying it as a public health risk (Bafunno et al., 2020). Such perspectives can alienate American Indian/Alaska Native individuals who hold strong traditional and cultural values regarding tobacco.

Health Consequences of Public Tobacco Use and Secondhand Smoke Exposure

Empirically, the prevailing health risks of commercial tobacco use among AI/AN in the United States is wide-ranging. Studies have shown that tobacco use and secondhand smoke exposure among American Indian communities have exacerbated the risks of developing cardiovascular conditions, various cancers such as cancer of the lungs, and other chronic diseases like diabetes. Moreover, according to the findings of Welch et al., (2024), Oshiro et al., (2022), Carter-Harris et al., (2018), there is an outstandingly high disparity in cancer screening knowledge among these communities which may explain why the health outcomes of the affected AI/AN populations continue to worsen.

Cardiovascular Diseases. Despite the ongoing cessation programs aimed at reducing the health disparities among the minority ethnicities and/or underrepresented races such as the American Indians in the United States, the American Heart Association (2023) reported that cardiovascular disease (CVD) leads to noteworthy mortalities among AI/AN adults. On average, AI/AN populations are more likely to smoke commercial tobacco compared to other ethnic

groups in the United States, the AI/AN people have disproportionately high risks of mortalities as a result of CVD developed through using various commercial tobacco products including cigarettes, smokeless tobacco, and cigars (Centers for Disease Control and Prevention, 2024a). Findings of American Heart Association (2023) and Chen et al. (2019) also suggest that American Indians and Alaska Natives have disproportionately high rates of heart attacks than any other races, at younger age, across the US.

Other studies have also found that tobacco use and exposure to secondhand smoke increases risk of coronary and peripheral heart diseases as well as stroke among AI/AN. Exposure to secondhand smoke among California AI/AN communities exacerbate the risks of developing coronary heart disease by at least two fold (Centers for Disease Control and Prevention, 2020a). The harmful chemicals that nonsmokers are exposed through secondhand smoke impact the functions of the heart and the general structure of the heart, altering the functioning of blood vessels, which collectively increase the risk of strokes and heart attacks (American Heart Association, 2024). Similarly, nonsmokers diagnosed with high blood pressure and high cholesterol levels have even higher risks of developing CVDs when they get exposed to secondhand smoke on a regular basis.

Lung Cancer. Lung cancer is another leading health consequence of commercial tobacco use and secondhand tobacco smoke exposure. Among the AI/AN adults in the US, lung cancer is the leading cause of cancer-related deaths (Indian Health Service, 2022; Plescia et al. 2014; Melkonian et al., 2022; Khan et al., 2021). As posited by American Cancer Society (2024), smoking is the core cause and driver of lung cancer cases with approximately 80% of lung cancer-related mortalities in the US being the result of tobacco smoking. Similarly, in the year 2018 there were approximately 597,000 cancer-related deaths in the US, 598,000 in 2019, and

610,000 in 2020 (Haque et al., 2023). Among men AI/AN adults, the mortality rate was 249.2 per n=3376 and among women, 189.9 per n=3239. These lung-cancer related death rates among active and direct AI/AN tobacco smokers are very high and calls for proper, more robust interventions.

Although secondhand smoke exposure among American nonsmokers dropped significantly from 87.5% to 25.2% between 1988 and 2014 (Tsai et al., 2018), significant progress has stalled among AI/AN communities in recent years. According to the Centers for Disease Control and Prevention's morbidity and mortality weekly report in 2018, the prevalence of secondhand smoke exposure remained extremely high among children aged 3-11 years (37.9%) (Tsai et al., 2018). To combat the threats that secondhand smoke poses to children and families, the U.S. implemented robust smoke-free laws and policies across workplaces and public places. For instance, between 2015-2017, at least 199 localities implemented stringent smoke-free laws, and the U.S. Department of Housing and Urban Development adopted a comprehensive rule requiring public housing to be smoke-free by July 2018 (Tsai et al., 2018). Despite these measures, many AI/AN communities still face high levels of secondhand smoke exposure due to the lack of state smoke free laws that automatically cover tribal nations or reservations. Additionally, many Native areas lack the resources implement smoke free protections and ensure compliance (Centers for Disease Control and Prevention, 2024b).

Diabetes. From a clinical angle, the relationship between tobacco smoking and diabetes has been well documented. Regular active and/or passive tobacco smoking has been identified as a modifiable risk factor for the development and continual growth of Type II diabetes. As reported by the Center for Disease Control (2022), Pan et al. (2015), and Campagna et al. (2019), active tobacco smokers are 30%-40% more likely to be diagnosed with Type II diabetes

compared to people who do not smoke. On the same note, people diagnosed with diabetes and are active smokers have a higher likelihood of having trouble with insulin dosing and managing their diabetic conditions than nonsmokers (Maddatu et al., 2017).

Across the AI/AN communities, diabetes prevalence is the highest of any other US racial group and is approximately twice that of White adults (Centers for Disease Control and Prevention, 2020b). The high regular rates of tobacco use among AI/AN populations might be a driving factor behind this elevated risk, embroiling the management and control of diabetes and heightening the possibilities of severe complications, morbidities, and mortalities. According to the report by the American Diabetes Association in 2024, approximately 9,000 people die as a result of diabetes caused by tobacco smoking in the US. The diabetes-related mortality rate among AI/AN per 100,000 people in 2018 was 41.6, which is higher compared to other racial and ethnic groups such as Whites (28.1), Blacks (37.2), Asians (15.0), and Hispanics (15.7) (Murphy et al., 2021). These findings demonstrate that tobacco use among AI/AN is still a critical public health issue especially with the emphasis on the high diabetes diagnoses and diabetes-related mortalities.

The American Indian Initiative (AII) and its Objectives

In response to the persistent disparities in commercial tobacco use and its associated health outcomes among American Indian (AI) populations, the California Department of Public Health, California Tobacco Prevention Program (CDPH/CTPP) launched the American Indian Tobacco Initiative (AII) in 2019. Funded by Proposition 56, the initiative provided grants to thirteen California Tribes and four American Indian Community Serving Organizations (AISCOs) for tobacco prevention projects led by Tribal governments.

Recognizing the sovereignty of federally recognized Tribes, CDPH/CTPP held consultation meetings in 2017 with Tribes from various counties to identify culturally relevant approaches to reduce commercial tobacco use disparities. These consultations led to the development of flexible grant submission procedures and culturally appropriate initiatives. Participating Tribes or grantees will receive funding for either a single-topic focus, which includes at least one policy and system change indicator, or a multi-topic focus with up to three indicators and the formation of a coalition.

The goals of the AII include building the capacity and skills of Tribal communities and AISCOs to implement tobacco prevention and reduction interventions, mobilizing and engaging community residents and Tribal government organizations to support policy and system changes, and improving the implementation, support, and evaluation of Tribal project policy and system change campaigns. By addressing these goals, the AII strives to reduce commercial tobacco-related disparities for California American Indians.

Evaluation of the American Indian Initiative

The California American Indian Tobacco Initiative Evaluation (CAITIE) team was tasked with assessing the overall success of the American Indian Initiative (AII) and providing feedback for future funding improvements. Unlike individual project evaluations, CAITIE evaluated the initiative in aggregate, offering a comprehensive view of its impact across various Tribal communities. The CAITIE team collected data over two cycles, between 2019 and 2021 for the baseline and 2022 to 2024 for the follow-up, gathering 143 survey responses, 103 interviews, and six talking circles. These interactions with Tribal Council members, elders, clinicians, youth, project directors, and staff were crucial in understanding the initiative's success and formulating recommendations to enhance Tribal programming.

Designed to be culturally relevant, the CAITIE evaluation incorporated best practices from Indigenous evaluation methodology. This included hiring California Native staff, conducting outreach led by Native staff with community ties, using talking circles instead of traditional focus groups, and employing a collective coding process. This culturally sensitive approach ensured that the evaluation honored Tribal sovereignty and traditions, providing a fair and representative assessment of project impact. The CAITIE team's dedication to cultural reciprocity and effective dissemination of results further underscored the importance of conducting evaluations that are respectful and inclusive of Tribal perspectives.

Study Purpose

While the CAITIE evaluation focused on assessing the initiative's overall impact, this study specifically aims to explore the success and impact of the core objectives or interventions chosen by the grantees of the CDPH/CTPP American Indian Initiative (AII) who participated in the CAITIE evaluation. This analysis seeks to understand how these interventions align with the initiative's goals, the extent to which they have been implemented and met, the challenges faced, and their overall impact on reducing commercial tobacco use within the American Indian population in California. Additionally, the study seeks to determine whether specific interventions were more successful than others by analyzing their perceived impact. By examining these core objectives, the study aims to provide deeper insights into the effectiveness of targeted interventions and offer recommendations for future program improvements.

Methods

Study Design

This study employs a qualitative approach to evaluate the objectives and interventions implemented through the American Indian Initiative. Specifically, key informant interviews collected during the follow-up data collection period by the California American Indian Tobacco Initiative Evaluation (CAITIE) team were analyzed. Analyzing qualitative data provides valuable insights and understanding into the processes and context of a program, filling gaps in quantitative data and adding depth to the overall evaluation (Centers for Disease Control and Prevention, 2018a). While the broader CAITIE evaluation focused on assessing the initiative's overall impact, this study specifically aims to explore the success and impact of the core objectives or interventions chosen by the grantees of the CDPH/CTPP American Indian Initiative (AII) who participated in the CAITIE evaluation.

The guiding questions for this study are:

1. What activities/policies are happening as a result of the AII and how well do they align with the objectives specified?
2. Are the objectives being met, to what extent, and what are the challenges faced?
3. What is the impact of specific objectives on the overall goals of the AII?

Data Collection

Key informant interviews with staff from projects funded by the initiative along with community members were conducted by the CAITIE team at baseline in 2021 and at follow-up in 2023. Interviews were conducted in English via a secure recorded conference call line using the Zoom platform and involved an interviewer and a notetaker. Lasting between 30 minutes to two hours, the interview questions explored areas such as the activities and policies resulting from the AII, the cultural relevance of the program, available resources, community awareness of

tobacco risks, support for policy change, impact on youth and nonmembers, and challenges faced during implementation. The interviews were then transcribed using Otter.AI and verified for accuracy by two to three CAITIE staff members. Additionally, transcripts were reviewed by at least one Native American staff member.

Key informants from 11 out of the 13 tribal communities initially participating in the CAITIE project were included in the analysis. Two tribal communities were excluded due to the lack of follow-up interviews. The key informants (n=30) consisted of 15 program staff members and 15 tribal members, providing a balanced perspective on the program's implementation and impact.

Before beginning the interview, participants were provided with an overview of their rights, and consent was obtained for recording the session. All data collected by the CAITIE team for the American Indian Initiative was aggregated and de-identified to protect the privacy and confidentiality of participating key informants, tribes, and supporting community organizations.

Data Analysis

For this study, the analysis was performed using the finalized interview transcripts provided by the CAITIE team and involved the use of descriptive and evaluation coding to systematically assess the data from key informant interviews (Saldana, 2009). Descriptive coding, a method that assigns labels to summarize the basic topic of a passage of qualitative data, was used to summarize the relevant content of the interviews and categorize the information based on the guiding questions (Saldana, 2009). This approach helps in organizing the data into meaningful categories that reflect the key areas of interest in the study. Evaluation coding, which involves assessing qualitative data to determine the effectiveness of programs and interventions,

was applied to assess the impact of the identified activities and policies in relation to the program objectives and the overall goals of the AII.

Each interview was carefully reviewed in its entirety (see Appendix A for the CAITIE Key Informant Interview Instrument) and coded based on the guiding questions designed to explore the alignment of activities and policies with the objectives/interventions chosen by the grantees, the extent to which these objectives were met, the challenges encountered, and the impact of the objectives on the overall goals of the AII. Codes were associated with the relevant program objectives identified by each grantee, with positive or negative values assigned to indicate benefits or challenges. The data were then aggregated based on the program objectives to explore the success and impact of these core objectives or interventions across all the grantees who identified it as an objective of their program. The data analysis process aimed to provide a nuanced understanding of the implementation and impact of project objectives/interventions, identifying key themes and insights to inform future funding and program development efforts.

Comparative Impact of Objectives

To determine whether specific interventions were more successful than others, descriptive coding was used to analyze the key informants' responses to Question #10, which asks: "At this point, what would you consider the impact of the American Indian Initiative program or the major accomplishments to reduce tobacco use and exposure in the Tribal community?" The responses were summarized and coded to identify mentions of impact relating to any of the specific objectives or interventions implemented through the American Indian Initiative.

After coding, the frequency of mentions for each objective or intervention were used to identify which ones were cited most often as having a significant impact. To account for the fact

that not all objectives were implemented uniformly across all tribes, the number of key informants who mentioned a particular objective were divided by the total number of key informants associated with tribes that have implemented that specific objective. This provided a percentage that reflected the relative success of each intervention based on its frequency of mentions. This approach allowed for a more accurate comparison of the perceived effectiveness of different strategies, considering their varying levels of implementation across different tribes.

Results

The analysis of the key informant interviews revealed that the grantees of the CDPH/CTPP American Indian Initiative (AII) selected a variety of objectives to address commercial tobacco use within their communities. The most common objectives were forming Youth Coalitions, establishing Smoke-Free Households, addressing Tobacco Product Waste, and implementing an Excise Tax on tobacco products. Of the 13 tribal communities that participated in the CAITIE project, 11 provided follow-up data. Among these, all 11 grantees focused on youth coalitions, nine on smoke-free households, five on tobacco product waste, and four on excise tax initiatives. The remaining objectives, which included policy and educational interventions, were less frequently chosen and will be discussed under other objectives.

Youth Coalition

Implementation and Impact of the Objective

The Youth Coalition objective was implemented in ten out of eleven communities, with one community still working to develop a youth coalition at the time of the interview being conducted. The initiative successfully engaged youth in various activities and policies aligned with the objectives of the AII. Activities included youth education, participation in events, and leadership opportunities. Many of the key informants interviewed reported positive outcomes, such as youth feeling empowered to share information about tobacco risks with their families, participating in community clean-up efforts, and taking on leadership roles.

The youth were involved in various activities, including attending tobacco summits, participating in after-school programs, and engaging in social media campaigns to raise awareness about the dangers of tobacco use. One informant highlighted the role of social media:

“...that wow factor for kids—what's going to make them stop in their tracks or say, you know, that sounds really cool, let's be involved—because social media is

such a big part of their everyday world, and technology [is] helping in those areas." (Female, program staff – Community Outreach Coordinator)

The coalition also worked on integrating cultural elements into their programs, which helped make the activities more relevant and engaging for the youth. For instance, incorporating traditional stories and values into the curriculum was highlighted as a way to emphasize the importance of staying tobacco-free:

"I'm trying to think like we're just incorporating just cultural things with the youth to kind of hit home with why it's important not to smoke and why to stick to traditional ways rather than sticking to the commercial ways." (Female, Program Director)

The impact of the youth coalition was significant, as described by one participant:

"Having the youth have these experiences, you know, going to the summit, going to the Capitol building, those have been transformative. You know, seeing the kids, you know, coming from this tiny little reservation with a member of population of 300 or so, and being too shy to order a coffee to all a sudden sitting in the front of lectures, speaking to elected officials, and then just being able to at least have the conversation to have a flavor ban implemented on the reservation." (Male, program staff –Outreach Coordinator)

Another informant noted:

"I think the impact is that it shows the youth that we are talking about it...they can ask their parents like, Mom, why do you smoke, and it's been talked about." (Female, tribal member)

The key informant interviews also shows that youth participation not only fostered a sense of responsibility among the younger generation but also created a ripple effect within the community, promoting tobacco-free lifestyles.

"I think with some of our youth and stuff and talking about it, I think the positive effects is they're realizing the bad stuff that's going on, and that they can't do it, they're not doing it. And then they're choosing to make sure that siblings and stuff

aren't doing it either.” (Female, tribal member – Cultural/youth Committee Leader)

Challenges

Despite these successes, several challenges were identified. Maintaining a consistent group of youth participants was difficult, partly due to competing priorities such as school and sports, and the impact of COVID-19, which led to fluctuations in engagement. As one key informant described,

"It's, to be honest, it's a little hit or miss. I know that we were coming on strong for a minute there... now, more recently, it's the kids, they're not as engaged. And I don't know if it's because they do not want to continue hearing about commercial tobacco stuff, or they're just busy with school, or whatever it is." (Female, tribal member)

Another informant echoed these sentiments:

“When we first started, it was like five or six youth. And I kind of just it goes down, it goes back up, you know, it's kind of a hit and miss, because kids you know, in school and sports and stuff like that.” (Female, program staff)

Funding constraints also posed significant challenges. Restrictions on providing incentives to non-tribal members and limitations on what grant funding could be used for, such as food, stickers, and T-shirts, hindered the ability to attract and retain youth participation. One participant explained the difficulties and the need for more flexible funding:

"I think maybe being a little bit flexible with funding, so we could provide T-shirts for our youth, and our community members for our events that we have annually. I know we have to call them uniforms. And I think funding for that, funding for backpacks for our youth. We had 100, and some participants at our youth summit last year. And, and we gave backpacks, and all five of our collaborators, we all kind of pitched in for that. Because there was no money. I mean, for backpacks, so, and food, we had to pitch in for the food because it didn't allow us. The program doesn't allow us to provide food." (Female, Program Director - Housing Dept. Executive Director)

This lack of flexibility in funding allocation made it difficult to maintain engagement and incentivize participation, which are crucial for the success of youth-oriented programs.

Transportation issues further complicated participation as youth often participated in various extracurricular activities and require transportation to attend these events. An informant described that:

"Transportation is an issue and kids are busy, you know, they're involved in many sports, and so it's just trying to pick those times when everybody could come together." (Female, tribal member)

Another informant pointed out the burnout from virtual engagement with their kids as a key challenge towards committing to the program. The informant recorded that:

"I really feel that there was a big burnout on zoom with the kids after going through that whole two years of the COVID lockdowns. I mean, I think kids are pretty zoned out on Zoom." (Female, tribal member)

Impact on Overall Goals of the AII

The impact of the youth coalition on the overall goals of the AII was made evident by the key informant interviews. Youth participation in the coalition not only fostered a sense of responsibility among the younger generation but also created a ripple effect within the community. Many youths shared information about tobacco risks with their families, contributing to a broader cultural shift towards tobacco prevention. The involvement of youth also helped normalize tobacco-free lifestyles and promoted community engagement. One key informant highlighted the importance of having a youth coalition:

"No one's going to not want to keep our youth safe [from commercial tobacco use]. So we've been using [youth] as the driving force. And not only that, but these youth are passionate about it." (Male, program staff – Outreach Coordinator)

Furthermore, the coalition's efforts significantly increased awareness about the dangers of smoking among both the youth and the wider community. This heightened awareness empowered the younger generation to take active roles in advocating for smoke-free environments. An informant illustrated the empowerment felt by the youth:

“What I see working is the younger generation, the younger kids feel they have a voice now. And when they see somebody smoking, and they're too close to building, they'll tell them, can you read? Can you read, we have signs up on the building. And they'll say, Yes, we can say so What's that sign saying then? And then the adult will look at him say, oh, geez, I'm sorry. And basically, I've witnessed them have them put that out. And stop smoking. And that was powerful to me to witness that. And one of our kids to just step up and say, Okay, I can say this now, because they're not supposed to be smoking here. So they, they're learning how to speak up when they don't want cigarettes around them.” (Male, Program Director)

Smoke-Free Households

Implementation and Impact of the Objective

The smoke-free household policy was implemented in seven communities, with two in the process of getting the policy approved for implementation. This policy aimed to create smoke-free environments within homes through voluntary pledges, which were well-received by many community members. The significant increase in voluntary pledges indicated a growing commitment to maintaining healthier home environments. One key informant shared:

“When I started, we didn't have that many smoke free home pledges and that is one policy we have, which is fully 100% voluntary. We only had maybe a handful now we are up to I believe 41 smoke free home pledges. That was just in the past few months.” (Male, program staff)

The implementation in some communities included follow-up calls to ensure that community members were adhering to their pledges. Indoor air monitoring reports were also used to build momentum and demonstrate the benefits of maintaining smoke-free homes. These reports

show that the mechanisms and policy would help the communities see the positive impact of their efforts, leading to increased support and implementation of the policy. An informant reported that:

“We were able to complete the indoor air monitoring in October. And we finally got a report back and we're gonna have a community meeting about that, so that people can see what it's like what the effects are, the air quality when you use commercial tobacco in your home. So we're hoping that that builds a lot of momentum to get people to start signing our smoke free home pledge.” (Male, program staff – Outreach Coordinator)

The policy also sought to influence broader community norms regarding tobacco use. Efforts included asking community members to participate in smoke-free home pledges and displaying signs indicating smoke-free homes. One informant described the community outreach efforts:

"They went around and asked everybody in the community if they'd be willing to participate in a smoke-free home and put a sign out front of their home, stating that there's a smoke-free home." (Female, tribal member)

Another key informant pointed out,

"That's one thing I was trying to, I've been trying to fight for years is I do not like people smoking in our homes. Those are our homes; those are our rentals. So when they move out, it's extensive work we have to do to get all that crap out of there. I haven't won that fight yet. But that is still something I am working on." (Female, Tribal Councilmember)

Another informant highlighted the community's excitement about the potential impact of the policy,

"I want to make sure that that house is a smoke-free house and the person lived in it before that didn't smoke, you know, so to have this policy come up, where there's no smoking pledges in their houses and stuff. That's awesome. And then these houses are going to last a lot longer, because that poison isn't going into the walls and the paint of our houses, you know." (Female, tribal member - Cultural/Youth Committee leader)

Challenges

The smoke-free household policy faced several challenges, primarily related to its voluntary nature and gaining tribal approval for the policy. Gaining approval proved difficult due to ideological challenges related to homeownership and personal freedoms. One key informant noted,

"People who are homeowners really feel like, you know, well, this is my house, I could do what I want. And honestly, I'm not even sure if they smoke or not. I think it's more or less, that the ideology of them having to have extra rules or something... Because, you know, some people who own the homes up here... really feel like, you know, well, this is my house, I could do what I want" (Male, program staff – Program Outreach)

Another informant noted,

"We are trying to get our tribal council to sign our voluntary in-home no smoking policy, which we've actually been trying for a while but our tribal council has not got to it yet, for whatever reason." (Female, program staff – Engagement Coordinator)

Additionally, members of one tribal community expressed concerns about the ambitious expectations set by the Scope of Work (SOW). The goal of achieving 50% of households adopting the policy within a few years was seen as overly ambitious. One participant explained:

"The first time I read the scope of work, I was like, Who wrote that 50% of households on the res will voluntarily adopt a smoke-free home policy? 50%? In four years? And like, then we gave money back for like a year and a half of the program. So that's like, two and a half years, and you expect it? That's like ridiculous from the outset." (Female, program staff - Community Engagement Coordinator)

Impact on Overall Goals of the AII

The smoke-free household policy had a notable impact on the overall goals of the AII by promoting healthier living environments and contributing to a cultural shift towards tobacco-free

lifestyles. By encouraging families to pledge to maintain smoke-free homes, the initiative helped reduce exposure to secondhand smoke, a critical step in improving public health. The policy also fostered a sense of community and collective effort in combating tobacco use.

This collective effort was evident as more families became aware of the health benefits and supported the policy, even before official tribal approval in some cases. As noted by one participant:

"And we weren't supposed to put out the voluntary pledge to make your home smoke-free before the policy gets signed to the tribal council. So a few people had seen that, and they actually signed it before it's even been signed by the tribe. So that was kind of nice to see, you know? They were on board for that," (Female, program staff - Engagement Coordinator)

The implementation of smoke-free homes also highlights the community's focus on education and voluntary commitment rather than enforcement, fostering a supportive environment for behavior change. One informant from the community shared,

"We also hope to secure pledges from homeowners living on the reservation regarding non-use of tobacco products in their home. So we don't, you know, want to tell them to stop smoking. But we do want to educate them on the health disparities and to commit to not smoking in their homes." (Female, Program director - Housing Dept. Executive Director)

Another informant emphasized the symbolic importance of these pledges:

"It says that by signing this I am showing my support for an in-home smoke-free policy. And that was to get that together to present to the tribal council to show them that the tribe is going to go forward." (Female, program staff - Engagement Coordinator)

Tobacco Product Waste

Implementation and Impact of the Objective

The objective to address tobacco product waste was successfully implemented in four communities. While initially only two communities identified addressing tobacco product waste as an objective, three additional communities later added this objective to their scope of work. This initiative aimed to reduce tobacco-related litter through community clean-up events and increased awareness about the environmental impact of tobacco waste. These activities not only helped clean up the community but also educated residents about the broader implications of tobacco use and the need for tobacco control policies.

Community members, especially youth, participated actively in clean-up events. These events were well-received and highlighted the extent of tobacco waste in public areas. One key informant stated,

"Well, I know that during our Fiesta, which some people call them powwows, it's a cultural gathering. They did go out and get a variety of community youth to go after that event and pick up and count cartridges or cigarette butts or I forget what else they counted. And I was surprised that the number of items associated with tobacco products were found out there at that gathering location." (Male, program staff - Project Supervisor)

Another key informant describes how they "have gotten huge jars full, and baths full" of litter (Female, Program Director - Housing Dept. Executive Director). Clean-up events often involved youth, community leaders, and even neighboring communities, fostering a sense of responsibility and collective effort. One key informant notes that "you see all of the adults that are in leadership positions, making the butt pick up." (Female, tribal member). Additionally, participants explain that:

"[they've] had... tobacco waste pickups that have been highly attended, not only by- with our youth but... with our community as well. And then we've had

additional tribes come up and help us too because it's happening on our property."
(Female, program staff Community Outreach Coordinator)

These activities also served to demonstrate the need for policies and changes to reduce tobacco waste. The visibility of the collected waste underscored the importance of stronger tobacco control policies and community engagement in environmental health initiatives. One key informant emphasized,

"So what we did was we held a litter observation, on that day, and then we did a litter cleanup event, the Monday after that weekend. And we collected 2000 cigarette butts, just from that weekend." (Female, program staff – Project Director)

The community response to these events showed awareness about the impact of tobacco waste on the community and environment at large. Many residents appreciated the clean-up efforts and believe these efforts were impactful in raising awareness about the damage caused by tobacco waste. One participant noted:

"I think they're very aware of the health risks, especially with us doing our cleanups, I think they're eye opening to them, how much waste there is around our community and around what's going on." (Female, Program Director)

Another shared the positive reception of involving youth in clean up events:

"Yeah, and one thing our community really liked to see was us getting the youth involved in that cleanup event that we did have... they were glad to have had that event happen." (Female, program staff – Project Director)

Impact on Overall Goals of the AII

The tobacco product waste initiative had a significant impact on the overall goals of the AII by promoting environmental health and raising awareness about the broader implications of tobacco use. The community clean-up events not only removed tobacco waste but also educated

participants about the environmental and health impacts of tobacco products. The initiative also fostered a sense of community involvement and responsibility. By actively participating in clean-up efforts, community members, especially youth, felt more connected to their environment and more committed to maintaining tobacco-free spaces.

Additionally, the data collected from these events were used strategically to advocate for further policy changes. One key informant explained,

"So that is another thing we are being strategic with was our cleanup event. So we just compiled all our information and sent it off to our evaluator. So once we get his evaluation back to us, that's going to be another huge point we make with our tribal council in trying to implement more signage for next year's event, and maybe even adding ashtrays and designated smoking areas during the event, because we definitely see a pattern of where people smoke too, you can tell by the litter." (Female, program staff – Project Director)

Excise Tax

Implementation and Impact of the Objective

The objective to implement an excise tax on tobacco products was adopted by four communities. The excise tax aimed to reduce tobacco consumption by increasing the cost of tobacco products and generating revenue to fund tobacco prevention and education programs. The implementation of this objective varied across communities, with some successfully integrating the tax into their policies and others facing challenges.

In two communities, the excise tax was successfully implemented, and the revenue generated was earmarked for tobacco education and youth programs. One key informant explained,

"The tribe collects the tax on it and the tribe keeps that... There has been some discussion as to how is that money going to be budgeted? Obviously, it needs to go some towards the youth and then the endeavors of this whole tobacco reduction program." (Female, tribal member)

The above sentiment was echoed by another informant who emphasized the importance of using the tax revenue to support youth initiatives:

"I would say our excise tax is probably one of the bigger ones just because it affects- we have one store for the reservation. So that helps with our youth programs to help fund not only to fund it, but also helps to keep going and helps it work with our youth." (Female, Program Director)

In another community, the excise tax objective was combined with a flavor ban to address the appeal of flavored tobacco products to youth. A participant described the adjustment:

"Originally, it was to amend the excise tax in our community. I did request for our scope of work to be slightly altered so that we could get more youth involvement. So we are combining that third objective with a main excise tax and or implementing a flavor ban on the reservation as well." (Male, program staff – Outreach Coordinator)

Challenges

The primary challenge faced in implementing the excise tax was determining how to allocate the generated revenue effectively. In some cases, the tax revenue was directed to a general fund, leading to discussions about its specific use for tobacco prevention and education.

One informant noted,

"All that money will go back into a general fund federal tax with the council to determine what they want to use it for knowing that we suggest that it be earmarked for tobacco education." (Female, program staff - Community Outreach Coordinator)

This allocation uncertainty required community leaders to advocate for the funds to be dedicated to tobacco control initiatives.

Impact on Overall Goals of the AII

The excise tax had a positive impact on the overall goals of the AII by providing a financial mechanism to support tobacco prevention and education initiatives. Program staff as

well as tribal members revealed that revenue generated from the tax was used to fund youth programs, educational campaigns, and other activities aimed at reducing tobacco use within the community. This funding was crucial in sustaining and expanding the community's tobacco control efforts.

The combination of the excise tax with other tobacco control measures, such as the flavor ban, further strengthened the community's efforts to reduce tobacco use, particularly among youth. This comprehensive approach addressed both the financial accessibility and the appeal of tobacco products, aligning with the broader goals of the AII to promote healthier behaviors and reduce tobacco-related harm.

Other Objectives

Several additional objectives were identified and implemented across various communities to promote healthier environments and reduce tobacco use. These included creating smoke-free outdoor recreational areas, establishing smoke-free indoor workplaces, launching tobacco prevention and cessation programs, and implementing a flavored tobacco ban.

The objective to create smoke-free outdoor recreational areas was implemented in three communities, with two fully implementing the policy and one in progress. This initiative aimed to reduce exposure to secondhand smoke in public spaces such as parks and playgrounds. One key informant shared,

"So I know that for us, we didn't really have too much of a problem implementing the smoke-free outdoor areas for you know, being at a minimum 25 feet away from the tribal offices and tribal buildings, if people do happen to smoke. So the outdoor recreational policy was created and passed." (Male, program staff – Program Outreach)

The objective to establish smoke-free indoor workplaces was implemented in one community, aiming to create smoke-free environments within non-gaming workplaces. The

policy was successfully integrated, although educating all employees presented some subtle challenges. One key informant explained:

"It's been super simple to do. And as far as our scope of work is concerned that objective was met rather quickly... But then technically, you would really want to educate everybody in the workplace. And so working with HR, in order to get that implemented. To meet with everyone and get them educated, is a little difficult as far as like, for the workplace policy. Before, it was a little bit more generic. Now it's a little bit more detailed and totally includes like, you know, the vehicles never been used by employees and stuff like that." (Female, program staff)

One community launched a tobacco prevention and cessation program aimed at reducing tobacco use through education and support. The program included developing quit kits and distributing educational materials to those interested in quitting tobacco. A key informant explained,

"We have a like a kit it, not or we have a quit kit. But we developed a booklet we haven't fully developed, like the whole entire kit. But we have a booklet we've distributed to anyone that's shown interest or voiced that they're interested in quitting commercial tobacco. And then any educational materials that we have, that we've been able to develop or find, through resources. And then we give them those resources as well." (Male, program staff)

Finally, one community implemented a ban on flavored tobacco products particularly targeting youth. This objective aimed to reduce tobacco use by eliminating flavored products from local stores. A key informant shared:

"Just in time for the flavored tobacco ban--that just happened in California. We had sold flavored tobacco in our c-store [convenience store]. But we had the option, because you know we are in federal land, we didn't really have to follow those state standards to sell that. But we opted not to sell it just for the safety of our children because we, you know, we have a highly populated reservation that's half children." (Female, Tribal Councilmember)

Comparative Impact of Objectives

The analysis of key informant interviews revealed varying perceptions of the impact of different objectives and interventions implemented under the American Indian Initiative. Key informants were asked to discuss the impact of the AII or to identify major accomplishments in reducing tobacco use and exposure within their communities. Table 1 summarizes these findings, showing the frequency and percentage with which specific objectives or interventions were identified by participants as being impactful, adjusted for the number of KIs from tribes that implemented each objective.

Table 1. Community Perspectives on the Impact of American Indian Initiative Objectives

Objective/Intervention	Number of KIs Mentioning Impact	Total KIs from Tribes Implementing the Objective	Percentage of Mentions (%)
Youth Coalition	19	30	63.33
Smoke-free households	5	22	22.73
Tobacco product waste	6	14	42.86
Excise tax	0	12	0
Smoke-free outdoor recreational area	2	9	22.22
Smoke-free outdoor recreational area & entryways	1	3	33.33
Smoke-free housing & non-gaming worksite	0	4	0
Smoke-free indoor workplace (non-gaming worksites)	1	3	33.33
Tobacco prevention & cessation program	0	2	0
Flavor ban	0	3	0

Table 1 presents community perspectives on the impact of various objectives and interventions implemented through the American Indian Initiative (AII) based on key informant interviews. The table includes the number of key informants (KIs) who mentioned each objective, the total number of KIs from tribes that implemented the specific objective, and the resulting percentage of mentions. This percentage reflects the relative success of each intervention as perceived by the informants, accounting for the varying levels of implementation across different tribes.

The youth coalition objective had the highest recognition, with 63.3% of key informants from implementing tribes mentioning its significance. This objective was adopted by all 30 key informants, indicating its broad implementation and recognition as an effective intervention. The involvement of youth in tobacco prevention activities was highlighted as a key factor in raising awareness and promoting tobacco-free lifestyles within tribal communities. Tobacco product waste initiatives also received notable recognition, with 42.9% of key informants from implementing tribes acknowledging its impact. These initiatives often involved community clean-up events that not only reduced tobacco-related litter but also raised awareness about the environmental and health consequences of tobacco use.

Both the smoke-free outdoor recreational areas and entryways objective and the smoke-free indoor workplaces objective were mentioned by 33.3% of key informants from implementing tribes. These policies aimed to reduce secondhand smoke exposure in public and workspaces, contributing to healthier environments. Smoke-free households and smoke-free outdoor recreational areas had lower mentions, with 22.7% and 22.2% of key informants, respectively, discussing these objectives.

Several objectives, including excise tax, smoke-free housing & non-gaming worksite, tobacco prevention & cessation program, and flavor ban, had a negligible mention rate. This may indicate that these interventions were either less frequently implemented or not highlighted by the key informants during the interviews within the evaluated timeframe.

Discussion

The evaluation of the CDPH/CTPP American Indian Initiative (AII) revealed significant insights into the success and challenges associated with the core objectives of the initiative. The most common objectives included forming Youth Coalitions, establishing Smoke-Free Households, addressing Tobacco Product Waste, and implementing an Excise Tax on tobacco products. Each objective demonstrated varying degrees of success and impact on the overall goals of the AII, which aimed to reduce commercial tobacco-related disparities among California American Indians.

Principal Findings

The youth coalitions were largely successful in engaging young people in tobacco prevention activities, fostering leadership, and promoting tobacco-free lifestyles. Despite challenges such as fluctuating participation and funding constraints, the coalitions effectively empowered youth to advocate for healthier communities. The smoke-free households objective saw a significant increase in voluntary pledges, indicating growing community commitment to maintaining healthier home environments. By encouraging families to pledge to maintain smoke-free homes, the initiative helped reduce exposure to secondhand smoke, a critical step in improving public health. This collective effort was evident as more families became aware of the health benefits and supported the policy, even before official tribal approval in some cases. However, ideological resistance and the voluntary nature of the pledges posed challenges to wider adoption.

Addressing tobacco product waste involved community clean-up events that not only reduced litter but also raised awareness about the environmental impact of tobacco use. Clean-up events often involved youth, community leaders, and even neighboring communities, fostering a

sense of responsibility and collective effort. These activities also served to demonstrate the need for policies and changes to reduce tobacco waste. The community clean-up events not only removed tobacco waste but also educated participants about the environmental and health impacts of tobacco products. These activities fostered community involvement and highlighted the need for stronger tobacco control policies.

With regard to excise tax on tobacco, the main challenge was determining how to allocate the generated revenue effectively. In some cases, the tax revenue was directed to a general fund, leading to discussions about its specific use for tobacco prevention and education. As established from the results, the combination of the excise tax with other tobacco control measures, such as the flavor ban, further strengthened the community's efforts to reduce tobacco use, particularly among youth.

Comparative analysis of the perceived impact of different objectives revealed that the Youth Coalition was cited most frequently as impactful, with 63.3% of mentions, while smoke-free policies and smoke-free indoor workplaces followed with 22.0% and 33.3% respectively. This suggests that interventions involving youth engagement and public policies were viewed as more effective compared to other strategies.

Limitations

Despite the valuable insights gained from this evaluation, several limitations should be acknowledged. First, the use of self-reported information from key informants may be subject to bias. Additionally, the study's focus on a specific set of objectives chosen by grantees may not capture the full range of activities and outcomes associated with the AII. Second, the exclusion of two tribal communities due to a lack of follow-up interviews may have resulted in an incomplete representation of the initiative's overall impact. Third, the evaluation's qualitative

nature, while providing depth and context, may limit the transferability of the findings to other American Indian communities outside California. Additionally, the varying degrees of implementation across different communities make it challenging to attribute observed changes solely to the initiative's interventions. Finally, the impact of the COVID-19 pandemic on program activities and data collection processes may have influenced the outcomes and responses of participants, adding another layer of complexity to the evaluation.

In addition to the evaluation's general limitations, specific challenges were encountered in the comparative analysis of the different interventions. The analysis was limited to key informant responses to a single question: "At this point, what would you consider the impact of the American Indian Initiative program or the major accomplishments to reduce tobacco use and exposure in the Tribal community?" This narrow focus may not fully capture the breadth of impacts or all significant interventions. Key informants might not have been aware of certain objectives existing or being implemented, or they may not have mentioned all impactful interventions in their responses to this question. As a result, the comparative analysis may reflect an incomplete or skewed perspective on the relative success of different interventions.

Comparison with Prior Work

The findings from this study underscore the importance of culturally adapted approaches in implementing smoke-free policies and tobacco control initiatives within American Indian (AI) communities. The benefits of smoke-free housing policies have been well-documented, particularly in tribal contexts. For example, the adoption of such policies by the Red Cliff Band of Lake Superior Chippewa Indians in 2016 highlighted their commitment to creating healthier environments for future generations. Jim Belanger of the Red Cliff Community Health Center noted that the goal of their policy was to create a healthier environment for the seventh

generation, emphasizing the long-term vision and cultural significance of such initiatives (Public Health Law Center, 2020).

The U.S. Department of Housing and Urban Development (HUD) has identified several benefits of smoke-free housing policies, including cost savings, maintenance savings, insurance savings, reduced legal liability, and health protection for residents and staff. Although HUD's smoke free rule does not apply to Tribal housing, these benefits are equally relevant to Tribal contexts, particularly in protecting children from secondhand smoke and preserving cultural practices related to sacred tobacco use. Furthermore, research has shown that smoke-free housing policies can decrease smoking rates among those addicted to commercial tobacco, thereby addressing the disparities in tobacco use patterns. Considerations for implementing smoke-free tribal policies include making sure that the difference between commercial tobacco and ceremonial tobacco is clearly defined and whether to include e-cigarettes (MN Dept. of Health, 2022; Daley et al., 2011; D'Silva et al., 2018; Milwaukee Public Museum, 2019; MN Dept. of Health, 2022; Public Health Law Center, 2020).

In addition to housing policies, broader tobacco control measures, such as community-wide smoke-free events and educational campaigns, have shown promise. Tribal coordinators have successfully implemented smoke-free policies in various settings, including community gatherings and public buildings. For example, the Minnesota Tribal Tobacco Education and Policy Initiative conducted 21 smoke-free events and passed several smoke-free policies, demonstrating the effectiveness of community-driven approaches in shifting social norms and reducing secondhand smoke exposure (Scott et al., 2016). The empirical findings fill the gaps in the studies by Kong et al. (2012), Boudreau et al. (2016), and Bafunno et al. (2020), which established that tobacco cessation programs majorly fail to achieve their smoke-free goals to

their entirety due to failure to incorporate community-driven approaches and lack of emphasis on culture of the target group—AI/AN. These events are not only instrumental in policy implementation but also serve as platforms for educating youth and community members about the harms of commercial tobacco and the benefits of smoke-free environments.

Tobacco education programs targeted at youth and adolescents are particularly effective in reducing tobacco use initiation, especially when combined with other policy tools such as tobacco taxes, smoking bans, and restrictions on youth access to tobacco (Satter et al., 2012). Reducing and delaying tobacco use initiation is crucial because commercial tobacco is more likely to cause addiction the younger the initiation. This underscores the importance of comprehensive strategies that include youth education as a key component of tobacco control efforts.

Tobacco taxation is another critical tool for tobacco control that is underutilized on tribal reservations. Higher tobacco taxes have been shown to decrease tobacco consumption, increase quit attempts, and generate revenue for tobacco control activities (Satter et al., 2016; D’Silva et al., 2018; Sadik, 2014; Rusk et al., 2023). Implementing tobacco taxes on tribal lands could help mitigate the high costs associated with commercial tobacco use and support comprehensive tobacco control efforts.

However, implementing these policies is not without challenges. Effective policy implementation requires education, appropriate signage, and enforcement mechanisms tailored to the community's cultural context. Rather than overemphasizing the negative impacts of commercial tobacco use while addressing the AI/AN communities as established by Bafunno et al. (2020), the findings of this study suggests that educating residents about the harms of commercial tobacco and the benefits of smoke-free policies is crucial for gaining community

support and ensuring compliance. Signage and educational materials should reflect the community's cultural values, emphasizing the distinction between commercial and sacred tobacco use (Public Health Law Center, 2020). Youth education is particularly vital, as engaging young community members early on can foster long-term adherence to smoke-free norms and enhance the sustainability of these policies.

The integration of culturally relevant education and cessation programs is also essential. The findings show that mainstream cessation interventions often fail to acknowledge the traditional role of tobacco in Indigenous communities, findings that are in line with the empirical findings from the study of (MN Dept. of Health, 2022; Daley et al., 2011; D'Silva et al., 2018; Sadik, 2014; Rusk et al., 2023), which can render them ineffective. Therefore, it is vital to develop cessation programs that respect and incorporate cultural practices and values. Moreover, the study has also shown that individuals who visit healthcare providers are more likely to implement complete household smoking bans, suggesting that clinic-based interventions could be effective in promoting smoke-free homes. Modifying these interventions to include culturally relevant information can further enhance their effectiveness and ensure they resonate with the community.

Implications for Policy and Practice

The evaluation underscores the importance of culturally relevant and community-driven approaches in tobacco control initiatives. The success of youth coalitions and community clean-up events highlights the potential of engaging community members, particularly youth, in tobacco prevention efforts. Policymakers and program planners should consider incorporating traditional cultural elements and fostering community involvement to enhance the effectiveness of tobacco control programs. The challenges associated with smoke-free household policies and

excise tax implementation indicate the need for flexible and context-specific strategies. Engaging community leaders and addressing ideological resistance through education and dialogue are critical for gaining wider acceptance of smoke-free policies. Similarly, ensuring transparent and equitable allocation of excise tax revenue can enhance community support and sustain tobacco prevention efforts.

Appendix

Appendix A: CAITIE Key Informant Interview Instrument

The following is a simplified version of the key informant interview instrument and does not contain probing questions, examples, and introductory and closing remarks.

1. What activities and policies are happening as a result of this American Indian Initiative project?
2. What is working well so far with the American Indian Initiative project?
3. What is most important to the community regarding commercial tobacco use?
 - a. In what ways does the American Indian Initiative project address these concerns?
 - b. In what ways is the American Indian Initiative project culturally relevant for the Tribal community it is helping?
4. What resources does the American Indian Initiative project have to accomplish this project's goals?
 - a. Can you elaborate on how the resources have been helpful?
 - b. Do you think any other resources are needed to help accomplish these goals? If so, can you please explain?
5. Please tell me about the current involvement of the individuals, leaders, groups, and organizations for this American Indian Initiative project's tobacco efforts.
6. Which other individuals, leaders, groups, and organizations do you think should be involved in the American Indian Initiative project efforts for the community?
7. The Tribal Community Coordinating Center (TCCC) is a resource for Tribal grantees to utilize. Are you aware of the TCCC?
 - a. How has the TCCC supported the American Indian Initiative project?
8. In what ways are community members aware of the health consequences surrounding commercial tobacco use?
9. In what ways has the community shown readiness and public support to implement commercial tobacco policy changes?
10. At this point, what would you consider the impact of the American Indian Initiative project or the major accomplishments to reduce tobacco use and exposure in the Tribal community?
11. What has been the impact of the American Indian Initiative project for youth in the Tribal community?
12. How has the American Indian Initiative project impacted nonmembers and visitors who come to the community?
13. How are tobacco Tribal codes and policies enforced?
 - a. In general, what happens to those who do not follow a tobacco Tribal code or policy?
14. How has the American Indian Initiative project contributed to relationships, connections, and collaborations with other organizations, grantees of the American Indian Initiative, Tribes, etc.?
15. Please share with me some of the challenges with the American Indian Initiative project. What could be improved or be done to make it better?

16. Is there anything else you would like to share about the American Indian Initiative project or your thoughts about implementation of the American Indian Initiative project?

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