Tobacco Use, Quitting, and Service Access for Northern California Arab Americans: A Participatory Study

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ABSTRACT

Background: Cigarette smoking rates have decreased in the USA, particularly in California. Despite representing a large population in the US and particularly in California, Arab Americans are not typically assessed in tobacco-related health studies. Disparately high smoking rates have been found in community samples of Arab Americans. In a formative participatory research study, we aimed to assess experiences with tobacco products and access to cessation and prevention services for Arab Americans who use commercial tobacco products. **Methods:** In partnership with a Community Advisory Board, we conducted a Brief Survey of adult Northern California Arab Americans who use tobacco products, both men and women (n=101), followed by Assets Mapping to identify services, and Focus Groups with a subset of survey participants (n=30), to assess tobacco product use, readiness to quit, and access to culturally-appropriate cessation services. **Results:** The majority of people who smoked did so daily. Waterpipe use was as common as cigarette smoking, and more so for women. Intent to quit was offset by highly normative tobacco use in the social environment, and limited access to culturally-appropriate cessation services. **Discussion:** Improvement in outreach and services specific to Arab Americans may support prevention and cessation of commercial tobacco products.

KEYWORDS: Arab American; commercial tobacco; health equity; community engagement

Background

Arab Americans in Nicotine and Tobacco Research

Tobacco smoking is among the most preventable major causes of disease and death in the United States (US).[1] Smoking increases risks for illness and premature death including heart and lung disease, diabetes, asthma, and many other illnesses for people who smoke and for their families, and also can impact erectile function for men and pregnancy outcomes for women.[2-4] Counseling and pharmacotherapy have been found to be effective in helping people who smoke cut back and quit smoking, including for people who smoke who experience difficulty quitting [5] and for non-White US populations.[6]

While Arab Americans are understudied in nicotine and tobacco research,[7] there are many indicators of disparities in tobacco use. Use of both cigarettes and waterpipe tobacco smoking (most commonly called *shisha* by Arab Americans and also known as *hookah*, *arghile* or *narghile*, or *goza*) are common in the Middle East.[7] In Arab countries, rates of tobacco use for men range from 40% (Iraq, Egypt, Palestine) to 77% (Yemen), while tobacco use rates among women range from 2.7% (Palestine) to 29% (Yemen) and 35% (Lebanon).[8] Arab American community surveys have shown current smoking rates ranging from 39% to 60% (compared to 16% for US adults).[9] "Arab" refers to people whose primary language is Arabic and who originate from Western Asia and North Africa, with a majority of Arabs being Muslims. The Arab Institute estimates that 3.7 million Americans are of Arab ancestry, with the largest number residing in California.[10] Arab Americans may be considered an invisible minority in the US.[11, 12] Classified in the US Census sometimes as "White" and sometimes as "(Western) Asian,"[13] Arab

Americans have not yet been the focus of any national health study.[14] Scholars have noted that such limited data does not allow for an effective understanding of key drivers of health and potential health disparities among Arab Americans.[15] The few studies that assessed disease prevalence and mortality among Arab Americans report tobacco-related cancers such as prostate, lung, and colorectal cancers as the most commonly diagnosed types of cancers among male Arab Americans and breast, lung, and colorectal cancers as the most diagnosed types among female Arab Americans.[16]

Arab Americans and Tobacco Cessation Services

Arab nations differ widely in terms of access to wealth; lower income countries such as Yemen, Syria, and Iraq are noted for having little or no tobacco cessation resources or programs.[17] [89] Of US Arabs, the lowest median household income rates are reported by Iraqis and Yemenis—$32,075 and $34,667 respectively, compared to $51,914 for the US overall—and Yemenis report the lowest rates of homeownership at 36.7%, compared to 66.6% for the US overall.[18] Distress and depression related to discrimination and stigma may increase health risks to Arab Americans,[15] including tobacco use.[19] Arabs coming to the US from conflict zones (e.g., Syria, Yemen, Sudan, Iraq), including refugees and asylees, are at an elevated risk for anxiety and Post-Traumatic Stress Disorder,[20] which are highly associated with smoking. Social connectedness and community insularity may buffer against smoking for women in communities in which women's smoking is stigmatized but may increase risks for men by reinforcing smoking as a normative masculine behavior.[21, 22] Women and children living with people who smoke are at risk for second- and thirdhand smoke exposure.

California's Comprehensive Tobacco Control Program

Arab Americans may underutilize preventive health services,[23] and to date there are very few tobacco treatment and prevention programs specific to Arab Americans.[9, 24] California's Comprehensive Tobacco Control Program (CTCP) was designed and has been shown to have impacts on reducing tobacco use and exposures for the general population of California residents.[25] The CTCP features a free quit line service which is available in English and several non-English languages, but not yet Arabic.[26] The CTCP also includes policies intended to restrict availability of tobacco products (e.g., by taxation) and reduce secondhand smoke exposures in public and some private settings. Immigrants and refugees with Limited English Proficiency and/or coming from low-tobacco control countries can become aware of and benefit from California control policies.[27] Lack of linguistically- and culturally-appropriate health promotion materials and programs may, however, limit their knowledge of tobacco-related harms and best practices for cessation and prevention.

California has had a long-standing tobacco control program, which has resulted in one of the lowest state level smoking prevalence rate in the nation of 10.1 percent in 2017.[28] California has fewer people who smoke heavily, more people who smoke lightly and intermittently, and a higher proportion of people who formerly smoked than other US states.[29, 30] California has been one of the leading states whose programs embrace ethnic distinctions in tobacco use patterns among the various races/ethnicities that reside in the state.[31] Nonetheless, while research and targeted campaigns addressing tobacco issues among African Americans,[32, 33] Latinos,[34, 35] and different Asian populations in California are ongoing,[36, 37] little is known about tobacco use

patterns and smoking cessation among Arab Americans in California. Additionally, there are no state-level efforts that are specific to Arab Americans who smoke.

Arab Americans in California

Many Arab Americans arrived in California's Central Valley region as agricultural workers in the 1950s. A prominent farmworker union organizer alongside Cesar Chavez was Nagi Daifullah, a Yemeni American.[38] Many Yemeni Americans moved to the San Francisco Bay Area of Northern California to continue working in the produce industry, including as shopkeepers. In Southern California are substantial communities of Arab Americans from Iraq, Palestine/Israel, Syria, Egypt, and Lebanon. In the Bay Area, the largest group of Arab-ancestry people in the Bay Area are from Yemen: 4102 people in 2015, according to the US Census, not including children born in the US. Yemeni community leaders estimate up to 10,000 community members in the Bay Area.[39, 40] There is also a sizeable community of people from Sudan, and these two communities are well-connected through social and religious service and practice. From 2010 to 2014, a Bay Area Arab cultural center maintained a Social Services Department which provided relief, support, and referral services to underserved Arab Americans. The department was closed when the agency shifted to a performing arts and culture focus, and no other Arab-specific social services have since replaced it. Other Arab American community organizations in the Bay Area were focused on college students and young professionals; small business owners; soccer teams; performing arts groups; men's and women's social groups; and international humanitarian aid and social justice advocacy

*Establishment of the Community Advisory Board*At the request of local Arab Americans concerned about tobacco-related health disparities, an investigative team composed of Arab Americans and non-Arab Americans obtained funds to conduct formative community-engaged research. As no Arab American organizations in the area focused on health or social service provision, there was no clear community partner organization. Using a combination of network referrals and internet searches we recruited for and empaneled a Community Advisory Board (CAB) of local Arab American leaders, and worked with the CAB to develop, implement, and interpret the results of our research. Linking the CAB's and staff's expertise in programming culturally- and linguistically appropriate tobacco cessation services, our goals were to (1) rapidly assess tobacco use, access to services, and identify healthcare service organization(s) utilized by Arab American tobacco product users, which we report here, and (2) utilize the information obtained in this rapid assessment to develop a pilot intervention program, which we will report in a future publication. Our aims were to understand community-specific cessation needs, gauge overall readiness to change, and identify existing cessation services to which the team could facilitate linkages and referrals, together with outreach and education about tobacco-related harms and best practices in cessation and prevention.

Arab American Community Partnership and Community-Based Participatory Research

Prior health service research has shown the importance of working with Arab American community leaders, establishing trust in the program, and respecting family, cultural, and religious traditions,[41, 42] with Community-Based Participatory Research (CBPR) recommended as the optimal approach.[41] CBPR core principles are co-production of knowledge and shared decision-making power. Researchers and community members work together to select the research aims and methods, collect and

analyze data, and identify and implement a course of action based on the results of the research.[43, 44] Since community members are engaged in all stages of the research and research is primarily grounded in the lived experiences of community members, methods and measures developed within CBPR projects may be said to have high relevance and validity.[45] CBPR methods, including endorsement of key leaders within a CAB and use of community or lay health workers as "cultural mediators," are recommended to develop trust in tobacco program activities, supporting both recruitment and program validity.[41, 46] In addition, conducting primary research in partnership with under-reached communities can in itself raise awareness and mobilize community members in support of health goals.[47] Our approach to data collection was framed by the Transtheoretical Model,[48] which aims to support an individual in changing harmful health behaviors by moving them along progressive stages of change (precontemplation, contemplation, preparation, action, maintenance). Our approach was also informed by the Community Readiness Model,[49] which considers community-level awareness of and readiness to change social-environmental drivers of harmful health behaviors. We combine these approaches with an overall understanding that multilevel interventions can have synergistic effects.[50, 51]

Recruitment of the Community Engagement Core: CAB, Staff, and Consultants

For our pilot study we empaneled a CAB whose members brought together a variety of skills, experiences, community connections, and knowledge of health research. CAB members were recruited to reflect and connect with sectors of the Arab American deemed important to the project and included both men and women; small business owners; health, social service, and religious professionals; and community organizers. Many CAB members were also parents of young children. All were fluent in Arabic, and some were also fluent in English. CAB members

joined for various reasons, including interest in raising awareness about tobacco use effects on people who smoke and their children; supporting people who smoke to cut back and quit; and sense of responsibility to the community, as leaders. One CAB member envisioned a health service agency for Arab Americans, similar to health agencies in the area that focused on Native Americans and Asian Americans. Other CAB members were particularly motivated to improve Arab women's health, and to advance Arab women's participation in health sciences. The project staff members and consultants brought expertise in tobacco-related public health research and practice; community-based preventive interventions; clinic-based tobacco cessation; community-participatory research; immigrant and minority health; anthropology; global health; and social epidemiology. All were fluent in English and two were also fluent in Arabic. In addition, staff member and second author L.S. is a member of the community. Staff and consultants were motivated by commitments to socially-just public health and health service provision, particularly in addressing inequitable tobacco risks, and interest in enhancing the articulation of community-based knowledge with health sciences.

Formative Research Goals

Our project was supported by a two-year pilot research award, with the overall goal of developing a pilot intervention. To understand how to best program the intervention activities specific to the cultural and linguistic needs of the Arab American community, we conducted a rapid assessment using a mixed-method design.. Our design entailed a brief community survey of Arab Americans who smoked to understand their patterns of use and readiness to quit, followed by focus group interviews to elucidate barriers and supports to quitting, and an assessment of culturally-appropriate and accessible cessation resources. Our rapid assessment

was designed both to collect information and as a mode of community engagement, introducing the topics and staff to the community as a first step of raising awareness about tobacco-related harms and means to reduce and prevent harms.

Methods

Community Engagement. The investigative team worked with this CAB to design, implement, interpret, and report on results from community-based data collection with Arab American tobacco users. To assess tobacco product use and barriers and supports for treatment, we conducted (1) a Brief Survey with Arab American adult tobacco users in the East Bay Area followed by (2) Focus Groups with respondents recruited from the survey. The COVID-19 pandemic broke out in California while we were midway through our first data collection activity, the Brief Survey. Bay Area counties were the first in the nation to issue Shelter-In-Place orders in response to the pandemic (March 17, 2020). All study protocols and products were approved by the CAB, and the study was approved for protection of human subjects by the lead agency's Institutional Review Board.

Community Advisory Board. The CAB was composed of Arab American and North African community members who either volunteered or were referred by the community to be involved in the research study. As trusted and influential members of their communities, their role was to help develop, coordinate, lead, and oversee all program activities. In addition, the CAB oversaw and approved of all research and program activities for the community, supporting outreach and dissemination efforts. The research team communicated regularly with the CAB

through emails and quarterly meetings facilitated on Zoom. While all CAB members were either bi- or multi-lingual, a majority of communication during meetings, phone, or email was done in English. In cases that required English to Arabic translation during meetings, two of the project team members spoke Arabic fluently and were available to translate as needed. All research materials were provided in both Arabic and English to provide full accessibility, as there were varying levels of English fluency on the board. In addition, the project coordinator documented all the meetings and communications in written notes which were made available to board members in both printed and digital forms as they preferred for their review.

To develop the research protocols, the research staff used an iterative process with the CAB. First the research staff researched and recommended potential survey and interview questions, responses, and format, based on our own previous research studies and prior research conducted on Arab Americans. Before meeting with the CAB, we shared a draft of all research materials for their review. At our meetings, we conducted a line-by-line review with the CAB for feedback and guidance. The CAB approved most of the research drafts we presented. They asked for clarification and made suggestions to improve questions and responses, such as adding a question specific to the Muslim community and their tobacco use. The staff provided a cash honorarium to each CAB member as a token of appreciation for their contribution to the study.

Sampling and Recruitment. Using in-person recruitment at community events pre-pandemic, and thereafter referrals from CAB members and project staff well-connected to the local Yemeni and Sudanese communities, we recruited 101 Arab American adult tobacco users to the Brief Survey. This was less than we had proposed to recruit (proposed n=120). Pandemic conditions severely limited the team's ability to interact with the community, and when we judged that the team and

CAB had exhausted our referral networks, we closed the survey. Respondents were screened for any past 6-month use of any tobacco products (including cigarettes, e-cigarettes, hookah or shisha, chew or snuff), East Bay Area residence, and age 18 and over (self-report). We recruited Focus Group participants (n=30) from among survey respondents who consented to be recontacted. Because men's and women's activity spheres are separate for many Yemenis, we stratified by gender to allow separate focus groups for men and women. Because older and younger people might have differing experiences with tobacco use and quitting, we also stratified by age groups (21-35, 36 and up). We closed enrollment when we attained 4 groups with at least 6 individuals each. Due to very high interest in the women's groups, we allowed additional participants who were invited by enrolled participants to join. For Assets Mapping, we conducted brief telephone interviews with providers at the healthcare facilities most commonly reported by survey respondents, seeking out providers who might best have knowledge of cessation services (n=7).

Data Collection**.** The Brief Survey was initially designed and fielded to be self-administered, with or without assistance, in paper form, in either English or Arabic. Due to pandemic conditions we converted to a web-based survey and all subsequent data collection activities, as well as CAB meetings, were conducted in web-based platforms. All survey responses were stored separately from identifiable data (e.g., contact information) and uploaded for analysis to SAS©. Bilingual bicultural project staff conducted four Focus Groups stratified by gender (male and female) and age (older and younger adults). Assets Mapping was conducted by brief telephone interviews with providers. The Focus Groups were conducted as web-based meetings,

in Arabic and English, and audio-recorded. Audio recordings were professionally translated and transcribed.

Survey Measures and Focus Group Domains. All Brief Survey measures and all Focus Group questions were drafted by the research staff and reviewed and amended by the CAB. The staff and CAB agreed that, due to the formative nature of the research and the partnership, all data collection should be narrowly focused on assessment of tobacco use and dependence and readiness to quit. In the Brief Survey we assessed participant's age, gender, generation in US, household composition, healthcare provider and health insurance (public or private) information. We asked respondents to report ever and past 30 days frequency of shisha smoking (daily, weekly, month, occasionally, rarely); and ever use of e-cigarettes, as well as number of days they used e-cigarettes in the past 30 days. We asked respondents why they smoked shisha, and why they used e-cigarettes. We assessed current cigarette use with the two items; cigarettes per day and time until lighting first cigarette.[52] We also asked respondents to report if they found it difficult not to smoke where smoking is forbidden (with responses Yes or No) and, at the CAB's recommendation, if they found it difficult not to smoke during Ramadan (the annual 30 day period during which observant Muslims refrain from eating, drinking, and smoking in daylight hours). To assess readiness to quit, we asked respondents if they were thinking about quitting in the next month, sometime in the next six months, not thinking about quitting, or not sure. We asked respondents to report past quit attempts; what methods they used; and what methods they would recommend or try again; as well as whether they had been advised to quit by a healthcare professional or by a family member or friend. To gauge community-level readiness to change, we assessed home smoking norms and smoking among family members and friends. In Focus

Groups we invited participants to share their observations on barriers and supports to changing tobacco habits; and invited them to comment on a list of best practices for tobacco cessation, e.g., nicotine replacement therapies, individual or group counseling, quit lines, and text messaging, as well as self-recovery (quitting on one's own).

Assets Mapping. Providers were asked whether patients were asked about their smoking; what services were available for people who smoke, including referrals; and whether services and resources for people who smoke were available in Arabic. Staff also searched provider websites and referrals for Arabic-language printed or online materials for cessation and prevention.

Data Analysis. Quantitative analysis of survey responses for this paper was generated using SAS©. To analyze the results of Assets Mapping, we created a Resource Matrix, tabulating providers, cessation resources available, and whether or not Arabic language services were available. Qualitative analysts open-coded the focus group transcripts for cross-cutting themes as well as themes which were gender- or age-group-specific.

Contextualization and synthesis of data across methods was supported by the close conceptual and procedural linkages between the data sources. The Brief Survey served as a base, enabling a rapid assessment across a sample of Bay Area Arab American adults who use tobacco products. The survey results allowed us to describe the types of tobacco products most used, readiness to quit, and exposure to and use of best practices in tobacco cessation, as well as community norms which might challenge quit attempts. As the Focus Group participants were for the most part drawn from among the survey respondents, the Brief Survey responses contextualize their qualitative responses, which responses served to more closely examine the survey patterns and

move these results in the direction of culturally-appropriate intervention design. Key informant respondents in the Assets Mapping component were selected from among the healthcare providers most frequently named by Brief Survey respondents, and their responses allowed us to understand linkages or lack thereof between Arab Americans who use tobacco products and treatment providers.

The staff presented and discussed preliminary results of these analyses with the consultants and the CAB. Next, the staff generated abstracts for presentations to scientific audiences which were reviewed and approved by the CAB. We then developed manuscript drafts which were reviewed and edited by CAB member co-authors. All CAB members were invited to participate in data analysis, interpretation, and reporting, including preparing and co-authoring the present manuscript. Not all CAB members had time for or interest in these activities. In addition, their normal work and family responsibilities, midway through the first year most CAB members also diverted extra time and energy into COVID-19 emergency response, including community testing; added clinical hours; and added childcare due to distance learning. Some but not all CAB members had the capacity or interest to work with technical materials in English; however, all were provided with summaries in Arabic and opportunities to comment in web-based meetings conducted in Arabic. Not all CAB members wished to be named in public reports; three CAB members are listed as co-authors.

Results

Survey Results. Survey respondents were predominantly between the ages of 25 and 54, about one-third female, and represented a range of educational backgrounds. The majority were born

outside the US, lived with children, and spoke primarily Arabic at home. More respondents preferred Arabic in healthcare services than had access to this service. About 40% reported having private insurance while only 6% reported having a private healthcare provider (see Table 1).

--Table 1 HERE--

For lifetime tobacco product use, the most common product was shisha followed by cigarettes (combustible) and then e-cigarettes. About half of people who smoked cigarettes reported smoking half a pack or less per day, however about a third reported smoking their first cigarette within 30 minutes of waking, indicating higher physical dependence on nicotine. More men than women reported ever using either type of cigarettes, while slightly more women reported ever smoking shisha. Of people who smoked shisha, a little under half reported weekly use. Shisha smoking was reported as primarily a social activity, with flavoring being important for many users, and very few respondents endorsed shisha use as a traditional cultural practice. E-cigarette users reported mostly trying e-cigarettes out of curiosity, followed by interests in quitting, replacing, or cutting down on combustible cigarettes (see Table 2).

--Table 2 HERE--

Of all 101 respondents, more than a third reported that smoking was allowed, and that it would be difficult to ask people not to smoke, inside the home. The majority of respondents reported that at least some, most or all of their family and friends in the US used tobacco products, particularly friends.

The majority of respondents had considered or tried quitting tobacco products, and had been advised to quit by friends, family, and/or health providers. About half were contemplating quitting within the next month or 6 months. Of cessation methods, the most commonly tried and endorsed was quitting on one's own. For nicotine replacement products, only the transdermal patch was cited. More than half thought it would be difficult or very difficult to quit, compared to a third who thought it would be difficult not to smoke in restricted places and during Ramadan.

Focus Group Results. Focus Group participants reported mostly trying and endorsing quitting on one's own, or with friends' and family help:

> "If I'm gonna quit, and I need help, I'm gonna use friend or family…Calling this phone number or talking to a counselor, that would be my last thing on my list."

> "If a person wants to quit, that he will do it himself if he is convinced that it is bad for his health."

> "I think it is the will power. If someone has a power of will and determination and knows that this thing is wrong and harms the human body and people around him who inhale the smoke, and realize this, then they will try to quit smoking or reduce it."

Some Focus Group participants expressed qualified support of counseling for cessation:

> "It's a good idea to have a coach guiding them, but they have to be willing to quit smoking, because without the will they won't make it. "

> "I like the idea and I prefer that this coach is a smoker himself, because when a non-smoker advise smokers they don't accept it, but when the advice comes from a smoker it is way better."

Younger women Focus Group participants supported meetings for tobacco cessation:

> "If we imagine that COVID-19 ended, why don't you go to events halls, because in these gatherings people bring shisha and smoke. So, this is the best place for such programs and women will be there, because I don't think that women will attend [other] such programs."

Men Focus Group participants expressed mixed support for nicotine replacement products:

> "Those patches don't work from what I hear."

> "Those patches: some would say it's good because it helps them psychologically to know that they are in the process of something, so that little bit of attachment on your skin, reminder you that you're on a mission"

There was some support among Focus Group participants for text messages and handouts, including in both Arabic and English:

> "Media plays a vital role, and when these texts reach smoker daily or ever now and then, it can help him understand the harm effects of smoking and the importance of physical and psychological health."

> "It can be in these two languages, because I see young girls around 14 years old in the Yemeni community that smoke shisha, and these girls will understand better in English, but their mothers will understand better in Arabic."

When asked about other ways to help people stop smoking, younger men cited organized sports:

> "As you can see our community, most of the Arabs don't go to clubs on the weekend, they don't go out, they just stay at home and smoke shisha, so another way of doing that if there is an organized sports tournaments or other activities and competitor, they could have a social gathering and then that social gathering with shisha will be eliminated so that is one way of quitting."

Older women suggested group gatherings to study Quran, including online:

> "Zoom competitions can be good for women who get bored at home and can't go out daily, so they have competitions instead or memorize the Quran."

Assets Mapping Results. Of the providers most often named by survey respondents as being their healthcare provider, most reported screening for cigarette smoking, but not use of other tobacco products. Only Kaiser Permanente of Northern California (KP), a private insurer/provider system, offered tobacco cessation services in the form of tobacco cessation classes for members (due to COVID-19 pandemic conditions these services were only available online at the time of our study). KP supported medical translation and interpretation in Arabic (and numerous other non-English languages) for all services by remote dial-up services. For un- and under-insured people, which includes the majority of respondents in our study, we identified only one local

cessation program, run by the City of Berkeley; however, this service was only available in English. Other providers mentioned referring patients who smoke to quit line services. Of these, including the free quit line service provided by the State of California's Comprehensive Tobacco Control Program (Kick It California, formerly California Smokers' Helpline), none were available in Arabic. For available printed or online materials (e.g., hand-outs, tips for people who smoke, quit line links), we were able to obtain some examples developed in Arabic-speaking countries, or other states with large Arabic-speaking populations, but none were specific to California (e.g., quit line numbers, other resource links).

Discussion

Decades of health education, treatment, prevention, and regulatory policy have greatly reduced tobacco product use among Californians overall.[30, 53] Arab Americans, however, may not be fully benefitting from these efforts. While daily smoking in the US has steadily decreased,[54] and in California the majority of people who smoke are likely to smoke nondaily,[25] 90% of people who smoke cigarettes in our sample reported daily smoking. While among Californians overall, cigarette smoking is ten times more common than shisha use,[28] as many or more Arab Americans in our survey reported shisha use compared to cigarette smoking, including 44% weekly and 12% daily shisha users. The majority of women surveyed reported shisha rather than cigarette or e-cigarette use. Despite increasing evidence of shisha health risks,[55] including for women and children,[56] risks are not widely understood by users.[57-59] Local providers frequented by the survey respondents did not screen for shisha use, and indeed adequate measurement of shisha risks are as yet lacking.[60] Shisha tobacco (also called *maasel*), a flavored tobacco product, is generally produced abroad and imported to the US. Although shisha tobacco products are subject

to federal rules, they are not yet well-regulated,[61] therefore people who smoke shisha may be less protected by tobacco control efforts, including in states with comprehensive tobacco control programs.

Previously identified barriers to tobacco treatment for Arab Americans include culturally normative tobacco smoking in the home; low perceptions of tobacco-related risks (including low perception of shisha smoking risks); low awareness of cessation resources; and logistic obstacles including costs, lack of insurance, lack of a primary care provider, and time and transportation issues.[7, 62, 63] Our Brief Survey and Focus Group data reflected many of these concerns, including normative tobacco use and home smoking and low awareness and misperceptions regarding the effectiveness of cessation resources. While counseling in combination with nicotine replacement products are recommended as best practices in tobacco treatment, very few of the respondents in our community sample had tried or endorsed these methods. A recent study of people who smoke and were newly enrolled in Kaiser Permanente Northern California found that 80% had been advised by a clinician to quit.[64] By contrast, only 54% of tobacco users in our sample had received such advice. Counseling services may, moreover, be limited for low-income and uninsured people who smoke, as were the majority of respondents in our study. For example, Medicare reimburses $27.93 for 10 minutes or more of smoking cessation, but only to "higher level" and thus high-salaried clinicians, i.e., physicians, and not most nurses or counselors.[65] We identified only one publicly funded cessation program operating in our study area, but without Arabic language capacity. Our study found a lower intent to quit for Arab Americans who smoke (57%) compared to California adults who smoke overall (66%).[28] Low readiness to quit has been found among Arab Americans in other research.[7] More than a third of our respondents reported

that smoking was allowed inside the home, and nearly half thought it would be hard to change this. The majority of respondents reported living with children. Protecting children from second- and thirdhand hand smoke may support changes in tobacco practices for families and the community. Other studies have found potential facilitators for quitting among Arab Americans may include a strong sense of family, as well as traditional systems of counseling, and sense of pride with concomitant avoidance of shame.[46] Focus Group participants indicated some interest in alternate social activities, e.g., sports for men, and social groups including Quranic studies for women, to support tobacco cessation. Additionally, Ramadan may provide opportunities for cutting back and quitting among Arab Americans who observe the fast.

Poor cultural competency in providers, including discrimination and low awareness of Arab cultural values and symptom presentation and management,[46, 63] have been cited as effecting treatment seeking for Arab Americans. While we did not broadly assess discrimination and cultural competency in healthcare experiences, we found a discrepancy between desired and available Arabic-language service provision. Culturally- and linguistically-appropriate community engagement to enhance use of available tobacco cessation resources and to raise awareness of secondhand smoke risks, particularly for people who smoke and live with children, may reduce and prevent tobacco-related illness in this underreached community.

Limitations

This was the first research project in which the local Arab American community had participated. While conducting our research, we were actively building trusting relationships with the community and developing the community's knowledge and awareness about research

and tobacco-related health in addition to collecting data. Since it would be very difficult to conduct a census of this community and there was no clinical population to sample, we did not randomly sample research participants. We proposed to recruit 120 Arab American adult tobacco users but due to the challenges experienced by the pandemic, we recruited 101 participants. There may have been some data and insight to the communities' experiences that we missed. The pandemic severely impacted our ability to interact with community members in person and assist them in completion of the survey in person. It also challenged our ability to build relationships and trust with the community that we would have otherwise done in person. However, since this is a pilot study, we understand that we can address this sample size issue and expand for future intervention efforts. We also hope that future programming can resume in person. Lastly, since this study was based on a community survey and focus groups that relied on self-reported data of smoking cessation/reduction, rather than biological markers, we were unable to verify participants smoking status. However, despite these limitations, this study's findings provide important information and contributions of literature specific to the Arab American community regarding their tobacco use, quitting efforts, and service access that should be considered for future programs.

Conclusion

As a result of our rapid assessment, we concluded that, while people who smoke cigarettes were overall moderately dependent and would benefit by tobacco treatment, e.g., cessation and pharmacotherapy, they lacked access to and confidence in such resources. Unfortunately, we did not identify any tobacco cessation services that were culturally appropriate for Arab Americans. The only local provider with both tobacco treatment services, and Arabic language capacity (via

translation service) was a private provider, while the majority of Arab American tobacco users in our study were publicly insured or uninsured. The only agency providing low, or no cost tobacco treatment had no Arabic language capacity. No treatment or prevention materials or programs addressed shisha smoking, yet this was the most commonly used tobacco product among the Arab Americans we surveyed. We assessed the community to be overall at a contemplation stage of change, which would benefit from programs to raise awareness of best practices in tobacco treatment, community-wide efforts to enhance norms supporting quitting and harm reduction, and advocacy for enhanced linguistically and culturally appropriate outreach materials. Quitline services in Arabic, together with Arabic language resources addressing shisha as well as cigarette use, would greatly benefit public health efforts to reduce tobacco-related harms. We found that using a CBPR approach and having an involved CAB created a great partnership between the staff, research participants, and board members, serving overall as the most optimal approach to conduct this research. Due to salient barriers to cessation that exist for Arab Americans, such as low awareness of tobacco-related risks, particularly shisha, lack of access to cessation resources, time and transportation issues, or even social exclusion, there was initially some mistrust from participants at the inception of the study. However, through the collaboration of the CAB, a careful process of building trust was created. Since community members were engaged at every stage of the research and had strong relationships with CAB members, participants were more willing to complete the surveys and speak openly during focus groups. In collaboration with the CAB, we were able to ensure that the project remained linguistic and culturally appropriate for the community. Overall, we conclude that developing a CAB of grassroots community leaders for the research and any future interventions in the Arab American community is and will be an important component of health programming efforts, in creating trust in the program, and for

establishing respect for family, cultural, and religious traditions that may not be well understood by others.

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Table 1. Population

Variable	%
Demographics	
Gender	
Female	64
Male	35
Age Group	
18-24 years	14
25-34 years	32
45-54 years	31
55+	10
Education	
High school or less	35
Some college or trade school	35
Advanced degree (BA or further)	30
Low-income household	
Yes	57
No	29
Unsure	13
Children at home	
Yes	79
No	19
Generation in the USA	
First (born outside USA)	76
Second (born in USA, parents not)	17
Third or more	8
Language preferences	
Speak mostly Arabic at home	68
Prefer mostly or all Arabic in healthcare	59
Have Arabic available in healthcare	27
Health Insurance	
Private	38
Medi-Cal	47
Other/None/unsure	15
Health provider	
Public	50
Private	6
None	22
Other/none/unsure	22
Smoking Environments	
Home smoking allowed	
Everywhere inside	4
Some places inside	36
Nowhere inside	59
Asking others not to smoke in home	
Very difficult	14
Somewhat difficult	21
Not difficult	55
Not sure	10
Family in US use any tobacco	
Most or all	11

Some	50
None	38
Friends in US use any tobacco	
Most or all	38
Some	56
None	7
Quit Experiences	
Ever advised to quit by family or friend?	
Yes	73
No	27
Ever advised to quit by healthcare professional?	
Yes	54
No	46
Ever tried to quit	
Yes	60
No	40
Contemplating quitting	
Next month	34
Next 6 months	23
Not thinking about quitting	15
Not sure	26
How hard would it be to quit	
Very difficult	23
Somewhat difficult	28
Not at all difficult	37
Not sure	11
Difficult not to smoke where forbidden	
Yes	35
No	65
Difficult not to smoke during Ramadan	
Yes	30
No	70
Quit methods tried*	
On your own	30
Exercise more	15
Patch	12
Other methods (counseling, prayer, spiritual guidance)	25
None	24
Quit methods endorsed*	
On your own	32
Exercise more	34
Patch	10
Other methods (counseling, prayer, spiritual guidance)	24
None	18

*Multiple responses allowed

Table 2. Smoking rates.

Variable	%
Ever smoked cigarettes (n=60)	57
Women	39
Men	75
Time to first cigarette	
Within 5 min	12
6 to 30 min	20
31 to 60 min	27
After 60 min	37
Cigarettes per day	
<1	10
1-9	47
10-19	22
20-29	12
30	7
Ever smoked waterpipe (n=77)	78
Women	79
Men	76
Why smoke waterpipe*	
Social activity	32
Flavors	25
Smoke/vapor clouds	13
Traditional/cultural activity	8
Waterpipe use frequency	
Every day	12
Weekly	44
Monthly	7
Occasionally	22
Rarely	16
Ever used e-cigs (n=33)	31
Women	21
Men	41
E-cigarettes per day	
1 or less	45
2-30	40
30	15
Why use e-cigs*	
Curiosity, just to try	35
Quit smoking cigarettes	21
Replace smoking cigarettes	20
Reduce smoking cigarettes	18

* Multiple responses allowed