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Lay Health Influencers: How They Tailor Brief Tobacco Cessation Interventions

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Abstract

Interventions tailored to individual smoker characteristics have increasingly received attention in the tobacco control literature. The majority of tailored interventions are generated by computers and administered with printed materials or Web-based programs. The purpose of this study was to examine the tailoring activities of community lay health influencers who were trained to perform face-to-face brief tobacco cessation interventions. Eighty participants of a large-scale, randomized controlled trial completed a 6-week qualitative follow-up interview. A majority of participants (86%) reported that they made adjustments in their intervention behaviors based on individual smoker characteristics, their relationship with the smoker, and/or setting. Situational contexts (i.e., location and timing) primarily played a role after targeted smokers were selected. The findings suggest that lay health influencers benefit from a training curriculum that emphasizes a motivational, person-centered approach to brief cessation interventions. Recommendations for future tobacco cessation intervention trainings are presented.

Tobacco use is the leading preventable cause of death in the U.S. (Mokdad, Marks, Stroup, & Gerberding, 2004). During 2000–2004, approximately 443,000 premature deaths were attributed to cigarette smoking or secondhand smoke exposure (CDC, 2008b). The three leading causes of smoking-related death were lung cancer, ischemic heart disease, and chronic obstructive pulmonary disease (CDC, 2008b). Smoking also poses a substantial economic burden in the U.S. with annual productivity losses of \$96.8 billion (CDC, 2008b). Despite well-publicized risks, adult cigarette smoking prevalence remains well above the Healthy People 2010 public health objective of 12% (U.S. Department of Health and Human Services, 2000). In 2007, approximately 42.3 million (19.8%) of U.S. adults were current

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smokers (CDC, 2008a). The population of smokers is diverse; however, specific groups of individuals experience greater burdens of smoking. The National Health Interview Survey documented significant differences in smoking prevalence by gender, age, race and ethnicity, education level, income (CDC, 2008a), and occupational class (Barbeau, Krieger, & Soobader, 2004).

Demographic characteristics and other variables are also associated with quitting behaviors among individuals who have received treatment for smoking cessation or nicotine dependence. Factors that are positively associated with smoking abstinence among treatment groups include higher level of education, intention to quit smoking, smoking cessation self-efficacy (Haug et al., 2010), absence of a current psychiatric diagnosis, longer duration of previous tobacco abstinence, and lower score on Fagerstrom Test for Nicotine Dependence (Ferguson et al., 2003). Factors that are negatively associated with smoking abstinence are higher levels of nicotine dependence and having a partner who smokes (Haug et al., 2010). There is inconsistent evidence regarding gender effects among individuals who received treatment. One study found that women were more likely to abstain from smoking (Haug et al., 2010), whereas another documented significant findings only for men (Ferguson et al., 2003). A separate investigation indicated that other demographics variables and smoking history were more important predictors of sustained smoking cessation compared to gender (Bjornson et al., 1995). Given this literature, researchers recommend tailored smoking cessation interventions based on demographic characteristics, smoking-related variables and other significant predictors to enhance health outcomes (Haug et al., 2010).

Tailored interventions have increasingly received attention in the tobacco control literature. Researchers have examined the effectiveness of intervention strategies and self-help materials adapted to individual smoker characteristics, using a variety of methodologies including randomized controlled trials (RCT). One RCT found that the degree of message tailoring was associated with increased engagement in a Web-based cessation program (Stretcher et al., 2008). Engagement, measured as the total number of Web sections that were opened, was related to subsequent smoking cessation. Another RCT showed that among individuals who were smokers at baseline, quit rates were higher among the intervention group that received individually tailored advice letters in addition to the usual care of telephone counseling and a mailed packet of information (Sutton & Gilbert, 2007). Although empirical studies support tailored cessation interventions, the research has two major limitations. First, few studies have addressed the complexity of tailoring for multiple variables. Researchers have developed complex smoker profiles based on symptoms of hyperactivity/novelty-seeking, depressivity, and nicotine dependence and scores on smoking and psychological variables (Collins, Torchalla, Schroter, Buchkremer, & Batra, 2008). However, the efficacy of treatments tailored for those profiles have yet to be tested. Second, tailored interventions are predominately generated by computers and administered with printed materials (i.e., advice letters) or Web-based programs. This was reflected in the 2008 Update to the Clinical Service Practice Guideline that stated that tailored materials are either printed or Web-based (Fiore et al., 2008). The 2008 Update recommended that clinicians provide tailored self-help materials to patients interested in quitting. There is a noticeable

gap in the literature regarding strategies and effectiveness of tailored *face-to-face* tobacco cessation interventions.

There is only one study on tailored face-to-face (FTF) interventions with tobacco users. A sample of African-Americans who received counseling and a printed guide tailored for African-American smokers reported significantly more quit attempts and increased use of prequitting strategies at a 6-month follow-up compared to participants who received a standard intervention (Orleans et al., 1998). There is a similar lack of empirical data on tailored FTF interventions in other areas of health promotion. One of the few existing studies highlighted the challenges of tailoring peer counseling to meet the specific needs of other HIV+ women (Messias, Moneyham, Vyavaharkar, Murdaugh, & Phillips, 2009). The HIV/AIDS peer counselors reported that they were unable to apply a “one size fits all” approach to their work. In the field of health education, a definition of *tailoring* was created to describe the process of developing individualized intervention materials and strategies (Kreuter and Skinner, 2000). According to Kreuter and Skinner (2000), tailoring is “any combination of information or change strategies *intended to reach one specific person*, based on characteristics that are unique to that person, related to the outcome of interest, and have been *derived from an individual assessment* [italics in original].”

Support for research on tailored FTF interventions in tobacco cessation includes evidence that interveners’ behaviors may be influenced by perceptions of smokers and individual characteristics. A study based on the 1997 Behavioral Risk Factor Surveillance System showed that female smokers and older smokers were more likely to receive professional advice to quit smoking (Denny, Serdula, Holtzman, & Nelson, 2003). Another study found that primary care physicians were more likely to offer smoking cessation assistance to individuals who were considering a quit attempt or preparing to quit compared to those who had no plans for quitting (Ellerbe et al., 2003). Similarly, perceptions of residents’ disinterest in tobacco cessation were an identified barrier to advice giving among nursing staff of a long-term residential care facility (Watt, Carosella, Podgorski, & Ossip-Klein, 2004). More research is needed to understand the selection of targeted smokers, frequency of tailoring, specific tailoring strategies, and effectiveness of tailored interventions on abstinence. It is also unknown whether abilities to individualize FTF interventions have a positive impact on intervener’s outcomes. Interveners with strong tailoring skills may experience greater self-confidence, satisfaction, and motivation to approach a wide range of smokers and may be more resilient to burn-out over time. Therefore, a broader exploration of interveners’ experiences is warranted.

To address gaps in the literature on tailored FTF cessation interventions, this study analyzed qualitative interviews conducted with 80 community members who were trained to perform FTF brief tobacco cessation interventions. A brief intervention was defined as consisting of five steps adapted from the “5 A’s” (Ask/Aware, Assess, Advise, Assist, and Arrange) that may be conducted in as few as three minutes (Fiore et al., 2000). The individuals were participants of a larger study, referred to as Project Reach, consisting of a randomized controlled trial to compare different methods of lay health advisor training (i.e., in-person, Web-based, and usual practice mailed materials). Quantitative assessments were conducted with all participants at baseline, post-test, and 3-and 6-month follow-up periods (further

details are provided in Campbell, Mays, Yuan, & Muramoto, 2007 and Castañeda, Nichter, Nichter, & Muramoto, 2010). Follow-up qualitative interviews were conducted with a subsample of participants to obtain a richer understanding of their experiences applying the cessation intervention training in real world settings.

The present study examined the tailoring activities of trained community members reported during the 6-week qualitative interviews. The following research questions were addressed: 1) Did community members tailor their brief cessation intervention behaviors and messages to specific individuals and contexts? 2) What were the main smoker characteristics and contextual factors that influenced tailoring cessation interventions? 3) What strategies did community members use to tailor their cessation interventions?

Method

Project Reach

Project Reach was designed to address the limited implementation of the Public Health Service Clinical Practice Guideline and brief interventions by a full spectrum of potential cessation providers. In contrast to the majority of cessation training strategies focused on health care providers and the healthcare system, Project Reach adapted a training program for a broad range of human service providers, including allied health services, behavioral health, social services, education, clergy, law enforcement, childcare, and community outreach. Project Reach was informed by the lay health advisor model. Lay health advisors, also referred to as natural helpers, community health workers, and *promotoras*, utilize their social networks to provide advice, information, and referrals to healthcare professionals (Thomas, Eng, Clark, Robinson, & Blumenthal, 1998). They often reach out beyond their personal networks and educate other members of their communities. In Project Reach and related publications, participants were referred to as *health influencers*, a term that captured their diverse backgrounds and their training to deliver brief interventions to a wide range of smokers (i.e., family member, friend, co-worker, and stranger) across a variety of settings (i.e., homes, worksites, and public areas).

Recruitment for the main study involved several methods, including paid advertising (print, tv, radio, movie theatre screens, and community college catalogs), community outreach presentations (businesses, organizations, and neighborhood associations) and public events (health and job fairs). Individuals were eligible to participate if they met the following criteria: 1) age 18 years or older; 2) interest in receiving training in brief interventions for tobacco cessation; 3) availability for follow-up interviews for up to 9 months; 4) access to high-speed internet or 5) willingness to attend a community college to gain Internet access; 6) willingness to forego other tobacco intervention trainings for 9 months; 7) opportunities for interaction with others; and 8) willingness to be randomized to training options (Campbell et al., 2007). Individuals were excluded if they had received tobacco cessation training in the past 2 years or if another member of their household was already enrolled in the study (Campbell et al., 2007).

In the main study, 898 participants were randomly assigned to an in-person training (IPT), Web-based training (WBT), or a usual practices group that received standard written

materials, similar to those commonly distributed by quitlines to people seeking help for someone else's tobacco use. The Reach training curriculum (used for both IPT and WBT) emphasized a motivational, person-centered intervention approach, enabling participants to adapt their behaviors to the tobacco user's readiness to change and different situational contexts. Participants were encouraged to approach tobacco users from their social networks and in everyday settings, resulting in interactions with close individuals as well as casual acquaintances and strangers. The Reach curriculum addressed several specific topics, including tobacco addiction, communication skills, awareness of situational context, brief intervention and referral skills ("5 A's"), and cessation aids. Participants were provided a training manual and handouts to give tobacco users during the brief intervention. The printed tools included a brief intervention guide, rewards of quitting, a list of medications to help quit, quit tips, personal quit plan, and a local smoker's helpline card. The in-person training consisted of a single, 4-hour session led by trained instructors. Instructional videotapes were used to present core conceptual information, demonstrate BI skills, and provide testimonials from tobacco users, health influencers, and tobacco experts. The Web-based training was designed as a parallel to the in-person classroom experience and featured a "virtual instructor" and interactive and dynamic learning components.

Participants

A convenience sample from the main Project Reach sample was recruited by telephone for serial qualitative interviews when they were 6-weeks post training to allow for adequate time to conduct interventions. Participants were contacted if they completed the in-person or Web-based training and post-test assessment. Individuals who conducted at least one brief intervention during the past 6 weeks and were willing to participate in interviews at 6-weeks, 3-months, and 6-months post training were eligible for the qualitative study. The current analyses were based on 80 individuals who participated in the 6-week qualitative interview. Out of the 80 individuals, 28 completed all three interviews, 14 completed two interviews, and 38 completed only one interview. Reasons for attrition were individuals could not be reached (i.e., telephone numbers had changed or were not available when calls were made) or they declined to participate in additional interviews. The current analyses were limited to the first follow-up period because it resulted in the largest sample size and allowed for observations of first impressions of conducting brief interventions. The qualitative study was approved by the University of Arizona Human Subjects Protection Program. Participants provided written informed consent for all qualitative assessments when they enrolled in the main study and verbal consent prior to the start of the 6-week telephone interview.

Procedures

The 6-week follow-up interviews were conducted with individual participants between February 2005 and January 2006. The semi-structured interviews were conducted by telephone, lasting approximately 30–45 minutes. A few lasted as long as one hour. The interview questions were grouped around three major themes: 1) recent brief intervention experiences; 2) changes in motivations, attitudes, and intervention strategies over time; and 3) likelihood of conducting an intervention and likely intervention behaviors in response to hypothetical situations. The telephone interviews were conducted by three graduate students

in medical anthropology trained in qualitative data methods. The interview questions were developed and pre-tested by the qualitative study team led by two medical anthropologists. Subsequent modifications of the interview questions took place in research meetings that involved discussions of observations and emergent themes. Participants were compensated \$15 for the completion of the telephone interview.

Data Analysis

All interviews were tape-recorded and transcribed verbatim. Transcripts were analyzed using a coding-categorizing technique, which involved arranging the data into categories sorted by broader themes and then assigning codes to the categories (Miles & Huberman, 1994). The research team developed the initial coding manual after reviewing the interview questions, transcripts, and emergent themes. Using Atlas.ti 5.0 (Muhr, 2005), transcripts were coded by one interviewer and reviewed by another for inter-rater reliability. If there was disagreement, the interviewers met to discuss and reconcile the coding.

For the present study, two members of the research team conducted and supervised the data analyses in a series of several steps. One researcher was trained in clinical psychology and the other in medical anthropology. In the first step, the two researchers reviewed the interview guides and identified two questions that directly assessed tailoring intervention activities. The first question was “Tell me about the times you have talked with someone about tobacco use. Did you adjust your approach?” This question included a series of sub-questions regarding relationship with the smoker and context of the intervention. The second question was “Did you change how you talked about tobacco with different people in different situations?” One researcher reviewed the transcripts for participants’ responses to the second question and coded individuals into one of two groups: those who reported tailoring brief interventions 6-weeks post-training and those who did not. Six individuals did not tailor interventions because they conducted interventions with only one person. Thus, the question about changing approaches for different smokers was not applicable.

In subsequent steps, the two researchers reviewed code reports consisting of responses from the sample of 69 participants who reported adjusting or changing their intervention approaches. The code reports were created using Atlas.ti 5.0. Most of the analyses were conducted with the code report for “adjustapproach.” The “adjustapproach” code had been previously assigned to segments of the transcripts when the participants responded directly to a probe for the first question (“If yes, what did you change?”) or addressed adjusting intervention approaches elsewhere in the interview. Among the 6-week transcripts, the “adjustapproach” code was assigned to a total of 119 text segments. All 119 text segments were reviewed separately by the two researchers and a graduate student in anthropology trained in qualitative methods. Based on their review, the two researchers took notes regarding major themes and illustrative quotes. Based on his review, the graduate student created a detailed table with main themes. For each theme, he included a list of participants (by ID numbers) who provided supportive responses and examples of illustrative quotes. Each researcher reviewed the table of themes and used their own notes to narrow down and/or merge themes. Afterwards, the two researchers compared their findings and used an iterative process to create a final list of patterns that were most common, interesting, and/or

unique, along with any illustrative quotes to represent them. The patterns fell into one of three major categories: smoker characteristics, relationship with smoker, and setting and timing for intervention.

In the last step, one researcher reviewed additional code reports from the 6-week interviews to determine if there was more data related to tailoring brief cessation interventions. The researchers selected codes that were most relevant to the research questions. They included “familymem” (in response to question about feeling more comfortable talking with family members), “worksetting” (comments related to co-workers, job role, or job setting), “uselv” (in response to question about likelihood of talking with heavy, moderate, or light smokers), “age” (in response to question about how feel about talking to someone older or younger), “alonevsothers” (in response to question about talking with smokers when they are alone or in the company of others who might support cessation), “publicvprivate” (comments on public versus private settings), “illness” (in response to question about talking with a smoker who is ill), and “negativeexp” (participants’ discussion of any negative experiences that occurred when conducting an intervention). Additional themes, patterns, and quotes related to tailoring cessation interventions were identified from those analyses.

Results

Participant Characteristics

Sixty-nine out of 80 participants (86%) indicated that they made adjustments in their interventions based on the individual and/or setting. Six individuals intervened with only one person and thus, did not have opportunities to tailor their behaviors. Five participants approached more than one smoker, but did not tailor their intervention behaviors. Reasons cited for using the same approach with all smokers included interactions with “the same type of friends” or relationships, no interactions with strangers, and having an outgoing personality in all situational contexts.

Background characteristics of all 80 participants are presented in Table 1. Age of the participants ranged between 19 and 69 years old. Participants were predominately female (84%) and Caucasian (85%). There were higher percentages of past (41%) and current (9%) smokers among the group of individuals who tailored cessation interventions compared to the group of individuals who did not. The group who tailored interventions also had a higher percentage of individuals (62%) who reported ever conducting a brief intervention prior to enrolling in the study compared to the group who did not tailor interventions (36%). In the structured survey, a brief intervention was defined as a non-confrontational conversation intended to encourage or support a tobacco user’s desire to quit.

At the 6-week interview, the group who tailored interventions reported a higher average number of encounters and broader range than those who did not tailor interventions. The average numbers of encounters was 6 (range 2–48) among health influencers who tailored interventions and 2 (range 1–5) among those who did not tailor interventions during the follow-up period. The sample sizes for both groups were slightly smaller than those for the other descriptive analyses. Three individuals were excluded from the tailoring group because they were unable to recall the number of smokers whom they approached. One

individual was excluded from the not tailoring group because they were identified as an outlier, reporting 75 encounters with smokers during the 6-week period.

Tailoring to Smoker Characteristics

Among the group of participants who reported tailoring their interventions (n=69), the main influences were individual smoker characteristics and relationship with the smoker. Situational contexts (i.e., timing and location) primarily played a role after targeted smokers were selected. Many health influencers had opinions about and often adapted their intervention behaviors and messages based on the smoker's gender, age, sense of humor, level of tobacco use, readiness to quit, and illness. One man explained, "I do tend to change my approach, depending on how I see the individual." Mixed opinions were most common regarding tailoring based on age and level of use, as indicated in the following sections.

Gender—Most health influencers felt that it was important to consider gender of the smoker when they conducted cessation interventions. They recognized that some content of the intervention, such as motivators and barriers to quitting, might be gender-specific. For example, one health influencer suggested that, "Females don't want to gain weight (from quitting smoking)." Some participants adapted their communication style based on the smoker's gender. One man said, "[I was] probably more gentle with the girls, a little more aggressive with the males. I kind of respond to the way they respond, and their demeanor."

Age—Most participants expressed the viewpoint that "younger" smokers, as defined by each participant, were easier to approach and more open to receiving a brief intervention. One woman described, "Someone who's younger is more receptive and they're probably going to listen. Or at least pretend they're listening." For many health influencers, positive expectations seemed to outweigh perceived barriers of younger smokers feeling "invincible" to the adverse effects of tobacco use and wanting to appear "cool" among their peers. Intervention strategies with youth consisted of tobacco use education, with an emphasis on risks and consequences, and included communication styles that combined firmness and humor. One man noted,

[With] that young guy, I joke with him. He seems to be more receptive that way. I joke with him but then I get serious. He does want to quit, but right now at this point he thinks he can handle it, he can do it himself. So because of that, I'm kind of firmer with him, I'm trying to wake him up. Because I think a lot of it is just that immaturity.

Interventions with "older" smokers, as defined by each participant, were associated with different types of challenges. Participants perceived older smokers as being more "addicted" to tobacco and "set in their ways." One woman said, "[adult smokers] are more focused on the addiction or that it's a tool or a part of them. Whereas young people, they're doing it because they like to and they think it's cool." Several participants spoke of barriers related to respecting the rights of adult peers. Others were influenced by cultural norms that promoted respect for elders. Participants stated, "I felt I'd be intruding (with older smokers)" and "I kind of feel awkward telling these people who are older than I what to do."

Sense of humor—Using humor to tailor interventions was not limited to interactions with younger smokers. Participants incorporated humor in interventions with other smokers if they felt that the individuals would be receptive to it. One woman said, “Some of the people that I talked to you just have to kind of joke around. Because that’s the way that they are. They’re kind of jokey people.” Participants suggested that humor helped to facilitate interactions and enhance communication. They were cautious, however, to avoid generalizing the use of humor strategies with all smokers. One woman was aware of the importance of “knowing what you can joke around about and what you can’t joke around about with certain people.”

Level of tobacco use—Participants had mixed views about the importance of making distinctions between lighter, casual smokers and heavier, chronic smokers. One woman stated that level of smoking was irrelevant to conducting an intervention, “Smoking is smoking regardless, it doesn’t matter if they’re like chain smokers. It doesn’t matter as long as I try to get the point across.” This opinion was held by other participants who relied more heavily on other characteristics and cues to identify smokers to approach. Another woman said,

I look at body language and eye contact and their verbal responses and I determine whether or not they’re motivated ...And if I think a person is sincere and really wants help and is motivated to quit, then that’s who I want to work with. And I don’t care if they’re a light smoker, moderate smoker, or a heavy smoker.

Other health influencers, however, felt that making distinctions among light and heavy smokers was important, but their specific opinions and tailoring activities varied. For some participants, interventions with lighter smokers were perceived to be easier compared to those with chronic smokers because those smokers were less defensive. Chronic smokers were viewed as being more “addicted” and interventions with them seemed more hopeless. One woman said, “Well, I feel like with a heavy smoker I’d be wasting my time. But with a light or a moderate smoker I would have a chance.” On the contrary, a few described more positive perceptions of chronic smokers, including that they may be “clearer” about quitting because of having a more established identity as a smoker. Many participants used approaches that were straightforward and blunt with heavier smokers.

Readiness to quit—Although health influencers were eager to help individuals quit smoking, many were careful to assess and tailor their behaviors based on the smoker’s readiness to quit. One woman stated, “The thing that would matter is if they’re open to discussion. That’s the motivator for me. Because if they don’t wanna talk, I don’t wanna get involved in pushing them.” Many participants were more persistent with individuals who were interested in or already close to quitting.

Illness—Participants were also sensitive to the smoker’s individual health status and many adapted their interventions accordingly. One woman spoke of tailoring interventions with her daughter to address specific health concerns. She explained, “I changed how I’ve spoken with [daughter] in different terms, in different situations, like addressing her cough when she had the cough. That it would be really harsher on her lungs since she was ill. When she got

her lip pierced, I tried to tell her that the tobacco smoke was really bad for that incision.” Similarly, another participant seized an opportunity to intervene with a target smoker after they had been sick. The absence of health problems was also considered when tailoring intervention strategies and adapting expectations regarding cessation outcomes. One woman pointed out,

“Hardly any of the people that I’ve done interventions with have any illness issues because most of them are young. And so they don’t even relate to the fact that smoking causes so many related deaths and illnesses. And I give them all the information, but when they’re twenty, twenty-three, twenty-four years old, they’re infallible.”

Tailoring to Relationship with Smoker

Participants who tailored their interventions also made adjustments based on the type of relationship and level of closeness experienced with the target smoker. Participants used different approaches to tailor interventions with family members, whereas most used similar strategies to tailor interactions with friends and individuals in the workplace. Some reported using “blunt” or aggressive communication styles with family members. One woman stated, “If they’re my family then I talked to them much more intimately than if they’re not my family. Then of course my boyfriend, I’m very intimate. Blunt is another way to put it.” Another woman described being less sympathetic in her interventions with her brother. In contrast, others reported implementing gentler approaches with specific family members. Tailoring for those individuals was largely influenced by expectations of how they might respond to the intervention. A different woman said, “Believe or not, with my sister I have to be a little bit careful because she’s kind of sensitive about it. So I have to be very soft with her. A little more indirect with her than I am with the other people.” Similar sentiments were shared by other participants who felt a need to be supportive and not “overbearing.”

Most interventions with friends were casual and conversational in content and tone. One woman made a comparison, “it (intervention with a friend) was more, a little nonchalant. It’s hard to be nonchalant with your sister.” Participants were more careful to consider personal rights and boundaries if the person was not a relative. Another woman said, “With family I would give more detail. But with the friends, I feel like I’m kind of butting in. I feel like it’s not really my business.”

Brief interventions with clients and co-workers were associated with different tailoring activities. Participants frequently emphasized educational approaches in those relationships. One woman described it as “more of a professional kind of sharing information” similar to an educational seminar. The interventions were typically conducted in a manner that was more focused and formal. Participants appeared motivated to tailor intervention behaviors with clients and co-workers to avoid conflict and other negative consequences. A different woman stated, “With people I work with I don’t want to seem too pushy. I try to do it in a nicer way.” Additional concerns included experiencing “backlash” and losing one’s job because of behaviors being viewed as harassment.

Tailoring to Setting and Timing of Intervention

Participants also reported tailoring based on other contextual factors. These included amount of privacy, time available, active smoking by the individual, and presence of others at the time of the intervention. Most participants expressed a preference for one-on-one interventions in private settings. They felt that such interventions would be more personal and reduce the amount of pressure experienced by the individual smoker. Several participants waited for opportunities that allowed them to have this preferred setting. In some cases, this resulted in postponing interventions. One woman said,

“I actually saw her recently for a trip, but didn’t have any time with her one-on-one. I was kind of waiting to talk to her and give her the materials in person, but that didn’t happen. ...There were always people around and I didn’t want to put her on the spot.”

Some participants were more assertive and created opportunities that allowed for more private interventions. For example, one participant physically positioned herself and the smoker so that the interaction occurred in a quiet location.

Public interventions were most common when health influencers approached strangers. Participants typically approached strangers when they were engaged in smoking because it provided an entry point for the conversation. Several participants, however, reported feeling uncomfortable approaching strangers because of the uncertainty of the individuals’ responses. Health influencers were more likely to adapt their intervention approaches to group settings when they were familiar with other people who were present. The familiarity enabled participants to engage others in the intervention, resulting in an informal “group intervention.” In some cases, the other people played active roles by contributing to the discussion about quitting. In other instances, individuals were supportive observers, as described by one woman, “I think my daughter was with me. So it was just us three. She [daughter] was more of an observer. She is encouraging her [smoker] to change her diet and stuff like that.”

Discussion

This study examined the prevalence, influences, and strategies used to tailor face-to-face (FTF) brief cessation interventions among a sample of community lay health influencers. A majority of participants (86%) reported adapting brief intervention behaviors and messages based on assessments of the individual and setting, similar to the definition of tailoring developed by Krueter and Skinner (2000). Consistent with past research (Denny et al., 2003), some health influencers tailored their intervention approaches according to gender and age. They reported using gentler communication strategies with female smokers and more aggressive communication styles with male smokers. However, unlike the study by Denny and colleagues (2003), participants generally described a preference for intervening with younger smokers, not older ones. Tailoring for age was often tied to adaptations made for level of tobacco use and illness. Two smoker profiles emerged from the data: the younger individual who was a lighter smoker and had fewer tobacco-related illnesses and the older individual who was a heavier smoker and had more tobacco-related health effects.

Participants described mixed opinions about which “profile” was easier to approach. It is noteworthy that the perceptions of younger, lighter smokers might have been based on stereotypes that are no longer supported by the scientific literature. Researchers currently suggest that cigarette consumption is a crude measure of nicotine dependence (Husten, 2009). Contrary to popular belief, some youths lose autonomy over tobacco after only one or two days of first inhaling a cigarette (DiFranza et al., 2007). Debunking myths about light and intermittent smoking may be an important focus of future intervention training programs.

Participants reported the most experience with tailoring smoking cessation behaviors and messages according to the type of relationship and level of closeness experienced with the individual smoker. One intriguing finding was divergent communication approaches used in family relationships across study participants compared to more consistent approaches used in other relationships. Some participants reported talking in a “blunt” manner with family members, whereas others described using a gentler communication style. Across all participants, interventions with friends were typically casual and conversational in content and tone. Interventions with clients and co-workers primarily focused on education and information sharing. One explanation for these findings is that family relationships, including those with romantic partners, are generally the most intimate type of relationship. The greater familiarity of individual personality traits, increased closeness, and heightened investment in the person’s health and well-being may contribute to greater specificity in tailored intervention messages for individual family members compared to messages targeted for other smokers. Another possible explanation is that participants were sensitive to the lack of success of interventions conducted with family members prior to the study and were highly motivated to learn and apply new intervention and communication skills in those relationships.

One of the most unexpected findings was tailoring smoking cessation messages based on the smoker’s perceived sense of humor. The Project Reach training curriculum did not specifically address the benefits of humor or provide training on incorporating humor in cessation interventions. Nevertheless, health influencers who were comfortable with humor often used jokes or funny commentary to facilitate interactions with smokers who would be responsive to it. For those health influencers, sense of humor may have been viewed as a component of an individual’s culture and a unique asset for tailoring tobacco control messages. In this study, humor appeared to share benefits similar to those documented in other fields (e.g., psychology and nursing). Humor was used as a tool to build and enhance communication (Dziegielewska, Jacinto, Laudadio, & Legg-Rodriguez, 2003) and create a more relaxed and safe environment in which to share and discuss a sensitive topic (Adamle, Chiang-Hanisko, Ludwick, Zeller, & Brown, 2007). Humor also helped to reduce stress and make tobacco users feel good during the discussion about quitting, similar to “healthy humor” in therapeutic settings (Sultanoff, 1994). The benefits of humor on the interveners’ own experiences were not directly assessed in this study. Based on the psychotherapy literature (Fry & Salameh, 1987), it may be suggested that participants may have used humor as a stress-reduction coping strategy and a preventive tool for fatigue and burn-out.

Participants in this study, however, were not naïve in their use of humor in cessation interventions. Many were aware that humor was not appropriate for all individuals and situational contexts. This knowledge was advantageous, given the literature on the potential risks of therapeutic humor. In clinical nursing practice, inappropriate use of humor may be destructive or damaging (Adamle et al. 2007). “Harmful humor” may alienate others, increase hostility, and make others feel bad (Sultanoff, 1994). In counseling settings, researchers recommend using humor and jokes in moderation (Dziegielewski et al., 2003). The same recommendations may be applied to lay health advisors who conduct brief cessation interventions with community members.

Regardless of smoker characteristics and relationship type, participants shared a strong preference for conducting one-on-one interventions in discrete and private settings and adapted their intervention activities accordingly. Some health influencers postponed interventions until the setting was perceived to be more ideal, whereas others actively created situations that provided greater privacy, such as moving to a quieter location. Of note, there was a preference for private one-on-one interventions despite training and suggestions that interventions could be conducted in a wide range of settings, including in public areas (i.e., bus stop). One interpretation of these findings is that health influencers perceived quitting tobacco use as a personal and sensitive health activity. Participants might have tailored interventions based on setting in order to respect individual autonomy and decision-making. Another possible explanation is that participants adapted their behaviors to avoid social risk to their relationships. *Social risk* is defined as perceived threat to an existing or potential relationship when a person challenges the behaviors, views, or identity of a close individual (Castañeda et al., 2010). Awareness of personal risks and its impact on tailoring behaviors was previously documented among HIV/AIDS peer counselors (Messias et al., 2009).

The current findings highlight the important role lay health influencers may play in reducing tobacco use among high risk groups. In particular, their abilities to tailor behaviors and messages according to a smoker’s gender and age, as well as sensitivity towards individual privacy, may be particularly useful in tobacco control efforts. Research has shown that individuals who are at greater risk of smoking prevalence include men, individuals below age 65, American Indians/Alaska Natives, adults with a GED and 9–11 years of education, and those with incomes below the federal poverty level (CDC, 2008a). Some of these groups are marginalized in society and may experience specific barriers to receiving tobacco cessation services. For instance, low-income smokers have a tendency to miss follow-up appointments because they lack flexibility in their jobs or do not want to give up a day’s pay, resulting in fewer opportunities for clinicians to intervene (Blumenthal, 2007). Another barrier exists for low-income people living in rural areas, who may use the Internet less frequently than counterparts living in urban or suburban areas (Bell, Reddy, & Rainie, 2004), limiting their participation in innovative web-based cessation programs. Lay health influencer programs may overcome barriers to access by interacting with smokers in natural settings and providing quit assistance that is personalized, non-judgmental, and flexible, an approach that may be particularly encouraging for disadvantaged groups (Roddy, Antoniak, Britton, Molyneux, & Lewis, 2006).

To enhance the tailoring of FTF intervention behaviors and messages conducted by lay health influencers, several recommendations for future trainings have been identified. First, health influencers would benefit from education and skills building on tailoring cessation interventions based on *individual* smoker characteristics and situational contexts. This was largely achieved by the Project Reach curriculum which emphasized a motivational, person-centered intervention approach and awareness of situational context, enabling interveners to adapt their behaviors to tobacco user's readiness to change, relationship type, intervention setting, and time available. The results showed that participants utilized several key components of the curriculum including communication skills, active listening, and assessment of motivators and barriers to quitting and readiness to quit. However, many participants remained heavily influenced by perceptions of certain smoker characteristics (i.e., level of tobacco use) and cultural norms (i.e., gender and age). Future training curricula should address common perceptions and misperceptions of smokers and cultural norms that may affect intervention behaviors and communication patterns. At the same time, they should prevent stereotyping of generic "types" of smokers and encourage adaptations that are "smoker-centered." Second, training programs should provide education on the potential benefits of tailoring intervention behaviors and messages to smokers and health influencers. Lay health advisors may be more motivated to engage in tailoring activities if they are aware of and experience certain positive outcomes. Intervener-focused benefits may include increased ability and confidence to intervene with a wider group of smokers in diverse settings. Less restrictive preferences for smokers and contexts may reduce the number of lost intervention opportunities (e.g., Ellerbeck et al., 2003). Third, training programs should also consider incorporating humor education and related skills building. Adapted from other fields, humor education in tobacco control may include: 1) recognition of humor as a communication tool; 2) knowledge of appropriate and inappropriate uses of humor; 3) cultural awareness and sensitivity of the presence or absence of humor; and 4) specific humor techniques (Adamle & Turkoski, 2006, Franzini, 2001). Incorporating humor in the curriculum may also facilitate attention and learning during the lay health influencer training session (Dziegieleski et al., 2003).

It is noteworthy that single training sessions may not be adequate for educating lay health influencers on how to tailor cessation interventions and sustain such activities over time. A recent study on the design, development, and feasibility of a lay health advisor perinatal tobacco cessation program highlighted the value of continuous training and capacity development (English, Merzel, & Moon-Howard, 2010). The researchers suggested that trainings should be offered on an ongoing basis and that content areas should overlap across sessions for further reinforcement. The recommendations were consistent with those supporting regular meetings and frequent interactions among lay health advisors (Altpeter, Earp, Bishop, & Eng, 1999, Castañeda et al., 2010, Thomas, Eng, Clark, Robinson, & Blumenthal, 1998). A more cost-effective strategy may include the development of virtual communities of cessation practice (CoP; Muramoto, Wassum, Connolly, Matthews, & Ford, 2010; Yuan et al., 2010). Using advanced Web-based technology, virtual CoP groups may have 24-hour access to interactive components (i.e., instant messaging, chat rooms, and blogs), social networking, and virtual resource centers consisting of the latest research on tobacco use and treatments (Muramoto et al., 2010; Yuan et al., 2010). Interactive

components may be particularly useful for role modeling, obtaining social support, and exchanging tailoring strategies among groups of interveners. Opportunities for ongoing training, which were desired by many Project Reach participants, may build and reinforce the knowledge and skills necessary for managing the complexities of face-to-face cessation interventions with community members.

The current study had some limitations. First, the sample of health influencers was predominately female. It is possible that women may be more likely to engage in tailoring activities and be influenced by smoker characteristics due to social norms that encourage them to be more nurturing and relationship-oriented than men, as suggested by social theorists (e.g., Chodorow, 1978). Future research needs to investigate how an intervener's gender may influence how they tailor intervention behaviors and messages. Second, data for this investigation was only from the first follow-up assessment (6 weeks). Longitudinal analyses with data from the 3-and 6-month follow-up periods might have provided more in-depth understanding of tailored intervention behaviors. But, longitudinal analyses would have reduced the sample size to 28 individuals who completed all three interviews. In addition, the amount of knowledge gained with longitudinal analyses was unclear. Previous findings with the longitudinal qualitative data indicated that participants reported improvements in intervention abilities during the 6-month period, but preferences for target audiences and contexts remained constant (Yuan et al., 2010). Therefore, it may be assumed that most tailoring strategies remained constant over time. Third, participants reported on both hypothetical and actual FTF interactions with tobacco users. This study was unable to examine whether planned or intended tailoring behaviors predicted actual behaviors. However, the themes for intended and completed intervention activities were relatively congruent across participants. Fourth, participants' responses may have been subjected to social desirability bias. Although asked directly, no participant reported adapting their interactions based on smoker's race or ethnicity. Participants, however, were open about other characteristics and situations that made them feel uncomfortable.

Future studies on tailored FTF interventions and lay health advisors must examine an underlying assumption held by the research team. Based on the effectiveness of other types of tailored cessation interventions (i.e., printed materials, Web-based programs), the researchers assumed that individuals who tailored their FTF interventions were "better" health influencers than those who did not. Further research is needed to determine the effectiveness of tailored FTF interventions on quitting behaviors and long-term abstinence. This should include investigations on the impact of different communication styles on cessation outcomes. Another area of study is the use of humor in lay health advisor cessation interventions, building on what is known in nursing and clinical psychology and informing the development of humor strategies appropriate for use in tobacco control efforts. Future studies also need to examine the effects of tailoring abilities on lay health influencer's self-efficacy, motivation, satisfaction, and evolution and durability of intervention behaviors over time.

This study showed that lay health influencers are willing and able to tailor cessation interventions based on individual smoker characteristics and social and environmental contexts. At the "heart" of it, tailored FTF interventions have a human component and

benefit from natural social settings that cannot be replicated by printed materials or Web-based programs. These unique qualities warrant further consideration as the field of tailored tobacco cessation interventions continues to expand and disparities in smoking prevalence and cessation are addressed.

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Table 1

Characteristics of Participants

Variable	Did tailor (n=69) n %	Did not tailor ^a (n=11) n %
Female	59 (86)	8 (73)
Mean age/range	49/19–69	40/24–57
Race/ethnicity		
Caucasian	60 (87)	8 (73)
Hispanic	12 (17)	2 (18)
African	2 (3)	1 (9)
Native	5 (7)	0 (0)
Employment type		
Health	15 (22)	3 (27)
Education	15 (22)	1 (9)
Other professional	17 (25)	3 (27)
Student	6 (9)	2 (18)
Homemaker/caregiver	3 (4)	1 (9)
Retired/volunteer	6 (9)	1 (9)
Unemployed/disabled/unknown	7 (10)	0 (0)
Current smoker ^b	6 (9)	0 (0)
Past smoker ^c	28 (41)	2 (18)
Ever performed brief intervention prior to enrolling in study ^d	43 (62)	4 (36)

Note.

^aParticipants who did not tailor cessation interventions included 6 individuals who intervened with only one smoker and did not have the opportunity to tailor their activities.

^bCurrent smoker was defined as a person who smoked a cigarette, even a puff, in the last 30 days.

^cPast smoker was defined as a person who smoked 100 or more cigarettes in their lifetime.

^dBrief intervention was defined as a non-confrontational conversation intended to encourage or support a tobacco user's desire to quit.