How Community Health Workers can Address Tobacco Dependence of High-Risk patients: A Qualitative Analysis of the Unique Training Needs of Community Health Workers

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Clarissa Huard[1], Enrique Villacis Alvarez[1], Anna Veluz-Wilkins[1], Andres Mauricio Garcia Sierra[1] and Marcia Tan[1]

[1]University of Chicago, Chicago, IL, USA.

ABSTRACT

INTRODUCTION: Communities with low socioeconomic status have disproportionately high rates of tobacco use, and community health workers (CHWs) have an increasing role in delivering tobacco cessation interventions. However, existing tobacco cessation trainings are not appropriate for the CHW model of care. The aim of this study was to identify training needs of CHWs to develop a tailored tobacco cessation curriculum to help them effectively serve their high-risk patients. Incorporating results of a previously conducted needs assessment survey, we developed a preliminary outline of a tobacco cessation training curriculum that was specific to the CHW experience.

METHODS: Participants (N = 14) discussed their impressions of (a) the training content, (b) the unique needs of patients seen by CHWs, and (c) tailoring to the CHW care model. We conducted virtual qualitative interviews and focus groups with stakeholders (i.e., managers/directors of CHW programs) and CHWs, respectively, to obtain feedback on training, as well as a sample 2-hour training schedule and curriculum. Two independent coders analyzed the data using the Framework method.

RESULTS: Two overarching themes emerged: the need for strategies to (a) personalize treatment to each high-risk patient and (b) increase and maintain patient motivation. CHWs also reported the need for specific language to engage patients who were not ready to quit.

CONCLUSION: A tailored training might focus on motivational interviewing, including how to personalize treatment to the patient's experiences, and role-playing scenarios with scenes on how to flexibly support patients who are overburdened and unmotivated.

KEYWORDS: Tobacco cessation, community health worker, tobacco cessation interventions, tobacco cessation training, health disparities, motivational interviewing

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CORRESPONDING AUTHOR: Marcia Tan, University of Chicago, 5841 S. Maryland Ave, MC2000 Chicago, IL 60637, USA. Email: mmtan@uchicago.edu

Introduction

Globally, tobacco continues to kill more than 8 million people each year.[1] While overall smoking rates have declined in the past couple of decades, rates have remained high for disadvantaged populations. For example, smoking rates for communities with low socioeconomic status (SES) are roughly 24% compared to 15% in the general population in the U.S.[2] These communities then face a higher burden of morbidity and mortality, including various types of cancer, cardiovascular disease, lung diseases, asthma, stroke, type 2 diabetes, and more.[3] In addition to having higher rates of smoking, these communities also face more barriers to receiving cessation support and treatment. According to the World Health Organization (WHO), only 30% of global tobacco users have access to tobacco cessation tools to help them quit.[4] Studies have shown that brief advice from physicians and other health care workers are successful in helping people quit;[5,6] however, up to 40% of people in the U.S. with low SES do not have a primary care physician,[7,8] meaning these patients do not have the opportunity to receive brief advice and support for quitting smoking from a health care provider.[7,8] Community health workers (CHWs), who are liaisons between the community and healthcare settings, can help to fill in the gap and provide care to patients that are missed by the traditional healthcare system.

There is growing support from the global community for the role CHWs can play in ensuring that communities have access to essential healthcare services.[9–11] As defined by the WHO, CHWs are "health care providers who live in the community they serve...to meet unmet health needs in a culturally appropriate manner."[11] CHWs serve a wide range of patients, including patients with low SES.[12,13] Adults with low SES who smoke are less likely to be successful in quitting compared to

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those with higher SES.[14–16] This is due to the compounding barriers that patients with low SES face, including cost, accessibility of cessation treatments, stress, and lack of support,[14,16] as well as social determinants of health such as neighborhood safety, physical factors such as comorbidities, and mental factors.[15,16] CHWs are in a key position to help mitigate the adverse outcomes that patients with low SES face as a result of barriers to cessation options. Many studies have shown that CHWs are successful in supporting their patients with tobacco cessation due to CHWs' unique positions in their community and their trusting relationship with their patients.[17–19] For example, in one study, CHWs were trained in tobacco cessation that focused on the unique CHW model of care with a person-centered approach.[20] The study found that CHWs would tailor their approach based on patient's age, gender, readiness to quit, sense of humor, comorbidities, and level of tobacco use.[20] The findings show that the unique CHW model of care and trusting relationship can be utilized to overcome the many barriers to smoking cessation that these high-risk groups face.[20]

While the patient population that CHWs serve are disproportionately at risk for smoking tobacco,[12,21] the current tobacco cessation trainings offered to CHWs are often not specific to the CHW model of care and inaccessible due to cost or time constraints.[22,23] CHWs are in the position to provide this support, and, as seen in a previous needs assessment conducted in a major urban U.S. city, 43.1% of CHWs do address tobacco with their patients yet only 16.7% were extremely confident in doing so.[24–26] CHWs need a training that will support them in addressing the specific barriers these communities face because CHWs have knowledge gaps surrounding tobacco cessation.[24] Furthermore, research has shown that training CHWs in delivering brief interventions requires some modifying to account for the nature of CHWs' relationship and interactions with their patients.[27] A tailored tobacco cessation training would provide CHWs with increased knowledge and skills, and therefore increased confidence, in supporting their high-risk patients to quit smoking. The purpose of the current study is to identify the unique training needs of CHWs to help adapt a training curriculum for CHWs to support their high-risk patients to quit smoking.

Methods

Reporting of the methods and results from this qualitative study conformed to the COREQ (COnsolidated criteria for REporting Qualitative research) guidelines.[28]

Participants

A convenience sample of CHWs and CHW managers who had formerly collaborated with the authors' institution were recruited from an academic medical center serving an urban population, a non-profit organization, and a local community college in the U.S. to participate in the study. For the recruitment process, a flyer with the purpose of the study was distributed via email to CHW managers or CHW program heads, who then directly distributed it to their CHWs. Eligibility criteria included: (1) being 18 years or older, (2) currently working as a CHW or CHW manager, (3) able to speak and read English. Participants were ineligible if they did not speak English, were younger than 18 years old, or did not currently work as a CHW. All participants who enrolled in the study completed the study. Participants were informed that their participation or lack of participation would not affect their employment status at their workplace. This study was approved by the Institutional Review Board.

Procedure

The current research is part of an ongoing project aimed at adapting an evidence-based tobacco cessation curriculum for CHWs. The participatory action framework was utilized to work with CHWs and develop a training that is relevant to the CHW model of care, as research has called for using participatory action frameworks when developing and testing ongoing training programs for CHWs.[29,30] A needs assessment survey was previously distributed to 53 CHWs and lung health professionals to assess knowledge gaps and the need for a tailored tobacco cessation training,[24] and followed up with one focus group of six CHWs to gain additional insights on the data from the survey. Next, the WHO Toolkit for delivering the 5A's and 5R's brief tobacco interventions in primary care®[31] was adapted to develop a curriculum for CHWs by focusing on two aspects: (a) details of how the training is administered to CHWs (e.g., 2-hour time limit, etc.), and (b) the specifics of the content itself (e.g., focusing on ways to assist patients in sociocultural context of their neighborhoods, etc.). Results from the needs assessment, supported by results of a literature review on effective tobacco cessation trainings for CHWs, were used to develop (a) a training curriculum outline and (b) a draft of a training PowerPoint presentation that were used in the current study.

Two focus groups and three qualitative interviews were conducted with CHWs (n = 11) and stakeholders (i.e., CHW managers/directors; n = 3) to gain feedback on the draft training curriculum. All participants who were scheduled for the study attended their respective sessions. The CHW focus groups provided feedback on both the training curriculum outline and the PowerPoint presentation, while the stakeholders provided feedback only on the training curriculum outline. Focus groups and interviews were held virtually over Zoom due to the COVID-19 pandemic between July and October of 2020. Participants completed a de-identified demographic questionnaire and discussed their impressions of the training content, tailoring to CHW clients/patients, and tailoring to the CHW model of care. Two health psychologists (MT and AV) conducted the focus groups and interviews. AV is a master's-level health psychologist and is currently a research consultant. MT is a doctoral-level clinical health psychologist and an

assistant professor. The interviewers facilitated virtually three 60-minute interviews and two 90-minute focus groups using semi-structured interview guides (see Appendix). The interviews and focus groups were audio recorded with the consent of the participants. Participants were compensated with either a $50.00 (interview) or $75.00 (focus group) gift card for their participation.

Data Analysis

Data from the participants (N = 14) were analyzed and discussed below. Research assistants in the study team transcribed the focus groups and interviews. Transcripts were not returned to participants for comment. Qualitative data were analyzed using the Framework method.[32] Two master's-level coders (CH and EV) independently reviewed and generated preliminary codes relevant to the research before meeting to create a merged codebook with definitions of each code. Codes were structured from broad topics to sub-topics, including primary codes (i.e., major topics explored), secondary codes (i.e., recurrent themes within these major topics), and tertiary codes (i.e., recurrent themes within these minor topics). The coders met to discuss and refine codes until a consensus on the coding dictionary was achieved. We considered data saturation as the point where no new codes or themes were generated, as described in Saunders and colleagues (2018).[33] Dedoose software (version 9) was then used by each coder to independently code the transcripts from the focus groups.[34]

Qualitative data analyze features (code co-occurrence and code application) were used to determine the most prevalent themes. To test for intercoder agreement, one coder hand calculated a simple agreement of the coding decisions (# of agreements/# of total codes) from 10 consecutive pages from each transcript. These pages were reviewed on the assumption that the researchers consistently coded throughout the transcript.[35]

Results

Qualitative data were analyzed to assess tobacco training needs of CHWs and how to better adapt trainings to be relevant to their clientele (Table 1). The intercoder agreement score for the two CHW transcripts is 71.25%, which meets the acceptable agreement level of 70%.[35] Four main themes emerged: (a) patients smoke as a stress reliever, (b) CHWs want key language, (c) there is a need to personalize smoking education to patients' specific health needs, and (d) there is a need to motivate patients to quit. Of note, these four main themes are equally important and interconnected, as there was overlap between themes. For example, personalizing information to the patient is a main theme, but is also a sub-theme of motivation because CHWs note that personalizing to the patient is one way to motivate and maintain motivation among patients. See Table 2 for CHW characteristics.

Patient Considerations

Theme 1: Smoking as a Stress Reliever. CHWs recognize that many adults who smoke use it as a coping mechanism to relieve stress or to cope with trauma. One CHW pointed out, "*it's a stress reliever and because African Americans experience trauma, more than stress, but trauma, uh multiple times a day and throughout the lifetime, I believe that's why cigarettes are so attractive…it was seen…from past generations as something that you do, uh, for calming yourself down, to relieve stress*" (P7). The use of smoking as a stress reliever is even picked up by younger generations, as CHWs see that "*a lot of young people tend to smoke especially in our community because of stress*" (P6). CHWs note that even the physical repetitive motion of smoking can be soothing and provide a sense of comfort, saying "*the puffing and the hand to mouth action…was giving [my patient] a sensation of calming herself down*," and drew the comparison between the soothing motion of smoking "*like a pacifier to a baby*" (P7). CHWs reported that sometimes patients are aware of their connection between stress and smoking. Others may be unaware, but these conversations with CHWs can help bring that connection to light. One CHW recalled pointing out this connection to a patient, who then said, "*I never thought about it like that. It's like the moment I get stressed or the moment someone starts to um elevate uh my stress level, I go to the cigarette*" (P7). CHWs discussed that patients will need healthy alternatives to cope with their stress and establish routines that do not include smoking.

Theme 2: Personalizing Smoking Education to Patients' Specific Health Needs. Throughout the focus groups, CHWs noted different ways they can personalize information to individual patients. CHWs serve a wide variety of patients with various comorbidities and conditions. CHWs discussed that if they can help connect the impact of smoking to the patient's specific health issues, then the patient may be more motivated to quit. For example, one CHW talked about a patient being seen for cardiac issues: "*they're coming in for heart and they're smoking, you know. That's even more of a danger, you know, to put that type of health risk on your heart when you're already on, you know, medications or, you know, have a stint or something. So, um I think that's another good thing from us being healthcare is that we can kind of um correlate the reason or, you know, a little a bit of their health issues*" (P6). Without making that personal connection, a CHW noted that "*if I smoked and you came in my room to talk to me, you just wanna talk to me about smoking, I'm not gon really wanna listen to you unless there is something dealing with my health to why I'm there for*" (P6). Some patients do not want to talk about smoking, but there is the potential that, "*[the patient] would listen more if it's something like, okay this is something that will help me better so I can stay out the hospital etcetera type of thing*" (P6). One stakeholder discussed how you can personalize the conversation based on what you may see during a home visit or in the background of a Zoom call, sharing an example "*if*

Table 1. Quotes From CHWs and Stakeholders During Focus Groups and Interviews.

BROAD CATEGORY	SUB THEME	PARTICIPANT	QUOTE
Trauma in communities	Coping mechanism	Participant 7	*"So, for me it's- it-* ***it's a stress reliever and because African Americans experience trauma…more than stress, but trauma, uh multiple times a day and throughout the lifetime, I believe that's why cigarettes are so attractive. Uh and it was seen uh from past generations as something that you do, uh, for calming yourself down, to relieve stress****, and the other part of that, it was seen as something that was cool."*
	Coping mechanism	Participant 6	*"I think a lot a-* ***a lot of young people tend to smoke especially in our community because of stress.*** *Because of the things that we may lack in the communities, or, you know, if it's a lot of violence going on within the Black communities, too."*
Smoking as a stress reliever	Sensation of calming oneself	Participant 7	*"It's how it made her feel, not that the stress was going away but* ***the puffing and the hand to mouth action*** *um* ***was giving her a sensation of calming herself down****. Um I kind of look at it as like* ***a pacifier for a baby****."*
	Link between stress and cigarette use	Participant 7	*"Yeah, when you um- when you point out to the person uh a correlation between their stress level and the times that they pick up whatever vice it is, whether it's cigarettes, drugs, whatever, it- it's a it- you know. You- you give them that aha moment like, you know,* ***I never thought about it like that. It's like the moment I get stressed or the moment someone starts to um elevate uh my stress level, I go to the cigarette.****"*
Seller's exploitation of smokers	Financial burden of cigarettes	Participant 1	*"Like we have patients, I'm sorry,* ***we have patients who will say well I can't afford this or I can't afford, that something that they need, in terms of their medical care****…But if you was to show them and they are a cigarette smoker…if you were to break it down to them yearly. This is what you'll be spending and you know look where- look how much money…And sometimes you'll have those patients that are like "oh, oh, oh wow," cause they really don't know. Especially for the ones who buy the loose, the uh* ***loosies****. Because you have some people who actually sell them um like $0.50 to $0.75 um for one cigarette. And then they go back and they get them all day- all day they're buying them."*
Patient's health issues	Personalize to patient	Participant 6	*"And then also I think another way we can be able to use them is based off why the patients coming in for. Like if I like am working doing cardiology now,* ***they're coming in for heart and they're smoking, you know. That's even more of a danger, you know, to put that type of health risk on your heart when you're already on, you know, medications or, you know, have a stint or something. So, um I think that's another good thing from us being healthcare is that we can kind of um correlate the reason or, you know, a little a bit of their health issues*** *of to why they should, you know… possibly can stop."*
	Personalize to patient	Participant 6	*"****if I smoked and you came in my room to talk to me, you just wanna talk to me about smoking, I'm not gon really wanna listen to you unless there is something dealing with my health to why I'm there for****. So, to incorporate those in there it makes it more of a, you know, me wanna hear it, you know. But if you just coming in and just wanna survey me on why I should or why I shouldn't do this, and a lot of people don't like to be told what to do like you know."*
	Personalize to patient	Participant 6	*"****So, I would listen more if it's something like, okay this is something that will help me better so I can stay out the hospital etcetera type of thing.****"*
		Stakeholder 3	*"…they have gone through a tobacco cessation training but um their they're interested in it because of* ***the population of people that we serve um the COPD and the CHF and the smoking*** *and trying to how do I help them I mean one of my educational pieces is smoking but* ***they're older they're adults and they usually can't tell them nothing*** *and you know I've been doing this so what are the techniques* ***what can I use to try to help them move them on along*** *so I think there's some interest on my side anyway um because of the population and the disease that we're targeting right now."*

(Continued)

Table 1. Continued.

BROAD CATEGORY	SUB THEME	PARTICIPANT	QUOTE
5 A's[a]	Need motivation to work	Participant 3	*"If um, **especially with the population that we work with, like sixty plus, if they don't want to do something, they're not going to do it**. [laughs]…And I'm saying it just like that on purpose. If they do not want to do it, they're not…"*
	Need motivation to work	Participant 3	*"Especially like "Who are you think you are telling me what to do?!"…this one honestly, there's no way around that. If they don't**, you can tell them until your face turns blue it's for your own benefit if you don't quit, you're going to die quickly**. They're not going to do it…It's not, so, there's no way around it. It's literally, the person has to have the will to want to do it."*
	Need motivation to work	Participant 2	*"…then because I know that he really is not supposed to, he's really not, because he is a CHF patient. Um, but **you want to say, just stop. Why won't you just stop? But you can't do that**… Other than that, if not they do not want to stop, then we- **we will get stopped on that second part where it says advise**."*
	More talking points	Participant 7	*"I want **you to give me some talking points** as to okay, you said no, you're not ready to quit. Okay, **and you've already shared with me that you already know the um the dangers of smoking and you're just not ready to um stop smoking**."*
	Alternative options (5 R's[b])	Participant 3	*"No, I think this would be good because **it gets the patient more involved in their health instead of you sounding like their mom or like a parent. It's more like, why is this important to you? Why- why do you want it?** Why do you, instead of me telling you, well you should quit because of this and this and this. It gets them- it **gives the patient a chance to understand why is it important for them to quit**, which, I think. I'm actually writing this down for my COPD patient."*
Patient motivation	Maintaining motivation	Participant 3	*"Example, had a patient had to remind her every day not to drink too much soda, not to drink so much water because of her fluid retention. And she knows the benefit of it, and just making sure that to add something there to make sure to motivate the patient, to remind them the reason why it's so important for them to quit. Remind them**, you're quitting because you want to make sure your blood pressure's low**, you want to quit, like just **something that motivates the patient so even when you're not talking to them every week they'll still wanna do it. Because you can teach them all the material but if they don't have the motivation then they'll start for a week or two and then they'll drop.**"*
	Empathizing with the patient	Participant 1	*"**It's an addiction that's hard to break**, so…I have um, I have a dad, my dad, he passed away from um lung cancer. He was a chain smoker. And so, this is- this is really near and dear to me right now to learn more about this and to try to help patients overcome that addiction."*
	Empathizing with the patient	Participant 2	*"I have to look at it like okay, um this person is dealing with a smoking, you know, addiction. But for me, it- it may not really be that easy for them because I love sweets, you know, so I have to remind myself like okay if you're dealing with, with like a, a sweet addiction that like you know you want that, so think about the next person. So, um, we always have to yeah, **remind ourselves um, we can't just think of it like oh well it's easy to stop, it's easy to stop something**. Or um, **but because for some people it may** be, some others, it may **take a little bit more than just that.**"*
	Non-judgmental	Stakeholder 1	"Yeah, Um I can't think of any specific myths cause I don't work too much with uh cessation, but I will say like that just in from a community member standpoint right like there's- this there's this **type of shame of doing something that**, you know, **society sees as not healthy for you**. And so, CHWs **since they've already built rapport, they can ease** that- ease **their fears and** you know um like **help them kind of cope with that**, you know maybe."

(Continued)

Table 1. Continued.

BROAD CATEGORY	SUB THEME	PARTICIPANT	QUOTE
Role play	Motivated patient vs. unmotivated patient	Participant 1	*"Have you guys ever encountered a patient who told you, no I don't want to quit….And if so, if so, [laughs] what was your response? What do you -* ***How do you respond to that?"***
	Motivated patient vs. unmotivated patient	Participant 3	*"I think so, especially if they're gonna be talking about doing this in a community health worker like program. Cause I did the one at [a community college] and we didn't talk much about smoking. So,* ***especially the students who want to become community health workers*** *in the future. Um, because those are things that you learn as you get into community health worker. You start to learn like the key tells that tell you this patient…"*
	Example of a discussion	Participant 3	*"****Maybe key phrases that I can just put in my repertoire so in the future if I have a patient*** *um, that is brand new to me, that just got into the pool and I've never talked to and asks me to help them find classes, maybe I have key phrases I can use that* ***might help me touch the conversation without them getting like overprotective over.*** *Like some- some smokers are very overprotective of their, their cigarettes, you know."*
		Stakeholder 2	*"You can show me the reality of, you can give me this model but* ***then you can teach me how to make it my own."***

[a]5 A's: Ask, Advise, Assess, Assist, Arrange
[b]5 R's of tobacco cessation: Relevance, Risks, Rewards, Roadblocks, Repetition

Table 2. Characteristics of CHWs and Stakeholders (i.e., CHW Managers).

CHARACTERISTICS	
Place of employment, n (%)	
Hospital	9 (69%)
Clinic	1 (8%)
University/Academic setting	3 (23%)
Community-based organization	1 (8%)
Length of time in current position, months, M (SD)	11.5 (8.9)
Time spent face-to-face with clients/patients, n (%)	
Less than 15 min	1 (8%)
15-30 min	4 (31%)
31-45 min	2 (15%)
more than 45 min	3 (23%)
Education n (%)	
Elementary or partial high school	
High school (grade 12 or GED)	0
Some college (no degree)	1 (8%)
Business or technical training	0
Associate degree	3 (23%)
University degree, bachelor or equivalent	4 (31%)
Post-graduate degree	4 (31%)
Race n (%)	
American Indian or Alaska Native	0
Asian	0
Black or African American	10 (77%)
White	3 (23%)
Other	4 (31%)
Ethnicity, Hispanic n (%)	3 (23%)
Gender, Female n (%)	13 (100%)

there's mold in the house…we are the eyes and the ears for the…physicians" (S3).

CHW Training Needs

Theme 3: Need for Key Language to Address Tobacco Dependence. Broaching the topic of smoking can be difficult and even uncomfortable for CHWs who work with older populations or with patients who are not in the position to prioritize quitting. CHWs want key phrases or questions they can utilize to spark conversation without upsetting the patient or having the patient stop engaging. When a patient makes it clear they do not want to quit, CHWs want to know, "*How do you respond to that?*" (P1). This is where CHWs want "*[trainers] to give me some talking points*" (P7). Stakeholders recognize this need for key language as well saying, "*the population of people that we serve um the COPD* (chronic obstructive pulmonary disease) *and the CHF* (congestive heart failure) *and the smoking …they're older… and [CHW] usually can't tell them nothing…what can I use to try to help them move them on along*" (S3). CHWs have noticed that the patient will not want to discuss smoking if they feel they are being pressured or lectured to quit. There are even times where "*you've [the patient] already shared with me that you already know the um the dangers of smoking and you're just not ready to um stop smoking*" (P7). In these cases of patients who are not ready to quit, CHWs want the language and skills to help patients feel involved and empowered in their health decision choices. The interviewers asked about motivation frameworks such as the 5'Rs (relevance, risks, rewards, roadblocks, and repetition), and CHWs responded favorably to them. Frameworks such as the 5 R's "*gets the patient more involved in their health instead of you sounding like their mom or like a parent. It's more like, why is this important to you? Why- why do you want it?*" (P3). These types of conversations "*gives the patient a chance to understand why is it important for them to quit*" (P3) and makes the patient feel like they are truly being listened to.

Both CHWs and stakeholders suggested that an important way that CHW should practice these skills is through role playing. For CHW, role playing can provide the opportunity to both watch and receive feedback from these conversations "*because you're actually seeing it. The verbiage that you want, the message that you want to communicate*" (P7). Stakeholders recognized that role-play is important because "*hands-on [learning] is really good for community health workers*" (S3). CHWs and stakeholders were interested in role play scenarios comparing how to respond to a motivated patient versus an unmotivated patient. It would give a CHW, "*especially the students who want to become community health workers in the future*" (P3), the chance to practice how to ask open-ended questions, listening skills, and learn how to approach uncomfortable topics. This opportunity to practice will be helpful for new CHWs with little direct experience to learn "*key phrases that I can just put in my repertoire so in the future if I have a patient…might help me touch the conversation without them getting like overprotective [of their cigarettes]*" (P3). It will help model different scenarios while also giving CHWs the tools to *"then… teach me how to make it my own*" (S2). This will allow CHWs to build a toolkit they can pull from so they can better address their patients' needs.

Theme 4: How to Motivate Patients. A common theme that emerged throughout the focus groups was the need to help motivate patients, which is a broad theme that can be interconnected with many of these other themes already discussed. CHWs often said that a major issue they run into is their patients are not ready to quit, "*especially with the population that we work with, like sixty plus, if they don't want to do something, they're not going to do it*" (P3). One intervention, the 5 A's (ask, advise, assess, assist, arrange) is hailed as the standard for brief tobacco cessation intervention.[36] The 5 steps of the intervention guides providers through the process of helping a patient who is ready to quit smoking. CHWs utilize the 5 A's, as they find it can be a helpful tool. However, CHWs noted that the 5 A's are only a helpful tool for patients who are already ready to quit, and for those that are not ready to quit, "*you can tell them until your face turns blue it's for your own benefit. If you don't quit, you're going to die quickly. They're not going to do it*" (P3). If the patient does not want to quit, CHWs will "*get stopped on that second part where it says advise*" (P2). CHWs want a different way to approach their patients who are not ready to quit or in the position to prioritize quitting.

Not only do CHWs need to support patients in finding their own personal motivation, but they also help teach patients how to maintain that motivation when the CHW is not around. Maintaining motivation is as crucial as having initial motivation "*because you can teach them all the material but if they don't have the motivation then they'll start for a week or two and then they'll drop*" (P3). CHWs can support patients in finding "*something that motivates the patient so even when you're not talking to them every week they'll still wanna do it*" (P3).

The CHW model of care puts CHWs in the prime position to assist patients with motivation. Smoking cigarettes can be seen as a "*…type of shame of doing something that…society sees as not healthy for you…*" (S1). Yet, with CHWs, "*…since they've already built rapport, they can…ease their fears and… help them kind of cope with that…*" (S1). The established relationship between CHW and patient is what will allow CHWs to successfully discuss smoking cessation with their patients. One CHW recalled a patient that had congestive heart failure saying, *"but you want to say, just stop. Why won't you just stop? But you can't do that*" (P2). As a health worker utilizing a motivational interviewing (M.I.) framework, one must remember that "*people have the right to make a bad decision and you have to respect that decision*" (S2). Others compared being addicted to cigarettes like having a sweet tooth and reminding themselves that cigarettes are "*an addiction that's hard to break*" (P2). They tried to relate to why their patients may struggle with giving up cigarettes: "*remind ourselves um, we can't just think of it like oh well it's easy to stop, it's easy to stop something…but because for some people it may…take a little bit more than just that*" (P2). One stakeholder discussed the nuance of bringing up smoking because while CHWs may want to bring it up every single visit, they also have to consider the timing, and "*this is where you can't train on that. This is where you have to say, is this an appropriate time to approach this conversation?… Do you feel that you build enough rapport with [me] to just ask it this time?*" (S2). CHWs want to help their unmotivated patients because being motivated is a key aspect in successfully quitting, as "*there's no way around it…the person has to have the will to want to do it [quit]*" (P3). CHWs are in the position to help their patients find and maintain motivation to quit smoking; however, they need the support to do so successfully.

Discussion

The primary results of the qualitative study illustrated that CHWs' unique relationships with their patients will improve their ability to tailor tobacco cessation information to each patient. In order to be successful, CHWs need to support patients, who are often highly dependent on nicotine,[21] so they are in a place where they can prioritize quitting. CHWs can do this through addressing the patients' specific needs and learning how to utilize M.I. within tobacco cessation. The ability to personalize treatment based on a patient's individual lifestyle leads to the potential for greater success in behavior change, and with specific training, CHWs could be the key to connecting underserved populations to personalized medicine.[37] Studies have shown that most people who smoke want to quit, and many do attempt to quit[15,38]; however, there are external factors that make it difficult to do so.[14,16] CHWs are often aware of these environmental and social barriers their patients' face, and CHWs can help their patients address the myriad of barriers so that the patient can focus on and prioritize quitting smoking.

While the patient population that CHWs serve often use tobacco, CHW training lacks content in tobacco cessation.[24] CHW training varies depending on what their employer offers and requires; therefore, if tobacco cessation is covered, it may be

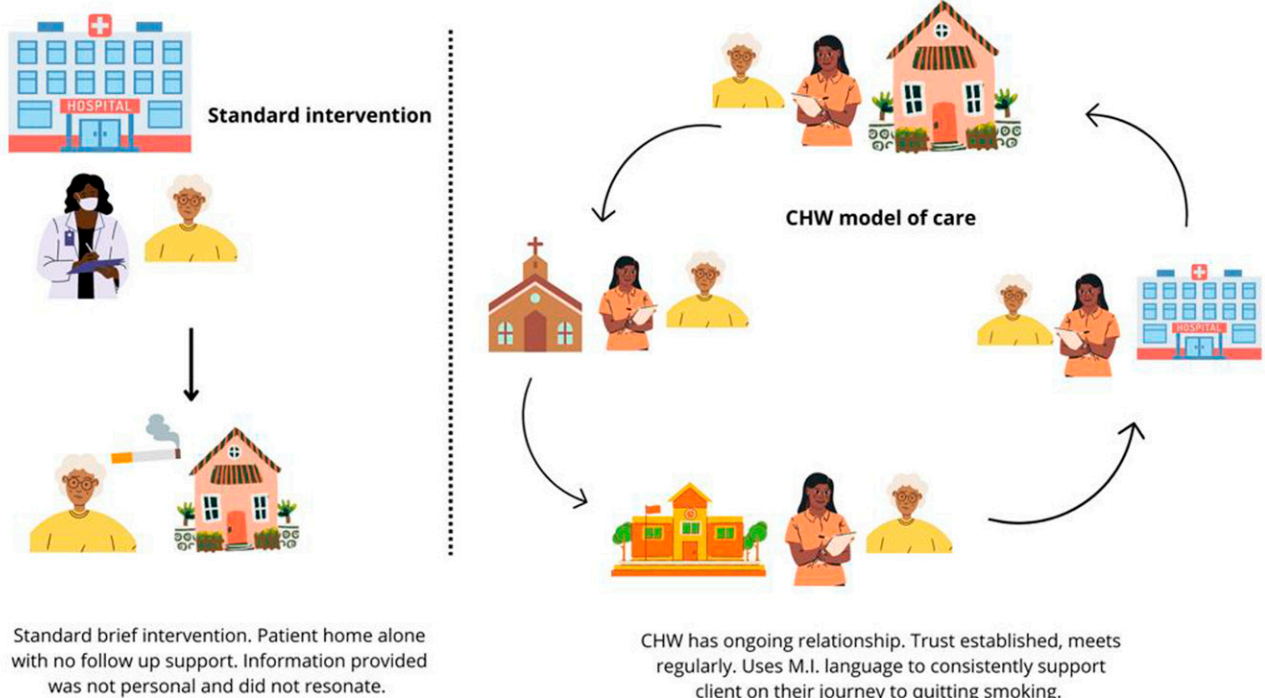

Figure 1. Community Health Worker (CHW) Model of Care in the context of smoking cessation.

one of many topics.[39] These tobacco cessation trainings tend to be general and focus on the 5 A's framework.[36] The 5 A's can be a helpful framework, but it doesn't fully utilize the CHW model of care or focus on patients who are not ready to quit. This makes it difficult for CHWs to confidently address smoking or tobacco use with their patients, especially with patients who face barriers or are indifferent about quitting. CHWs know that a key aspect in helping a patient discover their motivation is being non-judgmental and leveraging the rapport they have with patients to discuss tobacco use behavior. Having key language and phrases that utilize an M.I. framework can help CHWs support their patients while also ensuring the patients feels they have autonomy over the choices they make.

Studies have shown that while there are pros and cons to using M.I. interventions for smoking cessation, there is insufficient evidence to show that M.I. is a better tool for smoking cessation compared to other types of interventions.[40] Grobe et al (2020) found variations in effectiveness of smoking cessation M.I. by race; particularly, for African Americans who smoke, health education was more effective than M.I., suggesting that there is not enough evidence to use M.I. as a stand-alone intervention for smoking cessation in all populations.[41] However, CHWs have successfully used M.I. to promote other types of healthy behavior change, such as promoting cancer screenings, disease management, nutrition, and exercise.[42–44] CHWs need an avenue to personalize smoking education to patients' specific health needs, as CHWs in our study cited that while people wanted to quit, there was low motivation to do so. The M.I. framework has the potential to be a useful tool for CHWs because of the nature of their interactions with patients. They have conversations with patients that occur continually over a long period of time, allowing CHWs to build trust and gather information about the patient's personal barriers and motivational factors (see Figure 1). M.I. can help maintain trust between the CHW and the patient by expressing empathy and giving the patient full autonomy to make the choices that are best for themselves, rather than feel pressured or ashamed. However, more research is needed to determine the efficacy of CHWs using M.I. for smoking cessation.

The fidelity of M.I. depends on how it is delivered, making it beneficial to have a standardized M.I. framework to use as a guide. In a 2010 systemic review examining utilizing M.I. to help patients quit smoking, they found that the type of provider delivering the M.I. intervention did not change M.I.'s effectiveness.[45] CHWs consistently see patients and connect patients to services; therefore, through utilizing M.I. for smoking cessation, CHWs can fill the health care gaps of these high-risk patients who are not receiving the support they need to quit smoking and stay quit. Future research should focus on tailored trainings that utilize the CHW model of care, determining how effective M.I. is for smoking cessation, and role playing to promote confidently and successfully CHW-delivered tobacco cessation counseling to their patients.

Strengths and Limitations

While the sample size of the study was small (N = 14), this included both CHWs and managers, allowing multiple viewpoints on the training needs of CHWs. A common limitation of

all qualitative research is that not all participants will speak equally during focus groups. Further, the study criteria excluded individuals who did not speak English, and as a convenience sample of English-speaking CHWs was used, the results may not be generalizeable to other groups. Additionally, the study was from one U.S.-based hospital system, but the results have the potential to be generalizable to other low-resourced groups across the globe who face a lack of access to health care. This is due to the fact that, globally, the CHW model of care is designed to address patients' social needs as well as their health needs.[46]

Conclusion

CHWs address smoking cessation in the context of the patient's other health conditions, and they tailor the smoking cessation information to what is most relevant to each individual patient. When CHWs use an M.I. framework to deliver this information, patients feel empowered, and it can help them move to a position where they can successfully quit smoking. The CHW model of care includes CHWs having established trust with patients, understanding their cultural context, and having long term relationships with patients. CHWs across the world all utilize this same CHW model of care, giving this framework the potential to be successful across a variety of fields and contexts.

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ORCID iDs

Andres Mauricio Garcia Sierra https://orcid.org/0000-0001-9873-1570
Marcia Tan https://orcid.org/0000-0001-8553-5319

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Appendix

Interview Guide for C.H.A.N.G.E. Training

THEME	BROAD QUESTIONS	FOLLOW-UP PROMPTS
Curriculum content	What are your overall impressions of the curriculum?	
	What do you think about the content of the curriculum? (Probe: Was it easy to understand? Was it too much information?)	Do you think you would be able to deliver the content of the intervention to your clients/patients? If you were providing this tobacco cessation intervention to your clients/patients, how long do you think the intervention would last?
		Do you think the background information presented (Why people start smoking, what people smoke) in the intervention is relevant to the experiences of your clients/patients?
		What are your thoughts about the content describing the basics of nicotine addiction? Helpful to you has CHWs? Would you use this info with clients/patients? How?
		How relevant were the role-playing scenarios? Can you describe other common examples of issues that smoking clients/patients present with that would be useful to include to a role play exercise? Do you think it's even necessary to have example role play scenarios or better to break into small groups/pairs and allow each pair to come up with their own?
		Was there anything confusing about the information in the curriculum?
		We've been considering and have gotten suggestions to include more specific info/content about how smoking affects certain diseases/illnesses, like asthma, COPD, that may be the presenting concern of your clients/patients. What would you want to learn about regarding…
	What do you think about the design of the curriculum? (Probes: Were the figures/infographics easy to understand? Was the text easy to read?)	
	Do you feel like the content is tailored to fit your needs as a community health worker?	
	What would you change so that the content is more relevant to the clients/patients you work with?	

(Continued)

Continued.

THEME	BROAD QUESTIONS	FOLLOW-UP PROMPTS
Trainings	If you were to take a training on delivering this intervention to your clients/patients, how would you want the training to be delivered?	About how long should the training last?
		In what format should the training be? (Probes: Which format would make it easier and more enjoyable to pay attention? PowerPoint presentation? Role playing scenarios? Both?)
		During what time of the day should it take place?
		If there was a monetary cost required to attend a training, would you attend? What is the amount you would attend for?
		What type of certification or credits would you be interested in receiving for the training?
	Can you describe what other tobacco addiction/cessation trainings that you've participated in, either directly or through another organization/company, have been like??	If so, how often? Are continuing education unit (CEU) or continuing medical education (CME) credits offered for the training? Are any certifications offered?
		Does your facility provide cessation resources and services to staff members who use tobacco?
Tobacco cessation practices	Can you tell me a little bit about your interactions with your clients/patients? (Probes: How much time do you spend with each of your clients/patients? How often do you see them? Where are clients/patients seen/where are visits conducted?	
	How likely are you to talk about tobacco use/dependence during a visit?	Do you ask each of your clients/patients if he/she uses tobacco at their initial visit? Why or why not? What guides your decision to ask about tobacco use/address smoking at the initial visit?
		How often do you ask if they smoke throughout the course of their treatment?
	About how many of your clients/patients do you think use tobacco products?	For those who smoke, how would you describe most of your clients'/patients' current smoking status?
		What factor most likely motivates your clients/patients to want to quit tobacco?
	If you discuss tobacco use/dependence, in what level of detail do you address it with your clients/patients? (Probes: Do you only assess use? Refer to other services? Provide advice on how to quit?	
	Do you feel confident in addressing tobacco use/dependence with your clients/ patients? Why or why not?	How confident would you feel conducting this intervention with your clients/patients?
Open forum	Thank you for taking the time to complete the focus group! Please let us know if you have any additional comments or feedback.	