Nicotine Anonymous Peer Support Groups—Can They Work in Homeless Service Settings?

National Health Care for the Homeless Council
Practice-Based Research Network
March 2017

Introduction

Tobacco use is the single most preventable cause of morbidity and mortality in the United States (U.S. Department of Health and Human Services, 2014). Studies have consistently demonstrated that people who are homeless have high rates of tobacco use and high-risk smoking practices, including the misuse of tobacco products (Baggett & Rigotti, 2010; Torchalla, Strehlau, Okoli, Li, Schuetz, & Krausz, 2011). Smoking, in particular, is more prevalent in the homeless population (69-80%) than in the general U.S. adult population (17%) (Baggett & Rigotti, 2010; Centers for Disease Control & Prevention, 2015; Connor 2002, Tsai & Rosenheck, 2012). Out of the 890,283 patients served by the U.S. Health Care for the Homeless (HCH) health center program in 2015, 12% had a primary diagnosis of tobacco use disorder and 59% received smoking and tobacco use cessation counseling at their health center compared to 5% and 72% respectively in the general community health center population (Uniform Data System, 2015).

Individuals who are homeless and smoke have the desire to quit, preferring nicotine replacement therapy like patches and lozenges to other smoking cessation tools, and are interested in the prospect of utilizing e-cigarettes as well (Baggett, 2010; Connor, 2002; Okuyemi, 2006; Okuyemi, 2013). Individuals without homes also make efforts to quit at rates similar to their housed counterparts, though their success rates are lower (Baggett, Lebrun-Harris, & Rigotti, 2012; Businelle, 2014; Butler, 2002). Their barriers to quitting include high levels of nicotine dependence, depressed mood, stress, restlessness, and lack of readiness to quit on the stages of change (Businelle, 2014; Shelley, 2010; Torchalla, Strehlau, Okoli, Li, Schuetz, & Krausz, 2011). Peer-supported smoking cessation programs may be useful interventions. The literature suggests that former smokers want to help others quit and smokers are more ready to quit if they have support. Additionally, cessation is more likely if the person attempting cessation knows other quitters (Connor, 2002; Goldade, 2012; Goldade, 2013). Motivational interviewing is a useful tool to help providers identify their client stage of readiness to quit smoking (Shelley, 2010). Motivational interviewing has a positive impact on smoking cessation and is a delivery approach used in many homeless health care settings for a variety of medical and behavioral health issues (Okuyemi, 2006).

Screening for tobacco use and offering treatment to quit are essential primary care services but can prove challenging when patients have more immediate health concerns or social service needs. Many homeless health care clinics screen for tobacco use at primary care visits and providers are encouraged to give smoking cessation advice. About half of patients seen in federally-funded Health Care for the Homeless clinics reported receiving advice to quit and a large majority of providers in these same clinics reported screening for tobacco use (Baggett, 2010; Baggett, 2013). These federally-qualified health centers are required each year to report on rates of adult patients who have been screened for tobacco use and, if screened positive, rates of adults provided with cessation counseling or pharmacotherapy (Bureau, 2015). However, smoking programs that may involve group counseling and support are not consistently available. Providers may also focus on other health issues that seem like a higher priority than

smoking cessation, such as addressing alcohol and drug use, mental health issues, and acute medical conditions.

Individuals who are homeless may also be difficult to engage in care and some clinic staff report offering tobacco to potential patients to help build rapport and trust. A trustworthy relationship proves foundational when trying to engage individuals in care and bring them into the clinic setting (Baggett, 2013). Although smoking policies vary widely among emergency homeless shelters, residents of shelters with "no smoking" policies perceive smoking more negatively and may be more likely to attempt quitting (Vijayaraghavan, 2015).

Given the serious health consequences of tobacco use, the widespread prevalence of smoking in the homeless population, their high interest in quitting, and yet their low rates of tobacco cessation, research is needed to identify low-cost or free tobacco cessation options that may be attractive to homeless and other low socioeconomic status populations (Lee, 2005; Mokdad, Marks, Stroup, & Gerberding 2004; Glasser, 2010; Glasser, 2012; Glasser, 2015; Glasser & Hirsch, 2015). An expert panel comprising tobacco control networks, public health departments, health care providers, cancer advocacy agencies, and homeless service organizations recommended that tobacco cessation programs be integrated into established social service settings and to consider models similar to those used in alcohol and drug treatment, such as the model of 12-step programs (Porter, 2010; Glasser, 2010). Furthermore, the panel suggested expanding research on smoking cessation programs for people experiencing homelessness and explicitly recommended testing the efficacy of a no-cost intervention such as Nicotine Anonymous. Nicotine Anonymous (NicA) is a 12-step, peer support, smoking cessation program for individuals who use tobacco and wish to live a nicotine-free life (Nicotine Anonymous, 2016).

There is limited research on the efficacy of the NicA model (Lichtenstein, 1999; Zywiak, Glasser, & Moore, 2015), and no literature regarding its benefit to homeless populations. Similar to Alcoholics Anonymous, NicA is a 12-step support recovery model. NicA's recommended techniques for quitting smoking utilize a cognitive-behavioral therapeutic approach, such as creating a plan for quitting and identifying alternative activities to smoking if cravings arise (Lichtenstein, 1999). NicA meetings are held in the U.S. and across the globe with written materials available in at least 17 languages. Meetings are free and are held face-to-face, via telephone, and through the internet. Individuals recovering from alcoholism who also wanted to stay nicotine-free spearheaded the creation of NicA as they felt the 12-step model was helpful in managing their nicotine addiction (Lichtenstein, 1999; Nicotine Anonymous website). Therefore, the model may be more attractive to those who have had positive experiences with other 12-step programs versus those who have not had similar experiences. Given that smoking among people who are homeless is associated with a history of alcohol and drug use and with having mental health problems (Baggett, 2010; Okuyemi, 2013; Torchalla, 2011; Tsai & Rosenheck, 2012), NicA is an appropriate smoking cessation support group model to test among individuals who are homeless.

Health behavior interventions should be evidence-based and tailored to the specific population to which they are intended. Since there is limited research on the effectiveness of Nicotine

Anonymous on smoking cessation in the general population and specifically among people experiencing homelessness, a feasibility study was conducted to examine if peer-supported, NicA smoking cessation groups could be established in the homeless service setting and if clients in those settings would be receptive to the model.

Methodology

This study was designed by the Research Committee of the National Health Care for the Homeless Council. The National Health Care for the Homeless Council is a membership organization that aims "to eliminate homelessness by ensuring comprehensive health care and secure housing for everyone" (www.nhchc.org). The organization provides trainings and technical assistance to homeless service providers across the U.S., advocates for policies that will guarantee high-quality care for people who are homeless, and researches the best practices in providing care to this vulnerable population. The Research Committee comprises academic researchers, clinicians who serve people experiencing homelessness, and clients who have been served by federally-funded Health Care for the Homeless (HCH) health center program grantees.

Study Sites

The three HCH clinic organizations that participated in this study were recruited from the HCH Practice-Based Research Network (PBRN). The PBRN is registered with the Agency for Healthcare Research and Quality PBRN Resource Center and is composed of approximately 65 HCH grantees and medical respite care programs across the United States (https://pbrn.ahrq.gov/). A study invitation was sent to all PBRN members describing the study and requirements for participation. Sites were chosen if they had adequate resources and leadership investment to (1) host and promote NicA meetings for at least 12 weeks without external funding, (2) submit monthly reporting forms to investigators, and (3) participate in an in-depth interview at the end of the study to explore the feasibility of the intervention. A memorandum of agreement was signed between the National HCH Council and each participating site acknowledging that they would abide by the principles established by NicA Inc., collaborate with the National HCH Council on data collection, and agree to provide timely feedback on the feasibility of the project. Three organizations agreed to participate.

1. **Site 1 (Rhode Island):** Site 1 was a homeless service organization with a Health Care for the Homeless (HCH) clinic on the premises. The organization housed a 24-hour community room where individuals without homes, who had been given a pass to the room by security, were free to come and go. This was the site of the NicA meetings.
2. **Site 2 (Tennessee):** Site 2 was a day shelter that included transitional housing, recovery groups (Alcoholics Anonymous, Narcotics Anonymous), classes (art, music), meals, showers, and lockers to store belongings. The local HCH clinic and medical respite program were both within very close proximity.
3. **Site 3 (Massachusetts):** Site 3 was a medical respite program in the same building as an HCH clinic. Medical respite programs offer individuals who have been recently discharged

from the hospital a safe space to rest and recuperate. There are significant security barriers to entering and exiting the physical space and program; only program participants could attend NicA meetings

The Nicotine Anonymous Model

The Nicotine Anonymous model is a 12-step, peer support recovery program based on the Alcoholics Anonymous model. The main differences are that the word "alcohol" is replaced with "nicotine" in two of the steps and other program related literature discusses nicotine use and consequences instead of alcohol (Lichtenstein, 1999). The 12 steps of recovery include some of the following themes: admitting addiction to nicotine and powerlessness over that addiction, giving control over to a high power to resolve the addiction, recognizing the harm done to others as a result of addiction and making amends with those individuals, and to sharing the NicA message to others.

The NicA model allows members to support one another in a safe and confidential environment by sharing personal experiences of addiction and attempts to quit. The five tools used in the program are meetings, reading materials, sponsors, phone lists, and service (Nicotine Anonymous website; Meeting Starter Kit). Meetings take place once a week for approximately one hour and the one requirement for participation is the desire to quit using tobacco. It is recommended but not required that facilitators be former smokers who are currently abstinent.

NicA offers many options for reading materials to help meeting attendees in their endeavors to quit smoking; all of these materials are available for order at cost or printing from the NicA website. Literature not created by Nicotine Anonymous World Services can be used in meetings, but it is recommended that those materials be labeled as non-NicA program material.

New NicA members are encouraged to identify a sponsor who can assist in their recovery, preferably someone who has successfully quit themselves. Each NicA group maintains a phone list of meeting attendees that members can use to find a sponsor or to call someone in a time of need, such as fighting an urge to smoke. Beyond acting as someone's sponsor, NicA members can serve the group in other ways, such as ordering literature for their local group, recruiting new participants, and setting up for or cleaning up after meetings.

Training in the NicA Model

Staff and volunteers associated with the study sites were required to participate in a training webinar explaining the research study protocol (recruitment, data collection, confidentiality) and the fundamentals of starting a NicA support group (by a NicA subject matter expert) to ensure successful implementation and standardization of the meetings. Sites were also provided with the NicA Starter Kit developed by the Nicotine Anonymous World Services which includes instructions on starting and maintaining a group, examples of meeting formats and announcements, and pamphlets on the 12 steps, tips for quitting smoking, and the "Serenity

Prayer" (https://nicotine-anonymous.org/publications-mtg-starter-kit.html). Each point person was asked to visit a local NicA support group, if available, in their area prior to initiating the feasibility study at their site. "Smobriety" (smoking sobriety) was recommended but not required for site staff members who would facilitate the NicA meetings, and groups were encouraged to rotate responsibilities by allowing different attendees to facilitate the weekly meetings.

The meetings were registered on the NicA website as instructed for all new groups by the Nicotine Anonymous World Services. Additional NicA publications and smobriety chips were provided to the meeting facilitators to be utilized during weekly meetings.

Participant Recruitment

To recruit patients, sites were asked to conduct in-service trainings at their local organizations to inform staff about the feasibility study so that they could refer tobacco-using patients to the group. Sites also created NicA promotional flyers that they posted in clinic waiting rooms and their outreach workers distributed the flyers to potential participants. Inclusion criteria for participants in the study were: 18 years of age and over, current tobacco user with a desire to quit or reduce consumption, and homeless or recently homeless (individuals who have been homeless can continue receiving services at HCH clinics up until one year after they have received housing). There were no exclusion criteria.

All participation was strictly voluntary and no personally identifying information was collected on participants. At their first NicA meeting, participants were given a Confidentiality Statement Form explaining that the group was part of a feasibility study and that participating in the group had minimal risk of harm. The document also contained a statement assuring participants that their confidentiality and anonymity would be preserved as much as possible. It also emphasized the importance of maintaining the confidentiality of everyone in the group. Entering the meeting was acknowledgement that individuals consented to participate. Meeting staff facilitators provided assistance in reading and understanding the Confidentiality Statement if needed or requested by participants. This study was approved by the Migrant Clinicians Network Institutional Review Board.

NicA Meeting Facilitation

The NicA groups met once a week at the three homeless service sites for at least 12 weeks. The NicA model was followed completely; therefore, meetings were open to people of all races, ethnicities, ages, and genders. Each group was asked to follow the instructions contained in the NicA Starter Kit regarding how to run meetings following the 12-step program and was encouraged to rotate facilitation among the group members. Smobriety chips and NicA reading materials were distributed weekly. Meeting continuation beyond the feasibility study was at the discretion of the participating sites.

Measures and Data Collection

To measure the feasibility of offering NicA groups in homeless service settings, we measured the five components of program feasibility proposed by Bowen, et al. (2009): (1) implementation, (2) practicality, (3) demand, (4) acceptability, and (5) integration. Data collection included documentation of weekly meeting attendance and weekly distribution of smobriety chips, and in-depth interviews with the NicA meeting staff facilitators at the completion of the 12-week NicA 12 step program. Measures of each of the five feasibility components are as follows.

Implementation: Implementation is defined by the extent to which an intervention can be fully executed as planned. This was measured by asking the NicA meeting staff facilitators if they were able to provide the intervention as trained and intended using their existing resources, which included recruitment of attendees, running meetings, and distribution of smobriety chips.

Practicality: Practicality is defined by the extent to which an intervention can be delivered when resources, time, or commitment are constrained in some way. For this component, staff facilitators were asked to explain whether the intervention training and materials provided by investigators were sufficient for preparing them for implementing the NicA meetings. Practicality was also measured by asking staff facilitators whether organizational resources were adequate for helping them recruit meeting participants and for planning each meeting. Finally, staff facilitators were asked what skills were necessary for facilitating NicA meetings.

Demand: Demand is defined by the extent to which there is interest in an intervention by potential participants. Since the intervention was anonymous by the NicA design, we did not collect personally identifying information about participants. Demand was measured in two ways. (1) Staff facilitators documented how many individuals attended the NicA meetings each week and how many of and which kind of smobriety chips they distributed in each meeting. The number of smobriety chips that were distributed for each stage of recovery was documented at each weekly meeting to assess the number of newcomers, number who desired to be nicotine-free, and number that had been smoke-free for one hour, 24 hours, 7 days, and 30 days. Staff facilitators also estimated how many participants each week were repeat attendees. This was a reasonable expectation considering the facilitators would be familiar with the group members each and could recognize repeat attendees. (2) Staff facilitators were asked to estimate how and theorize why attendance may have fluctuated during the intervention period, including the average number of weeks participants attended meetings. Staff facilitators were also asked to track reasons individuals did not participate or discontinued participation if that information was disclosed during the intervention period.

Acceptability/Integration: Acceptability is defined as the reaction to the intervention of the targeted recipients and those involved in implementing the program. Integration is the extent to which the intervention fits within the structure of the host organization and could be maintained over time. Since acceptability and integration are both conceptually about how well the intervention fits within a population or setting, they were measured as one component of feasibility. Acceptability/integration was measured by whether or not a study site planned to

continue providing the NicA meetings after the study ended, if the facilitator thought that the intervention was suitable for the targeted population, and if the intervention was appropriate for the mission and culture of the organization.

Results

We evaluated the Nicotine Anonymous experience in all three study sites according to the feasibility criteria we have described above.

Implementation

All three study sites were able to obtain physical space to host the NicA meetings and promote attendance to the group through flyers in waiting rooms, face-to-face outreach with clients, and email communication to providers to share with their clients. Staff facilitators at Site 3 actually walked door-to-door on the morning before each meeting, to remind respite clients to attend. The participating sites already had other groups meeting at their locations, so adding another group was fairly simple. Site 3 did move an existing social worker-run group to a different time to accommodate the new NicA meeting. Site 1 and 3 held the meetings in their facilities. Site 2 utilized two different meeting sites during the study period that were both located physically outside of the host agency but in other homeless service agencies.

Staff facilitators were able to provide the 12-step model as designed by Nicotine Anonymous World Services, distribute “smobriety” chips as directed, and provide the written NicA materials to attendees. One element of implementation that was difficult to accomplish was identifying and utilizing peer facilitators for the NicA groups. As with Alcoholics Anonymous, it is ideal to have someone who is in recovery or desires to quit lead the group. Staff facilitators reported that it was challenging to find peer facilitators who were able, comfortable, and confident enough to take on the facilitation role. Literacy level was one factor that prevented some attendees from facilitating because they were unable to read the steps and suggested discussion materials. The Site 2 staff facilitator explained that the attendees in his group got comfortable with him leading the group and did not want to change that.

Practicality

Translating theory into practice varied across the sites. Site 1 obtained a physical room to host the NicA meetings but the facilitator decided to switch locations within the same building during the study. Since attendance was low, she thought moving the meeting to a more visible location might make the meetings more visible to clients of the homeless service agency and facilitate recruitment and meeting attendance. As noted above, this site also had some barriers to participation related to security at building entry since anyone who wanted to enter the building had to be registered and signed into the building.

Site 2 secured a physical location for the NicA group to meet in but after two weeks of low participant recruitment, the facilitator opted to change locations to facilitate recruitment. The first location was at an agency that served meals and provided clothing; it was somewhat isolated geographically from other homeless service organizations and clients were not accustomed to the availability of group meetings there. The second location acquired by the facilitator was in a major homeless day shelter with many other services and meetings available and other homeless service agencies nearby (see above description).

While the staff facilitators overall were able to utilize the 12-step support model of NicA, they also found parts of the model problematic. Staff facilitators found that many participant literacy levels prevented them from reading and understanding the NicA materials as well as feeling confident to lead the NicA group. Low attendance prevented one site from having peer facilitators. Also, the NicA model involves following the 12 steps and traditions in order each week. Since meeting attendance fluctuated so much, staff facilitators ended up repeating steps at each meeting, especially the earlier steps.

In addition, the 12-step content was not always concordant with how facilitators wanted to approach smoking cessation. For example, the first step asks participants to admit powerlessness over addiction, but one facilitator preferred to use more *empowering* language (see Appendix for the complete list of 12 steps). He felt that his clients experiencing homelessness already had an overwhelming sense of powerlessness in their everyday lives because of a lack of housing, employment, food, and support. He did not want to use language that further enabled the mentality that participants did not have control over their lives.

Staff facilitators from Site 2 and 3 both prepared discussion topics in addition to the 12 steps that they felt were relatable and inspiring to participants. For example, the Site 2 facilitator talked with meeting attendees about how the tobacco companies were profiting from the poor health of the people who smoked their products. Facilitators at Site 3 brought news articles to meetings that dealt with current issues related to tobacco, like a celebrity who had cancer from smoking or local tobacco tax issues. Staff facilitators reported that meeting attendees were very engaged in and motivated by these conversations and stories.

The facilitator from Site 1 felt that most of the people who came to the meeting were in the pre-contemplation stage of change and were not ready to agree to be abstinent from nicotine. They also found Step 1 of NicA difficult to acknowledge. The steps states, “We admitted we were powerless over nicotine – that our lives had become unmanageable.” Meeting attendees struggled to see how nicotine made their lives unmanageable, something that was more obvious in alcohol and other addictions.

Demand

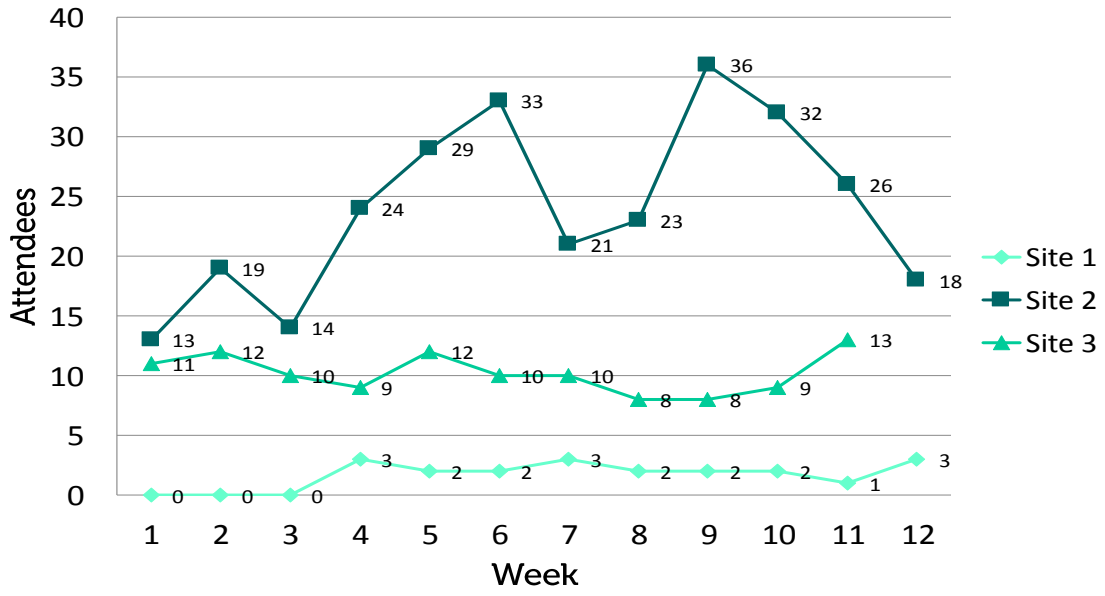
Meeting attendance varied widely between the three sites. The range of NicA attendees per week across all sites was 0-36 with an overall average of 12 attendees per week (Table 1). Site 2 consistently had the most number of meeting participants per week (13-36) while Site 1 had a maximum of 3 participants for the whole study period. An average of 8 participants were repeat attendees of the meetings.

Table 1. Average Number of Attendees per Weekly Meeting for 12-Week Study Period (Range: Min, Max)

	Site 1	Site 2	Site 3	Total
Weekly participants	2 (0,3)	24 (13,36)	10 (8,13)	12 (0,36)
Repeat participants	1 (0,2)	18 (6,27)	5 (3,7)	8 (0,27)

According to facilitator observations, fluctuation in weekly meeting attendance appeared to be based on when participants (1) received disability checks or (2) left the organization where meetings were held and no longer required services. For example, Site 3 is a program where clients stay 2 weeks on average. Once clients were discharged from the program, they usually did not come back to the meeting. Also, security barriers (only allowing program participants to enter) would have prevented them from attending the NicA meeting even if they had wanted to return. Receiving disability checks was seen by staff facilitators as a reason for attendance dropping during certain time periods. In the literature, the "check effect" is described as the theory that alcohol and drug use increase when individuals receive social security or disability income checks (Rosen 2011). Site 3 also noted that some participants did not return because they became frustrated with the disruptive behavior of other meeting participants. Some of these behaviors included interrupting or talking over others, monopolizing meeting time by talking too much or off topic, and becoming very upset when asked to modify behavior.

Figure 1. Number of NicA meeting participants per week



**Site 3 was unable to host a meeting on their 12th week, so there are no data available for that week for that site.*

As a reward for and to estimate smoking reduction, staff facilitators gave out "smobriety" chips. Newcomer chips were provided to first-time attendees of the NicA meetings [Table 2]. This type of chip was most commonly distributed during the study. The number of chips distributed is somewhat of an underestimate of newcomer attendance and smoking cessation because two sites ran out of chips in the middle of the study and were unable to distribute chips temporarily until the new chip shipments arrived. Only Site 3 was able to give out 24-hour smobriety chips and none of the sites gave out 7-days chips. Site3 is unique in that clients are only allowed to go outside and smoke during specified time blocks, so sometimes tobacco cessation was supported by the environment. Some attendees from this site who were former smokers reported that attending NicA meetings and merely talking about smoking triggered them to want to smoke again.

Table 2. Total Number of "Smobriety" Chips Distributed for the 12-Week Study Period*

	Desire to quit	Newcomer	Smoke Free Period			
			1-hour	24-hour	7-day	30-day
Site 1	8	11	6	0	0	0
Site 2	10	26	22	0	0	0
Site 3*	0	27	0	4	0	0

** Site data not available for week 12.*

Acceptability/Integration

Study sites viewed the NicA groups as appropriate to the missions of their organizations and for their patient populations. All of the sites appreciated the focus on smoking cessation, which was already a priority for sites. Site 3 staff facilitators appreciated that there was a specific support group for smoking cessation, as all other recovery support groups at this site focused on alcohol and drug use. They did note, however, that the 12-step model does not follow a harm reduction approach, which is what their program normally uses when attempting to modify substance abuse behavior.

Regarding NicA meeting continuation after study completion, Site 1 continued to work on smoking cessation but not in the form of NicA meetings. They implemented a program that was more educational regarding the health effects of smoking and smoking cessation. Site 2 dedicated a staff member to facilitate meetings, held the group in a location with other groups and educational opportunities, and continued hosting the meetings until approximately 16 months after study end. Site 3 dedicated established AmeriCorps volunteers to facilitate meetings and was hopeful that the group would continue after study end. This site already had

multiple smoking cessation groups before the NicA study was initiated, but the NicA group was different in that it was a support group and more peer-led. The facilitators were not smokers or homeless and the group attendees directed the conversation.

Staff facilitators reported that participants wanted more smoking cessation educational content. Some facilitators felt comfortable providing that education, even though it was not necessarily their role or expected of them; other did not feel prepared to answer medical questions about smoking. One staff facilitator expressed that the religious aspect of NicA was unnecessary; facilitators from another site noted that some attendees very much related to the religious aspect of the 12-step model while others did not. Some meeting attendees who had experience with other 12-step models for alcohol and drug treatment programs liked the familiarity of the model.

Two facilitators noted that they and some NicA attendees did not think the steps about acknowledging harm to others were relevant to smoking habits like they are with alcohol and drug use. Step 8 asks participants to identify all the people they had harmed and "to make amends to them all." Staff facilitators and attendees had the perception that alcohol and narcotics addictions have the potential to impact friends and family in a much more severe and harmful way than tobacco addiction, so asking participants to recognize this harm did not seem to be relevant.

Furthermore, additional steps ask participants to admit their character flaws. Staff facilitators from Site 3 reported that the later steps (6 and after) were very negative and did not like the focus on participant "defects of character" and "shortcomings." They perceived that participants already experienced a high level of guilt and that these steps exacerbated those feelings in an unproductive way. The staff facilitators also did not want participants to think that they were judging them for smoking or not having quit smoking.

Participant reactions to the chips varied. Sites 1 and 3 reported that attendees appreciated and were excited by receiving the chips while the Site 2 reported that attendees did not care about receiving the chips. The staff facilitator from Site 2 explained that the chip was one more thing for the participants to keep track of during the day. This is very different from the experience of Site 1, where the facilitator mentioned how much the participants appreciated receiving the chips.

Staff facilitators were asked to describe skills necessary to run NicA meetings based on their experiences. Responses were categorized into interpersonal and professional:

Interpersonal:

- Non-judgmental attitude towards participants and their experiences
- Ability to relate to participants: "keepin' it real"
- Good rapport with participants
- Respect for client personal space (making sure not to be invasive of physical space when approaching people)

Professional:

- Familiarity with the needs and experiences of the homeless population
- Group leading skills: knowledge and experience of running groups, explaining rules, managing diverse personalities and challenging behaviors
- Ability to acknowledge personal biases towards other people and ensure equal participation by all meeting attendees
- Previous experience with NicA meetings (not all sites were able to observe local NicA meetings either because they didn't exist or there were not enough participants in those local meetings)
- Flexibility with meeting content (modify so it is more interesting and relatable to participants without homes)
- Medical knowledge of how tobacco use, and specifically smoking, affects health
- Knowledge of smoking cessation aids, pharmacological treatments, and smokeless alternatives
- Ability to communicate with people with low literacy levels
- Bilingual (i.e., Spanish-speaking)

Discussion

This is the first known study exploring the feasibility of offering Nicotine Anonymous (NicA) meetings for people experiencing homelessness. Results show that it is feasible to implement NicA within a homeless health care setting in some locations. Success of the intervention varied depending on participant familiarity with meeting facilitators, accessibility of meeting spaces, other services available in the meeting settings, where participants were in their homeless trajectories and readiness to quit smoking, content of meetings, religious beliefs of participants, and literacy levels of participants. Given that some individuals may not want to return to a homeless shelter or clinic upon gaining housing, locations less specific to homelessness might be considered as transitional NicA group locations.

Providing NicA meetings is feasible as long as organizations have the support staff to run the meetings and recruit participants, and security barriers do not prevent people from participating. If an organization has existing educational and support groups, then people may be more likely to participate because they know to expect those kinds of opportunities from the organization. Reactions to the religious aspect of NicA, and the 12-step model in general, varied by site because of participants' differing religious and spiritual beliefs. In a study comparing homeless and housed smokers on reasons for smoking and smoking cessation experiences, Butler, et al. (2002) found that almost half of the smokers without homes had used prayer or spiritual mechanisms to quit compared to 60% in the housed smokers. However, an intervention that excludes a significant portion of people because of personal beliefs will not be acceptable to everyone. Therefore, a variety of smoking cessation programs may need to be offered, so as to attract persons a diverse patient population and those who are unable to participate in a spiritually-based program.

NicA may fit best into a smoking cessation program that also offers educational and counseling or cognitive behavioral therapy groups. NicA could be run concurrently or as a follow up to educational groups. Smoking among people who are homeless is positively related to stress, mental health issues, alcohol and drug use, and a history of trauma, and people who are homeless report smoking as a coping mechanism to reduce stress (Baggett, 2010; Butler, 2002; Okuyemi, 2013; Torchalla, 2011; Tsai & Rosenheck, 2012). Counseling that addresses how smokers can cope with other addictions and life stressors while quitting smoking may be more successful in reducing tobacco use than counseling that only addresses smoking (Okuyemi, 2006).

According to the NicA staff facilitators, the 12-step written materials challenged the literacy levels of some meeting participants. If the preferred method of running NicA meetings utilizes peer smokers as facilitators, then efforts should be made to provide alternative language for the steps that is tailored to people with lower reading levels and those with cognitive impairment (e.g., traumatic brain injury). In a 2010 study testing a smoking cessation intervention study with people without homes that utilized motivational interviewing, CBT, and pharmacotherapy, Shelley, et al. (2010) designed the intervention for people with low literacy levels and high rates of cognitive impairment. The intervention also incorporated recommendations for participants to manage the boredom and lack of structure that is encountered when living in homelessness. This is potentially important as Site 3 staff facilitators reported that the 12-step model provides structure for a population that does not often experience structure in other parts of their lives. These facilitators also perceived that individuals who have had previous successful experiences with the 12-step model may be more receptive to NicA.

As with other studies that have explored smoking cessation interventions with the homeless population, this study found that people were interested in and willing to talk about quitting. The range of NicA attendees across all of the sites in this study was 0-36 and two sites had weekly averages of 10 to 20 attendees. Current literature on NicA is limited, and there is no published information regarding the preferred number of new or repeat attendees by which to measure program viability. In the most thorough descriptive article about NicA, though, Lichtenstein (1999) states that meeting sizes ranged from 3-11 attendees but that 5-7 was the average number observed. Even though many attendees were current smokers, according to facilitator observation, and very few smobriety chips were distributed for actual smoking abstinence, participants were willing to entertain the idea of quitting and willing to talk about smoking with their peers. The literature shows that people who are homeless are more likely to be in the contemplation stage of change in regards to quitting smoking and may be less ready to quit than their housing counterparts (Shelley, 2010; Butler, 2002). Interventions that meet people where they are using motivational interviewing approaches may help smokers advance from the contemplation to preparation stage of behavior change.

Smoking cessation interventions may need to adopt a harm reduction approach that encourages and celebrates small improvements in deleterious health behavior when complete abstinence may not be possible or desired. Even if abstinence is not obtained, people in smoking cessation programs can benefit from talking about quitting and reduced consumption. Participants

receiving a nurse-delivered smoking cessation program, including a Quitline and nicotine patch subscriptions (Segan, 2015), reported that merely attempting to quit improved mood and confidence, lowered anxiety and depression, and resulted in spending less money on cigarettes. Some participants were able to reduce consumption in that their average number of cigarettes smoked per day by study end decreased from 19 to 9.

It is noteworthy that NicA is not as widespread as other 12-step groups such as Alcoholics Anonymous, Narcotics Anonymous, and Overeaters Anonymous (Makela, et al., 1996), so a modification of one or more of the Steps for NicA may be in order to increase its diffusion. Steps 8 and 9, which ask NicA meeting attendees to acknowledge harm done to others because of their smoking, are such steps. Secondhand smoke can cause serious health consequences to those in the presence of smokers, especially for pregnant women and children (Centers for Disease Control and Prevention, 2016; National Cancer Institute, 2011). However, some participants in this study had difficulty seeing the impact of their smoking on friends and family, especially when compared to the more immediate and severe impacts that an alcohol addiction could have. Future qualitative work with smokers without homes may be necessary to identify unique "harms to others" that meeting facilitators could discuss with participants. On the other hand, the steps could instead ask participants to focus primarily on themselves and on personal consequences such as health complications and financial costs, rather than harm to others.

Limitations

We recognize generalizability is limited in that participating sites were a convenience sample from the Health Care for the Homeless Practice-Based Research Network and existing resources from the organization were used to support the study, which may have introduced variance. The three NicA groups met in agencies with varying characteristics, which most likely impacted how the groups were implemented (e.g., building security, which may have led to low attendance at Site 1). Conversely, this varied sample allows the intervention to be examined within multiple settings and perspectives. Similarly, Nicotine Anonymous World Services states that all groups are autonomous, so meeting content and group dynamics may vary across groups. Despite these limitations (few resources, low control over background of facilitators, variability across sites), the settings in this study reflect the real-world, pragmatic environment in which our clinics operate and in which NicA typically would be implemented. Finally, because of the anonymous nature of Nicotine Anonymous, individuals self-selected to participate, and exact data on repeat attendees was unavailable because personally identifiable information could not be tracked, limiting data collection of representativeness within the study. An ideal method to provide more complete results would have been to interview meeting attendees at the end of the intervention, but again was not possible because of anonymity.

Conclusion

Smoking places an extremely high health burden on people who are homeless. The prevalence of smoking in the homeless population is 3-5 times higher than in the general population and related health conditions, such as cardiovascular issues and cancer, are the top causes of mortality in this population (Baggett, 2013; Lee, 2005). Smoking cessation initiatives implemented within primary care clinics, mental health facilities, or shelter settings will require the proper staffing and a multi-component approach to ensure that the services and products are appropriate for clients with diverse personal beliefs, different levels of readiness to quit, and co-occurring substance abuse and mental health issues. This study provides preliminary evidence that NicA may be feasible within these service settings and may be a good support group model for smoking cessation that is part of a larger program including health education, cognitive behavioral counseling, motivational interviewing, and pharmacotherapy. Increased investments in smoking cessation and behavioral health programs as well as continued research on smoking cessation interventions are needed that are tailored to the needs of people experiencing homelessness.

References

1. About us. Nicotine Anonymous website. http://www.nicotine-anonymous.org. Accessed June 26, 2016.
2. Baggett TP, Rigotti NA. Cigarette smoking and advice to quit in a national sample of homeless adults. *Am J Prev Med*. 2010;39(2):164-172.
3. Baggett TP, Anderson R, Freyder PJ, et al. Addressing tobacco use in homeless populations: a survey of health care professionals. *J Health Care Poor Underserved*. 2012;23:1650-1659.
4. Baggett TP, Lebrun-Harris LA, Rigotti NA. Homelessness, cigarette smoking, and desire to quit: results from a U.S. national study. *Addiction*. 2013;108(11):2009–2018.
5. Baggett TP, Hwang SW, O'Connell JJ, et al. Mortality among homeless adults in Boston: shifts in causes of death over a 15-year period. *JAMA Intern Med.* 2013;173(3):189-95.
6. Bowen DJ, Kreuter M, Spring B, et al. How we design feasibility studies. *Am J Prev Med*. 2009;36(5): 452-457.
7. Businelle MS, Ma P, Kendzor DE, et al. Predicting quit attempts among homeless smokers seeking cessation treatment: an ecological momentary assessment study. *Nicotine & Tobacco Research*. 2014;16(10):1371-1378.
8. Butler J, Okuyemi KS, Jean S, Nazir N, Ahluwalia JS, Resnicow K. Smoking characteristics of a homeless population. *Substance Abuse.* 2002;23(4):223-231
9. Centers for Disease Control and Prevention. Current cigarette smoking among adults—United States, 2005–2014. MMWR Wkly Rep 2015;64(44):1233–40.
10. Connor SE, Cook RL, Herbert MI, Neal SM, Williams JT. Smoking cessation in a homeless population: there is a will, but Is there a way? *J Gen Intern Med*. 2002;17(5): 369-372.
11. Glasser I. Nicotine Anonymous may benefit nicotine-dependent individuals. Letter to the Editor. *American Journal of Public Health*. 2010;100(2):196.
12. Glasser I. *Anthropology of Addiction and Recovery.* Long Grove, IL: Waveland Press, 2012.
13. Glasser I. Where smoking persists. Letter to the Editor. *New York Times*. November 30, 2015.
14. Glasser I, Hirsch E. Smoking Cessation and social justice. Letter in response to article on cigarette use and the mobility impaired community. *American Journal of Public Health.* 2015;105(2).
15. Goldade K, Guo H, Jarlais DD, et al. Homeless former smokers' interest in helping homeless current smokers quit. *Am J Health Promot.* 2012;27(2):90-3.
16. Goldade K, Jarlais DD, Everson-Rose SA, et al. Knowing quitters predicts smoking cessation in a homeless population. *American Journal of Health Behavior*. 2013;37(4):517-524.
17. Health Resources and Services Administration, Health Center Program. Uniform Data System Report, 2015 Health Center Data, National Health Care for the Homeless Program Grantee Data. http://bphc.hrsa.gov/uds/datacenter.aspx?q=tall&year=2015&state=&fd=ho. Accessed May 31, 2016.

18. Lee TC1, Hanlon JG, Ben-David J, et al. Risk factors for cardiovascular disease in homeless adults. *Circulation.* 2005;111(20):2629-35.
19. Lichtenstein E. Nicotine Anonymous: Community resource and research implications. *Psychology of Addictive Behaviors.* 1999;13(1): 60-68.
20. Makela K, Arminen I, Bloomfield K, et al. Alcoholics Anonymous as a mutual-help movement: A study in eight societies. Madison, WI: University of Wisconsin Press, 1996.
21. Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States, 2000. *JAMA.* 2004;291(10):1238-45.
22. Okuyemi KS, Thomas JL, Hall S, et al. Smoking cessation in homeless populations: a pilot clinical trial. *Nicotine Tob Res*. 2006;8(5):689-99.
23. Okuyemi KS, Goldade K, Whembolua G, et al. Smoking characteristics and comorbidities in the power to quit randomized clinical trial for homeless smokers. *Nicotine Tob Res.* 2013;15(1) 22-28.
24. Porter J, Houston L, Anderson RH, Maryman K. Addressing tobacco use in homeless populations: Recommendations of an expert panel. *Health Promot Pract*. 2011;12: 144S
25. Rosen MI. The Check Effect Reconsidered. *Addiction*. 2011;106(6):1071–1077.
26. Secondhand smoke and cancer. National Cancer Institute website. http://www.cancer.gov/about-cancer/causes-prevention/risk/tobacco/second-hand-smoke-fact-sheet. Updated January 12, 2011. Accessed August 4, 2016.
27. Secondhand smoke facts. Centers for Disease Control and Prevention website. https://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/general_facts/. Accessed August 4, 2016.
28. Segan CJ, Maddox S, Borland R. Homeless clients benefit from smoking cessation treatment delivered by homeless persons' program. *Nicotine Tob Res*. 2015;17(8): 996-1001.
29. Shelley D, Cantrell J, Warn D, Wong S. Smoking cessation among sheltered homeless: a pilot. *Am J Health Behav*. 2010;34(5):544-552
30. Torchalla IV, Strehlau V, Okoli CT, Li K, Schuetz C, Krausz M. Smoking and predictors of nicotine dependence in a homeless population. *Nicotine Tob Res.* 2011;13(10):934-42.
31. Tsai J, Rosenheck RA. Smoking among chronically homeless adults: Prevalence and correlates. *Psychiatric Services.* 2012;63(6): 569-76
32. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. The health consequences of smoking—50 years of progress: A report of the Surgeon General. http://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf. Published 2014. Accessed July 6, 2016.
33. Vijayaraghavan M, Pierce JP. Interest in smoking cessation related to a smoke-free policy among homeless adults. *J Community Health*. 2015;40(4):686-91.
34. Zywiak W, Glasser I, Moore R, et al. Results of the Nicotine Anonymous pilot study: With an invitation to practitioners and researchers. *The Addictions Newsletter Summer 2015.* 2015;23(2):23-25.

Appendix

The Twelve Steps of Nicotine Anonymous

1. We admitted we were powerless over nicotine – that our lives had become unmanageable.
2. Came to believe that a Power greater than ourselves could restore us to sanity.
3. Made a decision to turn our will and our lives over to the care of God as we understood Him.
4. Made a searching and fearless moral inventory of ourselves.
5. Admitted to God, to ourselves, and to another human being the exact nature of our wrongs.
6. Were entirely ready to have God remove all these defects of character.
7. Humbly asked Him to remove our shortcomings.
8. Made a list of all persons we had harmed, and became willing to make amends to them all.
9. Made direct amends to such people wherever possible, except when to do so would injure them or others.
10. Continued to take personal inventory and when we were wrong promptly admitted it.
11. Sought through prayer and meditation to improve our conscious contact with God as we understood Him, praying only for knowledge of His will for us and the power to carry that out.
12. Having had a spiritual awakening as the result of these steps, we tried to carry this message to nicotine users and to practice these principles in all our affairs.

The Twelve Traditions of Nicotine Anonymous

1. Our common welfare should come first; personal recovery depends upon Nicotine Anonymous unity.
2. For our group purpose there is but one ultimate authority - a loving God as He may express Himself in our group conscience. Our leaders are but trusted servants; they do not govern.
3. The only requirement for Nicotine Anonymous membership is a desire to stop using nicotine.
4. Each group should be autonomous except in matters affecting other groups or Nicotine Anonymous as a whole.
5. Each group has but one primary purpose - to carry its message to the nicotine addict who still suffers.
6. A Nicotine Anonymous group ought never endorse, finance, or lend the Nicotine Anonymous name to any related facility or outside enterprise, lest problems of money, property, and prestige divert us from our primary purpose.
7. Every Nicotine Anonymous group ought to be fully self-supporting, declining outside contributions.

8. Nicotine Anonymous should remain forever non-professional, but our service centers may employ special workers.
9. Nicotine Anonymous, as such, ought never be organized; but we may create service boards or committees directly responsible to those they serve.
10. Nicotine Anonymous has no opinion on outside issues; hence the Nicotine Anonymous name ought never be drawn into public controversy.
11. Our public relations policy is based on attraction rather than promotion; we need always maintain personal anonymity at the level of press, radio, TV, and films.
12. Anonymity is the spiritual foundation of all our traditions, ever reminding us to place principles before personalities.

Acknowledgements

The National Health Care for the Homeless Council would like to recognize the following individuals for their assistance in the designing, conducting, and interpreting of results of this study.

Wellspan Ephrata Community Hospital
Sharon Czabafy, MSS

University of California, Los Angeles
Lillian Gelberg, MD, MSPH

Boston Health Care for the Homeless Program
Kristina Moller
Arielle Stopa
Allison Whittier

Brown University
Irene Glasser, PhD
Jennifer Tidey, PhD
William Zywiak, PhD

Neighborhood Health
Bill Friskics-Warren
Randall Venson, BS

National Health Care for the Homeless Council
Darlene Jenkins, DrPH
Alaina Boyer, PhD

Meinbresse M., Czabafy S., Gelberg L., Glasser I., Moller K., Stopa A., Tidey J., Venson R., & Zywiak W. (2017). Nicotine Anonymous peer support groups—Can they work in homeless service settings? Nashville: Practice-Based Research Network, National Health Care for the Homeless Council.

Disclaimer: This project was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number U30CS09746, a National Training and Technical Assistance Cooperative Agreement for $1,625,741, with 0% match from nongovernmental sources. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government. All material in this document is public domain and may be used and reprinted without special permission.