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A systematic approach to smoking cessation activities in Danish shelters

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ABSTRACT

Introduction: Shelter users have an alarmingly high smoking prevalence; our aim was to develop systematic smoking cessation activities in the shelters. **Method:** All available ($n = 13$) shelters in Copenhagen were included. This Participatory Action Research had a development/test period and an implementation period for the revised intervention. Shelter-staff completed a questionnaire at baseline. Municipal smoking cessation counselors were trained to work with shelter users. Three types of on-site smoking cessation activities were developed and offered. **Results:** The estimated mean smoking prevalence in shelter users was 79%. Only two shelters ran smoking cessation activities prior to study start. All but one of the shelters implemented group-based intervention activities and approximately 13% of smokers signed-up; 26.6% of those who attended the first session were abstinent after approximately 12 weeks, as confirmed by staff. **Conclusion:** Smoking cessation activities in shelters are wanted by staff and shelter users, they are feasible and even very vulnerable persons are able to quit. Based on our experiences in Copenhagen shelters, we propose a systematic approach for future smoking cessation initiatives: smoking activities should be driven by the municipality, be proactive, on-site, tailored and flexible, in addition, free nicotine therapy should be offered and trained smoking cessation counselors should be available.

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Smoking; smoking cessation; homeless persons; shelters; mentally ill; substance abuse treatment centers; municipality

Introduction

World-wide shelter users have an alarmingly high smoking prevalence (El-Guebaly, Cathcart, Currie, Brown, & Gloster, 2002; Lasser et al., 2000; Power, Mallat, Bonevski, & Nielssen, 2015) and more than 70% of homeless people smoke (Kubisova et al., 2007; Torchalla et al., 2011; Tsai & Rosenheck, 2012). They also typically have higher daily tobacco intakes, higher levels of nicotine addiction and start smoking earlier than smokers in the general population (Butler et al., 2002). The reasons for the high smoking rates include self-medication, boredom, stress and using smoking as a method of social interaction, among others (Okuyemi et al., 2006). Further, it is difficult to quit smoking when everybody around you smokes, and smoking is the norm. Therefore, the burden of tobacco-related diseases such as cancer and chronic obstructive pulmonary disease (COPD) is very high in this population (Badiaga et al., 2009).

Even though it is highly relevant for public health, there is a general reluctance to deal with smoking cessation and smoking bans in vulnerable populations, such as in homeless people and the mentally ill. In Denmark, it has been found that shelter staff believe that it is best to avoid talking about smoking as “smoking is the least of their problems” and “it is the only

thing they have left”, and they don’t expect that users of shelters either wish to quit or are able to quit (*Rygn- ing er deres mindste problem? En undersøgelse om hold- ninger til socialt udsatte og rygning*, 2010). Further, more than half of the smoking staff members – and a third of non-smoking staff members found smoking with shelter users to be a good pedagogical tool (*Naar rogsloret forsvinder. En kvalitativ undersøgelse af rygning og rygestop blandt socialt udsatte*, April 2011). In sharp contrast to this, studies show that most shelter users/homeless persons have a desire to quit (Baggett, Lebrun-Harris, & Rigotti, 2013; Christensen, October 2011; Nahvi, Richter, Li, Modali, & Arnsten, 2006; Okuyemi et al., 2006).

There is a lack of knowledge about how to system- atically improve smoking cessation programs in order to increase the success rate of homeless people and other shelter users that wish to quit smoking.

The aim of this study was to improve the health of socially vulnerable persons with high smoking preva- lence and who were at high risk of smoking-related dis- eases by developing and implementing systematic smoking cessation activities in shelters in Copenhagen, Denmark. The primary aim of this paper is to describe these smoking cessation activities and investigate whether it is possible to draw general conclusions

which could be used as recommendations for future smoking cessation work in shelters in Denmark. The secondary aim is to describe the ongoing smoking cessation policies and smoking cessation activities in shelters in Copenhagen, Denmark and, finally, to report the results of group-based smoking cessation interventions in the shelters.

Methods

The project period of this Participatory Action Research was from 1 December 2014 to 31 December 2017. All 14 shelters in Copenhagen were contacted. One shelter was excluded as it closed shortly after the first contact, leaving a total of 13 shelters. Before up-start, interviews were performed with a shelter that had been very successful in implementing both indoor smoking bans and offering group-based smoking cessation in order to get inspiration (a national report from COWI describes this) (*Rogfrihed for alle – et magasin om tobaksforebyggelse blandt socialt udsatte*, 2011). The study was conducted in two waves; the first period was exploratory and regarded as the development- and test period, and any necessary adjustments were made during this period. The second period consisted of implementing the revised intervention. Six shelters were included in the first wave, and seven shelters in the second wave of the project.

We used an ecological method by which we gathered feedback from shelters throughout the study and developed interventions alongside the shelters. First, all shelters were visited by two members of the research team (KG and CL) in order to get an impression of the shelter, its users, staff and its smoking policies and – activities; in addition, interviews with shelter managers were conducted. All shelters were invited to participate in the project, which began with an up-start-meeting.

Up-start meetings: The shelter manager decided who should attend (typically one or two senior staff members). Shelter users were invited but only three attended the first meeting; together, the authors and staff decided that the participation of shelter users did not yield any additional information and that the discussions would be freer without shelter users' attendance. Therefore, only staffs were invited in the second wave and, to compensate, a staff member from wave one was invited to present their experience of the intervention. Municipal smoking cessation counselors also attended the up-start meeting; each counselor was assigned a geographic area/shelter(s). They had no previous experience working with shelter users, abusers or mentally ill persons. CP gave a short update on smoking and health, and KG on smoking cessation in mentally ill/vulnerable persons. Shelter staff gave a description of shelter users, activities and smoking policies, and completed a short questionnaire describing their shelter's existing smoking policies and

cessation activities and estimated the smoking prevalence in the shelter. Each shelter received a single questionnaire to complete. In cases where two or three staff members from one shelter attended the up-start meeting, they discussed each question and reached a consensus. In some cases, it was easy to get a precise estimate and reach a consensus, e.g. on the smoking prevalence of shelter users if the shelter offered permanent housing for chronic alcoholics and they knew their residents well and knew who smoked. In other cases, it was difficult, e.g. if the number of shelter users varied and new shelter users came and went. The shelter's level of smoking control was assessed on a scale (1 (highest) to 5 (lowest)): 1. smoking banned both indoors and outdoors; 2. indoor smoking ban and no special outdoor smoking area (e.g. smoking shed); 3. indoor smoking ban and a special outdoor smoking area (e.g. smoking shed); 4. smoke-free areas alongside indoor smoking-rooms indoor; 5. smoking allowed everywhere. Also, the attitude towards smoking cessation activities among users was estimated by a consensus of the attending staff members: "On a scale from 1 to 10, how positive do you think shelter users are towards smoking cessation activities?" 1 ("they don't want to hear about it at all" = very negative) to 10 ("they ask for assistance to quit smoking" = very positive). Staffs' and shelter managers' attitude towards smoking cessation activities was assessed in the same way: "On a scale from 1 to 10, how positive do you think staff/shelter manager is towards smoking cessation activities?" 1 ("they don't want to hear about it at all" = very negative) to 10 ("they are very dedicated to helping shelter users quit smoking" = very positive). Scales were developed for this purpose (not validated).

Networking meetings were held to plan future smoking cessation activities. Based on the up-start meetings, shelter visits, shelters' needs, resources and wishes and KG's and CP's experiences, different smoking cessation activities were planned in the different shelters. Three types of smoking cessation activities were developed in cooperation with the shelters: 1. House-meetings in shelters where the counselor was presented and smoking and cessation were discussed on a general level; 2. a quit-smoking "café" (an informal one-to-one conversation over a cup of coffee or tea) was set up in shelters where shelter users could have a non-committal talk about quitting smoking or, if they preferred, the shelter user could discuss smoking cessation with an individual smoking cessation counselor (motivational interviewing was used); 3. tailored smoking cessation groups were held in the shelters. A group-based behavioral smoking cessation intervention ("Gold Standard model") is used nationally (Kjaer et al., 2007; Neumann, Rasmussen, Ghith, Heitmann, & Tonnesen, 2013) in Denmark's general population. This group-based intervention was modified for use in shelters,

such as holding shorter sessions reducing the amount of written information, reminding the participants about the sessions and giving the participants more flexibility, e.g. in the choice of themes discussed. The modifications were decided after discussions between staff members, KG, CP, BD and the smoking cessation counselors. The group-based smoking cessation intervention consisted of 11 short sessions (typically one hour) over approximately ten weeks; there was very little written information, a high level of flexibility (e.g. non-smoking issues/problems were discussed more frequently than cessation-related issues, the group preferred to meet outdoors and the time of the meeting was changed), reminders were sent and there was room for “personal space” (some participants fell asleep, others were affected by drugs). Free nicotine replacement therapy was offered at each session. Psychoeducation was used in both the quit-smoking “cafés” and the smoking cessation groups.

As the municipal counselors had limited experience with socially disadvantaged/homeless people, they received supervision (two three-hours sessions) on addiction and mental illness, how to counsel socially vulnerable persons, group dynamics, motivational interviewing, knowledge on how smoking cessation can affect those with mental illnesses (e.g. interactions with anti-psychotic medicine), etc. These details are available on request.

Analyses

Smoking abstinence in the smoking cessation groups was measured after approximately 12 weeks and confirmed by a staff member who knew the user well. Carbon monoxide levels were measured with participants’ consent. We had follow-up data on all smokers who attended the smoking cessation groups. We used Pearson’s Chi-Square to test the effects of the smoking cessation groups; the level of significance was $p < 0.05$.

Smoking reduction was self-reported, and the number of cigarettes smoked was not systematically measured. We did not systematically register the effect of the smoking cessation “cafés” or the overall effect of the program on shelter users’ smoking prevalence (see discussion).

Results

Participation of shelters

One of the shelters did not complete the baseline questionnaire at all; this shelter referred their shelter users to activities in another shelter and so they appear as one, leaving 12 shelters. Of these, two shelters only assessed the smoking rate in shelter users, however the information was largely complete in the ten

remaining shelters; the different types of shelters and shelter users are shown in Table 1.

Smoking prevalence at baseline

The mean estimated smoking prevalence was 79% (50–98%) among shelter users, 30% among staff (0–60%) and 27% among shelter managers. Forty percent of shelters reported frequent or occasional conflicts regarding smoking among shelter users.

Smoking control at baseline

The level of smoking control varied across the shelters. None of the shelters had both indoor and outdoor bans, and none allowed smoking everywhere; 44% had both smoke-free areas and at least one smoking room.

Smoking cessation attitudes and activities at baseline

Positivity toward smoking cessation activities was estimated to be very high among shelter managers (mean 9.2), moderate among staff (mean 6.9) and lowest among shelter users (mean 5.0 (range 2–8)), differing across the shelters.

Only two out of ten shelters had active smoking cessation activities; three shelters had an educated smoking cessation counselor on-site.

Designing the smoking cessation activities

Lessons from the discussions at the up-start meetings were as follows: an important topic discussed was staff smoking with shelter users as a therapeutic bonding exercise. Also, the shelters had no spare resources to help the shelter users to quit smoking. Even the shelters with a staff -member educated in smoking cessation counseling preferred to have an external municipal smoking cessation counselor on-site because the staff member was indispensable in their everyday tasks. The smoking cessation activities should be tailored, flexible and on-site, and, ideally, counselors should visit the shelter regularly so shelter users get to know external counsellors and feel confident with them.

Accept of smoking cessation interventions

The counselors reported great interest in smoking cessation activities and gratefulness from shelter users. All shelters implemented at least two of the three offered smoking cessation activities. All but one of the shelters implemented the group-based smoking cessation. In some shelters, e.g. those for opioid-dependent people, staff were surprised by the users’ interest in quitting

Table 1. Characteristics of the included 13 shelters at baseline and the implemented smoking cessation activities in the intervention.

Shelter name	Shelter users Type of shelter	Estimated number of smokers ^a (smoking prevalence)	Smoking control – before start Level 1 (highest) to 5 (lowest)	Is the shelter manager a smoker?	Frequent conflicts about smoking (Shelter users)	Estimated positivity towards smoking cessation activities – baseline ^b Shelter users / Employees/ Shelter manager	Smoking cessation activities at baseline	Smoking cessation activities INTERVENTION
E-huset	Alcohol-dependent citizens (not abstinent). Sheltered housings.	44 (92%)	2 ^c	No	No	3/7/10	None	HM, SCC
Sundholm	Socially vulnerable citizens. Activity center.	40 (90%)	2	No	No	3/8/10	None	HM, GSC
N.A.B.O	Citizens with mental illness/vulnerability. Activity/socializing center.	25 (50%)						HM, GSC
Mamma Mia	Citizens with mental illness/vulnerability. Activity/socializing center + school.	175 (50%)		No	Yes	7/5/7	GSC	HM, GSC
Lyrskovsgade	Socially vulnerable citizens. Activity/socializing center.	70 (70%)	4	No	No	7/6/8	Staff SCC	HM, SCC GSC
Valmuen	Opioid-dependent citizens. Heroin and medical treatment, pedagogic and social activities.	45 (90%)	3	No	Yes	2/7/10	None	SCC, GSC
Vestergårdsvej	Citizens with mental disease. Sheltered housings.	16 (84%)	2	Yes	Yes	8/9/10	None	SCC, GSC
Stæren	Citizens with chronic drug abuse. Medicine dispensing. Activity/socializing center	75 (95%)	4	Yes	No	4/?/?	None	HM, SCC, GSC
Egmontgården	Battered women and vulnerable families. Sheltered housings.	35 (50%)	4	No	No	5/5/10	Staff SCC	SCC; GSC
KFUM	Socially vulnerable citizens. Homeless. Sheltered housings.	53 (98%)	2	No	No	5/5/8	None	SCC, GSC
Kompasset	Socially vulnerable citizens/citizens with mental disease. Activity/socializing center.	20 (90%)	3	No	Yes	6/10/10	Staff SCC	SCC, GSC
Pegasus	Citizens with mental illness. Activity/socializing center.	22 (90%)	NA	NA	NA	NA	NA	SCC, GSC
Amadeus	Socially vulnerable citizens/citizens with mental illness. Activity/socializing center. Ref Pegasus	NA	NA	NA	NA	NA	NA	None

Socially vulnerable citizens – homeless/ persons suffering from abuse- and/or mental illness attending shelters for socializing and/or treatment.
 HM: “House meetings” – informal discussions on smoking and cessation.
 SCC: Smoking cessation café – individual counseling, motivational interviewing, psychoeducational.
 GSC: Group-based behavioral smoking cessation, a psychoeducational course of approximately 12 weeks.
 IND: Individual behavioral smoking cessation, psychoeducational.
 Staff SCC: Staff member educated as smoking cessation counselor.
 Smoking control – 1. Indoor and outdoor; 2. Indoor and no special smoking area (e.g. shed) outdoor, 3; Indoor but special smoking area (e.g. shed) outdoor, 4; Both smoke-free areas and smoking-room(s) indoor, 5; Smoking allowed everywhere.
 NA: Not assessed.
^aEstimated highest prevalence (in most shelters users come and go/vary).
^b1 = Lowest, 10 highest.
^cSmoking in own room allowed.

smoking. Staff reported that smoking was discussed much more frequently and openly after the intervention, as were the health consequences of smoking, e.g. COPD, and several shelter users asked when the next group-based smoking cessation activity would be.

The effect of the group based smoking cessation

The smoking cessation groups Table 2: 81 out of an estimated 620 smokers (13%) signed up and almost all attended ($n=79$) the first session. More than a third completed the full course and 26.6% of those who attended the first session were abstinent (intention to treat), as confirmed by staff; this was significant ($p < 0.001$). One out of four reported to have reduced their tobacco consumption. The group dynamics were highly valued by the shelter users.

Discussion

This study found that there was great interest in smoking cessation activities in the shelters. Very few shelters had smoking cessation activities prior to the study but all shelters implemented at least two out of the three offered smoking cessation activities, mostly group-based on-site smoking cessation counselling. The recruitment rate was acceptable and over a quarter of users who attended the first session of group-based smoking cessation was confirmed to be abstinent after approximately 12 weeks. Even very vulnerable citizens wanted to quit and many were indeed able to quit, after receiving help.

The recruitment rates among participants in the present study were surprisingly high, 13% as estimated by staff; this is comparable to 14% recruitment rate of a similar population in Buckley et al., 2017. The quit rates were lower than in the general population, as expected, but acceptable when we consider that the smokers were highly vulnerable and often highly dependent. A recent review of 24 randomized controlled trials on the effectiveness of smoking cessation interventions among different disadvantaged groups, including homeless and mentally ill persons, found some short-term effects of multi-component and

behavioral interventions, including mindfulness training, motivational interviewing, financial incentives and extended telephone-delivered counseling (Wilson, Guillaumier, George, Denham, & Bonevski, 2017).

In the Danish capital of Copenhagen, very few shelters had ongoing smoking cessation activities before the start of the study. No shelters allowed un-restricted indoor smoking, but many shelters had smoking rooms. Smoking rates were high among shelter users, as well as among staff members. Previous studies have shown that homeless and mentally ill persons aspire to quit smoking (Baggett et al., 2013; Christensen, October 2011; Nahvi et al., 2006; Okuyemi et al., 2006). Focus group interviews revealed that the critical barriers to quitting smoking are its prevalence, its central role in a shelter's social interactions and its use as a coping mechanism against boredom and stress (Okuyemi et al., 2006). However, a recent study found that almost six out of ten homeless adults had attempted to quit smoking in the past year, and an equally large proportion agreed that further restrictions on smoking would increase their desire to quit (Vijayaraghavan & Pierce, 2015).

Denmark implemented a national ban on smoking indoors in 2007. One of the exceptions to this legislation was smoking in shelters. It is voluntary for shelters to decide whether they want partial, strict or no restrictions on indoor smoking. The reactions from some shelter users were: "Why are we not protected from second-hand smoke?" and "Are we second-rate citizens?". It has been found that the acceptance of tobacco use in homeless settings contributes to smoking more cigarettes per day (Okuyemi et al., 2006). Our study prompted many positive discussions in shelters among staff about their own smoking, especially smoking together with shelter users. Furthermore, several shelters started discussions about smoke-free environments.

In 2008–2011, the Danish Health Authority sponsored a nation-wide project aiming to improve smoking cessation in socially disadvantaged people (*Rygning er deres mindste problem? En undersøgelse om holdninger til socialt udsatte og rykning*, 2010). Eleven municipalities participated, helping socially disadvantaged citizens to quit smoking. Many of these smoking cessation initiatives were in shelters. At the end of the study recommendations were made on how to continue the success of the project. It is therefore disappointing to see that only a fifth of the shelters in Copenhagen offered any kind of assistance to quit smoking. The recommendations from the 2010 project are similar to our own findings: different types of smoking cessation activities should be offered, they should be on-site and tailored to the target group (e.g. shorter but more frequent sessions) and the shelter users should be familiar with the counselor. Furthermore, they recommended that staff members should

Table 2. Participation and effects of the group-based smoking cessation intervention in 12 shelters in Copenhagen, Denmark.

	1. Period N	2. Period N	Total N (%)
Signed up for GSC	31	50	81
Attended once	31	48	79 (97.5%)
Completed the course	11	19	30 (38.0%)
Verified abstinence at end of GSC ^a	10	11	21 (26.6%)
Reduced tobacco consumption ^b	7	13	20 (25.3%)

Note: GSC: Group-based smoking cessation.

^aApproximately 12 weeks (a few shelters only had 10–11 weeks of follow-up). Abstinence confirmed by staff who knew the person well, in addition to carbon monoxide measurements (in some cases).

^bSelf-reported reduction; no information on number of cigarettes.

also be offered smoking cessation assistance – which we agree to be very important, although this was not within the scope of our study.

Social health equality is a high political priority in Denmark. However, little has been done to decrease this inequality. It is our strong impression that shelters are very interested in offering smoking cessation assistance to shelter users but they do not have the resources to run professional smoking cessation activities. This study was anchored within municipal smoking cessation, and after our study had finished, the municipality of Copenhagen decided to implement smoking cessation activities in shelters as part of their future work. The municipality has continued to train and supervise new counselors on smoking, addiction and mental illness, how to counsel socially vulnerable persons and has continued to offer on-site smoking cessation in the shelters; we are glad to report that these initiatives appear to seem sustainable.

We suggest the following actions to successfully improve the health of homeless people:

1. The Danish state could make it mandatory for municipalities to routinely and pro-actively include shelters in their smoking cessation activities.
2. The state could remove the exception in the 2007 smoking ban legislation so shelters become smoke-free environments, in order to protect non-smokers and support the smokers that are trying to quit.
3. Municipalities could ensure that smoking cessation activities are routinely offered in shelters. Our study, the process and the activities have been thoroughly described in a guide so it should be easy to implement in other municipalities (*Få hjælp til rygestop. Erfaringsopsamling, koncept og guide*, December 2017).

It can be debated whether our findings are useful and transferrable to other countries where smoking cessation activities are organized in a different manner – we believe it is applicable in Scandinavia, at least. However, we also believe that there are some universal lessons from this project. First of all, we showed that smoking cessation activities in this population group were requested, valued and feasible. The activities should be pro-active, on-site and tailored to the different types of shelters and the different types of shelter users; grouped behavioral smoking cessation activities were preferred (held in small groups with short, frequent sessions). Next, the activities and counselors should be very flexible and inclusive; in addition, nicotine replacement therapy should be free of charge. These findings are in concordance with other studies (Okuyemi et al., 2006).

The strengths of this study are that all shelters in Copenhagen were included, regardless of their level of anti-smoking activities, smoking policies or willingness

to change. Thus, it reflects a real-life scenario. The activities were anchored in the existing municipal work which ensures continuity. Abstinence was confirmed by staff or validated by carbon monoxide measurements.

Performing interventions and research in shelters is challenging; it is a difficult balance between the systematic measurements demanded by the research project and real-life reality. It is a weakness that smoking prevalence in shelter users was not reported by shelter users themselves. Together with the shelter staff, we decided that this was not feasible; partly because many shelter users are very reluctant to complete surveys of any kind (very low participation rates found previously) and, partly because shelter users tend to come and go. It is a weakness, therefore, that the smoking prevalence is based on estimates only. In some shelters, the estimate was given by one senior staff member, in other shelters, two or three staff members came to a consensus on an estimate, a very suboptimal method. Other staff members might have assessed the prevalence differently, typically depending on whether they were smokers themselves. Further limitations are that relatively few smokers were included in the smoking cessation activities, and the baseline – questionnaire was not completed by all shelters. Further, there was a large drop-out rate in the smoking cessation groups. Also, we did not offer smoking cessation to staff members or intervene in the smoking environments, and the 12-week follow-up time for shelter users attending smoking cessation groups was short. A one-year follow-up questionnaire was developed at the start of the study (changes in smoking prevalence in shelters, attitudes and smoking policies) but was not routinely implemented due to unexpected internal resource problems. Further, there was no follow-up of the smoking cessation “café” interventions as many shelter users were reluctant to register and so systematic follow-ups were difficult. Effect measurement was only possible in the group-based interventions where systematic registration was possible. Thus, we can describe the extent of the implementation of the shelters’ activities but we were not able to evaluate the effect of fully implementing all the available activities – this is a huge weakness. Furthermore, the proposed suggestions for smoking cessation in shelters need to be replicated in other municipalities.

During this study, it was revealed that staffs were smoking with the shelter users in an attempt to build relationships. Unfortunately, formal interventions with staff were beyond the scope of the study, but we would like to investigate the impact of this in a future study, ideally in an intervention.

Conclusions

Very few smoking cessation activities were permanently implemented in Danish shelters before start

of the intervention, but shelters were open and willing to implement activities, when they were offered. Many vulnerable smokers, even chronic opioid drug addicts, are motivated to quit and can be recruited to smoking cessation groups. Based on experiences from all Copenhagen shelters we propose a model for future smoking cessation work in the shelters where smoking cessation activities are driven by the municipality, are pro-active, on-site, tailored and flexible and smoking cessation counselors are trained to work with the target group.

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Disclosure statement

No potential conflict of interest was reported by the authors.

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Notes on contributors

Charlotta Pisinger is professor in tobacco prevention, medical doctor and former president of the Danish Society of Tobacco Research. CP is used as a national tobacco expert, has written the national smoking cessation guidelines and published many tobacco-related papers and reports. CP is in the steering committee of the Danish Society of Public Health, has been working in many expert groups and been investigator in several large intervention trials. CP counselled the whole study, contributed to training of counsellors and wrote first draft of the paper.

Kit Green is educated as candidate in psychology and then supplemented with 4 years education to become a cognitive behavioral therapist. She has worked for 14 years with vulnerable persons, mentally ill and abusers both in Denmark and abroad. KG was training and supervising the smoking cessation counsellors.

Birgitta Dreieø is educated as Bachelor in nutrition and health and as a smoking cessation counselor. BD works in the department of public health in Copenhagen as a Strategic health advisor at workplaces in the municipality of Copenhagen and is a specialist within the field of citizen-centered smoking cessation and is coordinator of the smoking cessation work in shelters in Copenhagen.

Charlotte Larsen is educated as Master of Science in Business Administration and Corporate Communication. She has worked for the Danish Lung Foundation for several years and was head of this project. CL had no previous experience with vulnerable/homeless persons but visited all shelters and

achieved their acceptance of participation, planned the workshops and coordinated all activities, except the smoking cessation counseling.

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