

**Title:** Understanding the needs of Routine and Manual workers smokers on building sites:  
Results from a qualitative study on workplace smoking cessation

**Key words:** Smoking cessation; health promotion; routine and manual; public health

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## **Abstract**

*Objectives:* The number of adults smoking is decreasing, yet decreases are not spread evenly with the greatest number of smokers in the Routine/Manual (R/M) population. This research aimed to gain insight into the beliefs, behaviours, and cessation needs of R/M smokers working on construction sites to inform the potential development of a work-based smoking cessation service.

*Study Design:* A qualitative study in a work-based setting in the UK.

*Methods:* Semi structured focus group discussions and individual interviews (n = 23) with R/M employees on two development sites in London and 7 employers. Data were analysed using a framework approach.

*Results:* Key motivations for smoking continuance within this group were evident: physical effects; habit and routine; opportunity, and; social factors. Employees were knowledgeable about the negative health impacts of smoking but showed limited awareness of smoking cessation services and aids available. Intentions to give up smoking were common with favourable attitudes towards the development of a work-based smoking cessation service.

*Conclusion:* The milieu of construction sites mean tailored approaches to work-based smoking cessation programmes are needed to maximise potential benefits for both employees as well as their respective employers. Reconsideration of current Smokefree legislation as it applies to the construction industry is also required.

**Key words:** Smoking cessation; routine and manual; health promotion; public health; qualitative research

## Introduction

Cigarette smoking continues to be the leading cause of preventable morbidity and mortality in Western Europe and is one of the most significant contributing factors to inequalities in health, life expectancy, and ill-health especially cancer, coronary heart disease, and respiratory disease<sup>1-3</sup>. Moreover, there is now a substantial body of evidence demonstrating a socio-economic gradient between cigarette smoking and social disadvantage<sup>4</sup>. Individuals in Routine and Manual (R/M) groupings (characterised as having lower incomes than the national average and living in areas of social deprivation) are far more likely to smoke and less likely to become ex-smokers<sup>3,5-7</sup>. Smoking prevalence is twice as common in R/M households as it is in 'managerial and professional' households (28% vs. 13%)<sup>4,8</sup>. Furthermore, R/M smokers are more likely to have started smoking before the age of 16 (48% vs. 33% for managerial and professional groups) and are more likely to be heavily addicted to smoking with 37% of male R/M smokers having their first cigarette within five minutes of waking<sup>2</sup>. Consequently, smoking plays a significant role in contributing to health inequalities between socio-economic groups both in the UK and internationally, and accounts for up to half of the entire mortality differential between manual and non-manual groups<sup>2,9</sup>.

Given that most adults spend about a third of their day in a workplace environment, the workplace can be a useful setting through which large groups of employees can be reached by public health and health promotion initiatives<sup>e.g. 10-15</sup>. Indeed, ever since the WHO's Ottawa charter settings - such as workplaces, hospitals, schools for example - have been used successfully to engage with specific target groups including those deemed to be

particularly ‘hard to reach’ such as R/M smokers, young people, injecting drug users and so on<sup>16-19</sup>. Cahill and colleagues’ systematic review of workplace interventions for smoking cessation draws attention to a number of potential benefits of such settings-based initiatives<sup>6</sup>. These include attracting people less likely, especially men, to seek advice<sup>20-21</sup>; encourage peer group support and positive peer pressure; offer supporting structures such as the inclusion of occupational health staff in the workplace who may be on hand to give professional support, and; provide a convenient and accessible service (to a ‘captive audience’) as the employee generally is not required to travel to the programme<sup>6</sup>. In addition to the benefits for employees, from the employers’ perspectives, there are also a number of potential advantages mainly oriented around reducing loss of productivity<sup>22-24</sup>.

Despite the rationale and potential benefits for workplace-based smoking cessation programmes from a public health and/or health promotion perspective, there are few studies in the literature that are directly relevant to the contemporary UK context<sup>e.g. 25, 26</sup> with most evidence stemming from the US<sup>e.g. 11,12,14,15, 20, 23, 27-30</sup> or elsewhere<sup>e.g. 31-36</sup>. Arguably such US based studies tend not to reflect the contemporary trends and attitudes to smoking nor the landmark legislative and public health policy changes that have occurred in the last decade in Europe and the UK. Furthermore, there is little evidence in the wider literature upon which to develop workplace strategies that are targeted specifically towards particular groups such as R/M workers, and in the case of the present study construction workers. This has partly been a product of R/M construction workers presenting a ‘hard-to-reach’ sample, given their transient and often unsociable working hours, short-term contract arrangements and minimal spare time to participate in research.

In view of the above, the aims of this study were as follows: 1) To gain insight into the beliefs, behaviours, and cessation needs of R/M smokers to inform the development of a dedicated work-based smoking cessation service; 2) To assess employers' perceptions and commitment towards such a service.

## **Methods**

### *Design and sample*

A qualitative research design was utilised including focus group discussions with R/M smokers working on two large construction sites in the London Borough of Tower Hamlets (Whitechapel and Canary Wharf), as well as individual interviews with the managers of the R/M smokers.

Given the 'hard-to-reach' sample, participants were recruited by diverse strategies in collaboration with NHS (National Health Service) Tower Hamlets including working with the Local Authority and local cancer prevention foundations. The sample included 23 individuals: 16 R/M smokers (Table 1) working on building sites in Tower Hamlets and a cross-section of their employers (n=7; Table 2). Most employees were male (n=14) and White British (n=8). Five identified as White Irish and three as White Other. Aside to their R/M status, the sample were selected purposively based on a long history of smoking (average 14.7 years) and quantities consumed (average 22.6 per day); see Table 1.

TABLE ONE HERE

Regarding employers, all were male (n=7), six reported as being White British with one identifying as Mixed (White/Caribbean). Employers represented a range of professions including a Construction Executive, Senior Manager, Electrical Construction Manager, and subcontracted Managerial staff (Table 2).

## TABLE TWO HERE

### *Focus group discussions (employees)*

Focus groups discussion were conducted with employees from the two construction sites (N=16): one at the Whitechapel site (N=5) and two at the Canary Wharf site (N=5 and N=6). Using such groups can be particularly useful in that group processes may help individuals to talk to one another, ask questions, clarify views, exchange anecdotes, and comment on each other's experiences and points of view<sup>37</sup>. Each group lasted on average 90 minutes, generating approximately four hours of detailed focus group data. Participants were asked a range of questions including: current smoking behaviour; motivations to stop smoking; why they smoked (and why they started); smoking in the workplace and the influence of peers; general motivations and experience of stopping smoking; whether they had accessed any smoking cessation services in Tower Hamlets (or elsewhere), and; ideas for an 'ideal' stop smoking service in the workplace.

### *Individual interviews (employers)*

In-depth interviews were conducted with the employers of the R/M workers (n=5 at Canary Wharf; n=2 at Whitechapel; Table 2). Given the time pressures facing employers, individual interviews (telephone/face-to-face) were deemed the most appropriate means of eliciting

their views as it was unfeasible for a range of different employers to be available simultaneously to participate in a focus group discussion. Interviews were typically 45 minutes to one hour in duration, supplementing the focus group data by five hours of qualitative material.

Employers were asked about: views on their employees smoking; whether they would offer incentives for employees to encourage them to attend a stop smoking service; what support they might need from the NHS to encourage employees to take up smoking cessation services in the workplace, and; views on an 'ideal' smoking cessation service in the workplace.

#### *Data analysis*

Discussions were recorded, transcribed verbatim, and analysed thematically using a 'framework' approach<sup>38</sup>. Data management and analysis software QSR Nvivo 8.0<sup>39</sup> was used to support the analytical process through five key stages including: (i) familiarisation with the raw data (via iterative listening, reading transcripts, and field notes); (ii) identifying a thematic framework for coding data from the topic guides and inspection of the transcripts; (iii) coding individual transcripts by applying the thematic framework, (iv) organising the coded data into major themes using a matrix and (v) mapping the relationships between different themes by interpreting the data set as a whole.

To assist in reliability and verification of the analysis, regular meetings were held between NS and LC to discuss coding procedures and consider any potential contradictory perspectives and alternative explanations for the data. After the first two focus group



discussions with employees and four employer interviews were analysed, no further categories or codes emerged suggesting data saturation.

### *Ethics*

All participants' names and names of the construction companies are pseudonyms. Ethical consideration to complete the study was received from NHS Tower Hamlets and the rules of the Helsinki Declaration were followed<sup>40</sup>.

## **Results**

### *Employee findings*

Key findings related: motivations for smoking; smoking cessation; and views on a work-based smoking cessation service.

### *Motivations for smoking*

Employees reported five main reasons for smoking continuance including: enjoyment and the physical effects; habit and routine; boredom; opportunity to smoke, and; the social benefits including the influence of peers. These motivations are illustrated in turn.

Enjoyment of smoking including the perceived physical benefits (e.g. 'hit' of nicotine, associated feelings of relaxation) as well as a positive adjunct to food or drinks including alcohol, were reported to be important contributory factors in smoking continuance:

*P1: Relaxing, calms you down if you're stressed...especially when you're having a pint, it's a social thing as well.*

*P2: Goes with a cup of tea... goes with everything.*

*P3: I gave up a few times... but I always missed it after a meal. (Canary Wharf, Group 2)*

Others were less aware of their specific motivations and saw their smoking as part of an entrenched habit and routine:

*...It's my routine – I get changed, put my money in my pocket, sit on my bed, roll my fag, brush my teeth, go to the toilet, straight out the door. It's just stupid!*

*(Canary Wharf, Group 2)*

Within the context of the working environment, boredom at work due to a 'slow day' was also identified as a strong risk-factor in terms of increased levels of smoking:

*A lot of my smoking is the result of the job itself, like boredom... if it's a slow day I'll smoke more... (Canary Wharf, Group 2)*

In terms of the opportunities for smoking, the impacts of the different working environments at the two construction sites were notable. For instance, as employees at the Canary Wharf site were all piling specialists (deep foundations for buildings), they had to work outside and were thus able to smoke whilst working which did not interfere either with their work schedule or formal 'breaks'. For employees working on the Whitechapel site, smoking

opportunities were more limited as the site was further developed and substantially enclosed meaning that the 2007 Smokefree law was in effect <sup>41</sup> and a designated smoking area provided (this law was introduced in England to make virtually all ‘enclosed’ and ‘substantially enclosed’ public places and workplaces smoke free). Employees thus reported that not only were smoking opportunities more limited generally, but some felt pressure not to be seen to be taking ‘too many’ smoking breaks outside of formal work ‘breaks’. These next two illustrations show the contrasting impact of the ‘outside’ and ‘closed’ smoking environments:

Outside:

*I: When do you smoke?*

*PI: Whenever we like...We just smoke and carry on working. (Canary Wharf, Group 1)*

‘Closed’:

*I: Whereabouts do you smoke at work?*

*P: There’s a smoking area...that’s where we’ve been told to smoke.  
(Whitechapel, Group 1)*

A clear finding in the data was the perceived social benefits of smoking both in-and-out of the workplace, for example by having a ‘smoking buddy’, getting to know other people who smoke whilst having a ‘fag-break’, and smoking whilst drinking at the local pub (albeit outside):

*There's a social aspect to this job as a lot of people use the same pub. I'll go in tonight and find 8 or 10 work people in there and always some of them smoke, so you go out for a smoke with 'em. (Whitechapel, Group 1)*

Employees were aware that their own smoking is influenced by, and influences, others.

However, the influence of peers and other social networks was perceived as only impacting on how much they smoked, not on the likelihood of giving up:

*I: If you decided to quit, or one of your friends decided to quit, would that influence the way you smoke?*

*P3: No... if I wanted to smoke, I'd still smoke. I might have started due to peer pressure but I'm not gonna stop or start again because of it.*

*(Whitechapel, Group 1)*

### *Smoking cessation*

To gain an indication of intention to stop smoking (as well as providing guidance to the researchers in identifying extremes within the groups in order to ask more differentiated questions), employees were asked to rate their position on a scale from one to ten where 1-4 represented 'I don't want to stop' to 5-7 'I am thinking about stopping' to 8-10 'I am desperate to stop'. Most employees expressed an interest and/or intention to give up smoking with nine out of the 16 (56%) indicating that they were 'desperate to stop' (Table 1). Only three employees indicated they had little interest in stopping. Motivations to stop smoking were mostly related to 'health' and the 'family'. For example:

*I want to stop because after 18 years of smoking - the consequences of smoking for so long... just for the health purposes - I don't want all the complications.*

(Canary Wharf, Group 1)

*I don't want my children seeing me smoking... 'cos that'll make them think, 'oh - that's a normal thing to do', so they may try it later on in life... If I'm out with them for the whole day I'll throw a patch on, otherwise I'd be fighting with the missus and we'd get grumpy and ratty. (Canary Wharf, Group 1).*

There was a clear understanding of the negative health consequences of smoking, and for many, this was unsurprisingly a leading factor for their intention to stop:

*You always think it will happen to someone else [negative health consequences]. That's been my attitude for years - but now I'm thinking 'I'm 40 this year - I've been smoking for 16 years'. High blood pressure and heart attacks run in my family...the odds are not good [laughs]. (Canary Wharf, Group 2).*

For others, context was important and intention to stop varied depending on what they were doing (e.g. playing sport leading to increased intention) and where they were (e.g. drinking alcohol in the pub leading to decreased intention):

*...When I play rugby I'm desperate to stop [smoking], the rest of the time probably a bit less.*

*I: Is that because you're doing something active and you know it's good for you?*

*P: No – it's more the fact that I'm doing it and being out of breath really easily... it [intention] flicks back and forth 'cos I enjoy smoking when at work or when I'm out, but when I'm doing physical activity it burns and I know it's due to me fags. (Whitechapel, Group 1)*

However, participants were less aware (and knowledgeable) of the support available to help them stop smoking. Given that all those who had stopped for a brief period of time had since started again, reasons for re-starting smoking included a combination of the social and physical influences detailed above, and a belief that they could stop again in the future:

*When I was trying to give up the worst thing for me was that I could stop. But then I thought, 'right I've cracked it I'll just have a cigarette'. And you get into this cycle of smoking, stopping, and smoking again. (Canary Wharf, Group 1)*

#### *Views on a work-based smoking cessation service*

Employees were generally positive about the idea of having a smoking cessation service available in their workplace. Unsurprisingly, there was a diversity of views regarding the actual kinds of service provision (and delivery or access) they would prefer ranging from more individualistic approaches (such as health stalls, drop-ins etc.) to 'buddy systems' of

stopping smoking, to discursive small group sessions. Others reported the necessity for readily available prescriptions to smoking cessation drugs such as Champix<sup>1</sup>.

*I: What would you like to see [in a work-based stop smoking service]?*

*P1: Free pills, well on prescription... how else are you gonna get through it? How many of us have got enough willpower and can honestly say 'I can do it with willpower alone?' ...I'm not a doctor... but it's magic. (Whitechapel, Group 1)*

It is important to note that there is an opportunity here for any future service to manage expectations and challenge certain views around the use of prescription drugs to assist smoking cessation. For example, one employee from the Whitechapel focus group discussion felt that having tried Champix as a stop smoking aid, willpower was simply not required (although it should be noted at the time of the group, this individual was still smoking). This perception of 'willpower not being required' was of particular interest to a fellow participant in the group (who identified himself as being desperate to stop having smoked for 30 years):

*P1: Champix works like a book. It opens up and you've got all your tablets...week 1, week 2. You carry on smoking for the first week and then you stop in the second week.*

*P1: But you still need willpower though, surely?*

*P2: No.[P1: No?] I didn't.*

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<sup>1</sup> A drug containing varenicline tartrate which is used in smoking cessation. It can reduce withdrawal symptoms and craving after stopping smoking and also reduces the enjoyment of smoking if a person smokes whilst taking the drug.

*P4: That sounds perfect. (Whitechapel, Group 1)*

### *Employer findings*

#### *Employer views about smoking*

Generally, employers felt that smoking was perpetuated due to the nature of the routine work and boredom, particularly for those who were transient workers i.e. those living outside the borough of Tower Hamlets and living in local short term accommodation for extended periods of time. The stress of the job was also as a contributory factor.

*The workforce on this site is transient – most don't live here [London Borough of Tower Hamlets] so they stay over in 'digs' [lodgings] work long hours so they ... eat a crap diet and smoke like troopers... it's routine, it's boredom. (Brian, Canary Wharf)*

Employers viewed their staff as having the right to smoke, although some viewed it as a moral obligation to enhance motivations to stop and to help implement strategies to help employees achieve this.

*... If it's not illegal to do it then us stopping people smoking is a moral issue for me - particularly when it's fairly easy for me to allow guys to smoke... working to an onerous schedule that I've set them. I therefore think that whatever gets them through that day, whether it's hot food, dry clothes...or smoking.. then I'll do what I can to help them...But the bit that I'm wrestling with in my mind is that*



*quite clearly there is a health issue, and that is not in dispute.* (Mark, Canary Wharf)

Alternate views were that allowing people the right to smoke showed respect and created a good team environment.

*We don't say 'you can only smoke between the hours of'. As long as it's within reason, and people are getting their job done. Hopefully that's a good team environment that we wanna be in – that everyone does their bit and no-one would let anyone else down.* (Stephen, Canary Wharf)

A major concern for employers however, was whether smoking would affect productivity. External environment sites, where employees could smoke whilst working, were not seen to pose any concerns regarding productivity unlike enclosed construction sites where employees would have to stop work to smoke. Some employers estimated half an hour per cigarette (when getting to the compound and returning to work) and others up to 1.5 hours a day lost due to smoking.

*[Smoking] does cause disruption... If they are working five floors up, that could take 10 minutes plus 10 minutes a cigarette then 10 minutes to get back - that's half an hour per cigarette.* (Justin, Whitechapel)

Some also thought that smoking was seen to create a detrimental image of the site to outsiders and visitors.

*People have the option of smoking but it causes delays and doesn't look presentable to visitors with loads of butts all over the place. (Justin, Whitechapel)*

The employment of staff by subcontractors made some employers feel removed from the responsibility of initiating smoking cessation services. This raised complications about the establishment of smoking cessation initiatives as the subcontractors would have to be involved and give their approval for any such scheme.

*The problem is that we don't directly employ our workers, so any loss of time is the responsibility of their employers...it would be much easier to have smoking policies if they were our direct employees...I think their employees would see it [a smoking cessation service] as positive although for us, not being a direct employer, there's not much benefit. They [management subcontractors] would be positive to a healthy lifestyle as they would see the long-term benefit...*

(Justin, Whitechapel)

#### *Smoking cessation Services*

Employers felt that having a smoking cessation service in the workplace would be a good initiative with the potential for long-term health and productivity benefits for both the employers and the employees.

*The obvious advantage is the men's' health and I suppose if people aren't stopping for a cigarette and stuff during the work day then I guess there will be some long term benefits to having a service on-site. (Chris, Canary Wharf)*

*We would be willing to give it [work-based stop smoking service] a go... we're losing an hour and a half a day to a smoker so... whatever it takes to get 'em to stop smoking, in the long run, it gains you time. A lot of managers would be receptive to that. (Ali, Whitechapel)*

Incentives to encourage the uptake of services included time off work, although this was complicated by the employment arrangements as well as recognising the needs of non-smokers.

*...it's about commitment on both sides. If it was an hour [stop smoking] session and they used half-hour of their break, I would give 'em a half-hour. I could feel comfortable with that as a contribution from me and a contribution from them. (Mark, Canary Wharf)*

*...It could be trick to set up as you've gotta be mindful that not everyone smokes, and... so you wanna make sure you got the right balance and not forget those who haven't smoked or gave it up in the past... (Stephen, Canary Wharf)*

Providing free (to the employee) and flexible (e.g. drop-in) services for employees were seen by employers as being essential. Many were positive about the idea of having a ‘health stall’ in the workplace which would provide information about cessation services available.

*A few years ago something like a [health stall/day] would have been a waste of time, but now I think it could be good and useful – perceptions have changed in recent years and I think they [employees] would go for it yeah.” (Chris, Canary Wharf)*

Although most employers saw the value of stop-smoking group sessions, they also perceived resistance from other employers given the possible loss of productivity in the short-term as workers accessed the service. Consequently, out of hours sessions were favoured although this also raised issues about the likelihood of poor attendance. Finally, employers felt that a notable proportion of the wider employee workforce appeared disinterested in stopping and influencing employees’ motivations towards smoking would be essential:

*Most of the smokers here are happy to smoke and don’t want to stop...They say ‘I don’t want people telling me to stop like I wouldn’t want people telling me not to have a pint’. (Darren, Canary Wharf)*

## **Discussion**

Although the rationale and potential benefits for targeted workplace-based smoking cessation services are well understood, this study is among the first in the UK context to

explore how such work-based health promotion initiatives are perceived by ‘hard-to-reach’ R/M employees working on construction sites. It is likely to be the case that there are few equivalent studies outside of the US and thus the implications of this study may well extend to an international audience. A number of implications for the development of new workplace services are evident.

First, the unique construction site environment (including culture and social norms) is likely to play a contributory role in the continuance of smoking behaviours of R/M workers<sup>42, 43</sup>. For example, the two research sites differed physically meaning some employees could smoke when and wherever they liked whilst continuing their work whilst others could not. Open construction sites may be one of the few examples of where legislative smoking and related policy reforms in the UK have had a minimal impact in terms of reducing smoking opportunities<sup>41</sup>. Related to this issue, is that there are currently few occupational settings aside from construction, where the norm is to smoke; it is thus likely that such strong workplace norms impact on employee’s smoking continuance and/or cessation activities and intentions<sup>42, 44</sup>. Social norms theory claims that individuals may align many of their health behaviours with their (often erroneous) beliefs concerning the prevalence and acceptability of these behaviours in their environment. Overestimations of unhealthy behaviours are likely to increase these behaviours, and underestimations of healthy behaviours are likely to discourage individuals from engaging in them<sup>44, 45</sup>. This suggests that the opportunities for smoking and the social norms which operate across and within construction sites must be understood and addressed prior to implementing a workplace cessation service if they are to have the greatest chance of being effective.

Second, most R/M workers interviewed reported a low awareness and uptake of local smoking cessation services as well as other public health-related services <sup>(see 15, 46)</sup>. The transient nature of some workers, typically living in short-term rented accommodation in the local area to work, and the shift patterns common to construction sites compounds this issue (and characterises their ‘hard-to-reach’ status). However, our findings suggest it is important to realise the opportunities to offer *workplace* interventions where, for some, this may be their first experience of accessing smoking cessation (and other health related) services. Indeed, there may be few environments where services can be pitched to such a concentrated audience of smokers. Moreover, as with other research<sup>3,15</sup>, our study revealed a preference for, and acceptability of, more individualistic interventions (e.g. pharmacotherapies), suggesting a flexible ‘drop-in’ service style may be the most appropriate to reach R/M workers on construction sites. Adopting such a settings-approach to health promotion and/or public health can be particularly effective as it uses established social structures, channels, and processes to reach certain target groups (in this case R/M workers) meaning that it can encourage multi-stakeholder ownership of health<sup>47,48</sup>.

Finally, most participants reported an intention to stop smoking or to explore the options of stopping. In acknowledging health-behaviour theories, such as the Stages of Change<sup>49</sup> and social cognitive theories such as the Theory of Planned Behaviour and the Health Belief Model<sup>e.g. 50,51</sup>, it is evident that the main challenge therefore is to not only formulate positive intentions to stop but also, critically, to ensure these positive intentions can be translated into desired behaviour (i.e. smoking cessation). Although medication can support this translation of intention into behaviour, interventions should be mindful of the theoretical literature that has sought to bridge this ‘gap’, including Implementation Intentions<sup>52</sup> that essentially helps

people achieve positive changes in behaviour by anticipating critical situations in advance. This would involve the anticipation of situational cues (e.g. being offered cigarettes by a fellow worker) which can then elicit the pre-planned goal-directed response. Also, unlike all health-related behaviours, there is great potential to bridge the intention-behaviour gap demonstrating (through workplace interventions) the short-term effects of smoking cessation which may not be so obviously felt such as respiratory capacity and changing carbon monoxide levels.

The views of employers also have important implications for service development. Whilst employers were broadly supportive of smoking cessation services for their employees, several potential obstacles would have to be overcome to support sustainable and effective services. Firstly, the majority of employers interviewed were subcontracted staff and thus one step removed from the direct employers. This had implications on their sense of responsibility for the health of their employees and further complicated the approval of workplace interventions (which could only be granted by the direct employers). Secondly, there was concern that the uptake of workplace interventions during work hours would have a detrimental impact on the short-term productivity of the employees. It may be an easy assumption to stress the long-term benefits on productivity, as more employees stop smoking, but the realities of employing short-term staff for tight deadlines in this setting illustrates the problems associated with such assumptions. Thirdly, with time dedicated to using workplace interventions, employers were also concerned about there being no equivalent offer for the non-smokers. One possible option here could be for employers to set aside a set time per week, as is done in a number of such sites, where *all* employees can

access enrichment activities and/or services on a number of topics (smoking as well as healthy eating, ‘considerate construction’, and so on).

Although the study design yielded useful insights into the beliefs, behaviours, and cessation needs of R/M smokers as well as the views of their employers, the data should be interpreted in the context of several limitations. The study was conducted among R/M workers and employees from two construction sites in London and thus the findings should be interpreted only in this context. Moreover, given the small-scale, qualitative nature of the study and the purposive sampling used, the representativeness and generalisability of the results are clearly limited. Nonetheless, they do offer insights for those developing public health interventions in construction sites, and the findings may well resonate with employers and policy makers who have considerable influence on the working environment and cultures.

## **Conclusion**

Our findings showed that the development and implementation of work-based public health initiatives such as smoking cessation services are perceived positively by R/M employees working on construction sites and their employees. However, the milieu of construction work sites differs considerably meaning tailored approaches to work-based smoking cessation programmes are likely to be needed to maximise potential benefits for employees and employers. Moreover, reconsideration of current Smokefree legislation as it applies to the construction industry, especially in ‘open-sites’ is required.



**Ethical approval**

Ethical consideration to complete the study was received from NHS Tower Hamlets

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## Tables

*Table 1 Description of employee focus group participants (N=16)*

	Whitechapel	Canary Wharf Group 1	Canary Wharf Group 2	Total (percenta
<b>Age</b>				
20-29	2	1	2	5 (31.2)
30-39	2	2	3	7 (43.7)
40-59	0	0	1	1 (6.3)
50-59	1	1	0	2 (12.5)
60-69	0	1	0	1 (6.3)
<b>Gender</b>				
Male	4	5	5	14 (87.5)
Female	1	0	1	2 (12.5)
<b>Ethnicity</b>				
White British	4	2	2	8 (50.0)
White Irish	0	2	3	5 (31.2)
White Other	1	1	1	3 (18.8)
<b>Number of cigarettes per day</b>				
Mean	18	21	28.7	22.6
Median	20	20	30	20
<b>Years Smoked</b>				
Mean	15	12.2	16.8	14.7
Median	12.5	11.1	18	12.5
<b>Time smoked first cigarette after waking</b>				
Mean time after waking (minutes)	72	60	30	54
Longest time after waking (minutes)	120	90	90	100
Shortest time after waking (minutes)	30	45	2	26.67
<b>Ever tried to stop</b>				
	4	3	4	11(68.8)
<b>Intention to stop</b>				
No intention (1-4)	1	1	1	3 (18.8)
Thinking about stopping (5-7)	0	2	2	4 (25.0)
Desperate to stop (8-10)	4	2	3	9 (56.2)

*Table 2 Description of employer participants (N=7)*

	Whitechapel	Canary W	Total
<b>Age</b>			
20-29	1	0	1
30-39	1	2	3
40-59	0	2	2
50-59	0	1	1
<b>Gender</b>			
Male	2	5	7
Female	0	0	0
<b>Ethnicity</b>			
White British	1	5	6
Mixed White/Caribbean	1	0	1
<b>Position/Profession*</b>			
Construction Executive	1	1	2
Senior Manager	1	2	3
Electrical construction man	0	1	1
Subcontractor Manager	0	1	1

\*Defined by the participant/employer