

Engagement With Stop Smoking Services After Referral or Signposting: A Mixed Methods Study

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Abstract

Introduction

Screening for smoking when people interact with healthcare services and referral of those who smoke to stop smoking services (SSSs) is a key component of efforts to tackle tobacco use. However, little is known about what happens after someone is referred or signposted to SSSs.

Methods

As part of the Cessation of Smoking Trial in the Emergency Department (NCT04854616), those randomised to intervention (n= 505) were referred to local SSSs (along with receiving brief advice and an e-cigarette starter kit) and those randomised to control (n= 502) were given contact details for the same services (signposted). SSS engagement data was collected: 1) directly from participants and 2) from SSS, additional qualitative data came from 33 participant interviews.

Results

Engagement with SSSs was very low. 3.2% (n=16) of those in the intervention group and 2.4% (n=12) in the control group reported attending a one-to-one support session. From SSS data, engagement was also low with 8.9% (n=43) of those referred engaging and 3.1% (n=15) going on to quit with SSS support. The majority of the 24 intervention participants interviewed did not recall being contacted by an SSS.

Conclusion

Referral or signposting to stop smoking services within an Emergency Department based trial resulted in very low levels of engagement. Barriers to engagement identified included participants not being contacted by SSSs and the support offered not meeting their needs.

Implications

Referral or signposting of those who smoke to Stop smoking services from the Emergency Department resulted in low rates of engagement in this large multi-centre randomised controlled trial. In order to better support those who smoke it may be more effective for smoking cessation advice to be offered 'in the moment' within clinical settings, and follow-up to be proactively offered rather than relying on people being motivated to contact the services themselves or engaging when contacted.

Introduction

Smoking is a leading cause of death and disease and a significant cause of health inequality.[1,2] A key part of the approach to addressing tobacco use in many countries is screening users of health care services, giving brief advice to those who smoke and then referring to community stop smoking services (SSSs). In the UK, this approach has been recommended by The National Institute for Health and Care Excellence[3], Public Health England[4] and the NHS Long Term Plan.[5] However relatively little is known about what happens when patients are referred or signposted to SSSs.[6]

UK local authority SSSs offer a range of support to help people quit, including one-to-one appointments, group counselling, prescriptions for Nicotine Replacement Therapy (NRT), agonist medications and in some cases e-cigarettes are offered or their use is supported as part of a quit attempt.

Those who engage with SSSs are three times more likely to succeed in quitting than those who attempt to do so without any aid.[7] Despite the proven effectiveness of such services, their use in the UK has fallen for eight consecutive years, from 816,444 people in 2011/12 to 178,198 in 2021/22.[8] In part this may be due to funding to local SSSs being cut by 30% between 2014 and 2018.[9]

In this study we define 'engagement' as taking up a referral to an SSS either by attending an appointment, accepting a prescription, or setting a quit date. The general model used by SSSs is to encourage people to set a quit date after which they will attempt not to smoke tobacco. Data are regularly published on the proportion of people who successfully quit having set a quit date with SSS [10] however data are not available for the number of those who are referred to SSSs who go on to set a quit date (i.e. engagement rates). This paper adopts a mixed methods approach in order to demonstrate both levels of engagement and potential barriers to engagement which would not be possible with quantitative data alone.

A recent systematic review concluded that the proactive referral of smokers to smoking cessation programs by healthcare staff is effective at increasing enrolment.[11] The review identified five studies that investigated proactive e-referral.[11] These five studies found very different rates of engagement with SSSs for those actively referred of 7.8%[12], 10.3%[13], 14.7%[14], 29.5%[15] and 31%.[16] This variation may be explained by differences in the definition of engagement used, with both trials that found an engagement rate of over 20% using the definition of participants having registered with an online system, regardless of whether they had gone on to use the system or receive support.

We aimed to explore engagement with SSSs after referral or signposting from the Emergency Department (EDs) using a mixed methods approach, within the context of a randomised controlled trial.

Methods

The Cessation of Smoking Trial in the Emergency Department (ClinicalTrials.gov NCT04854616) is a two-arm, multicentre, individually randomised controlled trial. Full details and results can be found in the published protocol and results.[17,18] Participants randomised to the intervention group were referred by stop smoking advisors in the ED to the local SSSs via the standard electronic referral route used at the NHS site as well as receiving brief advice and an e-cigarette starter kit. Referral triggered proactive telephone contact by the SSSs. Control participants were given a card with contact details for the local SSSs.

Data for this study have been collected via three sources; 1) participants self-reporting service usage and smoking data, 2) information supplied by the SSSs and 3) qualitative data collected via participant interviews.

Written informed consent was given for both participation in the trial and in the qualitative sub-study. On completion of the 6-month follow-up questionnaires, participants received a £30 shopping voucher for taking part. A further £30 voucher was offered to participants who reported being smoke-free for providing a CO reading. Participants were, however, unaware they would be offered the additional £30 when completing follow-up questionnaires to avoid it acting as an incentive. Participants received £20 voucher for taking part in the qualitative interviews.

Participant reported data

At baseline and 6 month follow up all participants were asked about their use of SSSs in the past 6 months (“In the past 6 months, have you: Attended a group session with someone from a Smoking Cessation Service (in-person or remotely), Attended a one-to-one session with someone from a Smoking Cessation Service (in-person or remotely), Telephoned the NHS Smoking Helpline service for advice or support”). At 6 months all participants were asked whether they smoked. Those who reported abstinence were asked to biochemically verify that abstinence with an exhaled carbon monoxide test (with reading of <8ppm being used to confirm abstinence).

Stop smoking service data

Participants in the intervention arm were referred to one of six SSSs. These services were asked to provide the following data for participants who were referred to them as part of the COSTED trial: number of referrals received, number of people contacted, the number who engaged and the number who were recorded as having gone on to quit. Participants in the control arm were not referred, but instead signposted to SSSs, however engagement data on these participants was not available due to it not being possible to identify these participants from SSS records.

Qualitative data

Interviews were undertaken with 34 participants. Purposive sampling was used to recruit a range of genders, ethnicities, randomisation group, site of recruitment and change in smoking habits (quit, reduced tobacco and no change). The interviews were conducted via telephone or video call, recorded and transcribed verbatim.

Analysis

Rates of engagement were explored descriptively and differences in rates of engagement between intervention and control were analysed using chi squared tests. Qualitative data relating to SSS engagement was extracted from interview transcripts and analysed thematically [19] using the COM-B model as a theoretical framework with themes identified based on frequency and saliency and classified according to the relevant part of the participants journey.

Results

Participant reported data

Between January and August 2022, 1007 participants were randomised (505 to intervention and 502 to control). At 6 months follow up 366 (72.5%) participants in the intervention group and 325 (64.7%) in the control group reported their smoking status at six months and 330 (65.3%) in the intervention group and 306 (61.0%) reported whether they had engaged with a SSS.

Overall, the number of participants reporting attending a group SSS session since recruitment was 1.1% (n= 11), attending a one-to-one SSS session was 2.8% (n= 28) and contacting an NHS smoking helpline was 1.9% (n= 19). Table 1 presents the data by randomisation group. There was no significant difference between intervention and control.

Stop smoking services data

Of the six SSSs contacted, five provided data. Of 461 participants in the intervention group who were referred to the five services who provided data there were 316 referrals received (68.5%), 279 (60.5%) were contacted by the service, 43 people engaged with the service (9.3%) and 15 (3.3%) had quit as per the SSSs follow-up. This compares to the 124 (25.7%) in the intervention group who reported continuous smoking abstinence at six months and 36 (7.5%) who had biochemically validated continuous smoking abstinence at trial follow-up. Data for each site is available in supplementary table 1.

Two services provided reasons for not contacting participants, 32 were not able to be contacted and five were out of area.

Qualitative data

Of the 34 participants interviewed, 33 provided usable data on SSS engagement (one recording was inaudible) of whom 24 were in the intervention group and 9 in the control. Themes and illustrative quotes are included in supplementary table 2. Participant interview sample characteristics are available in supplementary table 3.

Contact

The anticipated method of contact for the intervention participants was that they would receive a phone call from the SSS with an offer of support and for control participants that they would contact the phone number on the written material themselves to seek support.

Of the 24 intervention participants who were interviewed, 11 recalled being contacted by the SSS the remaining 13 did not recall receiving any communication from them.

Of the 10 control participants who were signposted to SSSs, three went on to contact them.

Both figures are probably higher than the whole sample because participants who had quit smoking were purposively sampled.

A common theme from some participants who did not recall any communication was that they felt they would have benefitted from support from the SSS.

The low levels of contact potentially provides an explanation for the low levels of engagement seen in the quantitative data.

Engagement

Of the 11 intervention participants who recalled contact by the SSS, two participants engaged and nine did not.

Of the two who engaged one participant found them helpful. The other participant engaged and was sent nicotine replacement therapy (NRT) but relapsed to smoking. They reported the phone calls were brief and did not contain any behavioural support.

All three in the control group who contacted the SSS went on to engage, one was given an e-cigarette and managed to quit but then relapsed.

One participant contacted the SSS but said this was unrelated to taking part in the study. The third decided to quit smoking and contacted their GP who advised them to contact the SSS. They struggled to get an appointment with the SSS and also struggled to access NRT. They also reported the approach did not align with how they wanted to quit.

Discussion

This study found that referral or signposting to SSSs from the Emergency Department within the COSTED trial rarely resulted in engagement. Barriers to engagement included lack of contact by SSSs, the support offered not being flexible enough to meet participant's needs and offering interventions which were not acceptable to participants. This potentially has implications for service commissioning and delivery.

Relatively few of those referred to SSSs went on to engage (less than 3% for all types of services based on participant data and 11% based on SSS data). The 11% rate based on SSS data is in keeping with previous trials where engagement was classified as receiving stop smoking advice or treatment. Based on the qualitative and SSS data a possible reason for this is low rates of the SSSs successfully contacting referred participants (60% based on SSS data and 42% of the qualitative sample). This may be due to SSSs trying to contact participants and being unable to get through. Further possible reasons based on the qualitative data are the services not being flexible enough to meet people's needs and not offering the types of cessation methods that people wished to use.

There was a large disparity between the number of participants who quit smoking while supported by the SSSs (n=15) and the number who self-reported 6 months continuous abstinence (n=117) implying the vast majority of those who quit within the context of this trial did so without input from the SSSs.

Surprisingly (and contrary to previous studies [11]) there was no difference in engagement with the services between those who were actively referred to the SSSs and those who were merely signposted to the SSSs by providing contact details, although numbers were very small in both groups. A possible reason for this is the relatively low contact rate of those referred (discussed above) or a reason given by some participants in the qualitative interviews is that those in the intervention group (who were referred) also received behavioural support and an e-cigarette at enrolment therefore may not have felt they needed ongoing support from the SSS. Whether someone is referred to a SSS or signposted has not been previously considered as impacting on the effectiveness of SSSs.[20]

The low rates of engagement after referral or signpost indicates that delivering interventions in healthcare settings opportunistically may be more effective than relying on referral to external services.

There is evidence that smoking cessation interventions delivered in EDs are effective at achieving abstinence [18]. However there needs to be sufficient resources allocated to this so as not to burden existing staff.

The strengths of this study are that: a large number of people were randomised to either be referred or signposted to SSSs; we were able to triangulate responses using the three data sources; and we collected both self-reported and biochemically verified quit rates. It also benefits from having a group who received an active intervention (e-cigarette and brief advice) and a group who only received signposting. Generalisability is improved by the fact participants were referred to six different SSSs across the UK. This study collected real-world data in that participants were identified in a healthcare setting (the ED) and referred or signposted to the local service, therefore reflecting what might happen if such an intervention was implemented in practice. The inclusion of qualitative data allows identification of barriers to engagement and therefore potential targets for improvements.

The limitations of the study include missing data, with a third of participants not reporting their use of SSSs, differences in how SSSs reported data limiting comparability, one service not providing data and there being some missing data. The lack of an accepted definition of “engagement” made comparison difficult. The qualitative data was purposively sampled so some groups are overrepresented. We were also collecting data from participants six months after randomisation, so it is possible they forgot the contact from the SSS or would not have been aware if contact attempts were made but not successful (although this was mitigated by contacting the SSSs as well). The fact those who were referred also received brief advice and an e-cigarette also limits direct comparison between the groups.

Conclusion

Referral or signposting of those who smoke to SSSs from the Emergency Department resulted in low rates of engagement in this large multi-centre randomised controlled trial. In order to better support those who smoke it may be more effective for smoking cessation advice to be offered ‘in the moment’ within clinical settings, and follow-up to be proactively offered rather than relying on people being motivated to contact the services themselves or engaging when contacted. These findings have implications for policy makers looking to maximise the reach and effectiveness of services.

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Declaration of interest

None declared.

Data availability

The protocol, consent form, statistical analysis plan, medical ethics committee approvals, training materials and other relevant study materials are available online at <https://osf.io/8hbne/>. Deidentified participant data will be made available upon reasonable request.

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Table 1: Number of participants reporting accessing SSS by randomised group at 6 months follow-up

		Intervention (% of those randomised)	Control (% of those randomised)	Chi-square statistic	p-value for difference
Number randomised		505	502		
Number reporting having attended a group session with someone from smoking cessation service	Yes	3 (0.6%)	8 (1.6%)	2.7165	0.0993
	No	327 (64.7%)	298 (59.4%)		
Number reporting having attended a one-to-one session with someone from a Smoking Cessation Service	Yes	16 (3.2%)	12 (2.4%)	0.3241	0.5691
	No	314 (62.2%)	294 (58.6%)		
Number reporting having telephoned the NHS Smoking Helpline service for advice or support	Yes	10 (2.0%)	9 (1.8%)	0.0044	0.9474
	No	320 (63.3%)	297 (59.2%)		

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