Statistical analysis plan for: A randomised trial to increase the uptake of smoking cessation services using Personal Targeted risk information and Taster Sessions

Sixth version

Date:
6 January 2015

NIHR Health Technology Assessment Programme: Project Reference Number 08/58/02

Full trial title: A randomised trial to increase the uptake of smoking cessation services using Personal Targeted risk information and Taster Sessions

Acronym: Start2Quit

International Standardised Randomised Controlled trial Number – ISRCTN76561916

Trial sponsor: UCL

Chief (Principal) investigator: Hazel Gilbert, PhD

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Reviewed by: Toby Prevost (Trial Steering Committee Statistician)

Nominated statistician for analysis: Irene Petersen, PhD, Richard Morris, PhD

Project start date: 1st June 2010

Expected completion date: 31st May 2015
1. SYNOPSIS OF STUDY DESIGN AND PROCEDURES

1.1 Aims and Objectives (from protocol):

Primary objective:
1) To assess the relative effectiveness on attendance at the NHS services, of proactive recruitment by a brief personal letter, tailored to individual characteristics available in medical records, and invitation to a taster session to provide information about the NHS services, over a standard generic letter advertising the service.

Secondary objectives:
2) To assess the relative effectiveness of the two methods (standard versus intervention) in biochemically validated 7-day point-prevalent abstinence rates at the 6-month follow-up.

3) To assess the relative effectiveness of the two methods (standard versus intervention) in additional smoking cessation outcomes, from 24hr point prevalent to 3-month prolonged abstinence measured by self-report and validated (following the Russell standard recommend outcome) (West at al 2005) at the 6-month follow-up, to allow comparability with other studies.

4) To assess the number completing the 6-week NHS smoking cessation course.

5) To assess the number of quit attempts made, any reduction in daily cigarette consumption and use of smoking cessation aids

6) To explore the effectiveness of the intervention on attendance at the NHS services and 7-day point-prevalent abstinence by, age, gender and social deprivation.

1.2 Hypotheses:

Hypothesis A: Current smokers identified from general practice records and randomized to receive the intervention* are more likely to attend the NHS services than those who receive a standard generic letter advertising the service.

Hypothesis B: Assuming that smokers receiving the intervention are more likely to attend the service, then biochemically validated 7-day point-prevalent abstinence rates at the 6-month follow-up will be higher in those randomised to receive the intervention* than in those who receive a standard generic letter advertising the service.

* a brief personal tailored letter based on characteristics available in primary care medical records and on a short screening questionnaire, and invited to a 'Come and Try it' taster session designed to inform them about the NHS services.

1.3 Patient population studied:
The target group is smokers motivated to quit who have not previously attended the NHS services. Also targeted are smokers in areas of high deprivation and ethnic minorities, where smoking prevalence is high.

Inclusion criteria
All current smokers:
- willing to participate and returning the signed consent form
- aged 16 years and over
- able to read English
- motivated to quit
have not previously attended the NHS services within the previous 12 months are eligible for inclusion in the study.

For the purposes of this research, motivation to quit is defined as answering ‘yes’ to either or both of the following questions:
I. Are you seriously thinking of quitting in the next six months?
II. Would you think of quitting if appropriate help were offered at a convenient time and place?

Exclusion criteria
Smokers younger than 16 and any patients that the GP considered to be unsuitable for the project, e.g. severely or terminally ill, were excluded prior to the mailing of invitations.

1.4 Trial configuration:
Multicentre, parallel group with 3:2 allocation between a) intervention and b) standard treatment as described below.

**Intervention:** A brief personal tailored letter based on characteristics available in the patient’s primary care medical records and on information provided in a short screening questionnaire, and an invitation to a ‘Come and Try it’ introductory session.

**Standard treatment:** A standard generic letter advertising the smoking cessation service.

1.5 Randomisation procedures:

1.5.1. Points of randomisation
Current smokers aged 16 and over identified from practice records were sent a questionnaire, participant information leaflet, consent form and cover letter from their GP. Those who returned a completed questionnaire and signed consent form and were eligible to participate were randomised to intervention or control.

1.5.2. Specify block size, whether randomly varied
Participants were randomised in the ratio 3:2 (intervention:control) within practice, stratified by gender, and using a fixed block size of 5. For each practice, a computer program was run to create two randomisation tables, one for men and one for women. Each table consisted of 500 rows. In one column, there was a sequence of 2 s and 1 s in blocks of 5 (for example 1,1,2,2,1). This sequence was created by listing all possible permutations of three 1 s and two 2 s (10 in all), then repeatedly selecting one permutation at random (with replacement) and adding each selection to the sequence. This procedure used the random number generating function `rnd` in Microsoft VBA. For each table, the Randomize statement was used to initialize the random number generator with a seed based on the system timer.

1.5.3. Stratified allocation, or post-stratified analysis
Randomisation was stratified by general practice and gender.

1.6 Allocation concealment
1.6.1. Implementation of the random allocation sequence
Having created the tables for a given practice, another computer program was used to allocate participants from that practice to condition by selecting the first unused code (1 or 2) from the table for men or the table for women, depending on the participant’s gender, and then marking that code as used. If the information about gender was missing for a participant, the randomisation table to be used was selected at random. The use of a computer program that enforced randomisation after consent and baseline data entry ensured that concealment was preserved and differential entry prevented.
1.6.2. Blinding: who were blinded to group assignment

It was not possible to blind participants to the receipt of a personally tailored letter, and invitation to a taster session.

The personal letter to the individuals in the intervention arm was generated by a research assistant in the practice to ensure that the rest of the research team was blind to the allocation of the participant, which was enforced by the data management.

The primary outcome was obtained from routinely collected information on attendance from the Stop Smoking Service (SSS). Thus, the individual obtaining this information was not aware of the original group assignment.

In follow-up interviews to obtain additional outcomes, the interviewer was blinded to the allocation of the respondent. While it is possible that the interviewer could become unblinded later in the interview when they asked questions about the interventions, smoking cessation outcomes were assessed at the start of the interview.

In order to set up the analysis files without knowing the allocation of individuals, the trial statistician will, prior to the full data set becoming available, request a subset of the data without any variable that reveals intervention arm assignment. Using random numbers, the trial statistician will generate an artificial intervention assignment (in 3:2 ratio as in the true randomisation scheme) and develop and run programs on this dataset. Once the trial statistician, in conjunction with the senior statistician and the Trial Management Group, is happy with the programs, she will ask for the “real” intervention assignment as part of the complete dataset. Programs will then be run on the full dataset.

1.7 Any safety, data monitoring or special steering or evaluation committees

**Trial Steering Committee** (Internal members: Hazel Gilbert, UCL; Irwin Nazareth, UCL; Richard Morris, UCL; External members: Chair: Tim Coleman, Nottingham University; Toby Prevost, King’s College London; Michael Ussher, St Georges, University of London; Caroline Free, LSHTM; Sue Dowd, PPI)

1.8 Any interim analyses

At the time of writing this analysis plan a pilot study had been conducted to assess the criteria for proceeding to full trial recruitment (see section 1.8.2). Following this there has been no further analyses.

1.8.1. Reports for Data Monitoring and Ethics Committee (DMEC)

We know of no adverse effects of the intervention over and above NHS care which would warrant a separate DMEC.

1.8.2. Stopping rules determined as part of the protocol

The study was initiated with a pilot phase conducted in 8 practices recruited from two SSSs. This included a recruitment of approximately 20% of the original total sample. The methodology of the pilot phase was essentially the same as the full trial to enable combination of the data from both phases for analysis.

The criteria for judging the success of the pilot phase and proceeding to full trial was based on:

i) achieving a 7% response rate, i.e. a mean of 42 participants per practice giving consent and agreeing to randomization, in the first 8 practices.

ii) a preliminary analysis that suggests that the difference in uptake of smoking cessation services between the Intervention and Control groups is greater than zero.
No other stopping rules were applied

1.9 Efficacy and Safety Variables

Primary end point (outcomes):
1) The proportion of people entering the smoking cessation service (i.e. attending the first session of a 6-week course) over a period of 6 months from the receipt of the invitation letter. This will be measured by records of attendance at the NHS SSSs. Absence of a record of attendance will be assumed to mean no attendance occurred. The numbers for whom this applies will be reported.

Secondary end points (outcomes):
1) 7-day point prevalent abstinence at the 6-month follow-up, validated by salivary cotinine for all participants reporting abstinence in both the Intervention and Control groups.
2) Additional outcomes to allow comparability with other studies: 24hr pp abstinence, 7 day pp abstinence, 1month prolonged abstinence and 3-month prolonged abstinence measured by self-report and validated.
3) Self-reported changes in daily cigarette consumption, quit attempts, and changes in motivation and intention to quit in continuing smokers.
4) Use of NRT or Zyban or Champix and other smoking cessation aids.
5) The number completing the 6-week NHS course.

The analysis of the process measurements will be covered by a separate analysis plan.

1.10 Determination of Sample Size (from protocol):
Sample size: The original sample size was estimated to 2583 in total, including 1554 individuals in the intervention arm and 1029 in the control arm of the study (see justifications below). However, we sought and obtained an extension to the project to also estimate the 7-day point prevalent abstinence at the 6-month follow-up and the sample size was increased to a total of 4500 participants, including 2707 in the intervention arm and 1793 in the control arm (see justifications below).

Justification: Recent evidence from the RCT by Murray et al (2008) suggests that attendance at NHS services can be increased by 7.7% (from 8.9% to 16.6%) using a proactive intervention. This represents an overall increase of 7.7%. To detect a similar effect at 90% power and alpha of 0.05 would require a sample of 420 participants per group. However, in the absence of any other similar trials, we might assume that the uptake of services in those who receive the tailored letter and the taster session could be lower than that reported by Murray et al. Hence, assuming an estimated increase of 4.6% (from 8.9% to 13.5%, OR 1.65) we would require 1029 participants per group, 2058 in all, to detect this difference as statistically significant at the 5% level with 90% power.

We will recruit practices from 10 areas run by different SSSs. The taster sessions in each service would be run by the same three advisors comprising 10 therapist clusters. Thus before adjusting for clustering we would expect 103 patients per cluster. As previously mentioned we will manualise the intervention and run structured training to reduce the variability between the interventions delivered in each SSS. Nevertheless, to account for any persistent therapist effects that will be applied to those randomised to receive a taster session, assuming a therapist ICC of 0.005 (in the absence of any published data), and a therapist cluster size of 103, would require further inflation of our existing sample size by a factor of 1.51 only in the intervention group where the effects will occur. Thus, 1554 would receive the tailored letter and taster session, 2583 participants in total.
The same RCT found validated quit rates at 6 months of 4% versus 2.2% in the Intervention and Control Groups. With 2583 participants (distributed between intervention and control groups as described above), we will be able to demonstrate a slightly larger reduction in the quit rate at 6 months from 4.0% to 1.8% (-2.2%) with 80% power.

The justification for an extension of the trial was the following:

Assuming quit rates of 4% versus 2.2% in the Intervention and Control Groups (mimicking the findings of Murray et al, 2008), an 80% increase in the sample size is required, to 1793 in the Control group and 2707 in the Intervention group (assuming the same therapist effect as the original protocol), a total of 4500. A sample of this size would give 85.4% power to detect a difference of 1.8% at the 5% significance level. The same sample size would have 95% power to detect the difference between quit rates of 4.4 and 2.2% (doubling of quit rate).

Following the analysis plan outlined below in section 2.9, the revised sample size will have 90% power to detect the originally expected effect on attendance at an alpha level of 0.0025. This would allow an alpha of 0.0476 for the secondary outcome of quitting, leaving the power to detect a difference of 1.8% at just below 85%.

1.11 Changes in the Conduct of the Study or Planned Analysis
As outlined above an extension of the trial was obtained to adequately power the study to also evaluate the 7-day point prevalent abstinence at the 6-month follow-up. In section 2.9 we outline how we will interpret the results of this outcome in light of the primary outcome.

2. ANALYSIS CONSIDERATIONS
2.1. Types of analysis
We will compare our binary primary outcome; entry to the smoking cessation service, between the intervention and control groups. Thus, the proportion of people entering the smoking cessation service (over a period of 6 months from the receipt of the invitation letter) will be reported along with the difference between the intervention and control groups together with a 95% confidence interval. This will be our primary result. However, adjustment for baseline covariates is often advised, firstly to correct for any chance imbalances in important baseline variables following randomisation, and secondly, because adjusting for highly important baseline variables in an RCT can improve the precision of treatment effect estimates even when the outcome measure is binary. Statistical testing for baseline imbalances is not advised and instead key covariates should be selected prior to analysis based on the likely magnitude of the association with the outcome measure (European Agency for the Evaluation of Medicinal Products, 2003). We will therefore also perform a multivariable logistic regression to take into account any imbalance that may occur in important baseline characteristics known to predict smoking cessation outcomes between the groups:

- gender
- age
- dependence score (cigs per day + time from waking)
- intention to quit
- determination to quit
- longest previous quit
- live with smokers
- deprivation (IMD score)
- previous NHS SSS attendance

Odds ratios will be quoted together with their 95% confidence intervals and exact P-values.
We will account for the therapist effect (see section 1.10 above), by including the allocated taster session in our model as a random effect nested within the SSS cluster. We have chosen to nest within SSS rather than practice as the therapists were SSS rather than practice based.

For the analysis of the **7-day point prevalence abstinence at the 6-month follow-up** we will follow the same plan as described above.

If cessation shows an effect without attendance then we will examine differences in the pattern of characteristics within each arm.

### 2.1.2 Unit of analysis considerations

In the multivariable analysis we will use following categorisation for the covariate analyses:

- **Gender** (binary): Baseline questionnaire D4 - male/female
- **Age** in years (continuous): Baseline questionnaire D6
- **Dependence score** (continuous score 0-6):
  - Cigs per day (Baseline questionnaire Qs A4/6): Score
    - 5: 0
    - 6 to 10: 0
    - 11 to 20: 1
    - 21 to 30: 2
    - >30: 3
- **Time from waking baseline questionnaire Qs B2**: Score
  - >2hrs: 0
  - 1-2hrs: 0
  - 31-60 mins: 1
  - <30 mins: 2
  - <5 mins: 3
- **Intention to quit** (categorical): Baseline questionnaire B4: “Are you planning to quit: within 2weeks/30 days/6 months/not within 6 months?”
- **Determination to quit**: Baseline questionnaire B9 “How determined are you to quit for good?” Likert scale 1 to 5
- **Longest previous quit** (categorical): Baseline questionnaire B3: “What is the longest you have ever quit smoking for?” less than 24 hrs/1-6 days/1-4 weeks/> 1 month
- **Live with other smokers** (binary): Baseline questionnaire D2 yes/no
- **Deprivation** (measured by IMD score) (continuous)
- **Previous NHS SSS attendance** (binary): Baseline questionnaire B7 ‘Have you attended an NHS SSS ----?’ yes/no

### 2.1.3 Effect modification and sub group analyses

In order to assess whether the intervention is any more effective for any particular subgroup of smokers we will explore if there is an interaction between treatment and gender, treatment and age, and treatment and deprivation. This will be carried out for the primary outcome (attendance) and 7-day point prevalent abstinence at the 6-month follow-up.

### 2.1.4 Timing of analyses

Preliminary analyses will be done in January 2014. The final analysis will be done in April 2015.

### 2.2 Analysis populations

Analyses will be based on intention-to-treat i.e. we will assume that all randomised receive the treatment that they were randomised to.
In addition to the intention to treat analysis we shall estimate the causal effect of the intervention using CACE, the complier average causal effect estimator (or equivalently, an instrumental variables estimator). In the CACE analysis we will consider attendance at the taster NHS smoking cessation service in terms of a binary variable, for the primary outcome and the 7-day point prevalent abstinence at the 6-month follow-up.

2.3. Protocol Deviations
Possible protocol deviations include:

Individuals who choose to withdraw from the trial, and choose not to consent for the use of their data for primary or secondary outcomes (see Consort flowchart for details).

2.4 Derived variables
Abstinence definitions:

7day point prevalent abstinence validated by salivary cotinine
Postal / telephone questionnaire:
  Router question ‘Do you currently smoke cigarettes’ = not at all
  AND
  Section A Q2 ‘When did you last smoke a cigarette/roll up’ >1-6 days ago (code 3-7)
  AND
  Section A Q4 ‘Have you smoked a cigarette/roll up in the last 7 days’ = no(0)
  AND
  Salivary cotinine conc <12 ng/ml
  OR
  (Salivary cotinine conc >12 ng/ml AND Current use = any nicotine)
  OR
  (Salivary cotinine conc >12 ng/ml AND Date used NRT > date provided-7)

7day point prevalent abstinence measured by self-report
Postal / telephone questionnaire:
  Router question ‘Do you currently smoke cigarettes’ = not at all
  AND
  Section A Q2 ‘When did you last smoke a cigarette/roll up’ >1-6 days ago (3-7)
  AND
  Section A Q4 ‘Have you smoked a cigarette/roll up in the last 7 days’ = no(0)
Basic Questions only
  Q1 ‘Do you currently smoke cigarettes or roll ups’=no
  AND
  Q2 ‘When did you smoke your last cigarette or roll up’>1 to 6 days (3-7)

24hr point prevalent abstinence measured by self-report
Postal / telephone questionnaire:
  Router question ‘Do you currently smoke cigarettes’ = not at all
  AND
  Section A Q2 ‘When did you last smoke a cigarette/roll up’ >in the last 24 hrs (2-7)
  AND
  Section A Q3a ‘Have you smoked any cigarettes since you quit’ = no or Section A Q3b ‘How many have you smoked since you quit’ < 6
  AND
  Section A Q5 ‘Have you smoked a cigarette/roll up in the last 24 hrs’ = no(0)
Basic Questions only
  Q1 ‘Do you currently smoke cigarettes or roll ups’=no(0)
  AND
  Q2 ‘When did you smoke your last cigarette or roll up’> in the last 24 hrs (2-7)

Prolonged period of abstinence of 1 month and more measured by self-report
Postal / telephone questionnaire:
Router question ‘Do you currently smoke cigarettes’ = not at all
AND
Section A Q2 ‘When did you last smoke a cigarette/roll up’ = >2-4weeks (5/6/7)
AND
Section A Q4 ‘Have you smoked a cigarette/roll up in the last 7 days’ = no(0)

Basic Questions only
Q1 ‘Do you currently smoke cigarettes or roll ups’=no
AND
Q2 ‘When did you smoke your last cigarette or roll up’>2-4 weeks(5-7)

Prolonged period of abstinence of 3 months and more measured by self-report
Postal / telephone questionnaire:
Router question ‘Do you currently smoke cigarettes’ = not at all
AND
Section A Q2 ‘When did you last smoke a cigarette/roll up’ = >1-3mths (6/7)
AND
Section A Q3a ‘Have you smoked any cigarettes since you quit’ = no or Section A Q3b ‘How many have you smoked since you quit’ < 6
AND
Section A Q4 ‘Have you smoked a cigarette/roll up in the last 7 days’ = no(0)

Basic Questions only
Q1 ‘Do you currently smoke cigarettes or roll ups’=no(0)
AND
Q2 ‘When did you smoke your last cigarette or roll up’>1-3mths (6/7)

Prolonged period of abstinence of 3 months and more measured by self-report and validated
Postal / telephone questionnaire:
Router question ‘Do you currently smoke cigarettes’ = not at all
AND
Section A Q2 ‘When did you last smoke a cigarette/roll up’ = >1-3mths (6/7)
AND
Section A Q3a ‘Have you smoked any cigarettes since you quit’ = no or Section A Q3b ‘How many have you smoked since you quit’ < 6
AND
Section A Q4 ‘Have you smoked a cigarette/roll up in the last 7 days’ = no(0)
AND
Salivary cotinine conc <12 ng/ml
OR
(Salivary cotinine conc >12 ng/ml AND Current use = any nicotine)
OR
(Salivary cotinine conc >12 ng/ml AND Date used NRT >date provided-7)

2.5 Missing data conventions
Loss to follow-up after randomisation will be reported. However for the primary outcome (attendance at SSS), we will have records for all attendance. For the 7-day point prevalence abstinence at the 6 months follow-up we will assume that those who were lost to follow-up were still smoking. We will perform a sensitivity analysis to explore the impact of non-informative loss to follow-up by doing a complete case analysis (as in Appendix 4 of Gilbert et al, 2013).

2.6 Treatment Compliance and per protocol analysis
We will assume that all those who were randomised to treatment received a personalised letter. We will tabulate the number of individuals in the treatment arm who took up the invite to attend the taster session.

We will perform the ITT and CACE analysis as outlined above for the primary outcome and for the 7 day point prevalent abstinence measurement.
2.7. Analysis at SSS level
We will apply a multilevel model to adjust for the effects of therapist session, using the xtpoisson command in Stata. We will estimate the ICC by SSS. Analysis will allow for SSS as a random effect within the intervention arm only.

2.8. Software used
We will use Stata version 13 for all analysis.

2.9. Levels of significance
The interpretation of the results of the trial for the primary outcome (1) engagement with SSS and the main secondary outcome (2) 7-day point prevalent abstinence will be governed by an alpha spending plan which will preserve study wise alpha for (1) and (2). These outcomes fall naturally into a hierarchy with (1) as a step prior to (2). We will employ a hierarchical monitoring plan where alpha will be spent first on (1) and then on (2), and remaining alpha will be available for (2). The simple formula below describes alpha allocation in the hierarchy:

$$\alpha_{2c} = 1 - ((1 - \alpha_s)/(1 - \alpha_e))$$

where the subscripts describe: 2 = two sided; s = study level critical alpha [0.05]; e = engagement with SSS; c = 7-day point prevalent abstinence. Thus if the p value for attendance at SSS = 0.02, there remains p = 0.031 to spend on the second outcome of 7-day point prevalent abstinence and a p value for that outcome < 0.031 would be considered significant. If the p value for the primary outcome (difference in smoking cessation service attendance) is > 0.05 then the overall study will be considered neutral and any finding on the second outcome will be considered exploratory with a nominal p value.

Likewise, if there is a significant decrease in attendance within the intervention arm over the control arm then again the second outcome will be considered exploratory with a nominal p value.

For all other analyses, effect sizes and 95% confidence intervals will be calculated, and the exact P-value will be quoted.

2.10. Format of electronic files for archiving
Excel, SPSS and Stata

3. ANALYSIS OF PARTICIPANT CHARACTERISTICS

3.1. Methods used to summarise data.
Continuous data that are approximately normally distributed will be summarised in terms of the mean, standard deviation, median, minimum, maximum and number of observations. Skewed data will be presented in terms of the maximum, upper quartile, median, lower quartile, minimum and number of observations. Categorical data will be summarised in terms of frequency counts and percentages.

3.2. Disposition
We will summarise the number of patients screened for entry, excluded prior to randomisation by major reason and overall, the number of patients randomised and the number entering and completing each phase of the study by treatment group and overall. We will use CONSORT flow chart for this. (see Appendix)
3.3. Baseline
All baseline variables as listed in section 2.1 will be tabulated (count (%), mean (SD)) by treatment allocation and overall. No formal statistical tests will be performed.

4. ANALYSIS OF EFFICACY
4.1. Description of response variables
4.1.1. Primary
The primary outcome is obtained from routinely collected information on attendance from the Smoking cessation session and is a binary outcome.

4.1.2. Secondary
i. 7-day point prevalent abstinence at the 6-month follow-up, validated by salivary cotinine for all participants reporting abstinence in both the Intervention and Control groups. It is a binary outcome.

ii. Prolonged periods of abstinence of more than 7 days measured by self-report. These are binary outcome.

iii. Self-reported changes in daily cigarette consumption, quit attempts, and changes in motivation and intention to quit in continuing smokers.

iv. Use of NRT or Zyban or Champix and other smoking cessation aids.

v. The number completing the 6-week NHS course.

4.2. Analysis of response variables
4.2.1. Primary
Null hypothesis: No difference between treatment groups.

Entry to smoking cessation service:
Size of the difference between treatments will be expressed as an odds ratio including 95% CI from logistic regression and exact p-values

The SSS will be included in the model as a random effect (intervention group only) and we will report both estimates, unadjusted and adjusted, for covariates listed in section 2.1: however the unadjusted analysis will be considered the primary analysis.

4.2.2. Secondary
7-day point prevalent abstinence measured by self-report and validated at the 6-months follow-up:
Size of the difference between treatments will be expressed as odds ratio including 95% CI from logistic regression.

The SSS will be included in the model as a random effect (intervention group only) and we will report both estimates, unadjusted and adjusted, for covariates listed in section 2.1: however the unadjusted analysis will be considered the primary analysis.

Prolonged abstinence of >3 months measured by self-report and validated
Periods of abstinence of 24 hours to 3 months measured by self-report.
Size of the difference between treatments will be expressed as an odds ratio including 95% CI from logistic regression.

The SSS will be included in the model as a random effect (intervention group only) and we will report both estimates, unadjusted and adjusted, for covariates listed in section 2.1:
Self-reported changes in daily cigarette consumption
We will report average changes (including 95% CI) in cigarette smoked in those who are still smokers within the two treatment groups as difference between cigarette consumption at baseline and 6 months follow-up.

Self-reported quit attempts
We will report the proportion (95% CI) of individuals who made at least one quit attempt per individual by the 6-month follow-up in continuous smokers between two treatment groups.

Smoking cessation aids
We will report the proportion of individuals who took up smoking cessation aids in the two treatment groups.

Size of the difference between treatments will be expressed as an odds ratio including 95% CI from logistic regression with adjustments for clustering by SSS and taster session. In addition we will adjust for baseline covariates as above.

Number completing the 6-week NHS course
We will report number of individuals completing the 6-week NHS course in the two treatment groups.

Size of the difference between treatments will be expressed as an odds ratio including 95% CI from logistic regression with adjustments for clustering by SSS and taster session. In addition we will adjust for baseline covariates as above.

5. LIST OF PROPOSED SUMMARY TABLES
5.1. We will produce a CONSORT flow diagram showing enrolment, dispositions, exclusions, evaluable participants
See Appendix

5.2. Participant Characteristics and Background summary table

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<th>Characteristic</th>
<th>Treatment</th>
<th>Control</th>
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<td>Confident can quit</td>
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<td>Health problems (number of QOF diseases recorded)</td>
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</table>
### 5.3. Outcomes 6-months after date of randomisation

<table>
<thead>
<tr>
<th></th>
<th>Treatment</th>
<th>Control</th>
<th>OR (95% CI)*</th>
<th>P value</th>
<th>OR (95% CI)^</th>
<th>P value</th>
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</thead>
<tbody>
<tr>
<td>Total</td>
<td>N</td>
<td>N</td>
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<tr>
<td>Primary outcome</td>
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<tr>
<td>Attendance at SSS</td>
<td>N(%)</td>
<td>N(%)</td>
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<tr>
<td>Smoking status</td>
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<tr>
<td>7day pp abstinence</td>
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<tr>
<td>(self-report)</td>
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<tr>
<td>7day pp abstinence</td>
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<td>(validated)</td>
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<tr>
<td>24hr pp abstinence</td>
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<tr>
<td>(self-report)</td>
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<tr>
<td>1month prolonged</td>
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<tr>
<td>abstinence (self-report)</td>
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<tr>
<td>3months prolonged</td>
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<td>abstinence (self-report)</td>
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<td>3months prolonged</td>
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<tr>
<td>abstinence (validated)</td>
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*unadjusted estimates
^adjusted estimates
References


APPENDIX
Consort diagram of the flow of participants through the trial

SSSs (n=18)
Total Practices recruited (n=99)
List size (range=2,205 to 26,000)
Total list size = 962,548

Total Smokers identified = 141,488(14.7%)

Exclusions=29,272
by GP=4,186
duplicate address =25,086

Total sent invitation to participate and questionnaire=112,216(11.7%)

Wrong address/deceased=420
Non smoker=5333

Total potentially eligible smokers sent invitation and questionnaire=106,463(11.1%)

Not replied=89,825

Total Response=16,638(15.6%)1

Willing but not eligible=1874
Not ready to quit= 457
Attended SSS in last year= 457
Recently quit= 776
Pipe/cigar smoker= 118
Non smoker=57
Other=9

Smokers enrolled in trial=4,384(4.2%)2

Randomised to Intervention Group=2636
Sent personalised letter with risk information and invitation and appointment to taster session

Withdrawn from study=1

Attended taster session=738

Completed 6-month follow-up=2020 (76.7%)
  Telephone interview=1739 (66%)
  Postal qs=176 (6.7%)
  Basic=105 (4%)

Lost to follow-up=615 (23.3%)
  Declined to complete=107 (4.1%)
  Deceased=1(0.04%)
  No contact=507 (19.2%)

N analysed=4,383

Randomised to Control Group=1748
Sent standard generic letter advertising the services

Attended taster session=4

Completed 6-month follow-up=1352 (77.3%)
  Telephone interview=1170 (66.9%)
  Postal qs=127 (7.3%)
  Basic=55 (3.1%)

Lost to follow-up=396 (22.7%)
  Declined to complete=43 (2.5%)
  Deceased=3 (0.2%)
  No contact =350 (20%)

1 Of total potentially eligible and sent invitation = 106,463
2 Of total potentially eligible and sent invitation minus total willing but not eligible = 104,589