

Feasibility of a national longitudinal study ('The Smoking Toolkit Study') to monitor smoking cessation and attempts at harm reduction in the UK

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Summary

Background and aims

- It is important to have accurate and timely information at a national level of key markers of progress in smoking cessation to guide policy and achieve desired reductions in smoking prevalence and overall tobacco-related harm.
- This report describes the findings from a study assessing the feasibility and value of undertaking a large longitudinal study of smokers to monitor key national performance indicators on smoking cessation and attempts at harm reduction: the ‘Smoking Toolkit Study’ (STS). The STS could also provide a unique scientific toolkit for understanding the natural history of tobacco use and tobacco dependence.
- The pilot research aimed to: 1) test the methodology proposed for the STS in terms of its ability to generate a sample representative of smokers in key respects and the appropriateness of the proposed questionnaire structure and wording; 2) assess cost options for the full study; 3) within the limits of the sample size and length of follow-up, produce substantive findings on patterns of smoking, quitting and smoking reduction.

Methods

- Questions were added to three weeks of a weekly omnibus household survey carried out by a social research company (BMRB) in April-May 2005 (Baseline Survey). The Baseline Survey collected information from 5356 adults aged 16 to 74 years in England¹ on smoking patterns and the most recent attempt to stop smoking. It identified 901 current smokers willing to take part in further research. These were sent a postal questionnaire on smoking and smoking cessation patterns in July-August 2005 (Wave 1). Of these 450 were also asked to provide a saliva sample for analysis of the nicotine metabolite, cotinine. A total of 329 people returned the questionnaire and 93 usable saliva samples were obtained. A similar questionnaire was sent in November-December 2005 (Wave 2) to those who responded to Wave 1 with saliva samples were requested from those who had been asked for samples in Wave 1; 271 questionnaires were returned including 74 usable saliva samples.

Results

- Once weights had been applied to correct for known sampling biases, the Baseline Survey produced demographic and smoking data that were similar or identical to those produced by weighted data from the General Household Survey. The smoking prevalence was 25% and the average consumption was 15 cigarettes per day. The response rate to the Wave 1 questionnaire was low and this sample had a slight excess of respondents who were single and women. The average cigarette consumption was slightly higher and they were slightly older. No bias was evident in the proportion who had tried to stop smoking in the past year or the proportion of smokers from a manual occupational group. There was no further evidence of bias in Wave 2 of the sample providing usable saliva specimens. The procedure for collecting saliva samples worked reasonably well but there was a loss of approximately one third of sample because of insufficient saliva volume or contamination.
- In the Baseline Survey the proportion of respondents who had smoked in the past year that made at least one quit attempt in the year was 41%. However, comparison of reports of quit attempts at Wave 1 and Wave 2 provided evidence of significant non-reporting of quit attempts made more than 3 months ago. Thus 11% respondents at Wave 2 reported making a quit attempt in the 3 months leading up to Wave 1 whereas 26% percent of the same respondents reported making quit attempts at Wave 1 in the 3 months preceding that wave. The most likely explanation for this non-reporting is forgetting.
- Using data from the preceding 3 months prior to the Wave 1 and Wave 2 surveys it is apparent that almost half of those making a quit attempt in a 6 month period made multiple quit attempt

¹ The feasibility study was undertaken in England but the full study would use a sample from the UK

and the mean annualised rate of making quit attempts based on the 3-month recall was about 1.5 per smoker (including *all* smokers).

- Respondents appeared to be able to answer questions relating to the characteristics of quit attempts as formulated in the postal questionnaire. There was little missing data and few 'don't know' responses. Almost 50% of quit attempts involved some form of assistance including 24% NRT over-the-counter and 11% NRT on prescription; 36% of attempts involved gradual reduction and 38% percent were initiated as soon as the decision to quit was made; 26% were triggered by concern over future health, 15% were triggered by advice from a health professional, 14% by a decision that smoking was too expensive and 10% by a current health problem.
- Analysis of data from the two waves indicated that very few smokers were able to stop for more than a few weeks. Of 271 smokers at the Baseline Survey followed up at Wave 1 and Wave 2 only 8 (3%) reported being non-smokers at both follow-ups.
- Data from the follow-up surveys revealed a very striking source of bias in retrospective reports of cessation attempts. It was apparent that non-reporting (forgetting) of quit attempts was strongly related to how long these lasted. It was estimated about approximately 80% of quit attempts that last less than 1 day are forgotten after a week; about 50% of those lasting between 1 day and 1 week are forgotten after 1 month and about 20% of quit attempts that last between 1 week and 1 month are forgotten after 2 months.
- The small sample size and short follow-up limit conclusions regarding factors associated with the success of quit attempts. However, in quit attempts made between 1 month and 3 months ago, those that involved NRT over-the-counter or on prescription were more likely to last at least 1 month than those that were unaided – a relationship that was not attributable to recall bias.
- A majority of smokers reported attempting to cut down their smoking at both waves. The proportion of these using NRT to help them do this appeared to increase from Wave 1 to Wave 2 (9% to 17%) which may reflect publicity and marketing of use of nicotine gum and inhaler as an aid to cutting down prior to cessation between the two surveys.
- This study provided rare data on the stability of cigarette consumption and unique data on stability of nicotine intake and nicotine dependence in population samples over the medium term. Cigarette consumption and nicotine dependence measured by FTND were very stable over the period ($R \geq 0.8$) and saliva cotinine was also moderately stable ($R=0.7$).

Comment and recommendations

- The feasibility study indicated that it is possible to obtain valuable data on key smoking cessation parameters (rate of quit attempts, methods used in those quit attempts and success rates of quit attempts). However two factors need to be addressed. The first is the very low response rate to the postal questionnaire and the second is the non-reporting (probably because of forgetting) of failed quit attempts made even as little as a week ago. These issues can be addressed by a modification to the current design and an adjustment to correct for forgetting.
- A proposed modified design of the Smoking Toolkit Study involves using omnibus household surveys to collect all data relating to smoking characteristics and use the follow-up postal questions to collect data on the success of quit attempts. The Baseline Surveys each year would need to be conducted at least quarterly and if resources were available ideally monthly to enable accurate calibration of the adjustment for forgetting of quit attempts. Follow-up surveys could be carried out by postal questionnaire quarterly for 1 year after each wave of the Baseline Survey. Saliva cotinine concentrations could be collected at the baseline survey and postal questionnaires. The minimum running cost of the STS is estimated at £100K per year yielding a sample of approximately 2300 per year and the full scale study would cost an estimated £300K per year yielding approximately 7000 respondents per year.
- The prospects for obtaining a longer-term cohort of smokers needs to be reconsidered in the light of the low follow-up rate.

Introduction

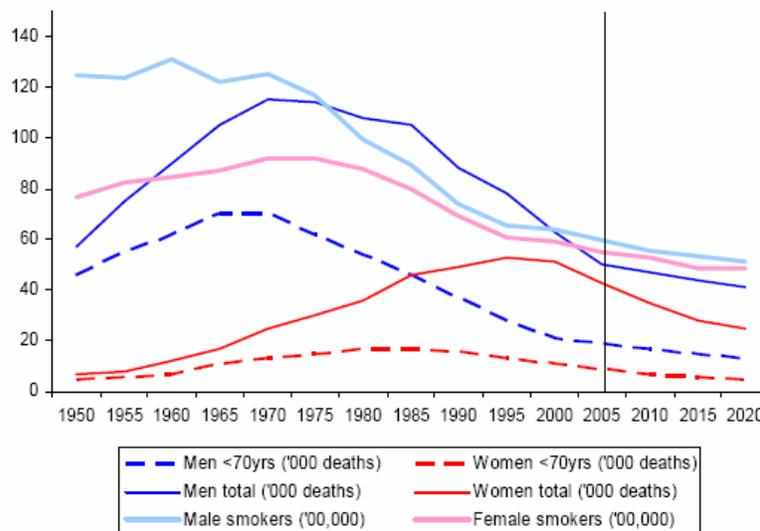
This report presents the findings from a study designed to assess the feasibility of, and most appropriate methods to use in, conducting a national longitudinal study aimed at providing essential ongoing information on national rates of smoking cessation and attempts at harm reduction, and providing a basis for answering fundamental scientific questions about factors that influence these activities.

Smoking cessation in the UK

In the UK cigarette smoking leads to approximately 90,000 premature deaths each year and some 30,000 in individuals under 70 years of age (1). In addition, it blights the lives of smokers causing significant reductions in quality of life (2). Smoking prevalence is considerably higher in low income smokers and this has led to a substantial and growing disparity in health between higher and lower income groups (3).

Progress in reducing smoking prevalence is slow. Prevalence in the UK is estimated at 26% and falling at approximately 0.4% per year, less in low income smokers (4). At the current rate of progress it will still be 20% in the year 2020, the death toll will be more than 70,000 per year for the foreseeable future, and the disparity according to income will be greater than it is at present (Figure 1).

Figure 1: Trends in numbers of smokers and smoking-related deaths in the UK 1950-2020. Mortality data to 2000 are drawn from Peto and Lopez (1). Figures on numbers of smokers are drawn from ONS and Tobacco Advisory Council estimates of smoking prevalence combined with population trends (www.oheschools.org/ohesch6pg2.html and www.optimumpopulation.org/opt.more.ukpoptable.html to calculate the number of adults aged 16 and over).

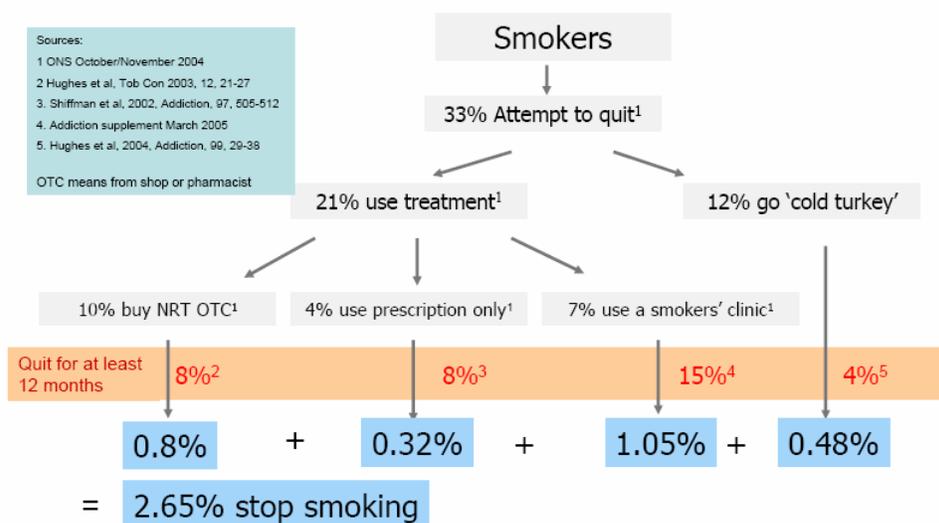


The UK government has set a reduction in smoking prevalence as a high priority (5). The strategy to achieve this is focusing on prohibiting promotion of tobacco, health warnings on cigarette packets, combating tobacco smuggling, mass media campaigns and advice from health professionals to encourage smokers to try to stop, banning smoking in indoor public places and improving access to treatment to aid cessation. Tax increases above the rate of inflation have been used in the past but do not currently appear to be part of the government's strategy.

The need for better indicators of population smoking cessation rates

This strategy requires timely and accurate information on key indices of progress, particularly: the rate at which smokers attempt to stop, the rate at which those attempts use aids that are believed to be effective, and the success of those attempts as a function of use of those aids. Figure 2 shows an attempt to estimate key cessation parameters for the latest year for which figures are available.

Figure 2: Estimated pathways to smoking cessation in the UK in 2004. These figures are broad estimates and subject to bias and error because of the nature of the studies used and the sample sizes



Given the importance of smoking cessation in particular groups (e.g. low-income smokers), it is essential to have a sufficient sample size to be able to estimate these smoking cessation indicators in these groups. Smoking cessation rates may vary according to age, gender, ethnic group, and income, education or SEG; changes in population demographics may therefore create spurious changes in cessation rates.

Also, interpreting these figures requires information on the smokers and their circumstances. Of particular importance are smoker characteristics that may influence exposure to different forms of intervention, use of different types of cessation aid and/or success rates. For each quit attempt it would be of value to ask about explicit triggers. It will also be important to assess characteristics that relate to motivation to stop smoking and difficulty in succeeding in stopping smoking. Factors associated with difficulty in stopping smoking have been relatively well explored and include (other than demographics) a marker of dependence (such as salivary cotinine or Fagerstrom Test for Nicotine Dependence) (6).

The parameters in Figure 1 are at best very approximate and potentially subject to bias because they are based on small cross sectional samples and extrapolation from a number of different sources, including clinical trial data on the effectiveness of different aids to cessation. Because of the nature of the data on which they are, they also assume that the large majority of smokers who attempt to stop in a given year make only one significant quit attempt in that year.

The major national surveys (e.g. the Health Survey for England, the Smoking Attitudes Survey and the General Household Survey) and cohorts (e.g. the 1959 British Birth Cohort Study) do not collect information that would be required to obtain these indicators. Cross sectional surveys cannot be used to assess the success rates of quit attempts because of extensive recall bias and the existing survey does not ask the questions that would be needed to provide direct estimates of the parameters

relating to individual quit attempts. The major national cohorts do not ask the required questions and the follow-up is too infrequent. Table 1 shows the required indicators and issues relating to their assessment.

Table 1: Key smoking cessation performance indicators and issues in their assessment

Indicator	Issues
1. Quit attempts per 1000 smokers in the past 12 months. Calculated from: a) Proportion of smokers making at least one serious attempt to stop for good in the past 12 months, b) The number of serious attempts to stop among those making attempts	Can be obtained from cross sectional surveys but subject to some recall bias and variation in interpretation of what counts as a quit attempt. The definition of a quit attempt needs to be more precise than that in current use which is subject to highly variable interpretation. Also need to consider the issue of spacing of quit attempts in that 45% of smokers making an average of 1 quit attempt may be more useful than 30% of smokers making an average of 1.5 quit attempts.
2. Use of aids to cessation in the past 12 months. Calculated as the proportion of quit attempts that involve use of each type of aid.	Needs to be obtained for each quit attempt and each of the main types of aid including: nicotine replacement therapy (NRT) bought over the counter, NRT received on NHS prescription, bupropion (Zyban), face-to-face support in an NHS stop-smoking group, face-to-face individual support from an NHS advisor and telephone counselling. Current surveys and cohorts do not allow linkage between specific quit attempts and use of cessation aids. This can be complicated but has been successfully achieved in the field of road safety research where circumstances of accidents have been obtained retrospectively for up to 3 accidents in the past 12 months. This can be obtained by cross sectional surveys although over periods longer than about 3 months this may be subject to bias and error.
3. Proportion of 'successful' quit attempts. Calculated as a total and separately for quit attempts using each form of assistance (e.g. NRT bought over the counter, NHS smokers group).	A successful quit attempt has to be defined operationally but must involve an extended duration of abstinence. Six months of continuous abstinence appears to be optimal because the rate of relapse after that appears to be predictable and so estimation of permanent cessation is possible. This rules out simply using the proportion that have stopped smoking within in the past year because most of these will only have stopped in the past few days or weeks. When calculating the successful quits attributable to use of different forms of assistance (face-to-face support, NRT etc.) it is essential to be able to match each attempt with a form of assistance used and a duration of success. To acquire these data using cross sectional surveys would be unrealistic because of the likelihood of bias and error in recall going back over a period of more than a few months.

There are two multi-national cohort studies that collect information close to what is required. One is the International Tobacco Control (ITC) survey (for initial publications see 7, 8). Unfortunately, although this survey collects valuable information on cessation the questions are not structured in such a way as to allow the rate parameters to be estimated, the sampling method (random digit telephone dialling) may lead to some bias and the sample size for the UK is too small to achieve adequate precision on parameters relating to recent cessation attempts. The other is the ATTEMPT cohort (9). As with the ITC survey, because the characteristics of each quit attempt are not obtained it does not allow direct estimation of key parameters and it uses an internet sample which, although it has been found to be similar to other national samples in terms of most demographic indicators may not be sufficiently representative. In addition the ATTEMPT cohort is limited to smokers of 35 to 65 years who smoke 5 or more cigarettes per day and who at baseline indicated an intention to quit within the next 6 months. The ATTEMPT cohort is also too small to achieve the required level of precision of parameters estimation.

The need for harm reduction indicators

While reducing smoking prevalence remains the primary goal, attention is also being turned to less harmful ways that people can obtain the nicotine that they appear to want (10). Cross-sectional surveys show that, controlling for relevant confounders, smokers of cigarettes with lower machine-

smoked yields do not ingest less nicotine (11) but short-term studies of switching to lower yielding cigarettes have found some reduction in smoke intake and it has been argued that changes in the composition of cigarettes have been responsible for part of the observed reduction in lung cancer incidence (12, 13). There is also evidence that some smokers are using pure nicotine products such as nicotine gum as a partial or complete replacement for cigarettes (14). There have been strong calls for a nicotine regulatory body that could control moves to less harmful nicotine delivery systems.

A majority of smokers are attempting some form of harm reduction, whether it involves smoking lower yielding cigarettes or restricting their consumption (6). It is possible in the future that more widespread use of NRT and increasing restrictions on smoking in public will influence the exposure of smokers to toxins. This may in turn have an impact on smoking-related disease but it may also have an impact on motivation to stop smoking. It will be essential to assess activities that are designed to reduce smoke exposure and corresponding saliva cotinine concentrations (15). A longitudinal study is necessary to assess the temporal stability of nicotine intake and interdependencies among harm reduction attempts at one time and cessation attempts at another.

Manner of quitting

Aside from the use of aids to quitting, it is possible that the manner of quitting may play a role in its success. It has been assumed until now that success is improved by planning a quit date in advance and making mental and other preparations for that quit date, such as keeping a smoking diary. There has never been any evaluation of this. It is also assumed by many that smokers go through a series of 'stages' from not thinking about quitting, to planning to quit at some time in the distant future, to planning to quit in the near future before making the quit attempt. This has never been tested and a recent study suggests that planning ahead is neither very common nor necessarily beneficial (16). This needs to be evaluated properly in population studies.

It has also been assumed that smokers should stop abruptly rather than attempt to 'cut down' first. In fact cutting down as a prelude to quitting appears to be relatively common (6). In 2005, Pfizer gained approval in the UK and a number of other countries to allow them to promote nicotine gum and inhaler to help smokers to cut down with a view to quitting. The public health goal was to bring more smokers to attempt to quit in a given time period and improve their chances of success. This initiative and other like it that may follow will need to be carefully studied to see how far their goals are met. This requires a longitudinal study of a nationally representative sample.

The need for a scientific toolkit

Surprisingly little is known about basic issues such as the stability of nicotine intake over periods of months or years, changes in nicotine intake in individuals as a function of changes in cigarette consumption or brand of cigarette smoked, short and medium term changes in broad health status as a function of changes in smoking status, and the role of health status in provoking quit attempts and the success of those attempts. Figures are widely promulgated about the average number of attempts required for success at quitting but this is reliant on recall data of highly questionable validity. Similarly, the effect that making an unsuccessful quit attempt has on the success of subsequent quit attempts can only be guessed at using current data because they rely on retrospective reports and an imprecise question. Genetic influences on smoking patterns, nicotine intake, cessation attempts and the success of these attempts are only now beginning to be explored (17). A longitudinal study is needed to provide these data.

The Smoking Toolkit Study (STS)

There are the many different approaches to design of a longitudinal study. The obvious method is to recruit a sample at a given time and then follow up this sample. This approach would not provide the required information, however. Many of the parameters require a sample of current smokers.

Following a sample of smokers recruited at the beginning of the study would not meet this objective because of loss to follow-up, the loss to the sample of smokers who stop smoking and a failure to account for people who become smokers at time points later in the follow-up period who were non-smokers at the beginning (e.g. because of relapse).

It is therefore necessary to assess key parameters relating to rates at which smokers attempt to stop and the use of aids to cessation through repeated cross sectional surveys. Parameters relating smoker characteristics to subsequent quit attempts and parameters concerning the success of the quit attempts can then be assessed through follow-up of each of these samples. These follow-ups would also provide the information on factors relating to changes in smoking patterns, including smoking reduction, and stability of nicotine intake.

The proposed STS involves a succession of cross sectional surveys with follow-ups for the purposes of studying national key parameters relating to smoking and smoking cessation. The sample must be large enough to allow estimation of these parameters with adequate precision in important subsamples. The frequency of initial survey and follow-up must be sufficient to minimise recall bias relating to quit attempts. The method of initial recruitment must allow confidence that with appropriate weighting procedures it is nationally representative. The questions must permit estimation of the rate of quit attempts, and characteristics of each quit attempt.

One method of achieving this is to obtain the initial sample of smokers through inclusion of items in one of the national omnibus household surveys used for social research and then to follow up the sample with postal questionnaires. However, it is not clear whether this method would yield representative samples or data of sufficient quality. Therefore, a pilot study was designed to examine this.

Objectives of the Smoking Toolkit Pilot (STP)

The objectives were:

1. To assess the representativeness of a national sample of smokers recruited by means of an omnibus household survey and followed up by postal questionnaire
2. To evaluate a method of gathering information relating to individual quit attempts
3. To assess the feasibility of obtaining saliva samples by post to be analysed for cotinine concentration
4. To provide preliminary estimates of key smoking cessation indicators in 2005
5. To address a number of questions about smoking patterns and nicotine intake, such as the stability of nicotine intake over time as measured by saliva cotinine concentrations.

Methods

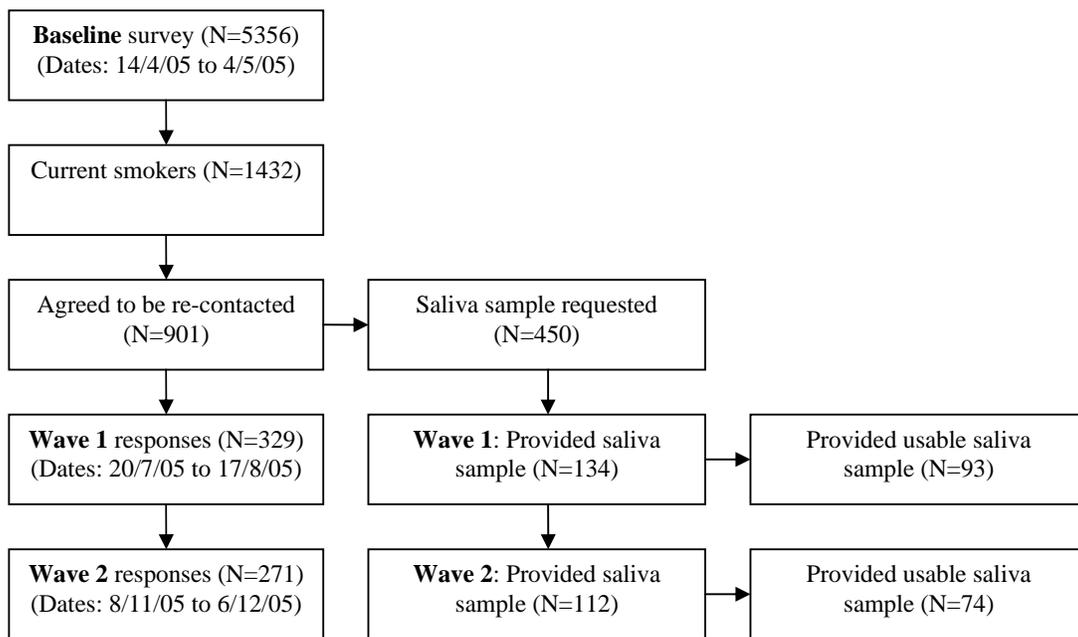
The pilot study aimed to recruit a sample of smokers using a cost-effective method that could be representative in key respects of the national population; administer a postal questionnaire 3 months later on smoking patterns; collect saliva samples by post for cotinine assays; and follow the sample up 3 months after that with a similar questionnaire and saliva samples.

Sample acquisition

Figure 3 shows the data acquisition process. The sample was generated by including a question on smoking status in three consecutive waves of the BMRB omnibus 'Access' survey. Participants in these weekly surveys are routinely asked whether they are willing to take part in further research. Those smokers that indicated that they would were approached 3 months later by letter inviting them to take part in the STP and the questionnaire for the first wave was included. Half of these were randomly selected to be sent in the same envelope a kit for collection of saliva which could then be returned and analysed for cotinine. The purpose of sending the saliva sample request to a

randomly selected half of the prospective participants was to determine whether this would reduce response rates. It was made clear in the covering letter that respondents could if they wished complete the questionnaire and not provide the saliva sample. A high-street voucher to the value of £5 was offered for returned questionnaires. Three months later, respondents to the first wave questionnaire were sent the second wave questionnaire and those that had been invited to provide a saliva sample were again invited to do so. A high-street voucher of £5 was again offered for completed questionnaires. For the postal questionnaires one reminder was sent.

Figure 3: Data acquisition in the Smoking Toolkit Pilot (STP)



Measures and materials

Appendices 1, 2 and 3 show the questions used in collecting the initial sample of respondents (Baseline), the first postal questionnaire (Wave 1) and the second postal questionnaire (Wave 2).

Appendix 4 shows the letters used to invite participation in the first wave. One version was used for those being asked to provide saliva samples and another for those not being asked. Appendix 5 shows the letters used for Wave 2.

Analysis

Frequencies and percentages were calculated for categorical variables and means and standard deviations for quantitative variables. Comparisons between proportions were assessed for statistical significance by chi-squared tests and comparisons between means by t-tests or analyses of variance. Associations between quantitative variables were assessed using Pearson's product moment correlation coefficient or Spearman's rank order correlation coefficient. Prediction of binary outcome variables such as abstinence was undertaken using logistic regression.

Data from the baseline sample were weighted using weights provided by BMRB to take account of selection biases in favour of females over males, low socioeconomic status and older age in their omnibus samples.

Results

Sample representativeness

Table 2 shows the demographic and smoking characteristics of the baseline sample. The smoking prevalence of the weighted sample was identical to the prevalence from the weighted sample of the English sample in the 2004-5 General Household Survey (18). The percentage of men was slightly higher in our weighted sample at 49% versus 47% in the English part of the GHS (see Table 8.9 of Goddard et al). The percentage married or cohabiting was identical to the GHS figure for Britain as a whole at 62% (the GHS figure for England is not published).

Table 2: Comparison of measures taken at baseline in the Toolkit sample with Health Survey for England

	Baseline sample (unweighted)	Baseline sample (weighted)
N	5356	5351
Percent (N) male	44 (2357)	49 (2610)
Mean (SD) age	47 (18.6)	46 (18.5)
Percent (N) married or living as married	60 (3195)	62 (3309)
Percent (N) manual occupation: social grade D or E	33 (1777)	25 (1431)
Percent (N) who had smoked in the past year	30 (1593)	28 (1490)
Percent (N) current smokers	27 (1432)	25 (1331)
Percent (N) reporting having attempted to stop within the past year (out of those who had smoked in past year)	41 (655)	42 (628)

Out of 1432 current smokers at baseline, 901 indicated that they would be prepared to be re-contacted. Of these 329 responded to the Wave 1 postal questionnaire. Of these 271 responded to the Wave 2 questionnaire.

Table 3 shows the characteristics of those that responded at Wave 1 and Wave 2 compared with the full Baseline sample. Respondents were older, smoked more cigarettes per day, less likely to be male and less likely to be married or living as married than non-respondents, but the differences were small. The average cigarette consumption of the baseline sample (14 per day) was the same as that found in the General Household Survey (18).

Table 3: Comparison of measures taken at baseline in respondents to Wave 1 and Wave 2 with baseline sample of smokers

	Baseline sample of smokers	Wave 1 sample	Wave 2 sample
N	1432	329	271
Mean (SD) cigarettes per day	14 (8.5)	15 ¹ (8.7)	15 ¹ (8.9)
Percent (N) male	47 (673)	40 ¹ (131)	41 ¹ (112)
Mean (SD) age	42 (16.6)	44 ¹ (16.6)	45 ¹ (16.0)
Percent (N) married or living as married	52 (742)	47 ¹ (156)	48 ¹ (130)
Percent (N) manual occupation	43 (616)	44 (146)	41 (111)
Percent (N) reporting having attempted to stop within the past year	35 (499)	36 (117)	33 (90)

¹Significant difference between respondents and those in the baseline sample that did not respond, $p < .05$ by chisquared test for proportions and t-test for means.

Half of the baseline samples who had agreed to be re-contacted were randomly selected to be requested to provide a saliva sample for cotinine analysis. Table 4 shows that those who responded and provided a sample were similar to the Wave 1 and Wave 2 samples as a whole except that at Wave 1 slightly more reported having attempted to stop prior to the baseline questionnaire.

Table 4: Measures taken at baseline in respondents who provided saliva samples for cotinine analysis in Wave 1 and Wave 2

	Wave 1 cotinine sample	Wave 2 cotinine sample
N	134	112
Usable samples (N)	93 (69)	74 (66)
Percent (N) male	40 (52)	39 (41)
Mean (SD) age	44 (16.9)	45 (16.7)
Percent (N) married or living as married	44 (57)	45 (47)
Percent (N) non-manual occupation	43 (56)	39 (41)
Mean (SD) cigarettes per day	15 (9.0)	15 (9.0)
Percent (N) reporting having attempted to stop within the past year	43 ¹ (56)	40 (42)

¹Significant difference between respondents and those in the baseline sample that did not respond, $p < .05$ by chisquared test.

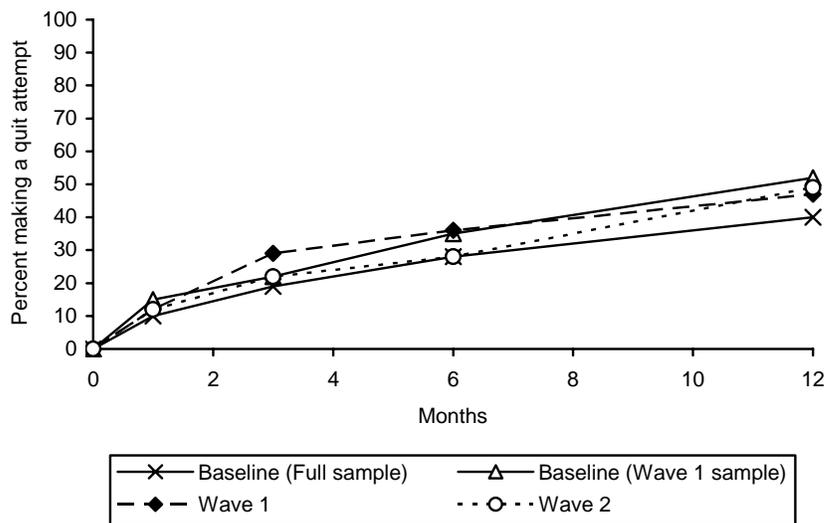
Collection of saliva samples

The procedure for collecting saliva samples appeared to work reasonably well but approximately one third of samples were not usable because of insufficient sample volume or contamination (Table 4).

Attempts to stop smoking

The proportion of smokers making at least one quit attempt over the past 1 month, 3 months, 6 months and 12 months was calculated for the baseline sample who had smoked in the previous year. Figure 4 shows that about 10 percent said they had made an attempt in the past 1 month and this figure rose to 41 percent over the past year. Restricting the sample to those that responded at Wave 1, it is apparent that smokers in this latter sample was attempting to quit at a higher rate: 15 percent in the past 1 month rising to 52 percent in the past 12 months. The figures obtained from the Wave 1 and Wave 2 postal questionnaires were similar.

Figure 4: Cumulative percentage of smokers making quit attempts in past 1 month, 3 months, 6 months and 12 months



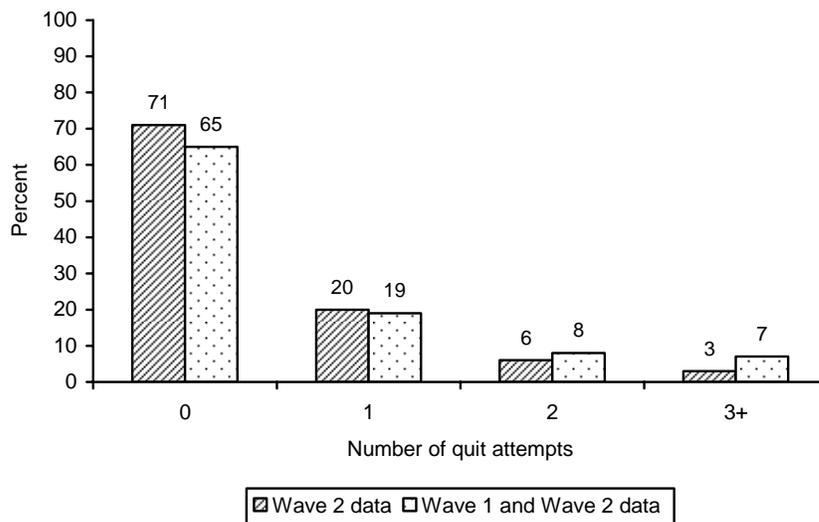
The rate at which smokers tried to quit in the 3 months prior to Wave 1 was positively correlated with rate of trying to quit in the 3 months prior to Wave 2: spearman's rank order correlation (ρ)=0.44, $p < .001$. The odds of making one or more quit attempts in the 3 months leading up to Wave 2 were 9.0 times higher if the smoker had tried to quit in the 3 months preceding the Wave 1 follow-up ($p < 0.001$). This goes some way towards explaining why the cumulative percentage of

those making quit attempts over different periods flattens of: it is because many of the quit attempts made over different time periods are being made by the same people.

There is another possible reason for the flattening of the cumulative incidence curve for quitting; people may forget their quit attempts. We attempted to assess this by calculating the proportion of smokers at Wave 2 who reported making one or more quit attempts between 3 and 6 months earlier and compared this with the same respondents who reported making at least one quit attempt in the past 3 months at Wave 1. The figures were 11% and 27% respectively. At least some of this may be related to misremembering exactly when quit attempts took place but the difference is so large that it seems likely that there is substantial forgetting of quit attempts after 3 months.

Figure 5 shows the distribution of number of quit attempts over the 6 months preceding Wave 2 taken from responses to the Wave 2 questionnaire and by adding quit attempts made in the past 3 months reported at Wave 2 and at Wave 1. Again, it is apparent that more quit attempts are reported when two 3-month periods are combined than when one 6-month period is used.

Figure 5: Numbers of quit attempts made over 6 months preceding Wave 2 assessed using 6-month from Wave 2 and by using 3-month recall from Wave 1 added to 3-month recall from Wave 2



At Wave 1 and Wave 2, smokers were asked how many quit attempts they had made and when they had made them. From this it was possible to calculate the number of quit attempts made over different time periods. Because of evidence of forgetting beyond 3 months, Table 5 shows the mean annualised quit rates based on the 1 month and 3 months prior to the Wave 1 and Wave 2 follow-ups only. The 1 month and 3 month annualised rates should be similar and in Wave 1 they are. In Wave 2 the 3 month figure is slightly lower. It seems that the rate of quit attempts per year is greater than 1 per smoker which is due to the fact that those who make quit attempts often make several in a year.

Table 5: Mean (SD) annualised rate of attempts to stop smoking based on number of quit attempts in past 1 month and 3 months

	Wave 1	Wave 2
Based on previous 1 month	1.5 (4.7)	1.7 (4.8)
Based on previous 3 months	1.5 (2.8)	1.2 (2.4)

There was some evidence that respondents from more lower socio-economic groups were making quit attempts more frequently. At Wave 1 the mean rates of quit attempts within the past month

ranged from 0.04 for social grades AB to 0.22 for E ($p=0.008$). At Wave 2, the 1 month quit rates ranged from 0.00 to 0.17 for AB to E but the trend was not statistically significant.

Characteristics of quit attempts

The characteristics of quit attempts made within 3 months of the Wave 1 and Wave 2 follow-ups are shown in Table 6. Respondents appeared to understand and be able to use the response format. There was little missing data and relatively few ‘don’t know’ responses.

A total of 42% of quit attempts were aided by medication or the NHS stop smoking services. Just over one third of quit attempts were made through gradual reduction. Almost half of quit attempts were made without any pre-planning. Concern about future health problems was the most common trigger.

Table 6: Characteristics of 204 quit attempts made within 3 months of the Wave 1 and Wave 2 follow ups

a. Use of aids to quitting

	Percent (N)
NRT over the counter	24 (48)
NRT on prescription from GP	11 (22)
Zyban from GP	3 (5)
NHS stop smoking group	2 (3)
NHS stop smoking service one-to-one	2 (3)
NHS telephone helpline	3 (5)
Something else	6 (3)
None of these	42 (85)
Cannot remember/don’t know/not stated	9 (20)

b. Method of cessation

	Percent (N)
Gradual	36 (73)
Abrupt	56 (114)
Cannot remember/don’t know/not stated	4 (7)

c. Planned versus unplanned

	Percent (N)
Decided on quit date in advance	38 (78)
Quit as soon as made the decision	46 (94)
Cannot remember/don’t know/not stated	16 (32)

d. What finally triggered the quit attempt

	Percent (N)
Advice from a GP/health professional	15 (30)
TV advert for a nicotine replacement product	2 (4)
Government TV/radio/press advert	3 (6)
Hearing about a new stop smoking treatment	1 (1)
A decision that smoking was too expensive	14 (29)
Being faced with smoking restrictions	3 (6)
I knew someone else who was stopping	6 (13)
Seeing a health warning on a cigarette packet	1 (2)
Health problems I had at the time	10 (20)
A concern about future health problems	26 (52)
Something else	6 (12)
Cannot remember/don’t know/not stated	14 (29)

Given the previous analysis concerning forgetting of quit attempts, there must be concern about whether the estimates in Table 6 are biased by smokers being more likely to forget particular kinds of quit attempts. For example, it may be that failed quit attempt that uses NRT is less likely to be forgotten than a failed quit attempt that uses no form of assistance. If that is the case, it would lead to an underestimate of the effect of NRT.

The sample size is small but Table 7 shows some tendency for quit attempts made less than a week ago to be reported as involving NRT over-the-counter, to involve cutting down before quitting and to be triggered by GP advice. There was no evidence that quit attempts with other characteristics were more likely to be forgotten.

Table 7: Characteristics of quit attempts made different lengths of time from the point of recall

	Time since quit attempt began			
	<1 week	1-4 weeks	1-2 months	2-3 months
a. Use of aids to quitting				
NRT over the counter	39 (7)	24 (13)	26 (14)	26 (14)
NRT on prescription from GP	11 (2)	9 (5)	13 (7)	14 (8)
No aid	44 (8)	64 (35)	51 (28)	48 (27)
b. Method of cessation				
Cut down before quitting	62 (13)	46 (25)	30 (17)	31 (18)
c. Planned versus unplanned				
Quit as soon as made the decision	56 (10)	68 (32)	39 (21)	59 (31)
d. What finally triggered the quit attempt				
Advice from a GP/health professional	40 (8)	21 (10)	11 (6)	11 (6)
A decision that smoking was too expensive	15 (3)	9 (4)	18 (10)	23 (12)
Health problems I had at the time	10 (2)	17 (8)	13 (7)	6 (3)
A concern about future health problems	30 (6)	30 (14)	32 (18)	26 (14)

There was a suggestion that respondents from lower socio-economic groups were more likely to use aids to cessation: 60% in manual groups versus 50% in non-manual groups. However, the difference was not statistically significant.

Smoking cessation

Looking at the pattern of cessation and relapse over the course of the study in the 271 people who responded to both waves, 4 percent (12) of smokers at baseline reported that they were non-smokers 12 weeks later at Wave 1; 2 percent (4) then became smokers again at Wave 2 and 5 percent (14) of Wave 1 smokers said they were non-smokers at Wave 2. Thus of the 271 smokers at baseline 3 percent (8) reported they were non-smokers at both follow up points. Of these 7 had not smoked at all since before the wave 1 follow up (at least 3 months) (Figure 6). This represents 8% of the 93 respondents that made a quit attempts between baseline and Wave 1. It is apparent that very few smokers stopped for more than 3 months.

These figures do not fully represent the process of cessation and relapse, however, because it is possible for respondents change smoking status more than once between each follow-up. In order to assess how long a given quit attempt is likely to last it is necessary to look at each quit attempt and tabulate the time to relapse.

One complication with this is that at any given follow-up point a proportion of respondents will still not be smoking and so the length of abstinence is indeterminate. This will be greater for quit attempts made more recently. Therefore the abstinence rates can only assessed up to the time when the follow-up takes place. Another complication is that unsuccessful quit attempts made a longer time ago may be more likely to be forgotten. It was already noted that quit attempts made longer than 3 months ago appeared to be less likely to be reported.

Figure 6: Pattern of cessation and relapse at each follow up

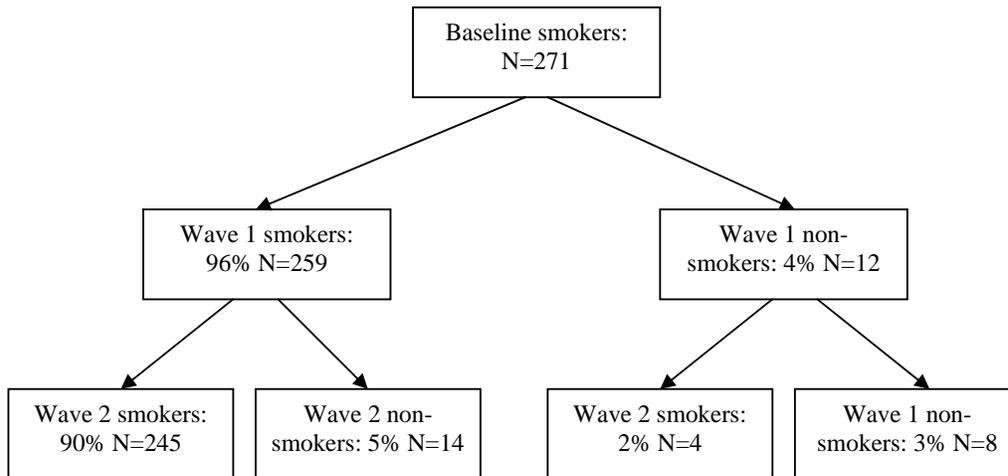
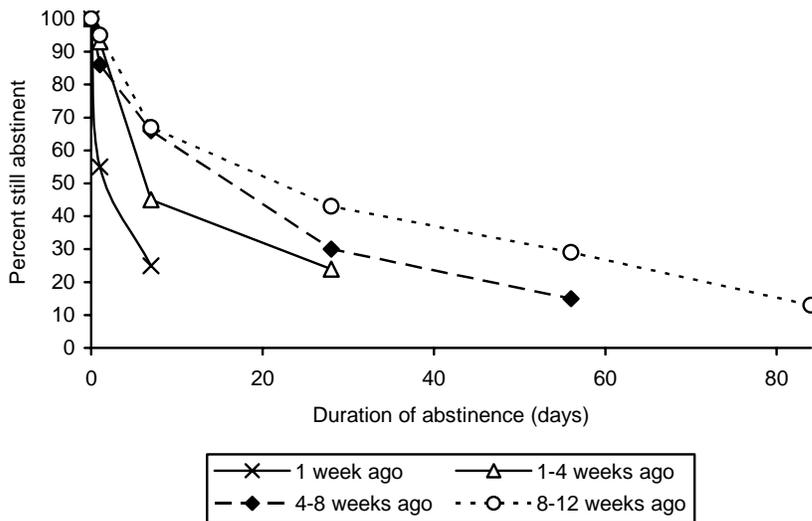


Figure 7 shows that the relapse curves differed according to how long ago the quit attempt was made at the follow-up point. Most strikingly, of quit attempts made within the past week only 55% lasted 1 day and 25% lasted the week, whereas when quit attempts made more than a week ago 80% were reported to last 1 day or more. The numbers are small but this suggests that a high proportion of quit attempts that last less than a day are being forgotten very quickly.

Figure 7: Percentages of quit attempts lasting different lengths of time (relapse curves) stratified by how long ago the quit attempt was made

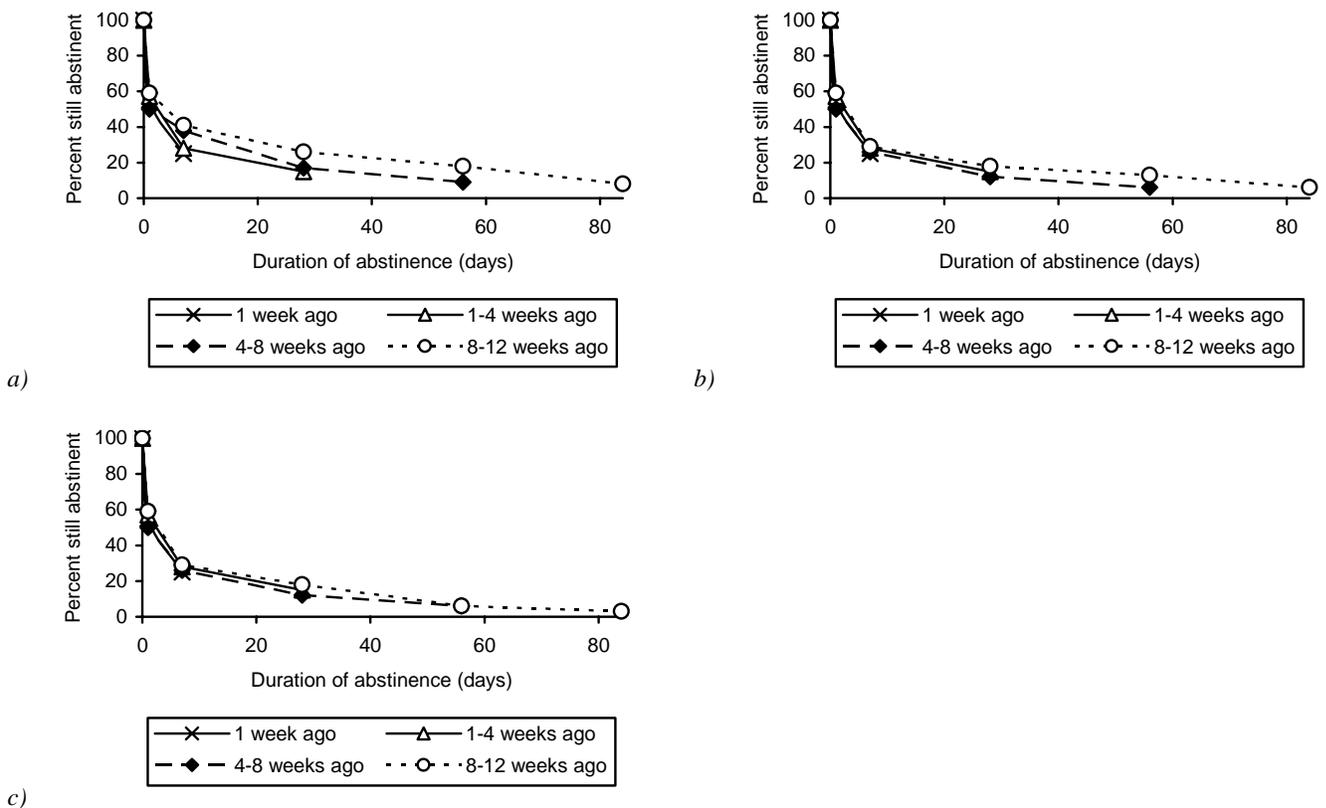


It may be possible to adjust for forgetting in quit attempts made more than 1 week ago. Figure 8a shows the relapse curves from Figure 7 but for the curves relating to quits made more than 1 week ago adjusted to account for an estimated 80% rate of forgetting of quits that lasted less than 1 day. It is clear that the relapse curves based on recall over different time periods converge considerably. However, quit attempts made longer ago still appear to be more successful. The rate of forgetting of quit attempts that lasted less than 1 week was estimated at 50%. Making an adjustment for this produces the relapse curves shown in Figure 8b. Again there is convergence of the relapse curves

but quit attempts made 8-12 weeks ago still appear to be more likely to be successful. A final adjustment was made assuming that 20% of quits lasting less than 1 month are forgotten after 2 months. The resulting relapse curves are shown in Figure 8c. Now the relapse curves based on recall over the differing time period are very close to each other.

These results suggest that there is substantial forgetting of quit attempts with 80% of those lasting less than 1 day being forgotten after 1 week, 50% of those lasting between 1 day and 1 week being forgotten after 1 month and 20% of those lasting between 1 week and 1 month being forgotten after 2 months.

Figure 8: Percentages of quit attempts lasting different lengths of time (relapse curves) stratified by how long ago the quit attempt was made adjusted to take account of forgetting of a) quits that last less than 1 day, b) quits that last less than 1 week, c) quits that last less than 1 month



Adjustment for forgetting resulting in continuous abstinence rates much closer to those found in the prospective analysis (Figure 6) with approximately 3% of attempts lasting at least 3 months.

With the current sample size and short follow-up it was not possible to test for differences in success rates of quit attempts with different socioeconomic groups.

Success of quit attempts as a function of their attributes

The sample size and length of follow-up limit the analyses that can be undertaken. For the purposes of the pilot exercise an attempt was made to determine whether use of NRT over the counter or obtained on prescription but not involving the NHS Stop Smoking Service was associated with quitting for more than 1 month in quit attempts that started between 1 month and 3 months before the follow-up point. There were 42 quit attempts involving use of NRT and 49 involving no aid; 45% of those involving NRT were reported as lasting more than 4 weeks compared with 27% of those not using NRT. In a logistic regression controlling for nicotine dependence as measured by the FTND the odds ratio was 3.2, $p=0.038$. Given the preceding discussion, the absolute success

rates are clearly inflated but there appears to be evidence the NRT use is linked with higher success rates relative to no aid.

It was noted earlier that there appeared to be a tendency to rapidly forget quit attempts made using NRT over-the-counter. This might lead to a biased estimate of the association. The direction of the bias depends on whether the tendency to forget quit attempts using NRT over-the-counter involves failed ones or successful ones. The sample size is too small to draw any firm conclusions but looking just at quit attempts made within the past week 2 out of 7 made with no aid lasted more than 1 day compared with 6 out of 7 made using NRT over-the-counter. This suggests that the advantage of NRT over-the-counter is manifest even in the very short term.

There was no evidence of a tendency for NRT on prescription to be forgotten. In a logistic regression controlling for nicotine dependence as measured by the FTND the odds ratio for success for at least 1 month when using NRT on prescription versus no aid controlling for FTND was 5.0, $p=0.034$.

Smoking reduction

Table 8 shows that a majority of continuing smokers at Wave 1 and Wave 2 reported attempting to cut down. Between Wave 1 and Wave 2, the licence for nicotine gum and inhaler was changed to allow these products to be used to assist cutting down as a prelude to stopping. There was an apparent increase in the proportion of those cutting down who used NRT at Wave 2 but no increase in the proportion cutting down.

Table 8: Prevalence of cutting down and use of NRT to help with cutting down

	Wave 1 (N=282)	Wave 2 (N=224)
Percent (N) cutting down	61 (171)	55 (122)
Percent (N) of those cutting down using NRT	9 (16)	17 (20)
Daily consumption of those cutting down/not cutting down	15/17	14/17 ¹
Saliva cotinine (ng/ml) of those cutting down/not cutting down	322/332 (N=79)	331/278 (N=63)

¹Significant difference between those cutting down and those not by t-test, $p=0.008$.

Stability of markers of smoke intake and cigarette dependence

There is surprisingly little information on the stability of cigarette consumption over a period of months in population samples. We found that this variable was in fact very stable; $R=0.8$, $p<.001$ in all cases for baseline vs Wave 1, Baseline vs Wave 2 and Wave 1 vs Wave 2.

There appear to be no population data on the stability of saliva cotinine concentrations. We found that these were moderately stable for the small sample that provided usable values in both waves: $R=0.7$, $p<.001$. There was no evidence of a significant change from Wave 1 to Wave 2 in the mean (SD) cotinine concentration: 373 (230) ng/ml and 336 (185) ng/ml respectively.

There do not appear to be any data to date on the stability of nicotine dependence as measured by the FTND in population samples. We found that this was in fact very high ($R=0.9$, $p<.001$). The mean (SD) values for Wave 1 and Wave 2 were similar: 3.8 (2.6) versus 3.9 (2.5).

Comment

The feasibility study indicated that the general approach could yield the kind of data required and indeed the present study generated some important novel findings. However, it raised two important methodological issues.

The first issue concerned the low follow-up rate. Although the bias that this created appeared to be small it is a cause for concern and suggests that as much information as possible be collected at the Baseline Survey. It should be possible to collect all information about quit attempts and smokers and recent ex-smokers using this method. However, success of quit attempts will require follow-ups.

The second issue was the surprisingly high rate of what appeared to be forgetting of attempts to stop smoking. The estimated forgetting rate of 80% of attempts that lasted less than 1 day is remarkable. It raises the issue of whether quit attempts that last less than 1 day should be counted. However, to exclude them would create further potential for bias, especially given that such short-lived quit attempts appeared to have particular characteristics. The best solution appears to be to ensure that data are collected with sufficient frequency that quit attempts made within the past week can be canvassed throughout the year and to apply an adjustment for forgetting to obtain the true estimates when it comes to using quit attempts made more than one week ago. The frequency of surveys must be at least quarterly and must generate an annual sample with enough quits made within the 3-month time window for accurate parameters estimation. Monthly surveys would be ideal.

Given the extremely low rate of success of quit attempts, it is vital to ensure that the sample generated each year be sufficiently large to estimate success rates as a function of characteristics of quit attempts. A total annual sample of 2000 would be a bare minimum for this. This would generate an estimated 800 quit attempts of which an estimated 24 would last at least 3 months. A sample of 8000 would generate approximately 3200 quit attempts of which an estimated 96 would last at least 3 months.

The low follow-up rate raises questions about the feasibility of using this method for establishing a cohort of smokers followed up beyond one year. Such a cohort would provide invaluable information on a range of factors but will require further piloting of methods of retaining the sample.

Recommendations for Smokers Toolkit Study

1. The goals of obtaining national incidence rates for quit attempts, triggers of quit attempts, characteristics of quit attempts and demographic, social and environmental correlates of individual incidence rates are achievable by a rolling programme of cross sectional household surveys asking about quit attempts within the past 3 months in a sample from the general population who were smokers 3 months ago. Asking for recall over a longer period creates too much bias. Even so, an adjustment will need to be made for forgetting of quit attempts made more than 1 week prior to the survey.
2. The minimum frequency of the baseline surveys would be quarterly but monthly would be ideal.
3. Having a rolling programme would negate seasonal variation and permit annualisation for the purposes of national performance indicators.
4. Using the social research organisation that carried out the feasibility study a given omnibus survey would be expected to yield approximately 500 respondents who smoke currently or have smoked in the past 3 months. Quarterly use of the omnibus surveys would yield an annual sample size of 2000. This would be a bare minimum for parameter estimation. Monthly baseline surveys would be ideal and would yield 8000 per year. The cost per baseline survey is approximately £15K and the cost of materials for follow-ups and cotinine assays would raise this to £25K per batch of 500 respondents. Thus the minimum running costs of the STS would be approximately £100K per year and the cost of the full sized study would be £400K per year.
5. The goal of assessing the proportion of successful quit attempts as a function of characteristics of smokers and quit attempts (such as gradual versus abrupt cessation, use of NRT etc.) requires follow-up of specific quit attempts in individuals who have been surveyed prior to making the quit attempt. This can be achieved by postal questionnaire carried out quarterly for 1 year.
6. The format of asking about the characteristics of the three most recent quit attempts as used in the pilot appeared to be successful and could be adopted.

7. Collection of saliva samples by post is feasible but there is some loss because of insufficient sample volume and contamination. Better instructions need to be piloted to minimise this problem.

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Appendix 1: Baseline questionnaire

ASK ALL

Q1. Do you smoke cigarettes at all nowadays? (including hand rolled cigarettes)

1. Yes
2. No

ASK IF 2 AT Q1

Q2. How many cigarettes per day do you usually smoke, or if you don't smoke daily how many do you usually smoke per week?

___ per day
___ per week
Other specify___

ASK ALL

Q3. Which of the following best applies to you?

1. I smoke every day
2. I smoke every week but not every day
3. I smoke sometimes but not every week
4. I have given up smoking completely but it was less than a year ago
5. I have given up smoking completely more than a year ago
6. I have never smoked regularly

ASK IF 1, 2, 3 AT Q3

Q4. Have you ever made a serious attempt to stop smoking? By serious attempt I mean you decided that you would try to make sure you never smoked another cigarette?

1. Yes
2. No
3. Don't know

ASK IF 1 AT Q4 OR 4, 5 AT Q3

Q5a) Thinking back to your most recent attempt to give up smoking, how long ago was it?

SHOW SCREEN

1. Within the last week
2. Within the last 2-3 weeks
3. A month ago
4. More than 1 month and up to 2 months
5. More than 2 months and up to 3 months
6. More than 3 months and up to 6 months
7. More than 6 months and up to a year
8. More than one year and up to 5 years
9. Longer than 5 years
10. Don't know

5b) Which of these statements best describes how your most recent quit attempt started:

SHOW SCREEN

1. I did not plan the quit attempt in advance; I just did it.
2. I planned the quit attempt for later the same day
3. I planned the quit attempt the day beforehand
4. I planned the quit attempt a few days beforehand

5. I planned the quit attempt a few weeks beforehand
6. I planned the quit attempt a few months beforehand
7. None of these (other specify)

8. I can't remember

5c) How long did your most recent quit attempt last?

SHOW SCREEN

1. Less than a day,
2. More than a day but less than 3 days,
3. More than 3 days up to a week,
4. More than a week up to a month
5. More than 1 month and up to 2 months
6. More than 2 months and up to 3 months
7. More than 3 months and up to 6 months
8. More than 6 months and up to a year
9. More than one year and up to 5 years
10. More than 5 years
11. Don't know
12. I am still not smoking

Appendix 2: Wave 1 postal questionnaire

How to fill in this questionnaire:

Please put a **cross** in the appropriate box to indicate your answer [X]. If you have made a mistake in your answer, please completely fill a box to show the mistake [■] and then cross the correct answer. You will need to use **blue or black ink**.

Your responses are important to us even if you are not interested in stopping smoking or have never tried to stop.

- Do you smoke cigarettes at all nowadays? (including hand rolled cigarettes)

(1)

 Yes 1 - **GO TO Q2**
 No 2 - **GO TO Q3**
- How many cigarettes per day do you usually smoke, or if you don't smoke daily how many do you usually smoke per week?

Write in the number you smoke using the boxes provided

 Per day (2-3) - **GO TO Q3**
 Per week (4-6) - **GO TO Q3**
- Have you made a serious attempt to stop smoking in the past 12 months? By serious attempt I mean you decided that you would try to make sure you never smoked another cigarette? Please include any attempt that you are currently making.

(7)

 Yes 1 - **GO TO Q4**
 No 2 - **GO TO Q6**
- How many serious quit attempts to stop smoking have you made in the last 12 months? (Choose **one** option only)

(8)

1 attempt	2 attempts	3 attempts	More than 3 attempts	Don't know
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Please fill in the next section if you have made ANY serious attempts to quit smoking in the last year. For each quit attempt please answer the following questions, starting with the column on the left.

5a How long ago did your quit attempt start? (Choose **one** from the list for each of your quit attempts)

	Most recent quit attempt	Next most recent quit attempt	Third most recent quit attempt
In the last week	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
More than a week up to a month	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
More than 1 month and up to 2 months	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
More than 2 months and up to 3 months	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4
More than 3 months and up to 6 months	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5
More than 6 months and up to a year	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6
Can't remember	<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7
	ONE CODE ONLY	ONE CODE ONLY	ONE CODE ONLY

5b How long did your quit attempt last before you went back to smoking? (Choose **one** from the list for each of your quit attempts)

	(12) Most recent quit attempt	(13) Next most recent quit attempt	(14) Third most recent quit attempt
Still not smoking	<input type="checkbox"/> 1		
Less than a day	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
Less than a week	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
More than 1 week up to a month	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4
More than 1 month to up to 2 months	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5
More than 2 months up to 3 months	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6
More than 3 months up to 6 months	<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7
More than 6 months up to 1 year	<input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8
Cannot remember	<input type="checkbox"/> 9	<input type="checkbox"/> 9	<input type="checkbox"/> 9
	ONE CODE ONLY	ONE CODE ONLY	ONE CODE ONLY

5c Which if any of the following did you try to help you stop smoking? (Choose **any that apply** for each quit attempt)

	(15) Most recent quit attempt	(16) Next most recent quit attempt	(17) Third most recent quit attempt
1. Nicotine replacement product (e.g. patches/gum/inhaler) without a prescription	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
2. Nicotine replacement product on prescription or given to you by a health professional	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
3. Zyban (bupropion)	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
4. Attended an NHS Stop Smoking Service group	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4
5. Attended an NHS Stop Smoking Service one to one counselling session	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5
6. Smoking helpline such as NHS smoking helpline or Quitline etc	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6
7. Something else: Please write in			
8. None of these	<input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8
9. Cannot remember	<input type="checkbox"/> 9	<input type="checkbox"/> 9	<input type="checkbox"/> 9

5d Did you cut down the amount you smoked before trying to stop completely? (Choose **one** response for each quit attempt)

	(18) Most recent quit attempt	(19) Next most recent quit attempt	(20) Third most recent quit attempt
Cut down first	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
Stopped without cutting down	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
Cannot remember	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
	ONE CODE ONLY	ONE CODE ONLY	ONE CODE ONLY

5e Please circle which applies to each quit attempt. (Choose **one** response for each quit attempt)

	(21) Most recent quit attempt	(22) Next most recent quit attempt	(23) Third most recent quit attempt
I planned the quit for later the same day or for a date in the future	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
I tried to quit as soon as I made the decision	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
	ONE CODE ONLY	ONE CODE ONLY	ONE CODE ONLY

5f What **finally triggered** the quit attempt? (Choose **one** from the list for each quit attempt)

	(24) Most recent quit attempt	(25) Next most recent quit attempt	(26) Third most recent quit attempt
1. Advice from a GP/health professional	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
2. TV advert for a nicotine replacement product	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
3. Government TV/radio/press advert	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
4. Hearing about a new stop smoking treatment	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4
5. A decision that smoking was too expensive	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5
6. Being faced with smoking restrictions	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6
7. I knew someone else who was stopping	<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7
8. Seeing a health warning on cigarette packet	<input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8
9. Being contacted by my local NHS Stop Smoking Services	<input type="checkbox"/> 9	<input type="checkbox"/> 9	<input type="checkbox"/> 9
10. Health problems I had at the time	<input type="checkbox"/> 10	<input type="checkbox"/> 10	<input type="checkbox"/> 10
11. A concern about future health problems	<input type="checkbox"/> 11	<input type="checkbox"/> 11	<input type="checkbox"/> 11
12. Something else please write in	<input type="checkbox"/> 13	<input type="checkbox"/> 13	<input type="checkbox"/> 13
13. Cannot remember	<input type="checkbox"/> 13	<input type="checkbox"/> 13	<input type="checkbox"/> 13
	ONE CODE ONLY	ONE CODE ONLY	ONE CODE ONLY

Please answer questions 6 to 9 if you are STILL SMOKING

6a. How soon after you wake up do you smoke your first cigarette? (Choose **one** response)

Within 5 minutes	6-30 minutes	More than 30 minutes	
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	(27)

6b. Do you find it difficult to stop smoking in no-smoking areas?

No	Yes	
<input type="checkbox"/> 1	<input type="checkbox"/> 2	(28)

6c. Which cigarette would you hate most to give up?

The first of the morning	Other	
<input type="checkbox"/> 1	<input type="checkbox"/> 2	(29)

6d. Do you smoke more frequently in the first hours after waking than during the rest of the day?

No	Yes	
<input type="checkbox"/> 1	<input type="checkbox"/> 2	(30)

6e. Do you smoke if you are so ill that you are in bed most of the day?

No 1 Yes 2 (31)

7. There is an idea to encourage all smokers to try and quit once a year. Does this idea appeal to you?

Yes 1 No 2 Don't know 3 (32)

8. Are you currently trying to cut down on how much you smoke?

Yes 1 No 2 (33)
- GO TO Q9 **- END OF SURVEY**

9. Which if any of the following are you currently using to help you cut down the amount you smoke? (Choose **any that apply**) (34)

Nicotine replacement gum 1 Nicotine replacement lozenges/tablets 2
Nicotine replacement inhaler 3 Nicotine replacement nasal spray 4
Nicotine patch 5 None of these 6

Please answer the questions 10 to 13 if you are NOT SMOKING.

10. Which one of the following best describes you? (35)

I feel happier now than when I was smoking 1
I feel about the same now as when I was smoking 2
I feel less happy now than when I was smoking 3

11. Do you still feel that you could easily go back to smoking? (36)

Yes 1 No 2 Don't know 3

12. Are you still using a nicotine replacement product? (37)

Yes 1 **- GO TO Q13**
No 2 **- END OF SURVEY**

13. Which nicotine replacement products are you currently using? (Choose **any that apply**) (38)

Nicotine gum 1 Nicotine lozenges/tablets 2
Nicotine inhaler 3 Nicotine nasal spray 4
Nicotine patch 5

**THANK YOU FOR TAKING PART IN THIS SURVEY
PLEASE RETURN IT DIRECTLY TO BMRB INTERNATIONAL IN THE FREEPOST
ENVELOPE PROVIDED.**

Appendix 3: Wave 2 postal questionnaire

How to fill in this questionnaire:

Please put a **cross** in the appropriate box to indicate your answer [X]. If you have made a mistake in your answer, please completely fill a box to show the mistake [■] and then cross the correct answer. You will need to use **blue or black ink**.

Your responses are important to us even if you are not interested in stopping smoking or have never tried to stop.

1. Do you smoke cigarettes at all nowadays? (including hand rolled cigarettes)

Yes 1 ⁽¹⁾ - **GO TO Q2**
 No 2 - **GO TO Q3**

2. How many cigarettes per day do you usually smoke, or if you don't smoke daily how many do you usually smoke per week?

Write in the number you smoke using the boxes provided

Per day ⁽²⁻³⁾ - **GO TO Q3**
 Per week ⁽⁴⁻⁶⁾ - **GO TO Q3**

3. Have you made a serious attempt to stop smoking in the past 12 months? By serious attempt I mean you decided that you would try to make sure you never smoked another cigarette? Please include any attempt that you are currently making.

Yes 1 ⁽⁷⁾ - **GO TO Q4**
 No 2 - **GO TO Q6**

4. How many serious quit attempts to stop smoking have you made in the last 12 months? (Choose **one** option only)

1 attempt	2 attempts	3 attempts	More than 3 attempts	Don't know ⁽⁸⁾
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Please fill in the next section if you have made ANY serious attempts to quit smoking in the last year. For each quit attempt please answer the following questions, starting with the column on the left.

5a How long ago did your quit attempt start? (Choose **one** from the list for each of your quit attempts)

	Most recent quit attempt	Next most recent quit attempt	Third most recent quit attempt
In the last week	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
More than a week up to a month	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
More than 1 month and up to 2 months	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
More than 2 months and up to 3 months	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4
More than 3 months and up to 6 months	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5
More than 6 months and up to a year	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6
Can't remember	<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7
	ONE CODE ONLY	ONE CODE ONLY	ONE CODE ONLY

5b How long did your quit attempt last before you went back to smoking? (Choose **one** from the list for each of your quit attempts)

	(12) Most recent quit attempt	(13) Next most recent quit attempt	(14) Third most recent quit attempt
Still not smoking	<input type="checkbox"/> 1		
Less than a day	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
Less than a week	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
More than 1 week up to a month	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4
More than 1 month to up to 2 months	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5
More than 2 months up to 3 months	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6
More than 3 months up to 6 months	<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7
More than 6 months up to 1 year	<input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8
Cannot remember	<input type="checkbox"/> 9	<input type="checkbox"/> 9	<input type="checkbox"/> 9
	ONE CODE ONLY	ONE CODE ONLY	ONE CODE ONLY

5c Which if any of the following did you try to help you stop smoking? (Choose **any that apply** for each quit attempt)

	(15) Most recent quit attempt	(16) Next most recent quit attempt	(17) Third most recent quit attempt
10. Nicotine replacement product (e.g. patches/gum/inhaler) without a prescription	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
11. Nicotine replacement product on prescription or given to you by a health professional	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
12. Zyban (bupropion)	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
13. Attended an NHS Stop Smoking Service group	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4
14. Attended an NHS Stop Smoking Service one to one counselling session	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5
15. Smoking helpline such as NHS smoking helpline or Quitline etc	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6
16. Something else: Please write in			
<hr/>			
17. None of these	<input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8
18. Cannot remember	<input type="checkbox"/> 9	<input type="checkbox"/> 9	<input type="checkbox"/> 9

5d Did you cut down the amount you smoked before trying to stop completely? (Choose **one** response for each quit attempt)

	(18) Most recent quit attempt	(19) Next most recent quit attempt	(20) Third most recent quit attempt
Cut down first	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
Stopped without cutting down	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
Cannot remember	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
	ONE CODE ONLY	ONE CODE ONLY	ONE CODE ONLY

5e Please circle which applies to each quit attempt. (Choose **one** response for each quit attempt)

	(21) Most recent quit attempt	(22) Next most recent quit attempt	(23) Third most recent quit attempt
I planned the quit for later the same day or for a date in the future	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
I tried to quit as soon as I made the decision	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
	ONE CODE ONLY	ONE CODE ONLY	ONE CODE ONLY

5f What **finally triggered** the quit attempt? (Choose **one** from the list for each quit attempt)

	(24) Most recent quit attempt	(25) Next most recent quit attempt	(26) Third most recent quit attempt
14. Advice from a GP/health professional	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
15. TV advert for a nicotine replacement product	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
16. Government TV/radio/press advert	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
17. Hearing about a new stop smoking treatment	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4
18. A decision that smoking was too expensive	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5
19. Being faced with smoking restrictions	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6
20. I knew someone else who was stopping	<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7
21. Seeing a health warning on cigarette packet	<input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8
22. Being contacted by my local NHS Stop Smoking Services	<input type="checkbox"/> 9	<input type="checkbox"/> 9	<input type="checkbox"/> 9
23. Health problems I had at the time	<input type="checkbox"/> 10	<input type="checkbox"/> 10	<input type="checkbox"/> 10
24. A concern about future health problems	<input type="checkbox"/> 11	<input type="checkbox"/> 11	<input type="checkbox"/> 11
25. Something else please write in	<input type="checkbox"/> 11	<input type="checkbox"/> 11	<input type="checkbox"/> 11

26. Cannot remember	<input type="checkbox"/> 13	<input type="checkbox"/> 13	<input type="checkbox"/> 13
	ONE CODE ONLY	ONE CODE ONLY	ONE CODE ONLY

Please answer questions 6 to 9 if you are STILL SMOKING

6a. How soon after you wake up do you smoke your first cigarette? (Choose **one** response)

Within 5 minutes	6-30 minutes	More than 30 minutes	
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	(27)

6b. Do you find it difficult to stop smoking in no-smoking areas?

No	Yes	
<input type="checkbox"/> 1	<input type="checkbox"/> 2	(28)

6c. Which cigarette would you hate most to give up?

The first of the morning	Other	
<input type="checkbox"/> 1	<input type="checkbox"/> 2	(29)

6d. Do you smoke more frequently in the first hours after waking than during the rest of the day?

No	Yes	
<input type="checkbox"/> 1	<input type="checkbox"/> 2	(30)

6e. Do you smoke if you are so ill that you are in bed most of the day?

No 1 Yes 2 (31)

7. There is an idea to encourage all smokers to try and quit once a year. Does this idea appeal to you?

Yes 1 No 2 Don't know 3 (32)

8. Are you currently trying to cut down on how much you smoke?

Yes 1 No 2 (33)
- GO TO Q9 **- END OF SURVEY**

9. Which if any of the following are you currently using to help you cut down the amount you smoke? (Choose **any that apply**) (34)

Nicotine replacement gum 1 Nicotine replacement lozenges/tablets 2
Nicotine replacement inhaler 3 Nicotine replacement nasal spray 4
Nicotine patch 5 None of these 6

Please answer the questions 10 to 13 if you are NOT SMOKING.

10. Which one of the following best describes you? (35)

I feel happier now than when I was smoking 1
I feel about the same now as when I was smoking 2
I feel less happy now than when I was smoking 3

11. Do you still feel that you could easily go back to smoking? (36)

Yes 1 No 2 Don't know 3

12. Are you still using a nicotine replacement product? (37)

Yes 1 **- GO TO Q13**
No 2 **- END OF SURVEY**

14. Which nicotine replacement products are you currently using? (Choose **any that apply**) (38)

Nicotine gum 1 Nicotine lozenges/tablets 2
Nicotine inhaler 3 Nicotine nasal spray 4
Nicotine patch 5

**THANK YOU FOR TAKING PART IN THIS SURVEY
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ENVELOPE PROVIDED.**

Appendix 4: Letters for Wave one samples

Royal Free and University College Medical School
Department of Epidemiology and Public Health
University College London
Gower Street Campus



HEALTH BEHAVIOUR UNIT
2-16 Torrington Place
London WC1E 6BT

Telephone +44 (0)20 7679 6642
Fax +44 (0)20 7813 2848
Direct line +44 (0)20 7679 6633

Director *Professor Jane Wardle*
Assistant Director *Professor Robert West*

Dear<<INSERT NAME>>>,</p></div>
<div data-bbox="125 313 710 330" data-label="Section-Header>
<h4><u>Smoking Behaviour Survey for University College London/Cancer Research UK</u></h4>
</div>
<div data-bbox="125 344 877 390" data-label="Text>
<p>At the end of an in home survey in which you took part in Spring 2005 for BMRB you very kindly agreed that you could be contacted for further research. I am writing now to ask if you would be willing to take part in a research project we are carrying out aimed to finding out more about smoking patterns in England.</p>
</div>
<div data-bbox="125 404 876 435" data-label="Text>
<p>As a thank you on receipt of a completed questionnaire we will post you a £5.00 high street voucher to spend at major high street stores.</p>
</div>
<div data-bbox="125 449 877 495" data-label="Text>
<p>This research is funded by Cancer Research UK and its goal is to try find out more about how many people try to stop smoking and how successful they are. It is important that we reach all types of smokers so even if you are not currently trying to give up smoking your views and opinions are important to us.</p>
</div>
<div data-bbox="125 509 876 555" data-label="Text>
<p>To help us with this research please could you fill in the enclosed questionnaire. Your replies are anonymous and your results will be analysed in aggregate with others. This project has been approved by the University College London Ethics Committee.</p>
</div>
<div data-bbox="125 569 876 600" data-label="Text>
<p>When you have completed the questionnaire, please would you put these into the FREEPOST envelope provided and post it back to us. You do not need to add a stamp.</p>
</div>
<div data-bbox="125 613 876 659" data-label="Text>
<p>We will send you a short questionnaire in January 2006 if you do not wish to be contacted or have any other queries please call Taj Sohal the Senior Research Executive at BMRB Social on 0208 433 4263 or me on 0207 679 6633.</p>
</div>
<div data-bbox="125 674 363 690" data-label="Text>
<p>Thank you for your help with this.</p>
</div>
<div data-bbox="125 704 243 720" data-label="Text>
<p>Yours faithfully,</p>
</div>
<div data-bbox="145 735 315 767" data-label="Text>

</div>
<div data-bbox="125 782 284 798" data-label="Caption>
<p>Professor Robert West</p>
</div>
<div data-bbox="125 938 352 957" data-label="Page-Footer>
<p>Smoking Toolkit Pilot Report</p>
</div>
<div data-bbox="725 938 796 957" data-label="Page-Footer>
<p>Page 30</p>
</div>

Royal Free and University College Medical School
Department of Epidemiology and Public Health
University College London
Gower Street Campus



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Fax +44 (0)20 7813 2848
Direct line +44 (0)20 7679 6633

Director *Professor Jane Wardle*
Assistant Director *Professor Robert West*

Dear<<INSERT NAME>>>,</p></div>
<div data-bbox="125 278 710 295" data-label="Section-Header>
<p><u>Smoking Behaviour Survey for University College London/Cancer Research UK</u></p></div>
<div data-bbox="125 308 877 355" data-label="Text>
<p>At the end of an in home survey in which you took part in Spring 2005 for BMRB you very kindly agreed that you could be contacted for further research. I am writing now to ask if you would be willing to take part in a research project we are carrying out aimed to finding out more about smoking patterns in England.</p></div>
<div data-bbox="125 368 877 400" data-label="Text>
<p>As a thank you on receipt of a completed questionnaire we will post you a £5.00 high street voucher to spend at major high street stores.</p></div>
<div data-bbox="125 413 877 460" data-label="Text>
<p>This research is funded by Cancer Research UK and its goal is to try find out more about how many people try to stop smoking and how successful they are. It is important that we reach all types of smokers so even if you are not currently trying to give up smoking your views and opinions are important to us.</p></div>
<div data-bbox="125 473 877 610" data-label="Text>
<p>To help us with this research please could you fill in the enclosed questionnaire. There is also a small plastic tube enclosed and this is for a saliva sample. It is optional to complete the saliva sample. This sample will be used for cotinine analysis. Cotinine is a by-product of nicotine and analysis of this product will help to find out your nicotine in-take for the last two weeks. The saliva sample will only be used for this purpose. All your replies to the questionnaire and results of the cotinine analysis will be in the strictest of confidence and not seen by anyone outside of the UCL, Cancer Research UK and BMRB Social Research teams. Your replies are anonymous and your results will be analysed in aggregate with others. We are still interested in your questionnaire responses even if you do not wish to provide the saliva sample. This project has been approved by the University College London Ethics Committee.</p></div>
<div data-bbox="125 623 877 699" data-label="Text>
<p>When you have completed the questionnaire and provided an optional saliva sample, please would you put these into the FREEPOST envelope provided and post it back to us. You do not need to add a stamp. We will send you a short questionnaire in January 2006 if you do not wish to be contacted or have any other queries please call Taj Sohal the Senior Research Executive at BMRB Social on 0208 433 4263 or me on 0207 679 6633.</p></div>
<div data-bbox="125 713 363 729" data-label="Text>
<p>Thank you for your help with this.</p></div>
<div data-bbox="125 743 243 759" data-label="Text>
<p>Yours faithfully,</p></div>
<div data-bbox="139 770 275 797" data-label="Text>
<p></p></div>
<div data-bbox="125 821 287 837" data-label="Text>
<p>Professor Robert West</p></div>
<div data-bbox="125 938 351 957" data-label="Page-Footer>
<p>Smoking Toolkit Pilot Report</p></div>
<div data-bbox="725 938 794 957" data-label="Page-Footer>
<p>Page 31</p></div>

Saliva Sample Instructions for Use

This sample will be used for cotinine analysis. Cotinine is a by-product of nicotine found in saliva. It yields accurate information on nicotine consumption in the last two weeks. Your sample will only be used for this test and no other purposes. Your results are held in the strictest confidence and would never be given to anyone outside the UCL, Cancer Research UK and BMRB Social Research teams.

It is optional for you to complete this sample.

There are two ways that you can use the sample; please choose the one that you would find the most comfortable.

- 1) Remove the white cotton dental roll and spit into the plastic casing and replace the cap firmly. You can discard the dental roll. Then place the plastic tube in the plastic envelope provided and seal. Please return the questionnaire and the sample in the **freepost envelope**.

- 2) Remove the white cotton roll and place in your mouth for a few minutes to soak up saliva. Then place the dental roll inside the plastic casing and close firmly. Then place the plastic tube in the plastic envelope provided and seal. Please return the questionnaire and the sample in the **freepost envelope**.

Appendix 5: Letters to Wave 2 samples

Royal Free and University College Medical School
Department of Epidemiology and Public Health
University College London
Gower Street Campus



HEALTH BEHAVIOUR UNIT
2-16 Torrington Place
London WC1E 6BT

Telephone +44 (0)20 7679 6642
Fax +44 (0)20 7813 2848
Direct line +44 (0)20 7679 6633

Director *Professor Jane Wardle*
Assistant Director *Professor Robert West*

Dear<<INSERT NAME>>>,</p></div>
<div data-bbox="125 313 710 330" data-label="Section-Header>
<h3><u>Smoking Behaviour Survey for University College London/Cancer Research UK</u></h3>
</div>
<div data-bbox="125 344 877 434" data-label="Text>
<p>In August 2005 you kindly took part in a short survey for UCL and Cancer Research UK, examining smoking patterns in England. As part of the final stage of this study, we are enclosing a short four page questionnaire and would be most grateful if you could participate in this survey. Your replies are important to us as they will help us to build a picture of smoking patterns over time. As a thank you we have enclosed a small token of our appreciation which is a £5.00 high street voucher for you to spend at major high street stores.</p>
</div>
<div data-bbox="125 449 877 495" data-label="Text>
<p>This research is funded by Cancer Research UK and its goal is to try find out more about how many people try to stop smoking and how successful they are. It is important that we reach all types of smokers so even if you are not currently trying to give up smoking your views and opinions are important to us.</p>
</div>
<div data-bbox="125 509 876 555" data-label="Text>
<p>To help us with this research please could you fill in the enclosed questionnaire. Your replies are anonymous and your results will be analysed in aggregate with others. This project has been approved by the University College London Ethics Committee.</p>
</div>
<div data-bbox="125 569 876 600" data-label="Text>
<p>When you have completed the questionnaire, please would you put these into the FREEPOST envelope provided and post it back to us. You do not need to add a stamp.</p>
</div>
<div data-bbox="125 613 876 644" data-label="Text>
<p>If you do not wish to be contacted or have any other queries please call Taj Sohal the Senior Research Executive at BMRB Social on 0208 433 4263 or me on 0207 679 6633.</p>
</div>
<div data-bbox="125 659 362 675" data-label="Text>
<p>Thank you for your help with this.</p>
</div>
<div data-bbox="125 688 243 705" data-label="Text>
<p>Yours faithfully,</p>
</div>
<div data-bbox="145 720 315 752" data-label="Text>

</div>
<div data-bbox="125 768 284 783" data-label="Caption>
<p>Professor Robert West</p>
</div>
<div data-bbox="125 938 351 957" data-label="Page-Footer>
<p>Smoking Toolkit Pilot Report</p>
</div>
<div data-bbox="725 938 794 957" data-label="Page-Footer>
<p>Page 33</p>
</div>

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London WC1E 6BT

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Fax +44 (0)20 7813 2848
Direct line +44 (0)20 7679 6633

Director *Professor Jane Wardle*
Assistant Director *Professor Robert West*

Dear<<INSERT NAME>>>,</p></div>
<div data-bbox="125 281 710 298" data-label="Section-Header>
<p><u>Smoking Behaviour Survey for University College London/Cancer Research UK</u></p>
</div>
<div data-bbox="125 311 877 401" data-label="Text>
<p>In August 2005 you kindly took part in a short survey for UCL and Cancer Research UK, examining smoking patterns in England. As part of the final stage of this study, we are enclosing a short four page questionnaire and would be most grateful if you could participate in this survey. Your replies are important to us as they will help us to build a picture of smoking patterns over time. As a thank you we have enclosed a small token of our appreciation which is a £5.00 high street voucher for you to spend at major high street stores.</p>
</div>
<div data-bbox="125 416 877 463" data-label="Text>
<p>This research is funded by Cancer Research UK and its goal is to try find out more about how many people try to stop smoking and how successful they are. It is important that we reach all types of smokers so even if you are not currently trying to give up smoking your views and opinions are important to us.</p>
</div>
<div data-bbox="125 477 877 612" data-label="Text>
<p>To help us with this research please could you fill in the enclosed questionnaire. There is also a small plastic tube enclosed and this is for a saliva sample. It is optional to complete the saliva sample. This sample will be used for cotinine analysis. Cotinine is a by-product of nicotine and analysis of this product will help to find out your nicotine intake for the last two weeks. The saliva sample will only be used for this purpose. All your replies to the questionnaire and results of the cotinine analysis will be in the strictest of confidence and not seen by anyone outside of the UCL, Cancer Research UK and BMRB Social Research teams. Your replies are anonymous and your results will be analysed in aggregate with others. We are still interested in your questionnaire responses even if you do not wish to provide the saliva sample. This project has been approved by the University College London Ethics Committee.</p>
</div>
<div data-bbox="125 626 877 687" data-label="Text>
<p>When you have completed the questionnaire and provided an optional saliva sample, please would you put these into the FREEPOST envelope provided and post it back to us. You do not need to add a stamp. If you do not wish to be contacted or have any other queries please call Taj Sohal the Senior Research Executive at BMRB Social on 0208 433 4263 or me on 0207 679 6633.</p>
</div>
<div data-bbox="125 701 363 717" data-label="Text>
<p>Thank you for your help with this.</p>
</div>
<div data-bbox="125 731 243 747" data-label="Text>
<p>Yours faithfully,</p>
</div>
<div data-bbox="139 758 275 784" data-label="Text>
<p></p>
</div>
<div data-bbox="125 809 287 824" data-label="Text>
<p>Professor Robert West</p>
</div>
<div data-bbox="125 938 351 957" data-label="Page-Footer>
<p>Smoking Toolkit Pilot Report</p>
</div>
<div data-bbox="725 938 796 957" data-label="Page-Footer>
<p>Page 34</p>
</div>

Saliva Sample Instructions for Use

This sample will be used for cotinine analysis. Cotinine is a by-product of nicotine found in saliva. It yields accurate information on nicotine consumption in the last two weeks. Your sample will only be used for this test and no other purposes. Your results are held in the strictest confidence and would never be given to anyone outside the UCL, Cancer Research UK and BMRB Social Research teams.

It is optional for you to complete this sample.

Please follow these instructions when using the sample:

- 1) Remove the white cotton dental roll and place in your mouth for a few minutes to soak up saliva. Make sure it gets fully soaked with saliva.
- 2) Then place the dental roll inside the plastic casing and close firmly.
- 3) Then place the plastic tube in the plastic envelope provided and seal. Please return the questionnaire and the sample in the **freepost envelope**.