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November 2021: NICE guidelines PH45 (June 2013) PH48 (November 2013) have been updated and replaced by NG209.
The recommendations labelled [2013] or [2013, amended 2021] in the updated guideline were based on these evidence reviews.
See www.nice.org.uk/guidance/NG209 for all the current recommendations and evidence reviews.

Stop Smoking Interventions in Secondary Care

Final Report

August 2012

Acknowledgments

The NCSCT CIC has conducted the evaluation of the 'Stop Smoking Interventions in Secondary Care' pilot on behalf of the Department of Health. Sincere thanks go to everyone involved in the development, implementation and analysis of the pilot discussed in this report including:

All of the Pilot sites

Fiona Singleton, Oxfordshire Stop Smoking Service

Graham West, Oxfordshire Stop Smoking Service

North 51

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Executive summary

Stop smoking services were initiated in England over twelve years ago and, unlike in many other countries where secondary care has played a predominant role in the development of services, they have traditionally been based in primary care and community settings. Despite evidence to the contrary, which suggests that secondary care settings offer a prime opportunity to intervene with smokers for a number of reasons, hospitals in England have often not provided structured stop smoking support.

In an attempt to encourage and improve the provision of stop smoking support within hospitals the Department of Health in England in 2009 developed guidance for primary care trusts and their corresponding local hospitals. Local areas were invited to pilot the 'Stop Smoking Interventions in Secondary Care' system as outlined within the guidance, which aimed to support the development of systematic and sustainable stop smoking interventions in secondary care settings.

This report provides an overview of the system and findings from the pre and post-implementation data as provided by the pilot sites. In summary:

- A group of 'early adopters' was recruited in two waves during the summer (June) and autumn (October) of 2009. Out of the original cohort of 72 pilot sites, 68 commenced the pilot; 23 submitted pre-implementation data; and 11 submitted their final post-implementation data.
- The pre-implementation data suggests that at the beginning of the pilot, 30.7% (n=1097) of the hospital population were current smokers which is considerably higher than the national average of 21%.
- According to a survey of the pilot sites, the main elements of the system implemented were: a referral link to the stop smoking service; having pharmacotherapy on the hospital formulary and meeting with key staff.
- When comparing the initial screening assessment for pre and post-implementation data, the provision of stop smoking information increased by 22.6%, as well as the number of referrals offered (4.5%) and the use of NRT whilst in hospital (6.6%).
- The pilot results demonstrate that there are a wealth of missed opportunities to intervene within the secondary care setting, and an enormous scope to improve and develop stop smoking support for hospital patients.
- The pilot was ambitious in scope with a large number of sites involved. Whilst in some areas positive results were evident, in general a lack of strategic programme management and co-ordinated and structured project management within the pilot sites led to inconsistent and varied data collection and submission, as well as varying degrees of success with the implementation of the system itself.

1. Introduction

Stop smoking services were initiated in England over twelve years ago, and have traditionally been based in primary care and community settings. Unlike many other countries, where secondary care has played a predominant role in the development of services, hospitals in England have often not provided structured stop smoking support. This is in contrast to the evidence which suggests that secondary care settings offer a prime opportunity to intervene with smokers for a number of reasons.

Smokers are often in hospital for a smoking related illness and stopping smoking can greatly improve the condition and its treatment.[1] It can also reduce the chance of readmission.[2] Planned admission provides a good opportunity to stop smoking in order to reduce the risk of care-related complications, and provides sufficient lead in time for maximum benefits.[3] However, unplanned admissions may also provide 'teachable moments' in which patients' motivation to stop smoking increases greatly because of a health concern.[4] Finally, healthcare professionals in hospitals are well placed to give very brief advice on stopping smoking, and have a duty of care to talk to patients about stopping.[5,6]

Despite the strong rationale for this work, many stop smoking services in England have received very few referrals from secondary care. In response, the English Department of Health (DH) in 2009 developed guidance for primary care trusts (PCTs) and their corresponding local hospitals to support the development of systematic and sustainable stop smoking interventions in secondary care settings. The aim of the 'Stop Smoking Interventions in Secondary Care' project was to make identifying smokers and stopping smoking a priority for acute trusts, thereby increasing opportunities for improving patient care. It aimed for all clinicians to take part in encouraging patients who smoke to have access to a stop smoking care pathway, while in hospital, and to capitalise on the admission period as a 'teachable moment'; to advise patients to quit smoking permanently and to refer them on to their local stop smoking service.

The 'Stop Smoking Interventions in Secondary Care' approach was provided to areas as a written guide, along with a comprehensive 'how to' toolkit*, which included care pathways for planned and unplanned interventions, sample correspondence for staff and checklists for implementation and evaluation. Additional resources were developed to accompany the guidance, including 'Get Well Sooner' patient leaflets, 'Ask, Advise, Act' (AAA) staff leaflets, a bespoke database for the collection of baseline and follow-up data and clinical case rationale sheets for a number of clinical conditions. An allocation of funding from the DH for the initial phase for recruitment of pilot sites was made available, with an additional wave of funding for the second phase made available in some areas.

* www.ncsct.co.uk/delivery/projects/secondary-care-additional-resources

The ambitious implementation phase aimed for a whole-system approach that sought to achieve large-scale behavioural change in practice within hospital. It was based upon the knowledge that programmes to stop smoking that begin during a hospital stay and that include follow-up support post discharge are effective.

Pilot sites were asked to capture pre and post-implementation as outlined in 2.2, (see page 7) and an interim report outlining the initial pre-implementation data was published in 2011.* This report provides a final overview of the pilot data, broken down into pre and post-implementation and including comparison where possible. It should however be noted that the figures reported in the pre-implementation interim report differ from those within this document. Following further data analysis for the purposes of the final report it became apparent that some sites had inputted post-implementation figures as pre-implementation data. This has now been revised and the figures provided within this report are considered to be final.

* www.ncsct.co.uk/Content/FileManager/documents/NCSCT-CIC-Delivery-Projects/stop-smoking-interventions-in-secondary-care-pre-implementation-report.pdf

2. Method

A group of 'early adopters' was recruited in two waves during the summer (June) and autumn (October) of 2009. Criteria for participation included:

1. Senior-level commitment from both the PCT and hospital directors
2. Willingness to collect and submit low-level data for pre and post-implementation phases
3. Perceived ability for the hospital to undertake the activities as detailed in the provided implementation checklist

Hospital and PCT representatives from each wave of early adopters attended launch events. These events were designed to build knowledge of the rationale for the work, enthusiasm for the approach and to provide information to guide early adopters through each stage of the pilot.

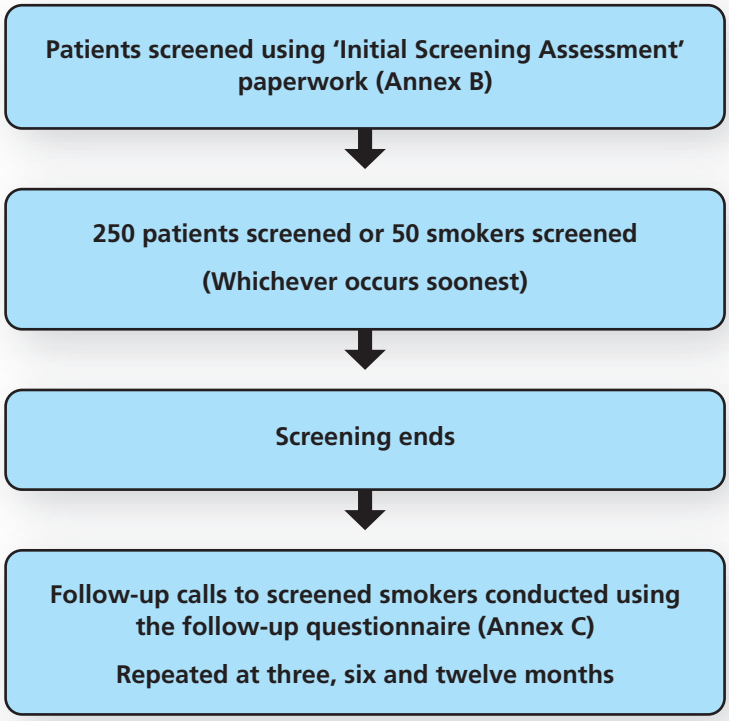
2.1 Pilot participation

Sixty eight sites commenced the pilot in the autumn of 2009; however, the continued participation for the purposes of data collection, as measured by data completeness, dropped down to 23 sites (34%) one year later (autumn 2010), with 11 sites (16%) submitting post-implementation data (January 2012). A number of other sites continued to implement the guidance but did not participate in the data collection; therefore no pre or post-implementation data is available on these sites but they are included in the pilot site survey (see 3.3).

2.2 Pre and post-implementation data: collection, treatment and analysis

The pre and post-implementation data were both comprised of two elements: an initial screening assessment (see Annex A) and a follow-up questionnaire (see Annex B) repeated at three, six and twelve months. The intention of the pre-implementation screening assessment questionnaire was to establish a baseline of current practice against which to benchmark future practice following implementation of the system changes as outlined within the guidance. The intention, therefore, of repeating this questionnaire for the post-implementation phase was to measure and compare the effect of 'system' implementation. The follow-up questionnaires were intended to determine whether patients made any changes to their smoking behaviour in the months following discharge from hospital.

Figure 1: Monitoring and evaluation process



Following local meetings to develop pilot project plans, each early adopter site in wave one (and each in wave two in the North West, South West and West Midlands) was asked to collect a pre-implementation sample in order to establish a baseline. Sites were instructed to collect a sample of 250 patients, 50 of whom were to be smokers. Where the 50 smokers were reached before a sample of 250 patients were collected (e.g. if 100 patients were collected and at least 50 were smokers), the data collection stopped early. This collection was intended to be completed within a one month period and data was to be entered onto the Secondary Care Database (SeCaD) online database. This cohort of smokers was followed up at three, six and twelve months after the initial data collection in order to find out whether any intervention received in relation to their hospital admission had had an impact on their smoking behaviour.

The pilot aimed for the 'system' itself to be implemented (detailed in section 3.1.2) and the data collection repeated six months after full implementation of the project, to support direct comparison.

The pre and post-implementation assessments collected a range of variables including:

- Tobacco use
- Whether a quit date was set
- Whether any information was received about stopping smoking
- Whether any nicotine replacement therapy (NRT) was provided to aid withdrawal management or a quit attempt
- Some background information on the individual's hospital stay (length of stay, surgical procedures and discharge information)

The pre and post-implementation follow-ups included questions regarding:

- Tobacco use since discharge
- Quit information
- Interventions on stopping smoking

Out of the original 72 pilot sites, 68 (94%) commenced the pilot. Of this, 17 (25%) completed the data collection as instructed (250 patients and/or 50 patients who smoke). There were six sites (9%) that were unable to include data on non-smoking patients because of organisational policy on data protection and, therefore, these sites along with sites which did not complete the process correctly are excluded from the analysis on hospital population smoking prevalence in order not to skew the results. Data from the full cohort of 23 sites which completed the pre-implementation data collection is however included in further subset analysis which looks at follow-up data. For the post-implementation phase only 11 sites (48%) submitted data, of which one (4%) had completed this as originally instructed (250 patients and/or 50 smoking patients).

Unfortunately the exact reasons for the high dropout rate of sites by the post-implementation phase are unknown as this was not formally captured within the original evaluation framework. However, adhoc feedback received from local areas often cited an apparent lack of national strategic leadership to maintain the momentum of the project, poor local leadership to support sustained implementation and difficulty in using the data collection tool as barriers to continuing with the project and/or continuing to capture the data. It should also be noted that during the project period (over two years) a number of staff involved at the beginning had subsequently moved onto new roles.

The analysis for the data set was completed using SPSS statistical package version 12.0 and Excel 2010. Prior to analysis the data was cleaned and several variables were collated into groupings to reduce the data complexity. For example, one variable, 'amount smoked' was an open text response in the dataset, producing multiple variations (ten cigarettes was input as '10', '10 cigarettes', '10 per day', 'ten'), while some data was translated into the incorrect format (e.g. 10 – 12 was input as 10-Dec). The amount smoked has been arranged into categories as follows:

1 = 1 – 10

2 = 11 – 20

3 = 21 – 30

4 = 31 and above

There is also a category for cigars / pipes / smokeless / other. Loose tobacco quantified in grams or ounces per day or week has been translated into approximate number of rolled cigarettes.* Other data which required some transforming and coding were type of tobacco used, information given and length of stay. Coding 'reason for admission' proved impossible due to the use of free text response for this question.

The data for the pre-implementation phase was submitted into SeCaD. When the licence for SeCaD ended in August 2011 a revised data collection tool was developed to ensure data collection for the post-implementation phase could happen. The pre-implementation data in SeCaD was cleaned and coded, and each of the sites with pre-implementation completed data were sent an individual report of their data, which enabled local analysis.

2.3 Pilot Site Survey

A short survey of all original participating pilot sites (n = 68) was carried out in February 2011 using an online tool ('survey monkey'). The survey asked respondents to indicate which elements they had managed to implement from the DH Guidance checklist, and which documents had been useful or helpful in relation to the pilot. The results from this can be found in section 3.3.

* Note: The number of hand rolled tobacco users was very low. The translation calculation has no scientific basis and was used to support the data analysis. Pilot sites inputting data were asked to input tobacco use as a daily amount, and if the patient specified use of hand rolled tobacco or pipes, they were asked to convert to an equivalent amount of cigarettes per day using the following formula: 1 gram of tobacco = 1 cigarette, 1 ounce of tobacco = 25 cigarettes

3. Results

3.1 Pre-implementation data (from the SeCaD database)

3.1.1 Smoking prevalence and behaviour

Data from the 17 sites that submitted complete data for both patients who smoke and non-smokers (Table 1) shows that, when looking at patients who had smoked in the last six months and last seven days, there was a smoking prevalence of 31.8% (n=1097) among the hospital population. This is considerably higher than the current general population prevalence of 21%.[7]

Table 1: Smoking behaviour

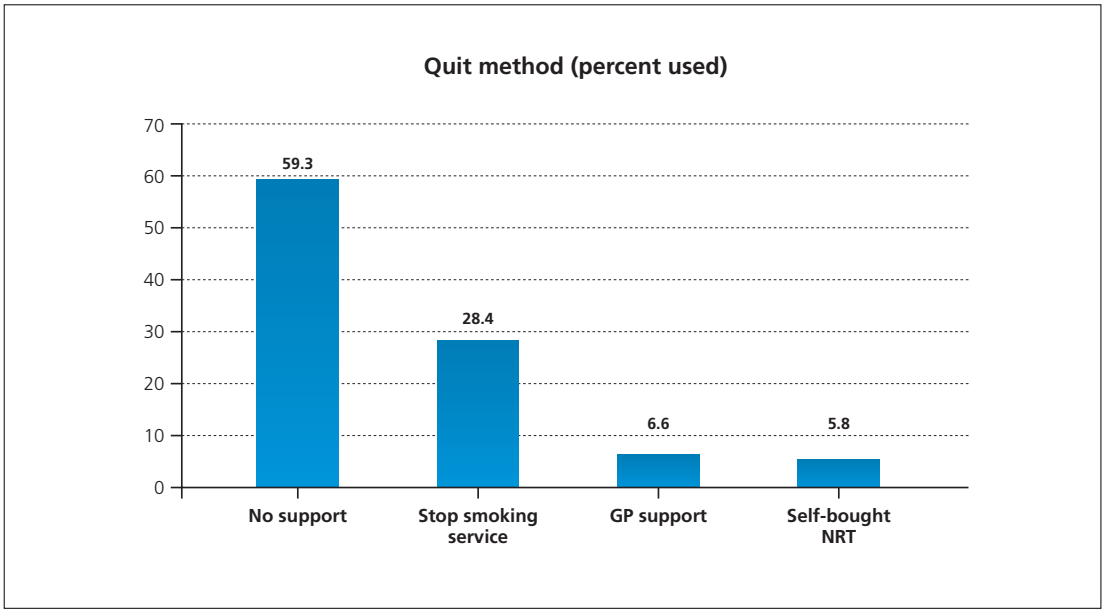
Smoking behaviour	% (n)
Smoked in the last six months (last seven day status unknown)	41.8 (1440)
Current smoker (smoked in last six months and last seven days)	31.8 (1097)
Recent quitter (smoked in last six months but not last seven days)	9.2 (318)
Non-smoker (not smoked in last seven days or six months)	54.6 (1883)
Not reported	0.7 (25)
Unknown	3.6 (123)

As shown in Table 1, the cohort also contained a group of recent quitters (9.2%, n=318) who reported smoking six months ago but not in the last seven days. This could indicate a pre-admission quit attempt, but could also plausibly include some forced abstinence since average length of stay was eight days. While this data is interesting, it has several limitations. It is not possible to separate out those who quit intentionally from those who were forced to be abstinent due to an extended hospital stay. It is also not possible to separate out those who quit as a part of their preadmission with those who either quit well in advance of hospitalisation or spontaneously upon admission. Finally, due to the varied methods of data collection used by the pilot sites, it is difficult to gauge how representative these figures are of the general hospital population. For example, some areas collected data in selected wards such as cardiology or respiratory where one would expect to see more smoking-related admissions than on other wards.

Of all of the patients who indicated they were smokers in the initial assessment (n=1440) the most common form of tobacco used was cigarettes (84.7%, n=1219) with a small number (1.4%, n=20) reported as smoking cigars, and pipe use reported by 1.2% (n=13). A further 9.1% (n=131) reported 'other' tobacco use (including hand rolled and cannabis) while 3.8% (n=55) were unknown. The average cigarettes smoked per day was 15 cigarettes (with a range of 1– 60). This indicated that these smokers may smoke slightly more than the average smoker, however since other relevant questions such as time to first cigarette were not asked, it is not possible to gauge whether these smokers were more dependent than those in the general population.

The pre-implementation questionnaire asked several questions which helped to define quitters, quit date and method of stopping smoking. When looking at the cohort of 'recent quitters' (n=318) who had indicated that they had not used tobacco in the last seven days, 78.6% (n=250) reported setting a quit date and 76.4% (n=243) reported a method of quitting. As shown in Figure 1, out of the 243 people who specified the method of quitting, the majority used no support (59.3%, n=144), while use of the stop smoking service was reported by 28.4% (n=69) which is well above the national average currently reported at 1.4%.[8] Other supported methods of stopping included GP support at 6.6% (n=16) and self-bought NRT at 5.8%, (n=14). As the majority specified that they used 'no support' to stop smoking, it is evident that further work is required to support smokers who want to stop to use the most effective method.

Figure 2: Reported quit method

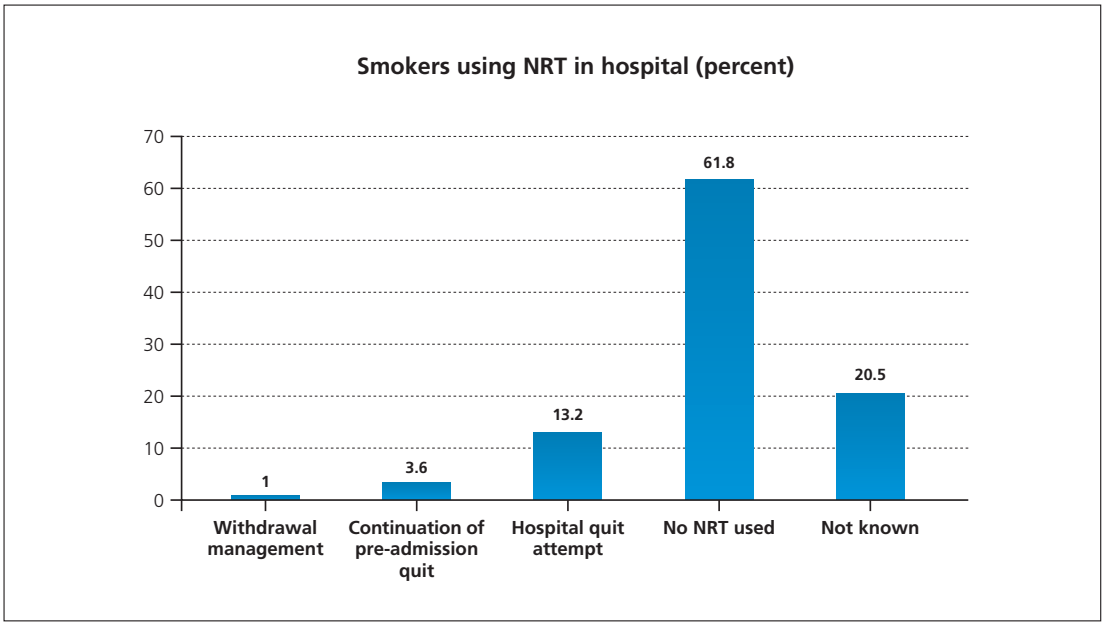


3.1.2 Information provided in hospital

This section of the pre-implementation questionnaire sought to identify the interventions currently provided in hospital, thereby providing a baseline of activity against which to benchmark future intervention levels. Many patients were given some type of advice on smoking in relation to their admission. Just under 40% (38.9%, n=560) of patients reported being given information or advice and of this, 65.9% (n=369) included verbal advice as opposed to just written. The most common single intervention was a healthcare professional providing advice verbally (51.3%, n=287). Over 57.3% (n=825) were not given any information or advice and 3.8% (n=55) were unknown.

In total 17.7% (n=255) of patients who smoked reported using NRT while in hospital, 61.8% (n=890) were not provided with NRT, and 20.5% (n=295) were not known (see Figure 3). Of patients who had used NRT in hospital 84.3% (n=215) were provided with NRT to take home upon discharge; which was very positive. However, when compared to the whole cohort of smokers (n=1440) only 14.9% (n=215) received NRT upon discharge, which is a concern. Failure to provide NRT upon discharge can be very problematic for vulnerable patients whose quit attempt may be at risk if they do not obtain NRT quickly and easily upon discharge. These figures could indicate low awareness of NRT availability by staff and patients, as well as difficulties associated with having NRT available on the hospital formulary.

Figure 3: Percentage of smokers who reported using NRT in hospital



The majority of smokers (51.5%, n=741) reported not being offered a referral to their local stop smoking service. Of the 326 (22.6%) patients who were, the majority were offered this during their hospital stay (43.3%, n=141) in comparison to on admission (36.5%, n=119) and on discharge (20.2%, n=66). A smaller number (14.4%, n=47) were given self-referral details.

The fact that 57.3% (n=825) of patients who smoke reported receiving no information or advice and 51.5% (n=741) were not offered a referral, is demonstrative of the huge missed opportunities that existed in the secondary care setting prior to this project.

3.1.3 Hospital admission information

Hospital length of stay averaged at eight days (Range: 0–186 days); however, the median was three days. Surgical procedures varied greatly from those likely to be smoking related such as amputations and heart surgery to those less likely such as bone or joint repairs. However, the question style used (free text response) to gather this information made it impractical to code these for the purpose of this report.

3.1.4 Pre-implementation follow-up

The follow-up data consisted of a set of questions asked of patients who participated in the screening assessment questionnaire and who smoked. It should be noted that the number of smokers in these datasets is small due to the small numbers of smokers to start with, difficulties the sites had in following them up, and some sites not completing all three follow ups. An overview of the outcomes from the three, six and twelve month follow-ups is provided in Table 2 below.

Table 2: Three, six and twelve month pre-implementation follow-up outcomes

	Three months %(n)	Six months %(n)	Twelve months %(n)
Number contacted	54 (777)	39 (561)	23.5 (339)
Smoked since discharge			
Yes	61.3 (477)	72.7 (408)	77.3 (262)
No	29.6 (230)	22.8 (128)	22.7 (77)
Not recorded	9.1 (71)	4.5 (25)	0 (0)
Quit attempt made in relation to hospital stay	46.6 (362)		
Stage of hospital quit			
Pre-admission	7.5 (27)		
During admission	29.6 (107)		
Upon discharge	3.6 (13)		
Not recorded	59.4 (215)		
Quit method used			
Stop smoking service	21.5 (78)		
GP	1.9 (7)		
Self-bought NRT	1.1 (4)		
No support	14.4 (52)		
Not recorded	61 (221)		

Note: Due to the method of data collection and reporting, it was not possible to robustly report outcomes for the same smokers across the 3, 6 and 12 month follow-ups. Therefore, only smoking status following discharge is given at the 6 and 12 month stage.

3.2 Post-implementation results

3.2.1 Post-implementation data: Smoking prevalence and behaviour

Two sites submitted patient data for smokers and non-smokers; of which only one site completed a full data set. Data from this one site showed a smoking prevalence of 18.9% (n=45) when looking at patients who had smoked in the last six months and last seven days.

It was however possible to include data from the 11 sites that submitted their post-implementation figures in the remainder of the analysis. Table 3 depicts smoking behaviour.

Table 3: Smoking Behaviour

Smoking behaviour	% (n)
Smoked in the last six months (last seven day status unknown)	52 (312)
Current smoker (smoked in last six months and last seven days)	38.8 (233)
Recent quitter (smoked in last six months but not last seven days)	12.5 (75)
Non-smoker (not smoked in last seven days or six months)	7 (42)
Not recorded	13.2 (79)
Unknown	28.5 (171)

Where recorded, the most common form of tobacco used was cigarettes (84.9%, n=265) with a small number reporting using cigars (1.3%, n=4), pipes (0.6%, n=2) and 'other' (11.5%, n=36). The amount smoked varied from one to 70 per day, and the average amount smoked per day was 15 cigarettes.

The post-implementation questionnaire asked several questions which helped to define quitters, quit date and method of stopping smoking. When looking at the cohort of 'recent quitters'* (n=75), 72% (n=54) reported setting a quit date and 80% (n=60) indicated a method of stopping smoking (n=60).

Of the 60 patients who indicated a quit method, the most frequently reported was 'no support' (55%, n=33), while use of the NHS stop smoking service was reported by 30% (n=18). Other methods of support used included self-bought NRT at 10% (n=6) and GP support at 5% (n=3).

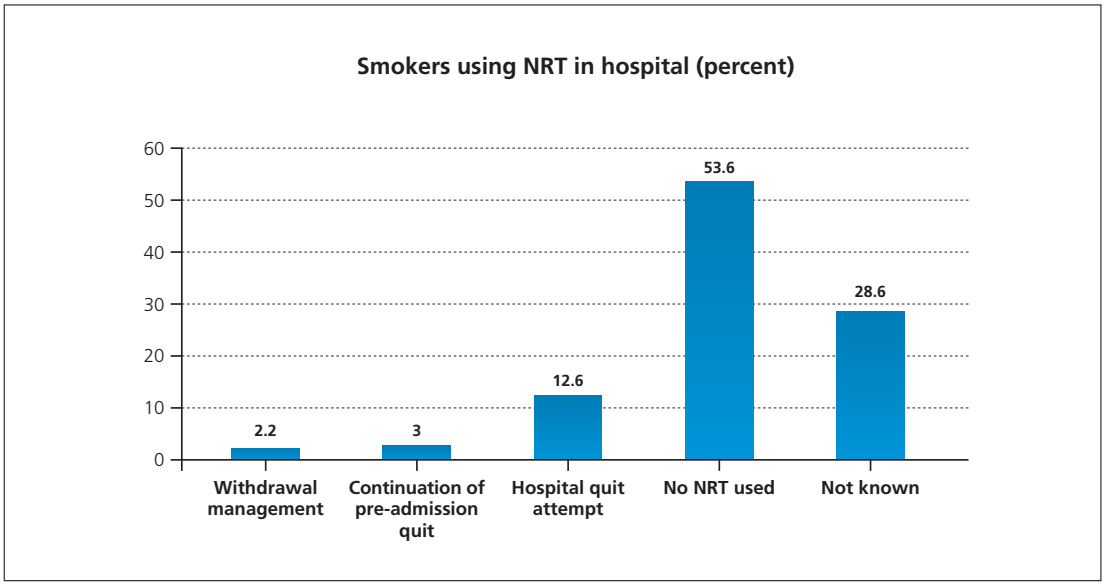
* Recent quitters defined as patients who reported smoking in the last six months but not the last seven days. Limitations of this definition are discussed on page 10.

3.2.2 Information provided in hospital:

For this section of the post-implementation phase, the questionnaire sought to identify the interventions currently provided in hospital. In total 54.2% (n=169) received information regarding stopping smoking, whereas 42% (n=131) did not, and the remainder were unanswered. Of those who were given some type of advice about stopping smoking, the most frequently reported was verbal advice (84%, n=142).

Where known, NRT was used in 20.8% (n=65) of cases, compared with 62.2% (n=195) where it was not. Of those whose NRT use while in hospital was reported, an encouraging 66.2% (n=43) were provided with NRT to take home following discharge; 24.6% (n=16) were not.

Figure 4: Percentage of smokers who reported using NRT in hospital



The majority of smokers (46.8%, n=146) were not offered a referral to their local stop smoking service. Of the 70 (22.4%) of patients who were, the majority were offered this during their hospital stay (68.6%, n=48), in comparison with on admission (27.1%, n=19), and on discharge (4.3%, n=3). There were also a small number of patients (4.1%, n=15) who were given self-referral details. As in the pre-implementation section of this report, this again shows a large incidence of missed opportunities to intervene with this vulnerable and motivated group of smokers.

3.2.3 Hospital admission information

Hospital length of stay averaged at seven days (Range: 1–90 days); however, the median was three days. Surgical procedures varied greatly from those likely to be smoking-related to those less likely. However, as with the pre-implementation data, the question style used (free text response) to gather this information made it impractical to code these for the purpose of this report.

3.2.4 Post-implementation follow-up

As per pre-implementation, the follow-up data consists of a set of questions asked of patients who participated in the screening assessment questionnaire and who smoked. It should be noted that the number of smokers in these datasets is low due to small numbers of smokers to start with, difficulties the sites had in following them up, and some sites not completing all three follow-ups. An overview of the outcomes from the three, six and twelve month follow-ups is provided in Table 4 below.

Table 4: Three, six and twelve month post-implementation follow-up outcomes

	Three months %(n)	Six months %(n)	Twelve months %(n)
Number contacted	56.1 (175)	80.1 (250)	80.1 (250)
Smoked since discharge			
Yes	59.4 (104)	36 (90)	18 (45)
No	26.9 (47)	14.8 (37)	6 (15)
Not recorded	13.7 (24)	49.2 (123)	76 (190)
Quit attempt made in relation to hospital stay	50.9 (89)		
Stage of hospital quit			
Pre-admission	7.9 (7)		
During admission	43.8 (39)		
Upon discharge	2.2 (2)		
Not recorded	46.1 (41)		
Quit method used			
Stop smoking service	30.3 (27)		
GP	1.1 (1)		
Self-bought NRT	2.2 (2)		
No support	16.9 (15)		
Not recorded	49.4 (44)		

Note: Due to the method of data collection and reporting, it was not possible to robustly report outcomes for the same smokers across the three, six and twelve month follow-ups. Therefore, only smoking status following discharge is given at the six and twelve month stage.

3.3 Pilot Site Survey

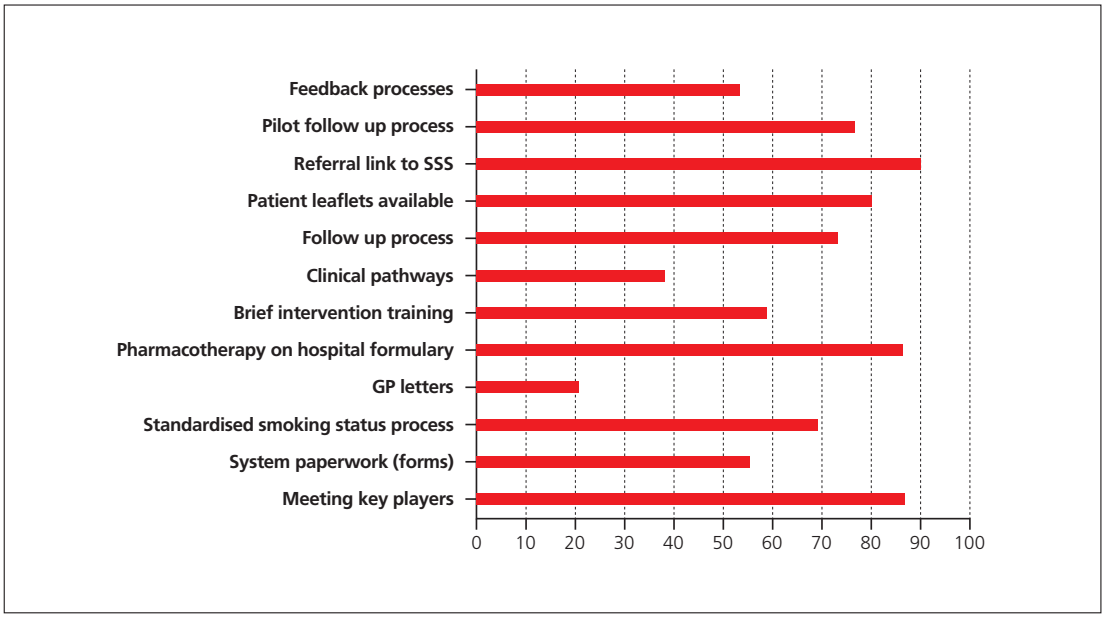
Responses were returned by 44% (n=30) of the sites. Many of the non-responders were no longer participating in the pilot or did not undertake the data collection.

3.3.1 Implementation of the approach

An implementation checklist was included within the project toolkit for local areas to follow. The data showed that the items most commonly implemented from the checklist were: meeting with key staff, setting up referral processes and ensuring pharmacotherapy availability via hospital formularies (see Figure 5). Other areas that were not implemented as frequently included setting up clinical pathways, standardising the identification of smokers in hospital settings and implementing paperwork to support these systems.

Figure 5: Implementation-percentage of sites reporting they implemented the following changes

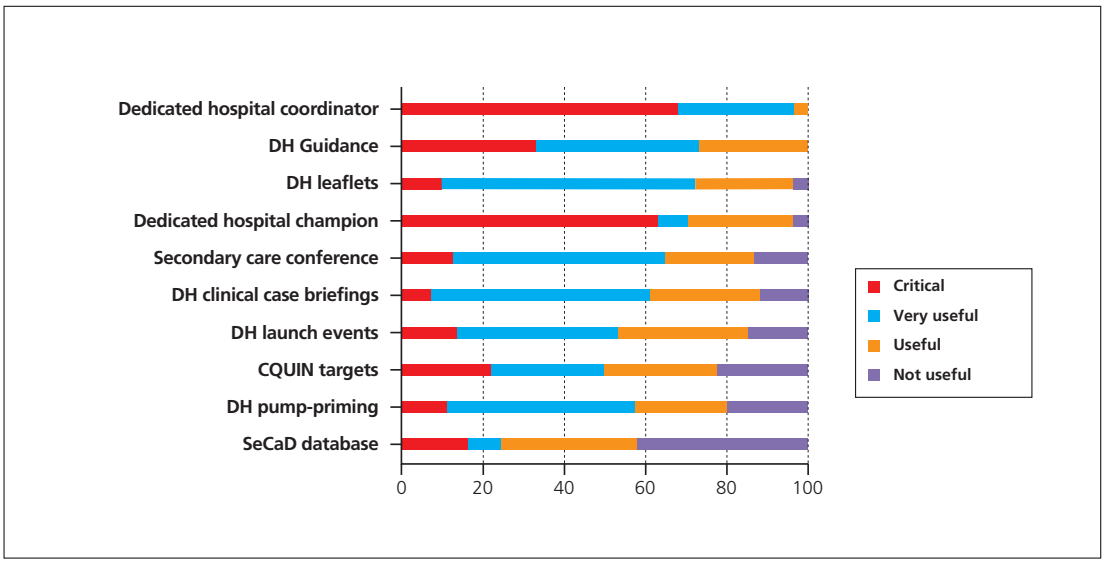
Question: Please indicate which of the following items from the DH Guidance implementation checklist your site fully implemented (tick all that apply)



Respondents were also asked which of the elements recommended as part of the approach were useful, as shown in Figure 6.

Figure 6: Degree to which these elements were felt to be useful to the pilot (percentage agreement)

Question: Which of the following have you found useful or helpful in undertaking this pilot?



3.3.3 Barriers to implementation

Respondents were asked to describe any barriers they faced in trying to implement the data capture required as part of the project. Table 5 provides a summary of the responses received.

Table 5: Barriers encountered

Question: Please briefly describe any problems or barriers your site encountered in completing any aspects of data collection, input, follow up or implementation

	% (n (count))
Lack of hospital support – general	2 (5)
Lack of hospital support – training	10 (2)
Problems with questionnaire / follow-up question design	13 (4)
Difficulty in completing the screening assessment form	37 (10)
Difficulty in getting hold of patients to follow-up	47 (9)
Problems entering data on database	40 (9)
Staffing issues	17 (6)
Lack of resources from DH	3 (1)
Lack of support from region	6 (2)

These barriers may also explain to some extent why the project timescales slipped for a number of areas. This was possibly also affected by the degree to which systems were already in place prior to the pilot. Several sites had longstanding relationships and working practices, while some were starting from a less developed base for action.

4. Comparison and conclusion

4.1 Comparison

Due to the aim of the pilot, the comparison has been limited to only those sites who submitted both pre and post-implementation data (n=11) in order to compare changes in activity. Table 6 provides a comparative summary of the initial screening results. Follow-up data has not been compared as, due to the nature of the data collection, it was not possible to identify smokers and therefore conduct further analysis with any confidence.

Table 6: Comparison of pre and post-implementation screening outcomes

	Pre-implementation % (n)	Post-implementation % (n)
Smoking Prevalence[a]	28.7 (50)	18.9 (45)
Recent Quitters[b]	21 (102)	25 (75)
Quit date set[c]	81.4 (83)	72 (54)
Quit method[c]	Total = 102	Total = 75
GP	6.9 (7)	4 (3)
SSS	12.7 (13)	24 (18)
No support	61.8 (63)	44 (33)
Self-bought NRT	2 (2)	8 (6)
Information given in hospital?[b]	Total = 485	Total = 312
Yes	31.6 (153)	54.2 (169)
No	64.1 (311)	42 (131)
Of yes responses % (n) given verbal Information	68.6 (105)	84 (142)
NRT used[b]	Total = 485	Total = 312
Yes	14.2 (69)	20.8 (65)
No	65.2 (316)	62.2 (194)
NRT TTO[d]	Total = 69	Total = 65
Yes	78.3 (54)	66.2 (43)
No	14.5 (10)	24.6 (16)
Referral offered?[b]	Total = 485	Total = 312
Yes	17.9 (87)	22.4 (70)
No	58.1 (282)	46.8 (146)
Self-referral	2.3 (11)	4.8 (15)
Referral (by stage)[e]	Total = 87	Total = 70
Admission	34.5 (30)	27.1 (19)
During stay	55.2 (48)	68.6 (48)
Discharge	10.3 (9)	4.3 (3)

a. Comparison of only one site
b. Comparison using all identified smokers within the 11 sites that submitted both pre and post-implementation data
c. Comparison using all identified 'recent quitters' within the 11 sites that submitted both pre and post-implementation data
d. Comparison using all identified smokers within the 11 sites that reported receiving NRT whilst in hospital
e. Comparison using all identified smokers within the 11 sites that reported being offered a referral

4.1.1 Smoking prevalence and recent quitters

Unfortunately, only one of the pilot sites that submitted post-implementation data included non-smokers and followed the 250 patients/50 smokers screening rule. Therefore it was only possible to compare the smoking prevalence within this one site. Whilst it is positive that prevalence appeared to reduce by 9.8% following the implementation of the system, this should be interpreted with some caution. In particular, the breakdown of patients included in the data collection by ward is not known and therefore it is possible that more patients from wards where a higher prevalence of smoking would be expected, such as respiratory wards for example, could have been included in the pre-implementation dataset. Patient demographics and dependence scores were also not routinely captured which would also influence this.

As shown in Table 6, an increase of 4% was also seen in the reported number of recent quitters i.e. those patients who had smoked within the last six months but not the last seven days. This however cannot be associated with the reduction in prevalence as recent quitters were not included within this calculation.

4.1.2 Provision of information and referral

It is emboldening that 22.6% more smokers (an increase from 31.6% to 54.2%) reported being given information about the stop smoking support available whilst in hospital. This, in addition to the fact that the reported provision of verbal advice also notably increased by 15.4%, suggests that as a result of implementation, a change in practice did occur. An increase in staff trained to deliver very brief advice for example, could have been one cause of such an improvement.

Similarly, the proportion of smokers offered a referral also increased by 4.5% (from 17.9% to 22.4%) although the actual number of referrals was less during post-implementation.

4.1.3 Use of NRT

Encouragingly, a 6.6% increase (14.2% to 20.8%) in NRT use was reported, which could suggest a greater availability of NRT and awareness among staff as a result of the pilot implementation, although it should be noted that in real terms this represents only four more people receiving NRT across the 11 sites. This still equates to less than a quarter of identified smokers using NRT, which is discouraging, especially considering that even smokers who do not wish to stop are likely to require pharmacological support while in hospital to effectively manage withdrawal symptoms. Furthermore, the apparent 12.1% reduction in the provision of NRT upon discharge is also disappointing, and indicates that there is an on-going need to raise the profile of smoking within secondary care settings in order to achieve a greater rate of change in day-to-day practice.

4.2 Conclusion

It is clear that embedding the identification, referral and support for smokers within secondary care settings requires a significant period of time and dedicated capacity among staff, including senior management, to achieve a change in day-to-day practice. Whilst it is encouraging that fundamental activity such as providing advice, referral and NRT to smokers did appear to increase within the pilot sites following implementation, the data continues to suggest that there are still a substantial number of missed opportunities to intervene with this high risk group. It is concerning, for example, that even in the post-implementation phase, over 40% of patients reported not receiving any information about the stop smoking support available to them (42%, n=131) or being offered a referral to a stop smoking service (46.8%, n=146). This failure to maximise contacts with all smokers could account for the reported continued low use of effective quit methods such as stop smoking services (24% of recent quitters, n=18) and NRT (20.8% of identified smokers, n=65) post implementation, and demonstrates that on-going implementation and monitoring is required to maintain and improve the offer, and delivery, of stop smoking support within secondary care settings.

Overall, the 'Stop Smoking Interventions in Secondary Care' national pilot was an ambitious piece of work with varying levels of take up in local areas. Given the apparent disparity amongst pilot sites in the method of implementation, data collection and adherence to evaluation and monitoring instructions, it is suggested that future pilots of this nature would benefit from a phased approach, beginning with one or a small number of sites to initially test the pilot design and to assess initial outcomes.

Ultimately, it would appear that unless there is high level support, visible via funding for a dedicated hospital post, presence of a committed champion and dedication to thorough system improvement, changes in practice are unlikely to be achieved and even less likely to be sustained.

5. Recommendations

While effective provision has been implemented in some local areas, the outcomes of this report suggest that further work is required to standardise the provision of stop smoking care in hospitals. The following recommendations provide suggested next steps to support improvements in this area.

- Robust, efficient and effective systems for the identification and referral of hospital patients who smoke should be standardised in all acute trusts to ensure the high number of smokers in this setting are identified and referred to appropriate support.
- All frontline hospital staff should be trained to routinely deliver very brief advice and refer all smokers (unless they specifically decline) to stop smoking support.
- NRT and other stop smoking medicines should be available on hospital formularies with information provided on how to use this medication effectively for temporary abstinence purposes, where the smoker declines the offer of stop smoking support.
- Stop smoking medicines should be included in any medicines to take home (upon discharge) to reduce the risk of relapse and to allow time for community based follow-up and support, as well as allowing a patient to continue using their stop smoking medicine if they have quit prior to or following admission.
- The hospital should be a supportive environment for patients, that encourages stopping smoking and abstinence during a hospital stay. Hospital staff should have a good knowledge and awareness of support available for patients, including stop smoking medicine.
- For the implementation of a system that supports hospital patients to stop smoking there needs to be strategic oversight with a programme management approach to coordinate and work closely with stakeholders to ensure there is a systematic implementation.
- Pilot projects need to start small, be manageable, and build sufficient support mechanisms in order to help embed systematic and lasting change. Simple and clear data collection methods should be employed with clear communications provided to all relevant staff. A small working group should be initiated that can develop and implement changes both systematically and culturally within the hospital, with an identified champion and dedicated hospital coordinator.

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8. Annex A:
Screening Assessment Form

Stop Smoking Intervention in Secondary Care

Screening Assessment Form

Hospital: _____ **Planned Admission?** Yes No

Unit: _____

Admitting diagnosis: _____

Patient details:

Title: _____ Street: _____

First Name: _____ Address 2: _____

Last Name: _____ Address 3: _____

Date of birth: _____ Town/ City: _____

Gender: Male County: _____

Female Post Code: _____

We would like to contact you after your discharge to find out how you are progressing in terms of your smoking. Do you agree to be contacted by telephone? If so, please provide a contact number. Please sign the box below to confirm you are happy for us to contact you (by telephone on one of the numbers provided) at up to three single timepoints over the next 12 months to audit the services we provide and see if you are happy with them. If you do not want us to call you, and you do not consent to this contact, please do not sign the box – this will not affect your hospital treatment in any way.

Home: _____

Mobile: _____

Patient signature:	Nurse signature:

Date: _____ / _____ / 20_____

1. Have you used any form of tobacco in the last 6 months?
a. No (no further questions)
b. Yes (please circle)

Cigarettes Pipe Cigars Other: _____

i. Have you used any form of tobacco in the last 7 days?
1. No
a. Quit date: _____
b. Method of stopping smoking (please circle)

NHS Stop Smoking Service Self-brought NRT GP No Support

2. Yes
a. What was the average amount smoked per day?

ii. Have you been given any information about stopping smoking in relation to your admission?
1. No
2. Yes
Please describe who gave you the information and what it was:

For completion on discharge by nurse:

2. Was NRT used in hospital?
a. Yes – Continuation of quit attempt started pre-admission (NRT brought into hospital)
b. Yes – Withdrawal management only
c. Yes – Started quit attempt in hospital
d. No

3. TTO NRT?
a. Yes

Please list:

b. No

4. Was a referral to LSSS made by the hospital staff?
a. Yes – On admission
b. Yes – During hospital stay
c. Yes – On discharge
d. Recommendation and self referral details given
e. No

5. Date of discharge: _____

6. Discharge to:
a. Home
b. Hospital/other facility
c. Deceased
d. Other

7. Total length of stay (days):

8. Surgical procedures undertaken:

9. Comments:

To LSSS for data entry

9. Annex B: Follow-up form

FOLLOW-UP FORM

To be completed by the LSSS hospital co-ordinator.

Hospital: Unit:

Date: Admitting diagnosis:

1. Have you used any form of tobacco since you were discharged from hospital on _____ (discharge date)?

   a. Yes

      i. Please circle any used:

      Cigarettes Pipe Cigars Other – please state:

      ii. What was the average amount smoked per day?

      iii. Were you given advice relating to smoking while you were in hospital? Yes/No

      iv. If yes, what and by whom?

      v. Did you make a quit attempt related to your hospital stay? Yes/No

      vi. If yes, how long were you completely abstinent from smoked tobacco?

      vii. Comments:

      No further questions

   b. No – quit date:

2. What method did you use to stop smoking? – please circle the method used:

   NHS Stop Smoking Service Self-bought NRT GP No support

3. Was your quit attempt related to your hospital stay?
    a. Yes – I stopped before my admission
    b. Yes – I stopped during my admission
    c. Yes – I stopped because of discharge referral/advice
    d. Yes – I stopped after discharge because of complications
    e. No
    f. Other – please state:

4. Did you receive any advice or support about smoking when you were in hospital? – please circle all that apply:
    a. Yes – pre-admission service and medication
    b. Yes – withdrawal management (NRT)
    c. Yes – hospital stop smoking service quit attempt, including medication
    d. Yes – verbal advice to stop
    e. Yes – written advice to stop
    f. Yes – formal referral by hospital staff to LSSS
    g. No – self-referral to LSSS information
    h. Other – please state:

5. Do you have any other comments about the service you received while in hospital?

NCSCT

November 2021: NICE guidelines PH45 (June 2013) and PH48 (November 2013) have been updated and replaced by NG209. The recommendations labelled [2013] or [2013, amended 2021] in the updated guideline were based on these evidence reviews. See www.nice.org.uk/guidance/NG209 for all the current recommendations and evidence reviews.

Streamlined Secondary Care System

Project Report

June 2012

Contents

Executive summary

Smoking increases the risk of post-operative complications and increases recovery time.[1] In 2009/10 there were 1.5 million hospital admissions for adults aged 35 and over with a primary diagnosis of a disease caused by smoking.[2] It is estimated that treating smoking-related illnesses cost the NHS £2.7 billion in 2006/7, or over £50 million every week.[3]

A standardised method of identifying and referring hospital patients to stop smoking support does not currently exist in England, with a real need for modernisation. Referral pathways are largely inefficient and not fully embedded or implemented within existing hospital systems. As a result, the NCSCT Community Interest Company (NCSCT) was commissioned by the Department of Health to test a streamlined, systematic and robust referral system in one acute trust that would increase the referral of smokers to appropriate stop smoking support.

The Streamlined Secondary Care System

The Streamlined Secondary Care System is a whole hospital approach to stop smoking support for patients. The system includes an innovative electronic referral system that is incorporated within the existing hospital IT system. The approach ensures that there is a straightforward and efficient method for referring smokers on to their local stop smoking service. It focuses on implementing systems that support staff to deliver 'Very Brief Advice' (VBA) and electronically refer patients. The electronic referral system sorts patients by their postcode to ensure that they are automatically referred to the correct local stop smoking service. The system also includes an online training programme that provides the necessary knowledge required to deliver VBA in the hospital setting.

The system was piloted in the Queen Alexandra Hospital within Portsmouth Hospitals NHS Trust for three months from 15 November 2011 to 17 February 2012. Whilst the intention was for all referrals to be made electronically from the seven pilot departments, there were also additional referrals made via existing referral systems (e.g. paper based) as departments not directly involved in the pilot engaged with the project.

Outcomes and recommendations

Key outcomes from the pilot included:

- In total there were 187 referrals made via the 'Referral Management System' (RMS) and 330 referrals made overall by all referral methods. This equates to a total increase of 602% when compared to the 47 referrals made during the same period in the previous year.
- Prior to the pilot 55 members of staff were reported as being trained in VBA by the local stop smoking services. From 1 September 2011 staff were asked to complete the online VBA training developed for the pilot. This resulted in a 415% (n=282) increase in the number of staff trained to give VBA to patients via the online training programme.

- The simplicity of the Streamlined Secondary Care System has proven to effectively increase the identification and referral of hospital patients into local stop smoking support. Key benefits of the approach include:
  - A simple and time efficient referral system that is easily incorporated within existing day-to-day practice
  - An effective, accessible and measurable online VBA training programme
  - A system that enables stop smoking services to respond quickly and efficiently to referred patients
  - A whole hospital approach that stimulates progress towards providing a supportive environment for patients to stop smoking

The evaluation of the Streamlined Secondary Care System pilot has resulted in the development of eight key recommendatons. The recommendations cannot be specifically aimed at acute trusts or local commissioners due to the radically changing landscape, however, the general recommendations are as follows:

1. The need for senior level engagement, passion and dedication to drive forward a cultural change within an acute trust
2. The need for thorough whole hospital engagement with frontline hospital staff, right through from senior and middle management
3. Referrals from acute settings on to stop smoking services should be made via a robust, secure, efficient electronic system, which can provide an auditable solution to measure performance against smoking related CQUIN indicators
4. Frontline hospital staff should be trained online to give VBA
5. Local areas should dedicate funding to develop hospitals into supportive environments for their patients to stop smoking, and for stop smoking medicines to be available on the hospital formulary
6. A programme management approach to implementing changes within an acute trust is required, supported by a dedicated project manager that includes the IT department being a key and willing stakeholder
7. The IT department in the acute trust is a key stakeholder, and it needs to be open, willing, flexible and accommodating to allow changes to be made to the internal IT system and able to work around challenges that may arise with existing, potentially antiquated, electronic systems to enable referrals to be made. In addition, it is also recommended that all patient electronic data capture methods for hospitals include a smoking status field.
8. NRT and other stop smoking medicines should be available on hospital formularies with information provided to both staff and patients on how to use this medication effectively, even for temporary abstinence purposes.

1. Introduction

Smoking increases the risk of post-operative complications and increases recovery time.[1] Smokers are also more likely to experience slower wound healing which can result in the need for further surgery, a longer hospital stay and increased costs to the health service. There are multiple health problems that can be linked directly to smoking, including cancer, cardiovascular disease and lung diseases, which frequently lead to a period of hospitalisation.[4]

In 2009/10 there were 1.5 million hospital admissions for adults aged 35 and over with a primary diagnosis of a disease caused by smoking: approximately 4,100 admissions per day. This figure has been rising steadily since 1996/97 when the number of such admissions was 1.1 million. In 2009/10 it was also estimated that around 461,700 hospital admissions were directly attributable to smoking, accounting for 5% of all adult hospital admissions. In addition there were 81,700 deaths which were estimated to be attributable to smoking in 2010, totalling 18% of all adult deaths.[2]

It is estimated that treating smoking-related illnesses cost the NHS £2.7 billion in 2006/7, or over £50 million every week.[3] It is important to note that these are costs of treating smoking-related illnesses and do not include costs related to working days lost or incapacity benefit payments for ill health for example, nor do they include any costs related to the effects of secondhand smoking.[2]

Benefits of hospital stop smoking interventions

Patients are more receptive to an offer of stop smoking support while in hospital. In particular, patients often experience a period of heightened motivation to stop smoking following admission which can be an excellent time to offer 'Very Brief Advice' (VBA, see appendix A).[4] A Cochrane review confirmed the positive impact of implementing stop smoking services for inpatients. This systematic review found that programmes to stop smoking that begin during a hospital stay, and include follow-up support for at least one month after discharge, are effective. Such programmes were found to be effective when administered to all hospitalised smokers, regardless of admitting diagnosis.[5]

Offering VBA is the single most cost effective and clinically proven preventative action a healthcare professional can take [6] and it is important to keep giving advice at every opportunity, as smokers may take several attempts to stop smoking successfully.[7] In addition, by referring a patient to a local stop smoking service, they are up to four times more likely to stop smoking.[8]

Prevalence and activity

Whilst exact hospital smoking prevalence is unknown, the Department of Health's 'Stop Smoking Interventions in Secondary Care' pilot pre-implementation data showed a smoking prevalence among hospital patients of 30.7%, which is well above the national average of 21%.[9] The pilot also showed that under 25% of patients were offered a referral to local stop smoking services, which highlights a huge number of missed opportunities with this highly captive audience.[10]

Stop smoking support in secondary care has developed significantly over recent years, although this is diverse, ranging from no activity in some acute trusts to established systems and activity in others. A standardised method of identifying and referring hospital patients to local stop smoking services in England does not currently exist. Rather, anecdotal evidence suggests that this is varied, with patient smoking status mostly being recorded on patients' (paper based) notes rather than electronically and referral pathways not fully embedded or implemented within existing hospital systems. A survey carried out in March 2011 of those delivering stop smoking support in acute settings, showed that nearly 90% of respondents believed that not having a robust electronic referral system from the hospital was limiting current activity and that such a development would be of value.[11]

Policy context

There is a wide range of smoking related CQUIN indicators in place across England, many of which aim to benefit patients by encouraging routine delivery of interventions that can lead to an attempt to stop smoking, including a referral on to stop smoking support. These indicators can also be very financially lucrative for acute trusts, and in turn beneficial for stop smoking services in terms of referrals. However, the issue remains that indicators are not standardised and many, for example, are not easily measurable and therefore do not support accurate local performance management. The most frequently reported challenge is that the indicator has been put in place with little consultation or assessment as to how the acute trust will deliver the required activity, or measure and accurately report on their performance, as recording is often paper based.

The Quality, Innovation, Productivity and Prevention (QIPP) agenda is a large scale transformational programme for the NHS, involving staff, clinicians and, patients; plus the voluntary sector. The aim of QIPP is to improve the quality of care the NHS delivers whilst making financial savings, which are hoped to be reinvested in frontline care. As part of this programme there has already been some work to engage and train staff to provide VBA to patients, and make referrals. Making these referrals, specifically electronically is very supportive of the QIPP agenda. In addition, development of referral pathways and training staff to give VBA to hospital patients supports the NHS Future Forum's 'Make Every Contact Count' recommendations.

To support development within this area, the NCSCT Community Interest Company (NCSCT) was commissioned by the Department of Health to test a streamlined, systematic and robust referral system in one acute trust by March 2012 that would increase the referral of smokers to appropriate stop smoking support. The primary outcome measured throughout the pilot was the number of referrals from the hospital on to local stop smoking support. Although not in the initial scope of the project, the number of quit attempts and four-week quit outcomes were also captured as secondary measures. This report provides an overview of the model tested and the findings from the pilot carried out in the Queen Alexandra Hospital in Portsmouth.

2. The model

2.1 Model overview

The 'Streamlined Secondary Care System' is a whole hospital approach to stop smoking support for patients. The model includes:

- Online VBA training for frontline hospital staff
- Routine recording of smoking status for all patients
- Routine delivery of VBA on smoking
- An electronic referral system without the need for the entry of patient details to be duplicated
- Stop smoking medicines on the hospital formulary including nicotine replacement therapy available for withdrawal management
- Rapid access to effective and appropriate stop smoking support

2.2 Training

In order to equip frontline staff with the necessary skills and knowledge to effectively deliver VBA within their local environment, an evidence-based online training programme is an essential component within the model. The training includes local information to increase salience for participating staff, and an assessment to ensure that the key learning points have been understood. The training is structured as follows:

- A screen highlighting the senior level endorsement from the hospital
- Local statistics on smoking related activity
- Three pre-pilot 'confidence in competence' questions
- The 30 second VBA, 'Ask, Advise, Act' approach
- Advice on provision of NRT for patients during periods of forced abstinence and if a referral is declined
- A brief overview of how to make a referral
- A short assessment of knowledge

2.3 Electronic referral system

The main objective of the streamlined system is for frontline hospital staff to deliver VBA to all patients and then indicate in patients' notes if a referral for stop smoking support is needed. An electronic referral is then made by administrative staff within the ward, and sent to the RMS (as illustrated in figure 1) which is hosted on a server within the NHS N3 network.

The RMS has the capacity to deal with a large number of referrals instantly, and works by sorting patients by their postcode and referring them on to their local stop smoking service according to specific rules. It is designed so that if patients visit a preoperative assessment or outpatient clinic their details would be sent to their local stop smoking service; but if they were an inpatient they would be seen whilst in hospital by an advisor from the closest local stop smoking service.

These rules are used in order to reduce the risk of patients getting lost in the system or unnecessary delays in receiving support. For example, this overcomes potential situations such as the referral of a smoker from Manchester who becomes unwell whilst visiting Portsmouth. In this situation, if seen as an outpatient their details would be sent to their local service in Manchester. If however they were admitted as an inpatient, they would be seen by an advisor from Portsmouth to ensure that they were seen and supported promptly after being referred.

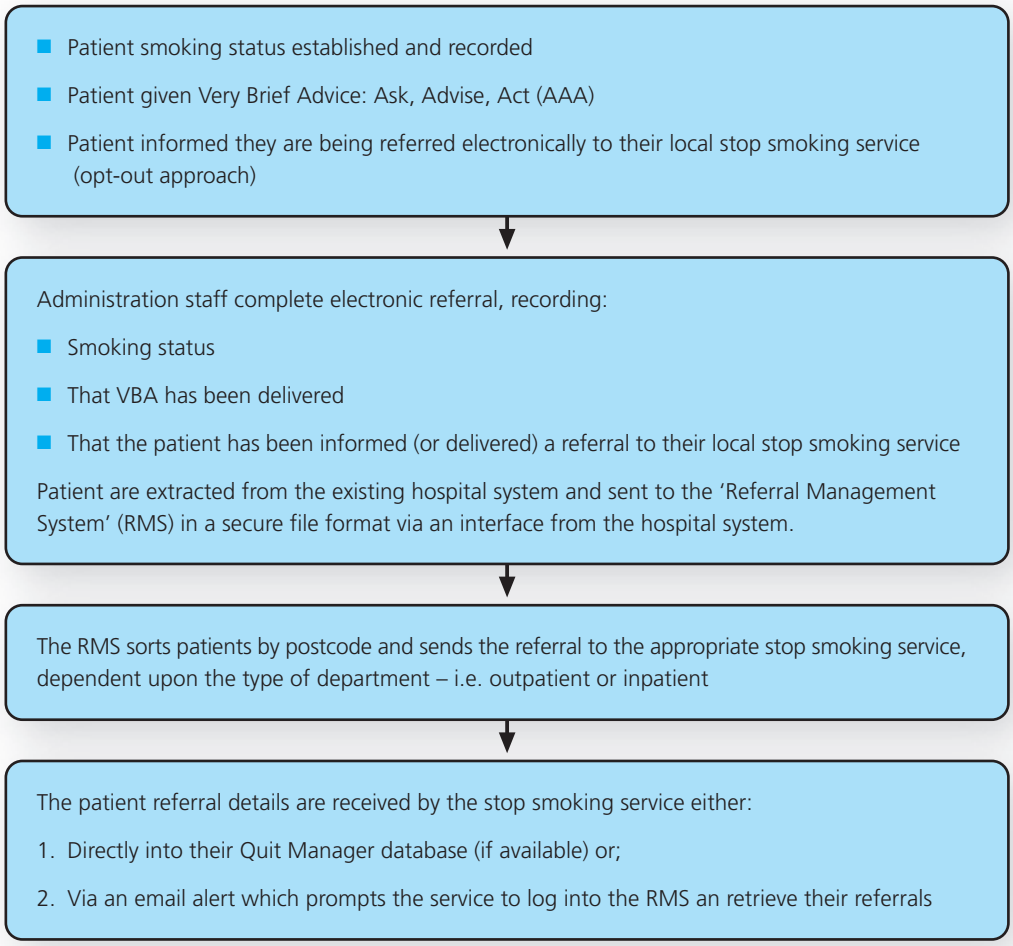
An entry, involving nothing more than answering five short questions (see section 3.2), is made in the patient's electronic records and a referral generated. This not only provides an auditable system, but also ensures that patients are seen and supported to stop smoking much quicker than by using existing models.

2.3.1 Receiving referrals

All of the stop smoking services in England can receive a referral via the RMS. This is important as although it is anticipated that the majority of patients within a hospital would fall within the geographical catchment of a small number of services, it is also recognised that patients from outside of this catchment could also be admitted.

The RMS is programmed so that when a referral is made, an e-mail alert is automatically sent from the system to the relevant stop smoking service, indicating that there is a referral waiting for them. This e-mail alert prompts the service to log-in and securely retrieve the referral, and action as per their normal protocol. If a stop smoking service has the 'Quit Manager' database, they are able to receive referrals directly into their database providing they have the referral module.

Figure 1: The Referral Management System (RMS) including flow chart of the referral process



2.4 Medication and protocols

As part of the whole hospital approach, recommendations and guidance for implementing a policy on NRT for withdrawal management and stop smoking medicines being made available on the hospital formulary are provided and support given for their development.

The recommendations include:

- NRT should be offered to ease withdrawal during a period of forced abstinence
- NRT should always be offered if a patient refuses a referral to their local stop smoking service
- Both NRT and varenicline (Champix) should be offered as first line treatments for patients
- Patients admitted to hospital that are using any stop smoking medicine are able to continue using this during their hospital stay

3. Testing the model

Following a request for potential pilot sites, Portsmouth Hospitals NHS Trust submitted a comprehensive application, accompanied by a supporting letter from the Medical Director of Portsmouth Hospitals NHS Trust, and the Director of Public Health in NHS Portsmouth. The site was appointed in May 2011, with the set-up phase starting in June 2011 and continuing over the summer months. The Streamlined Secondary Care System was piloted within seven departments in the Queen Alexandra Hospital in Portsmouth.

The primary aim of the pilot was to test an effective electronic referral system, with the key outcome being to increase the number of patient referrals from the hospital on to local stop smoking support. Whilst increasing conversion from referral to setting a quit date and four week quit outcomes was not directly within the scope of the project, these were also measured as secondary outcomes.

3.1 Programme management approach

3.1.1 Establishing milestones

In addition to the quality indicator (non-CQUIN) already in place within the pilot site, specific roles and responsibilities were agreed for the pilot, as well as key milestones and targets:

- 50% of the following staff groups in the pilot departments to complete online training by 1st October 2011:
  - Doctors
  - Nurses
  - Health Care Assistants
  - Midwives
  - Pharmacists
  - Administrative Staff

- Key departments such as respiratory and cardiology were chosen due to the likely high volume of smokers being admitted. Departments were also chosen based upon their level of engagement, both to support and develop some existing low-level activity, or as a tool for engagement that would involve a key department. The departments provided a range of settings to test the model, which would therefore be useful for potential future roll-out. The pilot departments were:
  - Trauma and Orthopaedics Outpatients
  - Respiratory Ward
  - Respiratory Outpatients
  - Cardiology
  - Maxillofacial Outpatients
  - Maternity Inpatients*
  - General Surgery
- The delivery of VBA to every identified smoker and referral (as appropriate) in the identified departments
- Development of guidelines for NRT and adding additional NRT products to the hospital formulary to be made available in order to improve patient choice

* Maternity inpatients were not included within the original selection of wards; however maternity colleagues proactively requested to be involved and as a result, following a delay in accessing the relevant IT training, began their implementation in January 2012.

3.2 IT

One of the key elements during the set-up phase of the pilot was the liaison and development of the IT system, to ensure referrals could be sent from the hospital system to the 'Referral Management System' (RMS). The original intention was for a smoking status field to be incorporated within the existing Patient Administration System (PAS) used within the hospital; however this was not possible due to a 14 month lead in time required in order to make any changes to PAS. This obstacle was overcome by using an 'Order Communication Module' (OCM) screen for the referrals to be made. The OCM screen was embedded within the existing system and extracted the specified fields required from the PAS system to send into the RMS. The use of an OCM screen was a viable alternative because hospital staff were already using these screens to complete social services and substance misuse service referrals. The screen developed asked five key questions:

1. Does the patient smoke?
2. Has stop smoking advice been given?
3. Refer the patient to their local stop smoking service?
4. Was patient given NRT?
5. Is the patient pregnant?

Once the OCM screen was completed, the following details were extracted from the PAS system and sent to the RMS:

- Forename
- Surname
- Date of birth
- Home telephone
- Mobile telephone
- Home address and postcode
- GP NACS code
- Practice NACS code
- If patient is pregnant
- Estimated discharge
- Date
- Referring organisation
- Referring department, i.e. ward etc.

The RMS would then sort the patient's details by postcode and refer on to the appropriate stop smoking service. As previously mentioned, there were three rules applied to the RMS when sorting the patients:

1. If an outpatient, refer directly to the patient's local stop smoking service
2. If an inpatient, refer to the pilot coordinator based in the hospital (to ensure patient is seen promptly)
3. If patient has no postcode (estimated at 5% of patients), refer to pilot coordinator based in the hospital (to ensure patient is seen promptly)

Portsmouth and Hampshire were identified as the two main services linked to the pilot hospital. Portsmouth had the 'Quit Manager' database and were able to receive referrals directly, whilst Hampshire did not have a web based system, and therefore received e-mail alerts. To ensure that any referrals outside of these services were responded to, an e-mail was sent out to all of the services across England which provided brief instructions and information on how to retrieve any referral(s) sent to their service.

3.3 Pharmacy

During the pilot set-up phase it was suggested that the pharmacy technicians in the pharmacy team could be utilised and trained to give patients VBA, as well as to discuss and provide NRT, and make a referral as part of their duties on in-patient wards. It was anticipated that this would also support the provision of NRT to patients for temporary abstinence and withdrawal management during their hospital stay. Due to initial financial issues the technicians were only able to start in the final month of the pilot, however despite this, their input worked well and proved to be a useful resource for engaging with patients, delivering VBA and facilitating referrals (n=12) into stop smoking support.

Before the pilot started, the only Nicotine Replacement Therapy (NRT) product available on the hospital formulary was the 24 hour nicotine patch. As part of the pilot, NRT guidelines were created and made available on the hospital intranet, and to improve patient choice the nicotine inhalator, gum and mouth spray were also added to the hospital formulary and stocked in the hospital pharmacy. An area on the staff intranet under the pharmacy section was created, to ensure up to date information about all of the products was available for staff, including instructions for dispensing NRT to patients by indicating on their patients' notes. Varenicline (Champix) was already available on the hospital formulary prior to the pilot starting.

3.4 Training

The VBA training was made available online so that it was easily and readily accessible for frontline hospital staff and was hosted on the NCSCT server to reduce the IT burden on the hospital. It was preferable for the VBA training to be online so that it was available at the convenience of staff, and to reduce the pressure of staff needing to be released for a face-to-face training course. This option for training staff was measurable and provided a step-by-step guide to support implementation of the pilot.

To ensure staff were trained and ready to identify and refer smokers when the electronic referral system was in place, a link to the training was made available one month before the system launched. Prior to the pilot going live, targets for the proportion of staff to be trained were agreed and disseminated to ensure that frontline staff fully understood what they needed to achieve. To measure any changes in confidence, staff were asked at the beginning of the training to self-report their confidence in asking, advising and referring patients who smoke. Trainees were then asked, via an automated e-mail, to repeat the 'confidence in competence' questions three months after completing the training.

The training launch was complemented by a programme of communications (see section 3.5).

3.5 Pilot promotion and communications

To ensure comprehensive awareness of the pilot and the need to complete the VBA training amongst staff, the trust's internal communications team incorporated key messages within their existing range of communication channels. These included:

- A message from the Chief Executive within the trust's monthly bulletin
- Articles within the staff magazine
- Promotional messages on the staff intranet
- Electronic short messages prompting staff to access the training and deliver VBA after logging into the computer
- E-bulletins and global emails

To complement the electronic communications, staff were also provided with a credit card sized resource to remind them to access the training and deliver VBA (see appendix B).

4. Outcomes

4.1 Training

Overall there was a 415% increase in the number of staff trained to give VBA, as previously just 55 staff were trained to give VBA via face-to-face training over the two years prior to the pilot. In total 282 members of staff in the pilot departments completed the training, and table 1 shows the breakdown by staff group. As expected, the highest proportion of staff who undertook the training were nurses (39.7%, n=112). This was anticipated as they would have the majority of contact with patients and therefore have the greatest opportunity to deliver VBA. Encouragingly, this was followed by doctors (17.4%, n=49), which given that this is often a group which are difficult to release for training and engage in training sessions, was very positive.

Table 1: Completion of online training by staff group

Staff group	% (n)
Doctors	17.4 (49)
Nurses	39.7 (112)
Pharmacists	1.1 (3)
Administrative staff	9.6 (27)
Health care assistants	16.7 (47)
Midwives	15.6 (44)
Total	100 (282)

Within some departments over two-thirds of staff were trained in VBA and in two (Maxillofacial Outpatients, Respiratory Outpatients) virtually all (97%, n=34, and 91.3%, n=23 respectively) were trained (table 2). Other departments (staff, general surgery, cardiology, and trauma and orthopaedics) had virtually two-thirds or more of their staff complete the training. One of the lower achievers was surprisingly the respiratory ward at 34% (n=19). The lowest percentage of staff trained was from maternity inpatients, however, this is a large department and the actual number of staff trained was encouraging, representing nearly one-fifth of all trainees.

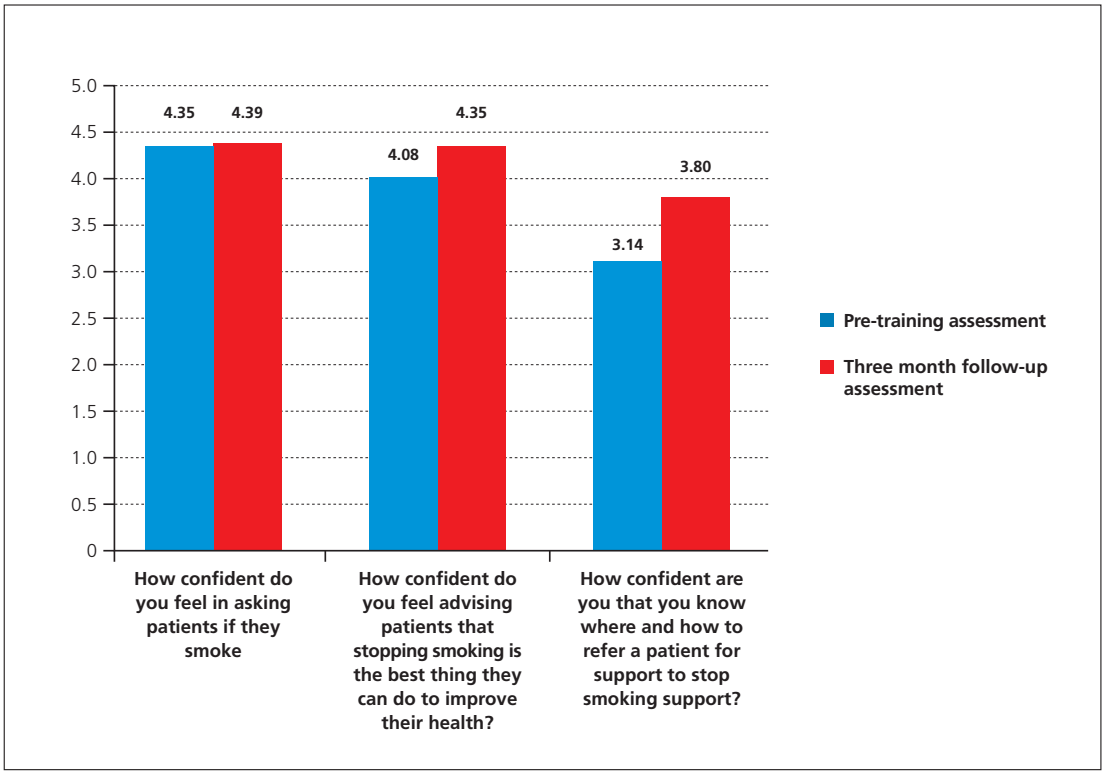
Table 2: Completion of online training by department

Department / Ward	Total number of staff in department % (n)	Staff trained % (n)
Trauma and Orthopaedics Outpatients	65 (62)	14.2 (40)
Respiratory Ward	34.0 (56)	6.7 (19)
Respiratory Outpatients	91.3 (23)	7.4 (21)
Cardiology	65.3 (72)	16.6 (47)
Maxillofacial Outpatients	97.1 (35)	12.1 (34)
Maternity Inpatients	29.2 (185)	19.1 (54)
General Surgery	77.8 (18)	5.0 (14)
Other	N/A	18.8 (53)
Total		100 (282)

In terms of staff demographics, the average age of staff completing the training was 42 years (range 18–65). On average staff had been qualified for 15.8 years, ranging from one to 37 years, with their average number of years in their current role being nine years (ranging from two to 37 years). It was positive, that not only staff who had been in a role for 37 years had agreed to and completed the training, but also that those who had been qualified for just one year had done so too. This showed that the training had reached all degrees of experience, and also indicated that even those members of staff with long service recognised the opportunity to improve day-to-day practice.

As previously mentioned, staff confidence in competence was measured at the start of the online training, and then repeated three months later (figure 2). Statistical significance was difficult to establish because initial confidence levels were high; however, encouragingly staff confidence in asking patients if they smoke increased overall by 0.04 (from 4.35 to 4.39), and by 0.27 (from 4.08 to 4.35) when staff were asked how confident they felt when advising patients that stopping smoking was the best thing they could do to improve their health. The greatest increase (0.66, from 3.14 to 3.80) was in relation to staff reporting how confident they felt in referring patients for support, which was statistically significant (<0.001).

Figure 2: Comparison of staff 'confidence in competence' – Average scores for pre-training and three month follow-up



Variations in confidence were reported between staff groups in the initial measurement, and in the three month follow-up measure. On the whole confidence improved in most staff groups, particularly amongst administrative staff, nurses and doctors. However, a decrease in confidence was reported among health care assistants in relation to asking patients if they smoke and advising patients to stop smoking. This group did report an increase, however, when asked about their confidence in knowing where and how to refer patients for support to stop smoking.

It is suggested that decreases in confidence could be due to a longer than three month delay in completing the follow-up measure, and therefore the need for a refresher training or negative experiences for a few individuals which could have skewed the results. However, on the whole confidence improved and this showed that firstly the training improved confidence, and secondly that this increase was positively reinforced when staff put the points learnt within the training into practice.

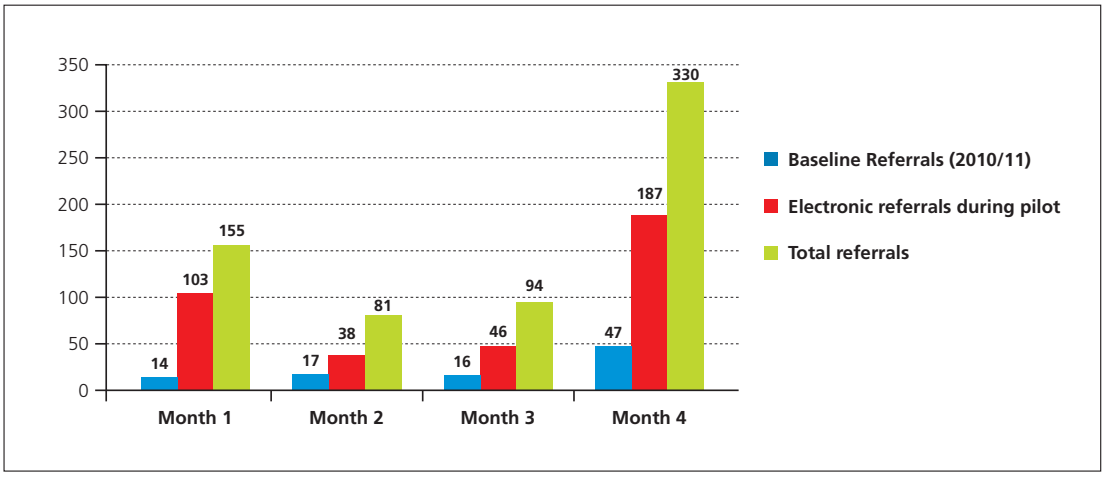
Staff knowledge was assessed in the final part of the online training, in the form of seven 'true or false' questions. The questions were related to the 'ask, advise, act' training screens, smoking related facts around patients expecting to be asked about smoking, and the 'how to refer' details. The average pass rate was 93.7%, which showed that the training had been understood and the majority of staff had an excellent level of knowledge in terms of their role in the pilot

However, there were some differences in staff knowledge when comparing staff groups. Nurses achieved the highest percentage of answers correctly at 95.3% (n=104), followed by doctors at 94.1% (n=46), health care assistants and midwives both achieving 93% (n=45, n=41 respectively), and administrative staff at 88.8% (n=23). The staff group with the lowest percentage of passing the knowledge assessment were the pharmacists with 85.7% (n=3). Overall, it was very positive that all groups achieved a pass rate above 85%, indicating that the training was understood by a range of audiences and roles.

4.2 Referrals

In total, there were 187 referrals made electronically by the pilot departments via the RMS on to local stop smoking support, over the pilot period. The breakdown of referrals over the three months is shown in figure 3.

Figure 3: Referrals made from the Queen Alexandra Hospital on to local stop smoking services in comparison to the same period in 2010/11

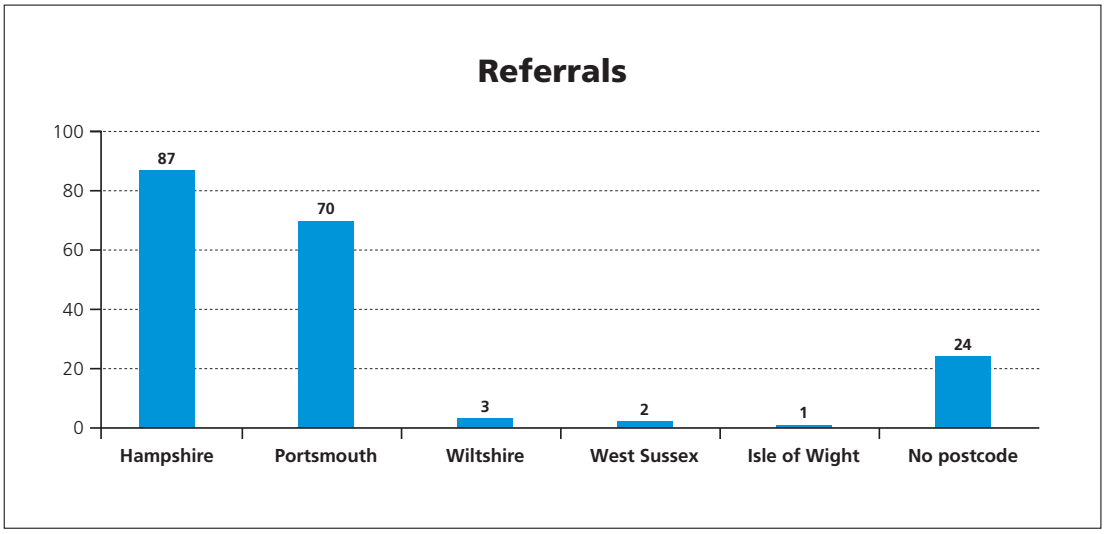


As shown the referral rate was very high in the first month. The dip in the second month was attributed to the two week Christmas period which resulted in lower activity. Overall referrals increased by 140 over the three months when compared to the same period in 2010/11, from 47 to 187 referrals. This resulted in a 298% increase, which was extremely positive and demonstrated that the system had worked efficiently and effectively. Based upon these results it appears plausible to expect a similar increase in referral activity if the system had been implemented in further hospital departments.

When reviewing the total number of referrals received by the Portsmouth and Hampshire stop smoking services from the hospital, an even greater increase was evident. When accounting for all referrals and not only those received via the RMS, a total number of 330 were received, an impressive 602% increase in referrals overall. When looking at the referrals broken down by month, the highest number were again received in the first month with 155 (47.0%) being made in total, 81 (24.6%) in the second month and 94 (28.5%) in the third and final month. The general increase is likely to be due to the training, and an increased awareness of the need to refer amongst staff generated by the pilot. This demonstrated that the ability to make an electronic referral is not necessarily the most important element to the system, but rather it is the staff engagement that ensures that referrals are made. However, it is important that the method of referral is easy and efficient. It is also likely that the general increase in referrals was due to some departments not having access to the IT system at the start of the pilot, and therefore referring via other means, i.e. fax, telephone etc. as an interim solution.

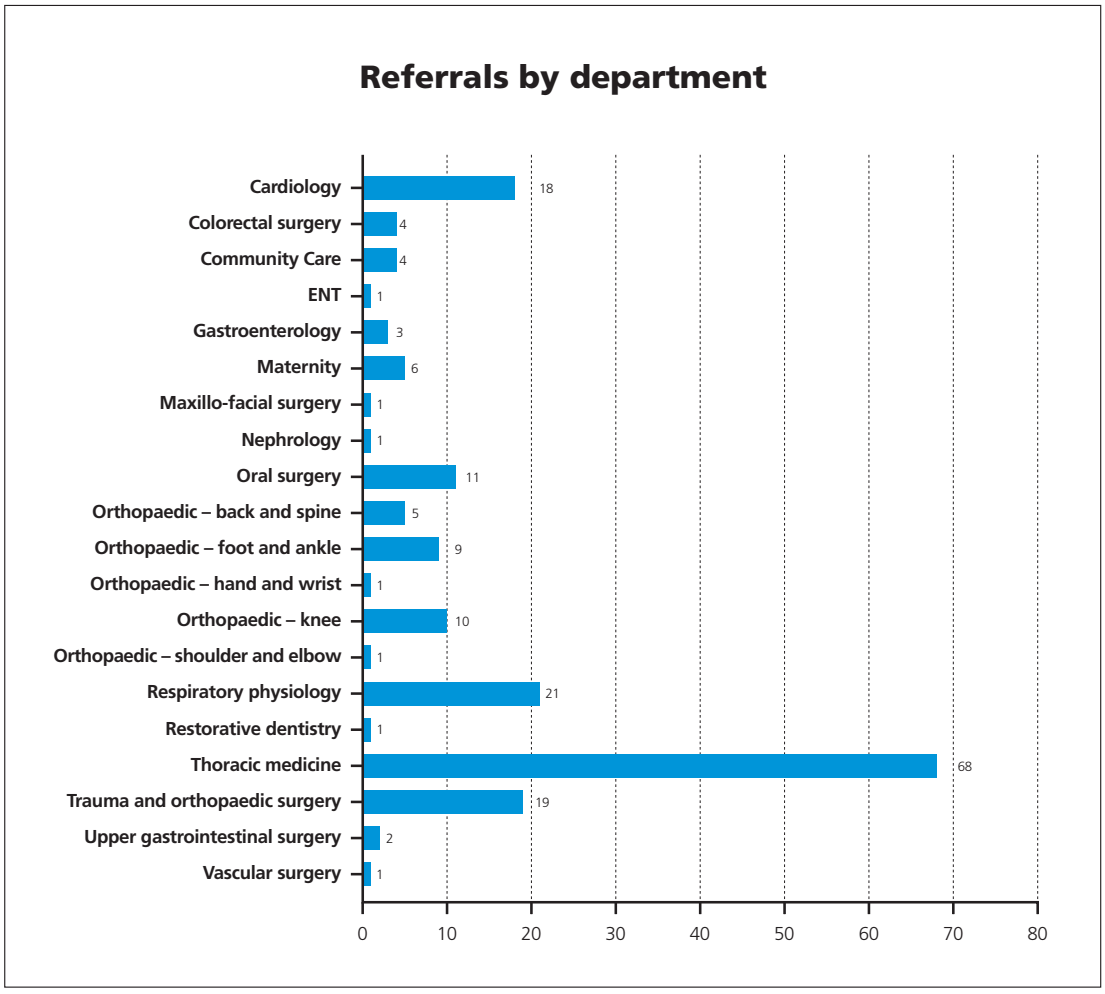
Patients entered into the RMS were referred to five different stop smoking services during the pilot, as illustrated in figure 4. As expected, the highest number of referrals were sent to the two local stop smoking services, Hampshire service, 'Quit 4 Life' (46.5%, n=87) and the Portsmouth service, 'Pompey Quit' (37.4%, n=70). The referrals sent to the other stop smoking services were successfully sent and received, with feedback confirming that referrals were easy to retrieve. There were 24 (12.8%) referrals made that did not have a postcode due to an initial IT error which meant that the incorrect code was used to extract the patient postcode, but this was easily corrected within the early stages of the pilot. These referrals were contacted by the pilot coordinator or re-referred if the postcode had been established.

Figure 4: Referrals made from the Queen Alexandra Hospital on to local stop smoking services via the Referral Management System, broken down by receiving stop smoking services



When looking at the referring departments, it was encouraging to see that there was a wide range in referral source, showing a good level of engagement and knowledge across the hospital, as illustrated in figure 5. The highest referring department was 'Thoracic medicine' with 68 (36.4%) referrals in total, which was an excellent achievement. There was even an encouraging number of referrals from Maternity (4.8%, n=6) who only started referring in the final month of the pilot due to an IT related training issue.

Figure 5: Referrals made from the Queen Alexandra Hospital on to local stop smoking services via the Referral Management System, broken down by referring department



A larger proportion of referred patients were male (55%, n=102), 45% (n=85) were female. Those aged between 45 and 59 were most frequently referred (40.1%, n=75), with the 60 plus age group being the next highest (23%, n=43). The number of referrals were the same for the 18 to 34 year olds (n=34, 18.2%) and the 35 to 44 year olds (n=34, 18.2%), with just one referral for an under 18 year old (0.5%).

Overall the number of referrals, range of referring departments and range of receiving stop smoking services indicated that the RMS was effectively used by a wide range of departments and staff. This also suggested that the system was easy to use and ensured that patients were referred on to their local stop smoking service quickly and efficiently without requiring a time intensive intervention from hospital staff.

4.3 Conversion and treatment outcomes

The aim of the pilot was to test an effective electronic referral method from the hospital for patients being referred on to local stop smoking support. Therefore, the primary outcome measured was the number of referrals made from the hospital. Although not the principal aim of the project, secondary outcomes such as the number of patients referred accepting support and quitting were also captured. It is clear that additional work is required to further develop services when supporting hospital patients to stop smoking, especially in terms of the initial contact being made.

In total 64 (40.8%) of the 157 patients referred via the RMS on to the Hampshire and Portsmouth stop smoking services, accepted support when contacted. Of these 64, at the time of data capture, 22 (34.4%) had gone on to set a 'quit date' and 14 (22%) were reported as four week quitters.*

4.4 Local implementation costs

The pilot had a three to four month preparation period, and was 'live' for three months. The costs to alter the hospital IT system were approximately £7,000, although this is significantly higher than would be anticipated for any future testing due to the lessons learnt. The pilot coordinator worked for three days a week based in the hospital, and was paid an NHS Band A&C six. In addition £1,200 contributed to the training costs of the pharmacy technicians, and towards their time spent on giving VBA to patients.

4.5 Qualitative analysis

In order to qualitatively evaluate the pilot, telephone interviews were conducted with staff at the start of the pilot (November / December 2011) and two months later (January / February 2012) in order to capture opinions pre and post implementation of the project. Participants were recruited from the pilot departments (referred to as 'operational staff' where quoted), and the project co-ordinator and stop smoking service managers (referred to as 'coordinating staff' where quoted). In addition, the Medical Director of Portsmouth Hospitals NHS Trust and the Director of Public Health for Portsmouth City (referred to as 'senior management' where quoted) were interviewed in January / February 2012. Participants were asked about their thoughts on the online training, the pilot itself and future recommendations. Interviews were, with permission, recorded and transcribed verbatim.

*Outcome data is correct at time of submission.

4.5.1 'Very Brief Advice' online training

Almost all participants responded positively when asked their opinions of the VBA online training. It was generally reported as being straightforward, quick and easy to access, with very few negative comments regarding the training itself.

> *It was very easy to access, it worked as it said it was going to, it was as short as it said it was going to ... and because it was as short as it said it was, we were able to go round everybody in our department and say come on guys you can do this, it really is only six minutes long or something. (Operational staff, early interview)*

> *I thought it was all pretty straightforward ... the time was very quick. It didn't take long at all to do that; it took about ten, 15 minutes. Easy and simple to understand. (Operational staff, early interview)*

Only one respondent indicated that whilst she was aware that the aim of the pilot was simply to refer patients, she was not aware of what happened after the referral was made and so would not be able to answer questions should the patient ask.

4.5.2 Potential problems or concerns

When asked at the outset about any concerns staff had regarding the successful completion of the pilot, a range of potential issues were reported. The amount of time the intervention would take, both for making the online referral and for having the initial discussion with patients at a time when staff were under pressure to see more patients was reported by a number of participants. Concern was also raised around the timing of the pilot as it was approaching winter, with the obvious potential for even greater activity across the hospital.

> *One of the concerns we had was that when you started asking people the questions that we needed to ask them, that it would be quite difficult to get them to do that briefly, because we're quite a friendly department and, um, our patients like us, and they tend to talk to us. And we ... you know, it was like we were saying to the clinic girls, you know, you cannot talk to people for 20 minutes about this, we just don't have the time in the department to do this. (Operational staff, early interview)*

> *In terms of processing patients, like anything at the moment, we're under a little bit of pressure to see more patients in the same amount of time ... we have the nurses do an assessment before they go in to see the consultant and ... we're very much under pressure to, kind of, reduce that amount of time we spend, not, not chatting but, for us it's weighing and doing lung function and doing a proper nursing assessment. If you add the smoking questions into that equation, then it makes that whole process a bit longer, so there is that to think about as well. (Operational staff, early interview)*

Another concern raised by a number of participants was around the issue of access to IT systems and training to use the computer system. Despite the pilot being up and running, some departments were not yet trained in how to use the online referral programme at the point of initial interviews.

> *The only problem, as I said, that we've got at the moment is, is purely that we haven't had the training to be able to allow us to make the necessary referrals, so we're still having to refer via the old system at the moment. (Operational staff, early interview)*

There was also concern regarding getting and keeping staff engaged, both in terms of motivation for participation and remembering about the project. Interestingly, one participant highlighted a concern that the pilot may not be successful in their department as a result of an attitude of apathy amongst the consultants.

> *When everyone's in a rush, and they're running around, it'll probably be one of the things they don't think of, because you get into a habit of doing things in certain ways, in a certain order, and if that's not part of your routine, then it is going to be forgotten. So people will need to be reminded. (Operational staff, 9, early interview)*

> *My consultants. I want to come out of this with our department having really good feedback for you, and at the moment I haven't got that feeling because there's so much apathy with ... with these doctors ... (Operational staff, 5, early interview)*

Another concern raised was the question of the appropriateness of staff asking patients about their smoking behaviour.

> *I'd say that, that, you know, some people think, you know, do we have the right really to question people on their, on their social aspects or, you know, it's another question to ask a patient. (Operational staff, 6, early interview)*

4.5.3 Positives of the pilot

Positive feedback from early interviews tended to be general in nature, and more in support of the concept of the pilot rather than for the pilot itself as many were in very early days of implementation. The majority of participants had positive things to say about the aims of the pilot, highlighting the importance of addressing the issue of smoking with patients. It was felt that it was beneficial to have a system in place to identify smokers, to document smoking status and to smokers on to appropriate support. It was also perhaps becoming apparent to operational staff that patients may not actually mind being approached about their smoking behaviour but instead respond positively to the offer of support.

> *If this works, and this makes it easy and it sort of means that more people are stopping smoking, I would like this to continue forever because I think it's fantastic. (Operational staff, 2, early interview)*

... initially you feel a bit hesitant about asking patients. But if you realise that they're coming to the hospital expecting to be asked that question, that's fine, you can, you know, it gives you a bit more confidence to go ahead with that ... I think, just having a scheme that backs you up makes you more confident in approaching the patient ...And in fact also that you have somewhere you can refer them to, so, and you're not just advising ... giving them advice, you can actually put them in touch with the right people. (Operational staff, 10, early interview)

One service manager felt that a big positive of the pilot was that it had brought together groups of people who had not worked together previously, both within the hospital and the wider smoking lobby. It was also felt that having a dedicated project manager had been a very helpful aspect to the project. Staff engagement was reported as an encouraging factor by both service managers and senior management, with the good intentions of hospital staff being recognised by both groups.

I think the intention by senior management has been good ... and certainly having spoken to some of the, for example, the orthopaedic consultants, really positive, really up for it, absolutely supportive, been 100% behind it, so some of the senior staff really, really, brilliant. (Coordinator, 2, early interview)

The good thing is ... is that, you know, individuals do want to, to do this, they do want to move it forward, and when you, when you, when you speak to individuals in the hospital, you know, they're, they're more than happy to do this sort of thing. (Coordinator, 1, early interview)

Feedback from later interviews was more focussed upon the details of the pilot than previously, and remained largely in favour of the project and referral system. Participants reported that the pilot was a good idea, had been well received by patients, was running smoothly and, after the initial issues had been addressed, was well organised. Engagement of nursing and administrative staff was largely reported as being positive and it was felt that the referral process was much simpler as a result of the pilot and allowed staff to offer support to more patients.

Certainly, from our point of view it's been absolutely great; I mean, I'm very happy doing it, and I think it's a fantastic idea, and I've been really pleasantly surprised at how many patients have embraced it and have been like, oh, yes, please, I'd really like to be referred. (Operational staff, 2, later interview)

... the fact that patients are being identified and.. having the access now to being able to refer online is, is better, is a better process than we were doing previously. (Operational staff, 4, later interview)

Service managers and the project co-ordinator were also positive in later interviews, reporting that a large number of staff had undertaken the very brief advice training and an increase in the number of referrals was evident. On a particularly encouraging note interest in participating in the pilot had extended from those departments initially included, indicating that there was a wider support for the pilot than just those selected to participate.

The numbers of people that have done the very brief advice training is very high, I think it's like 270-something, so actually I think that's a really good reflection on the staff that, that want to, to do it. (Coordinator, 1, later interview)

Well the amount of referrals that have come through as a whole compared to the referral rates from last year to the two smoking NHS local smoking services that we're using, is massive, it's a huge, huge difference. (Coordinator, 1, later interview)

4.5.4 Challenges of the pilot

In the early interviews, one negative point raised by interviewees was that they had not received the necessary training from the internal IT department on how to use the referral screen, meaning that almost all departments had been delayed in starting. This was due to a communication issue in the IT department, indicating that this training had taken place when in fact this was not the case. It was also felt that there should have been more communication about the pilot during the implementation phase and consultation regarding staff capacity to deliver. However, this is recognised as a common challenge in hospitals with projects of this nature, due to the sheer volume of staff and staff that often have an overstretched workload.

There was a delay in getting referrals because of the electronic set up but ... some of our staff have now got that. So, we can't enter it ourselves but some of our staff can so that's fine. (Operational staff, 10, early interview)

It's most definitely been a top down initiative rather than the other way, you know, rather than garnering ... what we could do. (Operational staff, 1, early interview)

Service managers and the project co-ordinator were also conscious of the issues arising from IT, but it appeared they were more of the view that the issues stemmed from the IT department at the hospital not being fully on board with the project and not providing the necessary communications. Opinions of this did not appear to improve in the later interviews.

What's been challenging is ... there was some sort of information from ICT that we really needed to know prior to the project commencing, around level of training that staff needed to be able to make the referrals ... and as far as we were aware that this was going to happen prior to the project starting. I think there was a bit of a miscommunication, and actually, we found out a week before the pilot was supposed to go live that this wasn't the case, that's why there's been such a delay. (Coordinator, 1, early interview)

A challenge raised by the operational staff was the communication of information around the pilot, although this was primarily reported in the early interviews. Whilst information was cascaded through all of the communication channels across the trust as a whole, some staff highlighted that it would have been better if they had been directly briefed about the pilot project. The project co-ordinator, service managers and senior management were also aware of the challenges posed by poor communications within the hospital and the possible effect this would have on the pilot as a result of operational staff not being aware of what was expected.

> *You run into the problem of, sort of, fortress middle-management, where for no particular ... you know not that anybody obstructs you wilfully, but actually it is just hard work trying to get things through the morass of – I don't know – IT departments, communication departments, communicating with a whole organisation, which is a massive organisation. And it's all of that stuff that is difficult and it's actually making sure that the message at the top is the message that's heard at the bottom and that what people at the frontline do is actually what we want them to do. (Senior management, 2)*

A lack of engagement from the doctors also appeared to be a major issue in the pilot, both as a result of a lack of information and lack of willingness, with some participants reporting that the pilot was actually not running in their department as a result of a lack of commitment from the doctors.

Operational staff reported that doctors were reluctant to participate in the pilot, feeling that it was not part of their role but the responsibility of the GP. This view persisted throughout both the early and late interviews.

> *We've come to a standstill with it, purely because the doctors aren't on board, you know. (Operational staff, 6, early interview)*

> *They (doctors) still baulked against it and said it is not their place to be doing this it is a GP surgery. I don't know, I can't do anything else. (Operational staff, 5, later interview)*

In the early interviews, a number of participants were also concerned about the additional work the pilot would cause on top of already stretched workloads. In particular, this appeared to be a concern for the clerical staff who, in some departments, were taking responsibility for making the referrals where not all staff had undertaken the necessary training. This was especially the case within outpatient wards due to the sheer volume of patients attending clinics. Concerns about workload were not, however, raised in follow up interviews indicating that once training issues had been resolved this became less of an issue.

> *You know, they have an awful lot to do. I mean on a typical day we can have 50, 80 patients through our department. Then you think for, you know, even if it just takes a couple of minutes that's still at least two hours extra work. (Operational staff, 7, early interview)*

Service managers and the project co-ordinator reported that they found particular difficulties with the hospital trust not taking ownership of the project and doing what they said they would do. Being an outsider to the hospital gave them little opportunity to influence what was going on.

I think the difficulty is that the hospital itself has taken very little responsibility inasmuch as in an ideal world we would have had perhaps a member of staff from the hospital side, maybe attending regular meetings but also perhaps being the champion. (Coordinator, 3, early interview)

I think what's been bad about it is the frustration of working as an outsider to an organisation with incredible kind of political barriers and, and sort of processes that don't really help. (Coordinator, 2, later interview)

4.5.5 Day-to-day impact

Operational staff generally indicated that the pilot did not have a detrimental impact on their day to day job role and it was felt that the model had been incorporated into everyday practice. These views did not appear to differ from the early interviews to the later ones. Where there was a noticeable increase in workload it was largely acknowledged that the extra time was acceptable for the desired outcomes of the pilot, although it was mentioned that the pilot was possibly introduced at a challenging time due to low staffing levels.

Yes, the girls have got a little bit more extra work to do, I mean, you know, making sure they remember it, that it's all absorbed into their daily routine and I get them all back at the end of the day to check them. It's not time consuming, you know, it's not noticeably time consuming. (Operational staff, 5, early interview)

I mean, it's been quite a few weeks ... or months that we've been doing it; and it's just sort of been incorporated into everyday life now. (Operational staff, 2, later interview)

4.5.6 Benefit to patients and patient response to the pilot

Most participants reported in the later interviews that they felt the pilot was beneficial to their patients. Some participants did highlight that they would like a feedback loop to see how the patients had done in terms of stopping smoking.

I think the fact that they are referred via a central system that can, can be monitored and they can be directed to the appropriate support, the fact that the project is there offering them support ... has to be advantageous to the patient. (Operational staff, 4, later interview)

When asked about the reaction of patients to the pilot, the general response was that they had been positive and responded well to the offer of referral; in many instances it appeared that patients were actually expecting to be asked about their smoking status and were grateful of the offer of support. Perhaps more importantly, given the concern about maintaining good relationships between patients and nursing staff, negative feedback about the pilot was limited to a minority of patients approached, and there was no suggestion that patients had been offended or taken the offer of support badly.

I think they're, they're open-minded. I think they're grateful that, that help is available to them for helping to give up smoking. (Operational staff, 4, later interview)

... the patients ... I don't think anybody's been offended. (Operational staff, 5, later interview)

... they either seem to be one or the other, yes, they're interested, or, no, I'm definitely not ... they don't mind being asked, I think sometimes if they're a smoker they almost expect that they might get asked that. (Operational staff, 10, later interview)

4.5.7 Rollout

When participants were asked whether they thought the pilot should be rolled out on a wider scale, the majority of operational staff responded positively to the concept in the early interviews, although many also emphasised that it would need to be accompanied by a comprehensive communications strategy. In later interviews however, respondents were even more positive, stating that they felt that the referral system could indeed be rolled out on a wider scale and was proving to be simple and beneficial.

It should be something that could be rolled out quite successfully to all hospitals, health centres ... I think personally that you would need to make sure that the appropriate training is in, in place prior to, to the project starting so staff are able to refer straightaway. (Operational staff, 4, early interview)

well, it could be ... I think it would be ... yes, definitely. Um, just the... just the fact that you have a very simple, um, tick box where, you know, people say they want Smoking Cessation advice, and then it gets triggered into another system where they actually get it; so it sounds very simple. (Operational staff, 1, later interview)

Views from the project coordinator and service manager were also positive, although there was an acknowledgement in early interviews that changes would need to be made for the pilot to run successfully on a wider scale. In later interviews, however, their views seemed to be more optimistic suggesting that since the early issues had been resolved the pilot could be successfully rolled out.

I think that this type of a paperless system providing everybody takes on board the lessons learned, around the IT side of things, I think could be the very easy system that can be implemented. (Coordinator, 1, early interview)

I actually think it should be rolled out across England. (Coordinator, 3, later interview)

5. Discussion

The Streamlined Secondary Care System has been successfully piloted and implemented in the Queen Alexandra Hospital in Portsmouth. The main findings following the implementation of the system included a dramatic increase in the number of staff trained, the delivery of VBA and referral activity. In total there were 187 referrals made via the RMS on to local stop smoking support, and an additional 143 referrals made via other methods, resulting in a total of 330 referrals being made during the three month pilot. This equated to an impressive 602% increase in referrals when compared to the same reporting period in the previous year, when just 47 referrals were made. There were 282 frontline members of staff trained from the pilot departments, ranging from doctors and nurses to administration staff, with the average pass rate of the post-training assessment being 93.7%. In addition, staff confidence in giving VBA had improved when this was measured in a follow-up assessment three months later. Overall, this success was due to excellent staff engagement throughout the hospital, and an increase in knowledge of how to give VBA and refer patients on to appropriate stop smoking support.

The conversion rates from initial referral through to stopping smoking are, as so commonly found when referring from acute settings, very low. The primary outcome of the pilot was to increase referrals, with the secondary outcome being that the patients would stop smoking when they accessed their local stop smoking service. The quality of the initial contact with these patients is very important, and future consideration needs to be made as to how the conversion from referral into accessing the service and stopping smoking could be improved. Encouragingly, although the numbers are small, the actual quit rate of the referred hospital patients in the pilot was excellent (64%, n=14).

The pilot emphasised the importance of the approach being a whole hospital initiative, and involving operational staff and ward managers from the outset, as opposed to being a top-down project. In addition the need to have a local project manager in place from the early stages of the pilot, who in turn would support effective communication from within the hospital is also evident.

The online training was very positively received, and this suggests that this is a useful, effective and efficient method of training staff. The training did not burden the hospital IT department by being hosted on the NCSCT server, or burden the pilot departments by requiring staff to be released for face-to-face training events. This mode of training is ideal for acute settings as it can be made so easily and readily available to staff. In addition the project showed that it is possible for multiple large organisations to work together successfully, overcoming many barriers and challenges along the way.

An important lesson learnt from the IT element of the pilot is that a robust communication system and project management approach is essential when working with acute trust IT teams. This ensures that what needs to be achieved and what is expected is clear. Integrating the recording of smoking status into the national PAS computer system would also overcome many of the IT challenges that were faced in the early stages of the pilot.

In terms of wider communication within the hospital, a comprehensive communications strategy is required in order to ensure that information is cascaded to the appropriate staff, as well as engaging the key members of the hospital 'middle management' groups to improve awareness and consult on project developments. In addition, providing a feedback loop to operational staff on their performance in terms of referrals and completion of training is recommended, to sustain engagement and maintain both motivation and confidence in identifying and referring patients. It is also important that the profile of the stop smoking services is consistently championed throughout the hospital.

The pilot has raised many interesting results and findings which will help to further develop the system if implemented more widely. The enthusiasm of the frontline staff to find and utilise other methods of referring patients, when they were not able to access the OCM screen to electronically refer, showed that there is excellent engagement with this work. The staff reporting that they were surprised, and pleased at how receptive and open patients were to being asked about their smoking, is a very important message to communicate more widely.

Overall the RMS has proven to be an excellent tool for making referrals from the hospital to local stop smoking support. The system was successfully implemented within the existing hospital system, with easy access for staff. The process of staff giving VBA to patients and indicating on their notes that a referral needed to be made functioned effectively, and patients details were efficiently sent to the RMS for sorting by patient postcode. Patients' details were received securely by the stop smoking services and contacted via the standard protocols in place for contacting referred clients.

Each element within the Streamlined Secondary Care System proved important, and the model as a whole has resulted in its success. The system not only increased the number of referrals, which in turn increased the number of patients accessing stop smoking support, but it also encouraged a high level of engagement, enthusiasm and interest from staff which was very encouraging. The overarching programme management has been essential when giving the strategic oversight and vision of the project, accompanied by the local operation management and coordination within the hospital.

The project has shown that by making systems simpler, they can in turn be effective and modernised. The model tested provides an auditable and accountable system that can support the performance management of smoking related CQUIN and other quality related indicators. It also ensures that the duty of care that frontline hospital staff have, to identify and refer their patients who smoke, is met; which in turn could result in dramatically improving their patients' current and future health outcomes. It is therefore recommended that local areas dedicate funding and resources to implement a whole hospital approach which includes the same core principles. It is also suggested that the potential to transfer such a model to other settings, such as primary care and mental health services is considered.

6. Recommendations

The evaluation of the Streamlined Secondary Care System pilot has resulted in the development of eight key recommendations. The recommendations cannot be specifically aimed at acute trusts or local commissioners due to the radically changing landscape, however, the general recommendations are as follows:

1. There needs to be senior level engagement, passion and dedication to drive forward a cultural change within an acute trust. This should include working toward hospitals being supportive environments for patients that encourages stopping smoking and abstinence during a patient's stay. This starts with embedding routine delivery of VBA and patient referral into frontline staff's day-to-day practice, and awareness that they have a duty of care to ask a patient about their smoking.

2. There needs to be thorough engagement with frontline hospital staff, and with the hospital as a whole, right through from senior and middle management, to ensure that all staff are informed of developments to improve support that patients have to stop smoking are communicated. A strong communications strategy is required, which includes feeding back to staff about their impact in terms of supporting and referring patients on to stop smoking support.

3. Referrals from acute settings on to stop smoking services should be made via a robust, secure, efficient and effective electronic system, allowing services to have real-time referrals and therefore being able to contact patients far quicker than via existing referral methods. The method of referring electronically should be embedded within the existing hospital system to avoid double entry and duplication of inputting patient details, which, in turn provides an auditable system that can support measurement of performance e.g. against a smoking related Commissioning for Quality and Innovation (CQUIN) indicator. This system should be standardised in all acute trusts to ensure the high number of smokers in this setting are identified and referred to appropriate support.

4. Frontline hospital staff should be trained online to give VBA to all patients as it is an efficient and measurable method, enabling relevant information to be included as opposed to a generic training programme. This also provides an auditable system that can support measurement of performance.

5. Local areas need to dedicate funding to develop hospitals into supportive environments for their patients to stop smoking. This includes implementing efficient and effective systems for referring hospital patients on to stop smoking support, providing training to staff to give VBA and implementing protocols to ensure patients can be provided with NRT and other stop smoking medicines, all coordinated by a dedicated project manager.

6. For the implementation of a hospital based system that supports patients to stop smoking, there needs to be both strategic oversight led by a dedicated project manager as well as identified operational support to manage day-to-day implementation activity and issues.
7. The IT department in the acute trust is a key stakeholder, and it needs to be open, willing, flexible and accommodating to allow changes to be made to the internal IT system and able to work around challenges that may arise with existing, potentially antiquated, electronic systems to enable referrals to be made. In addition, it is also recommended that all patient electronic data capture methods for hospitals include a smoking status field.
8. NRT and other stop smoking medicines should be available on hospital formularies with information provided to both staff and patients on how to use this medication effectively, even for temporary abstinence purposes. In addition, where a quit attempt has been made or abstinence maintained, stop smoking medicines should be included in any medicines to take home upon discharge to reduce the risk of relapse.

Specific considerations for Public Health England include:

1. Measurable smoking related CQUIN indicators, (or similar quality related indicators) should be made mandatory for all acute trusts in England.
2. Research in to the conversion rates of referred hospital patients successfully stopping smoking needs to take place. This should look specifically at why there is a significant drop-off between the referral and access to stop smoking support, and the most effective method of follow up to improve uptake of support post referral.
3. There needs to be a comprehensive review of acute trusts' provision of identifying and referring their patients on to stop smoking support, and support and guidance given to standardise this provision throughout England.
4. Develop a user friendly costing tool for both acute trust managers and commissioners that can be used to build and justify the case for investing in the provision of stop smoking interventions for patients.

Anyone requiring further information about this project is encouraged to contact Liz Hughes (liz.hughes@ncsct.co.uk).

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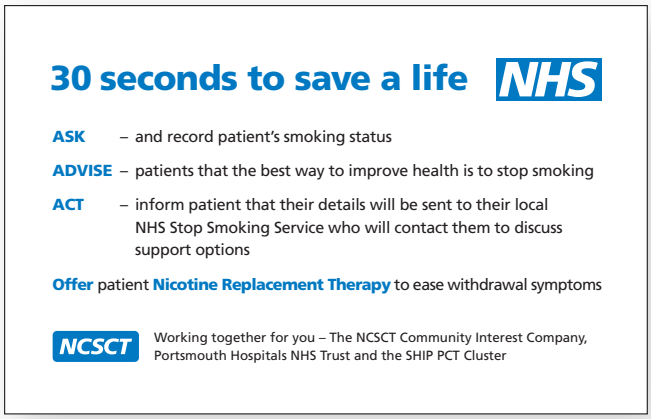
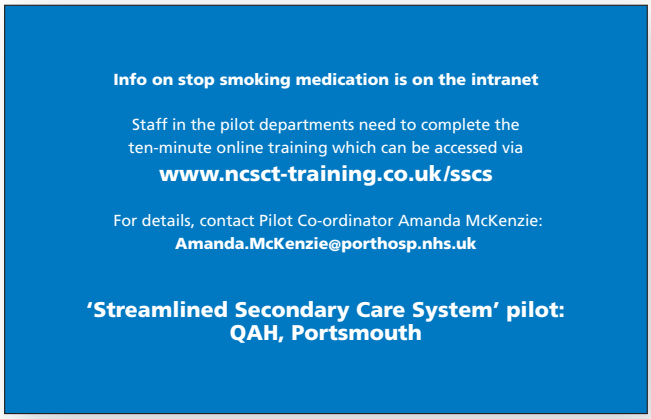
8. Appendix A: Very brief advice

9. Appendix B: VBA resource





Bedside interventions for smoking cessation: A randomised controlled trial of Systematic Identification and Treatment of Smokers (SITS)

In the UK alone, nearly half a million hospital admissions each year are attributable to smoking and at the point of admission, smokers are highly susceptible to smoking cessation messages in so called 'teachable moments'. Clinical guidelines recommend hospitals should: record smoking status in the medical notes, assess desire to quit smoking, offer behavioural and pharmacological support to the patient whilst in hospital and arrange or provide follow up cessation support. In the UK, the systematic integration of smoking cessation in secondary care was recommended in clinical guidance published in 1998, and later by the National Institute for Health and Clinical Excellence in 2006

The study aimed to develop and test the effectiveness of a method of systematic identification and treatment of all smokers in a secondary care setting. The primary outcome was 4-week validated smoking cessation, with a range of secondary outcomes including the offer and acceptance of smoking cessation support whilst an inpatient, receipt of support on discharge and 6 months validated smoking cessation

Before starting the main trial, we conducted an audit of medical notes on study wards to see what was currently being recorded and delivered in terms of smoking cessation support. The audit ran this for 4 weeks in September/October 2010 and screened a total of 767 medical notes and revealed that there was no record of smoking status in 25% of records screened, varying from 15% on endocrinology wards to over 50% on renal wards. 12.5% of patients were documented current smokers; of these 76% had no documented evidence of receiving any form of advice or support to quit smoking. Ascertainment of smoking status and delivery of cessation support to patients admitted to medical wards was low, suggesting that there is room for improvement in the management of smoking among inpatients (Murray, RL, Leonardi-Bee, J, Marsh, J, Jayes, L and Britton, J, 2012. Smoking status ascertainment and interventions in acute medical patients Clinical Medicine, Journal of the Royal College of Physicians. 12(1), 59-62).

Eighteen medical wards were randomised to either intervention or control using concealed allocation and stratified by number of discharges per week to achieve approximate parity. Usual care consisted of standard procedure for wards, which should comprise brief advice by the clinician and referral to a stop smoking service but in practice this rarely happens. The intervention consisted of a dedicated smoking cessation advisor with delegated prescribing rights providing one to one counselling and pharmacotherapy as often as the patient required for the duration of their hospital stay. All smokers interested in quitting were referred to the local stop smoking service on discharge. All smokers were asked to provide a measure of exhaled carbon monoxide, and were asked to give consent to be contacted at four weeks and six months post discharge to assess smoking status and use of cessation support.

Data were analysed using a mixed effect logistic regression model to allow for the cluster design and followed an intention to treat protocol. We used continuous abstinence for cessation at 4 weeks and 6 months and missing outcomes were assumed to be smoking

Data analysis was based on 493 patients, with approximately half in each group. Participants in the intervention were younger and a larger proportion male; the greatest representation of patients were from cardiology and respiratory medicine. Less than half of patients on usual care wards were offered any form of behavioural support, which may have just comprised brief advice, or pharmacotherapy, compared to every patient on intervention wards, with nearly 2.5 times more patients accepting the offer of support on intervention wards than usual care. Over half of those on intervention wards were referred to NHS stop smoking services after discharge, compared to less than 6% on control wards. At four weeks post discharge, 38% of smokers admitted to intervention wards were CO validated as abstinent from smoking compared to 17% on control wards. At six months post discharge, these figures were 19% and 9% respectively. Cost effectiveness analysis showed that the intervention cost £1101 (95% CI £1055-£1148) per validated 4-week quit, and relative to usual care cost an estimated £26,516 (95% CI £16,379-£68,051) per QALY.

This study illustrates that a large proportion of smokers offered support for quitting are receptive to receiving treatment, and the provision of such treatment results in higher quit rates at four weeks post discharge than amongst those who receive no support. In addition, the use of stop smoking services and other forms of support are significantly higher amongst those who come into contact with advice and support whilst in the secondary care setting.

We also carried out a qualitative exploration of patient and healthcare professional (HCP) views of the intervention (n = 30 patients, n=27 HCPs). This revealed that HCP discussions generally fail to go beyond ascertainment of smoking status, or were dependent on their judgements of who would benefit most. Delivery via a specialist cessation service rather than a reliance on inpatient ward staff was favoured by patients and HCPs, with time constrains and lack of knowledge commonly cited barriers by HCPs; these barriers were also acknowledged by patients. Most patients admitted that had they not been offered support they would have either tried to quit alone, or would not have attempted due to the cost of pharmacotherapy, and few would contact services on discharge

In summary, the study design shows great promise as a means of delivering smoking cessation interventions in secondary care, and is unique in its approach of delivering dedicated support at the bedside and arranging continued care after discharge

Expert paper 4: 'Association between smoking and mental disorders' by Jo Leonardi-Bee

Association between smoking and mental disorders

Dr Jo Leonardi-Bee

On behalf of the Royal College of Physicians and UK Centre for Tobacco Control Studies, University of Nottingham

Aim

People with mental disorders are more likely to be smokers. Many cross sectional studies have been performed which have shown a clear association between smoking and mental disorders. However, it is not clear in which direction the association occurs. It could be that smoking increases the risk of developing mental disorders, or mental disorders increases smoking uptake. We therefore performed a systematic review of longitudinal studies to determine the temporal relationship between smoking and mental disorders.

Methods

We performed a comprehensive search strategy of three electronic databases (Medline, EMBASE, and PsycInfo) from conception to February 2011. We included all comparative longitudinal studies which assessed either the impact of smoking on the risk of mental disorders, or mental disorders on smoking uptake. Mental disorders included were based on behavioural and emotional disorders, behavioural syndromes, schizophrenia, schizotypal, delusions disorders, mood and affective disorders, and neurotic and stress-related disorders. We excluded organic mental disorders (including dementia, mental and behavioural disorders due to psychoactive substance use, mental retardation and disorders of psychological development). We identified further studies from scanning the reference lists of the included studies, and translations were sought where necessary. We used recognised methods for screening of titles and abstracts, study selection using full-texts, and data extraction. We performed meta-analyses where possible using random effect models. Results are presented as pooled Relative Risks (RR) with 95% confidence intervals (CI).

Results

From a total of 10,522 papers identified from the searches, we checked the eligibility of 286 full text papers, and finally included 87 papers in the systematic review. The studies were categorised based on diagnosis into the following groups: any mental disorder, emotional and behavioural problems, depressions, anxiety, eating disorders, bipolar disorder, schizophrenia, and psychoses.

Smoking and risk of any mental disorders

Three studies were identified that assessed the impact of smoking on the risk of mental disorders, primarily relating to mood and anxiety disorders. Two studies found significant increased risk of developing mental disorders in the next 12 months among the adult general population and in US marines deployed to combat zones. But no effect was seen in the third study in adults with learning difficulties.

Smoking and developmental and behavioural disorders

Twenty one studies were identified, of which all assessed smoking uptake; however, only one study also assessed the onset of behavioural disorder. Seven studies focussed on ADHD, 13 studies on conduct disorder, and five on hyperactivity. Smaller numbers of studies looked at other developmental/behavioural disorders, including oppositional defiant disorder, hyperactivity-impulsivity, and inattention. A meta-analysis of three studies found behavioural disorders significantly increased smoking uptake (RR 1.23, 95% CI 1.07 to 1.42); however, no relationship was seen in the one study that looked at the association between smoking and the onset of a behavioural disorder.

In a meta-analysis of 5 studies, ADHD was found to be significantly associated with an increase in smoking uptake (RR 1.75, 95% CI 1.31 to 2.34). Results also indicated that inattention was associated with a 23% increase in smoking uptake (3 studies), but no effect was seen for hyperactivity-impulsivity (1 study), inattention with hyperactivity (1 study), or hyperactivity alone (3 studies). Furthermore, a pooled analysis of three studies found no significant effect of oppositional defiant disorder on smoking uptake. In a meta-analysis of five studies, conduct disorder was found to be significantly associated with an increase in smoking uptake (RR 1.30, 95% CI 1.17 to 1.44).

Smoking and bipolar disorder

Two studies were identified which assessed the relationship between smoking and bipolar disorder. In one study of adults, no significant association was seen between smoking and development of bipolar disorder, or bipolar disorder and smoking onset in adulthood. In the remaining study, bipolar disorder significantly increased uptake of heavy smoking in adolescence.

Smoking and schizophrenia

A wealth of cross-sectional literature exists regarding the relationship between smoking and schizophrenia; however, only four studies were identified from our searches which assessed the temporal relationship. Conflicting results were seen for two studies in young male army recruits, where one study in Israel found smoking significantly increased the risk of schizophrenia; however, a non-significant decreased risk was seen in the other study conducted in Sweden. One study reported that the time between smoking initiation and onset of mental disorders was shorter for schizophrenia than other disorders. Furthermore, in the remaining study, smoking was found to significantly increase the risk of developing schizophrenia spectrum disorder and affective spectrum disorder, in women.

Smoking and anxiety disorders

Eleven studies assessed the impact of anxiety disorders on uptake of smoking, with all but one study reporting increased risk of smoking uptake. Furthermore, eight studies assessed the impact of smoking on the risk of anxiety disorder. Five of these studies reported significant increased risk of an anxiety disorder, two reported a significant increased risk of post-traumatic stress disorder, but one study reported smoking was associated with a non-significant decreased risk of an anxiety disorder.

Smoking and eating disorders

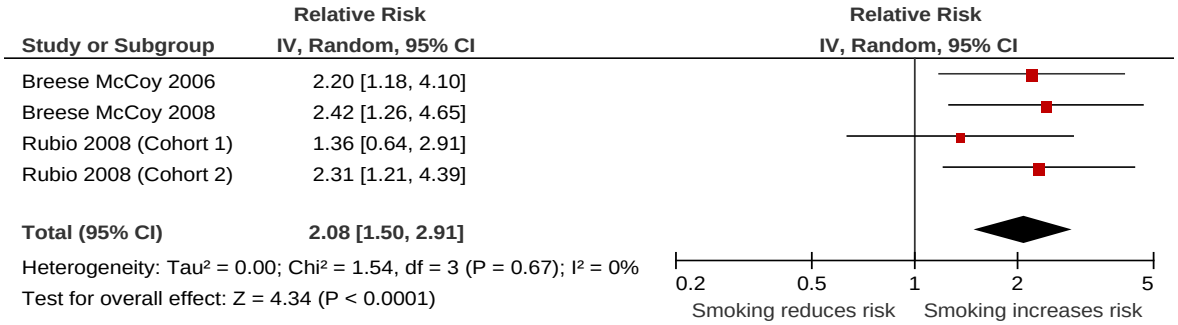
Three studies were identified which assessed the association between smoking and eating disorders. All three studies were conducted on adolescents aged 11-15 years, who were followed-up for one

year. Body dissatisfaction and/or eating pathology were significantly associated with smoking uptake. However, binge eating or purging was not associated with smoking uptake in males or females. Furthermore, in one study smoking was not significantly associated with binge eating or purging in females.

Smoking and depression

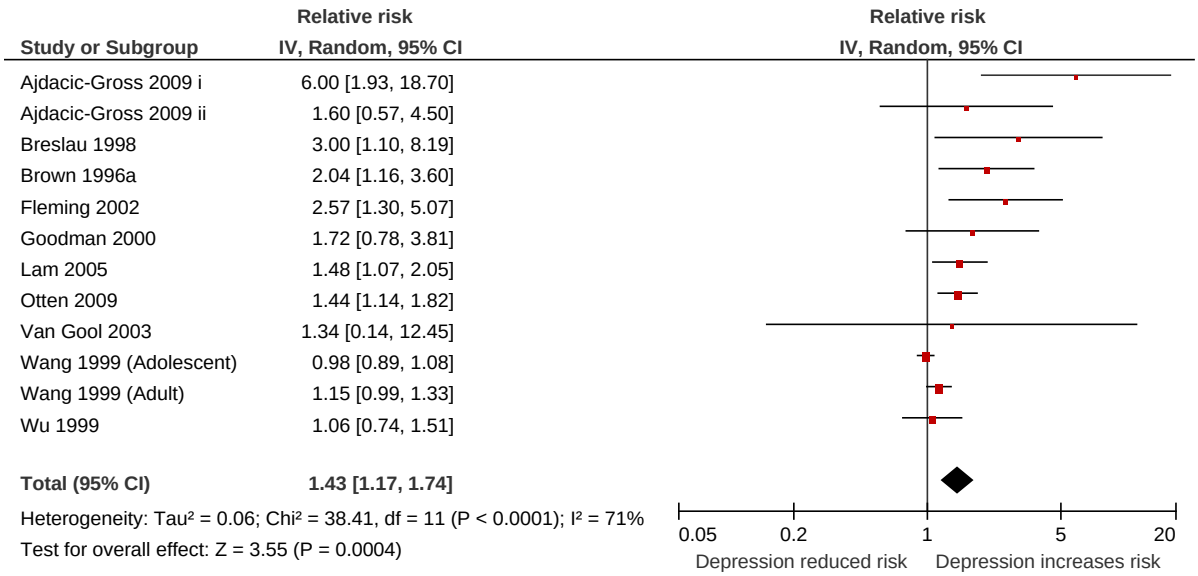
Thirty one studies assessed the impact of smoking on the onset of depression. In a meta-analysis, smoking was found to be associated with a 52% significant increase in the risk of depression (RR 1.52, 95% CI 1.36 to 1.71). Similar magnitudes of effect were seen in males and females, and between adults and adolescents. In a meta-analysis of three studies [1-3], smoking was found to be significantly associated with onset of postpartum depression (RR 2.08, 95% CI 1.50 to 2.91; Figure 1).

Figure 1 Smoking and onset of postpartum depression



A meta-analysis of 10 studies [4-13] found depression was associated with a significant increase of smoking uptake (RR 1.43, 95% CI 1.17 to 1.74; Figure 2), with similar magnitude of effect being seen between adults and adolescents.

Figure 2 Depression and smoking uptake



Smoking and dementia

A separate literature review was conducted to identify systematic reviews which assessed the association between smoking and the risk of dementia. Two systematic reviews were identified, which were published in 2007 [14] and 2008 [15], and contained approximately 20 studies. Findings from these reviews identified that smoking significantly increased the risk of dementia by 27%, Alzheimer's disease by approximately 60-70%, and vascular dementia by 78%.

Summary

Many cross sectional studies have identified a significant association between smoking and mental disorders; however, the temporal direction of the effect is not known. We found consistent evidence of a bi-directional association between smoking and anxiety disorders, and between smoking and depression. There was also consistent evidence that smoking increases the risk of postnatal depression and dementia. Furthermore, there was consistent evidence that smoking uptake is associated with ADHD, conduct disorder, bipolar disorder, and eating disorders.

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The prevalence of smoking in people with mental health problems: evidence from UK data sources

Dr Lisa Szatkowski, University of Nottingham and UK Centre for Tobacco Control Studies, and Professor Ann McNeill, Institute of Psychiatry King's College London and UK Centre for Tobacco Control Studies

Sources of data

Data presented in this report are drawn from three sources: the Health Survey for England[1] (HSE) and the Adult Psychiatric Morbidity Survey[2] (APMS), both national surveys of the English population; and The Health Improvement Network[3] (THIN), a database containing electronic primary care medical records from approximately 500 general practices throughout the UK. Several indicators of mental ill-health are available in these datasets, which are summarised in Table 1:

Table 1: Description of data sources used in this report

	HSE	APMS	THIN
Year of survey	2010	2007	2009-10
Sample size (ages 16+)	8,369	7,393	2,493,085[a]
Geographical coverage	England	England	UK
Smoking prevalence reported by:			
- GHQ-12[4]	✓		
- CIS-R[5]		✓	
- self-reported longstanding mental ill-health	✓		
- self-reported any mental ill-health		✓	
- specific psychiatric diagnoses		✓	✓
- use/prescription of psychoactive medications	✓	✓	✓
- self-reported use of mental health services		✓	
- self-reported suicide attempt		✓	

[a]All patients aged 16+ registered with a GP from 1st July 2009 to 31st June 2010

In the HSE and APMS current smokers were defined as those who responded positively to the question 'do you smoke cigarettes at all nowadays?' In THIN, patients who smoked during the study period were identified as those with a relevant smoking-related Read code[6] recorded in their medical records during the study year. Patients were also classified as smokers if their smoking status was not recorded during the study period, but their last-recorded status prior to the start of the study indicated they were smoking. This method has been shown to provide smoking prevalence estimates comparable to national survey data[7]. Data are presented for the prevalence of each indicator of mental health in the general population and the prevalence of smoking in that group, each with a 95% confidence interval. HSE and APMS data have been weighted to account for survey design and non-response, and THIN data adjusted for the clustering of patients within general practices.

In relation to their use in this report, APMS and HSE data share three main limitations: first, their sample sizes are such that estimates of smoking prevalence within demographic or mental health subgroups are often based on small numbers and hence imprecise; second, the reliance on self-reported measures of smoking behaviour introduces the possibility of biased estimates of these outcomes; and finally, that as household surveys both the APMS and HSE exclude groups of people known to have higher rates of mental illness and a higher smoking prevalence, including people living in mental healthcare institutions, prisons, temporary housing and the homeless. Both surveys are therefore likely to underestimate the true population prevalence of mental illness and smoking. The major strength of the THIN dataset for this analysis is the large sample size and hence relatively high precision of estimates of smoking in relation to mental disorder. However, details of treatments or diagnoses delivered to psychiatric patients in inpatient or outpatient secondary care settings are not necessarily entered into the primary care medical record. As a result, analyses using THIN data may underestimate the number of patients with mental health conditions. Conversely, many

medications prescribed for mental disorders may also be used in other indications, such as anxiolytics used as sleeping tablets, or antidepressants for the relief of chronic pain, thus leading to potential overestimation of the proportion of patients receiving medication for mental disorder.

Results

In 2010, HSE data estimate the prevalence of smoking among all adults in England to be 20.1% (95% CI 18.8-21.3). In all three datasets smoking prevalence was significantly higher in those reporting indicators of mental disorder (Table 2).

Table 2: Prevalence of mental disorder and smoking prevalence in these groups

Measure	Data source	Prevalence of disorder (95% CI)	Smoking prevalence (95% CI)
Common mental disorder			
GHQ-12 (score 3+)	HSE 2010	19.3 (18.2-20.4)	27.3 (24.7-30.0)
CIS-R (score 12+)	APMS 2007	15.1 (14.1-16.0)	34.0 (31.0-37.1)
Other mental disorders			
Reports a longstanding mental illness	HSE 2010	4.1 (3.6-4.7)	37.4 (31.9-43.1)
Reports any mental health disorder	APMS 2007	17.8 (16.8-18.9)	33.0 (30.2-35.8)
Any mental disorder recorded in medical records in last year	THIN 09-10	4.26 (4.03-4.48)	30.3 (29.4-31.2)
Other indicators of mental ill-health			
Spoken to a GP in the past year about a mental, nervous or emotional problem	APMS 2007	11.0 (10.3-11.8)	33.2 (30.0-36.5)
Currently receiving counselling for a mental, nervous or emotional problem	APMS 2007	2.59 (2.22-3.02)	34.6 (27.6-42.3)
Made one or more suicide attempts in the last year	APMS 2007	0.65 (0.47-0.91)	57.4 (40.7-72.5)

As Figure 1 shows, data from earlier waves of the HSE demonstrate a sustained and progressive decline in smoking prevalence over the past two decades among respondents not reporting a longstanding mental health condition, whilst rates among those reporting these conditions have remained almost unchanged during this period. Although a drop to 37.4% was observed in the most recent, 2010, survey, further data are needed to confirm whether this is the start of a downward trend.

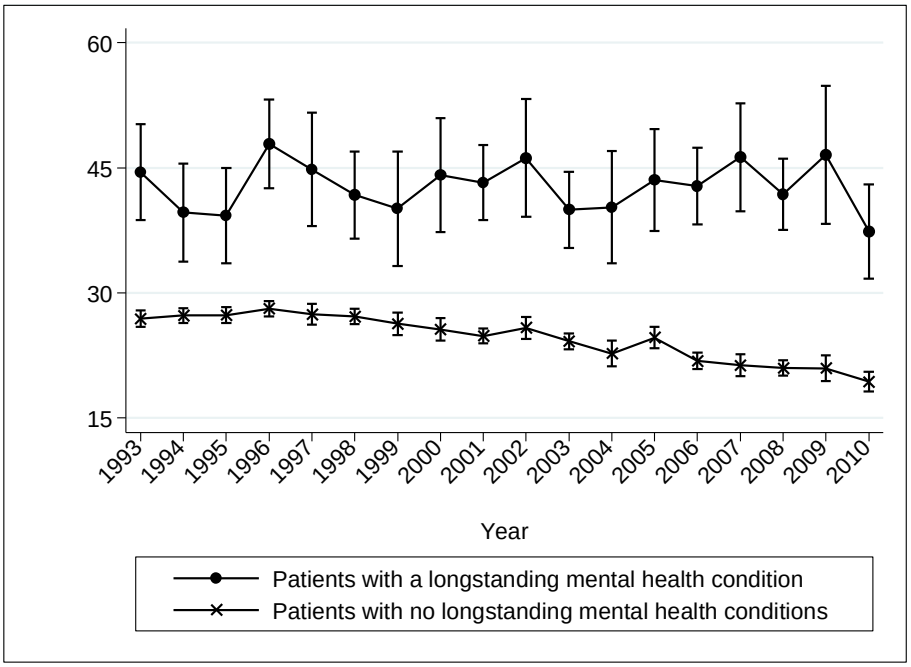

Figure 1: Changes in smoking prevalence between 1993 and 2010 in respondents with or without longstanding mental health conditions (with 95% CIs; HSE data)

Table 3 shows the prevalence of smoking amongst APMS survey respondents according to their psychiatric diagnosis. Smoking prevalence within specific diagnostic groups ranged from 25% (eating disorders) to 56% (probable psychosis).

Table 3: Smoking prevalence according to psychiatric diagnosis (APMS)

Diagnosis	**Prevalence of diagnosis (95% CI)**	**Smoking prevalence (95% CI)**
Depressive episode	2.98 (2.60-3.42)	39.8 (33.2-46.8)
Phobias	2.03 (1.71-2.41)	42.8 (34.0-50.1)
Generalised anxiety disorder	4.39 (3.92-4.91)	37.4 (31.9-43.4)
Obsessive compulsive disorder	1.11 (0.85-1.44)	40.2 (28.3-53.5)
Panic disorder	1.13 (0.89-1.43)	28.9 (19.6-40.4)
Mixed anxiety and depression	8.39 (7.66-9.18)	31.1 (27.1-35.3)
Probable psychosis	0.39 (0.25-0.60)	56.0 (33.3-76.3)
Post-traumatic stress disorder	2.89 (2.50-3.34)	40.4 (33.1-48.2)
Attention deficit hyperactivity disorder	0.57 (0.41-0.79)	39.1 (23.4-57.5)
Eating disorder	1.55 (1.26-1.92)	25.3 (17.3-35.4)

Table 4 shows the prevalence of smoking amongst survey respondents who report recent use of psychoactive medications and primary care patients with a prescription for these medications recorded in their electronic medical records over the course of one year. These figures again show a higher prevalence of smoking amongst people with this indicator of mental ill health than the smoking prevalence seen in the general population.

Table 4: Smoking prevalence according to medication use

	APMS (current use)		**HSE (use in last 7 days)**		**THIN (prescribed in 1 year)**	
	Prevalence (95% CI)	Smoking prevalence (95% CI)	Prevalence (95% CI)	Smoking prevalence (95% CI)	Prevalence (95% CI)	Smoking prevalence (95% CI)
ANY DRUG	5.65 (5.14-6.21)	35.0 (30.3-39.9)	5.21 (4.72-5.74)	27.0 (22.8-31.5)	14.3 (14.0-14.6)	27.1 (26.3-27.9)
Antipsychotic	0.47 (0.32-0.70)	59.2 (41.3-75.0)	0.36 (0.24-0.54)	44.7 (26.7-64.2)	1.11 (1.06-1.15)	34.4 (33.2-35.6)
Antimanic	0.14 (0.08-0.24)	8.86 (1.59-36.9)	0.17 (0.00-0.29)	49.5 (26.3-72.8)	0.14 (0.13-0.15)	30.2 (28.5-32.0)
Antidepressant	4.69 (4.23-5.21)	33.8 (28.9-39.1)	4.93 (4.45-5.47)	26.6 (22.3-31.2)	12.1 (11.8-12.4)	27.2 (26.4-28.0)
Anxiolytic	0.85 (0.67-1.07)	41.6 (30.0-54.3)	0.26 (0.18-0.39)	41.0 (22.3-62.8)	3.27 (3.14-3.40)	29.5 (28.5-30.5)

By combining the mid-2010 population estimates published by the Office for National Statistics[8] with the measures of the population prevalence of mental disorders and of smoking within diagnostic groups, estimates of the number of people with mental disorder in the UK, and the numbers that are smokers have been derived. Data are shown in Table 5, which demonstrates that, subject to the potential sources of error outlined above, there are approximately 2.6 million people in the UK with a common mental disorder who smoke (based on either the GHQ-12 or the CIS-R), and up to three million smokers with any mental disorder (based on data from the APMS). Smokers with mental disorder thus contribute significant numbers to the approximate total of ten million UK smokers[9].

Table 5: Estimates of the number of adults in the UK with mental disorders, and numbers of those who smoke

	Estimated number in UK population	Estimated number of smokers
HSE		
Reports current non-psychotic psychiatric morbidity (GHQ-12 3+)	9,761,026	2,663,784
Reports a longstanding mental health condition	2,081,879	777,790
Taken a psychoactive medication in the last 7 days	2,639,073	711,230
APMS		
Reports a common mental disorder (CIS-R ≥ 12)	7,648,754	2,600,576
Reports any mental disorder	9,016,412	2,975,416
Currently taking a psychoactive medication	2,861,951	1,001,683
THIN		
One or more mental disorders recorded in the last year	2,157,860	653,832
Prescribed psychoactive medication in the past year	7,243,522	1,962,994

In addition to their higher smoking prevalence, smokers with mental disorders are more heavily addicted to cigarettes than smokers in general. Among all smokers responding to the HSE, 5% were classified as heavily addicted according to the Heaviness of Smoking Index (HSI)[10], including 17% of those who reported a longstanding mental health condition, 14% of those currently taking a psychoactive medication, and 7% of those scoring three or more on the GHQ-12. Though people with mental disorders are more likely to be smokers and more likely to be heavily addicted to cigarettes than those without, data indicate that they are no less likely to want to quit smoking. When asked whether they would like to give up smoking altogether, 66% of all smokers in the HSE responded positively, as did 69% of smokers taking a psychoactive medication, 71% of smokers scoring three or more on the GHQ-12, and 61% of smokers reporting a longstanding mental health condition. However, smokers with mental disorders were more likely to report that they expected to find quitting difficult, and were less likely to expect to succeed, than patients without these disorders. When asked how easy or difficult they would find it to go without cigarettes for a whole day, 55% of all smokers completing the HSE reported they would find it fairly or very difficult. A significantly higher proportion, 79%, of smokers reporting a longstanding mental health condition believed they would find such abstinence fairly or very difficult. In addition, 72% of smokers taking a psychoactive medication at the time of the survey reported they would find quitting for a day difficult, as did 62% of smokers scoring three or more on the GHQ-12, though these proportions were not significantly different from that in all smokers.

Summary

- Smoking is substantially more prevalent among people with mental disorders compared to the general population
- Up to 3 million smokers in the UK, approximately one third of all UK smokers, also have evidence of mental disorder
- In contrast to the progressive decline in smoking prevalence over time in the general population, smoking among those with mental disorder has declined only minimally in nearly 20 years
- Smokers with mental disorders are more likely to be heavily addicted to smoking
- Smokers with mental disorders are just as likely to want to quit as those without, but are more likely to anticipate difficulty in doing so.

Acknowledgements

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November 2021: NICE guidelines PH45 (June 2013) PH48 (November 2013) have been updated and replaced by NG209.
The recommendations labelled [2013] or [2013, amended 2021] in the updated guideline were based on these evidence reviews.
See www.nice.org.uk/guidance/NG209 for all the current recommendations and evidence reviews.

Ethical Issues for Smoking Cessation and Smokefree Policies

Richard Ashcroft
Professor of Bioethics
School of Law
Queen Mary, University of London

Basic Premise

- Smoking is as *dangerous*
  - As *important*
  - And as *deserving* of clinical and public health intervention
  - In people with a mental disorder or disability
  - As it is in anyone.

Special challenges

- We have good evidence that the following make smoking particularly challenging in people with mental disorders/disabilities:
  - People in this group are more likely to smoke
  - They are more likely to find quitting difficult
- Even though they are more likely to be offered treatment, these patterns persist

Mechanisms

- The clinical and physiological links between smoking and mental disorders/disabilities are not fully clear
- The socio-cultural and psychological links are more apparent:
  - A belief that smoking helps with symptoms of illness and side-effects of treatment
  - Greater psychological dependence due to stress/stigma of mental disorder
  - High rates of co-dependence (alcohol, drugs)
  - High rates of smoking in peer group
  - Attitudes of staff toward smoking in this group

Recent Legal Cases

- R(N) v SoS; R(E) v Nott. HC NHS Trust (2009)
  - Rampton; expiry of exemption from smoke-free legislation; Art. 8 ECHR privacy/proportionality
- CL v Board of State Hospital (Scotland) (2011)
  - Lack of proper consultation; balance of interest in health promotion/personal freedom (diet)
- Chadwick Lodge case – ban on smoking outdoors/on supervised off-site visits? (ongoing)
- Foster v HMP Highdown – withdrawal of smoking privileges as disciplinary measure; refusal to provide NRT. (2010)
- Shelley v UK – refusal to provide clean needles for injecting drug users in UK prisons; harm reduction (2008)

Analysis of the Legal Cases

- All these cases illustrate:
  - The instability of the social and legal consensus about how far smoking cessation is an integrated part of (in-patient) mental health care
  - How far mental health facilities are homes and private places
  - How far the NHS has a duty of care to help in smoking cessation, how far it may mandate smoking cessation in those in its care, and how to balance the different rights of patients and staff and the differing objectives of state institutions

In favour of integrating smoking cessation and smokefree policies into mental health care

- Physical well-being as crucial for mental well-being
- Non-discrimination and valuing of the lives of people with mental disorder/disability
- Rights of staff and other patients to smokefree living

Subtleties and problems

- Look at the whole patient: smoking may not be the priority for care/intervention
- When/how/why to intervene
- Smoking should not be a ground for excluding the most vulnerable from places of safety (cf. Alcohol, drug use)
- The paradoxes of promoting autonomy and a sense of control and agency in people with mental disorders
- Self-subverting policies: a smoking policy which increases the chances of relapse is a bad policy

The role of staff

- Personal safety and fear of violence
- The informal economy
- The social uses of smoking in the carer/client relationship
  - In the patient's home
  - In the community setting
  - In formal care settings
- The prevalence of smoking in the mental health workforce

Tentative conclusions

- Smoking cessation and smokefree policies are just as important in mental health settings
- They may need more and more intensive interventions – and more investment
- A need for careful, integrated and planned care inclusive of smoking cessation in mental health care
- A need to address staff concerns and attitudes
- A need to see *health*, and not just mental health (or order, discipline and safety), as a key institutional goal of mental health, and prison/YOI, institutions

Smoking and mental disorder: Paper for NICE smoking cessation guidance (2012)

Dr Jonathan Campion (Director for Public Mental Health and Consultant Psychiatrist South London and Maudsley NHS Foundation Trust)

Smoking is the largest cause of preventable illness and responsible for almost one in five deaths (79,100) in England in adults over 34 years old (NHS IC, 2012). Smokers die on average 10 years earlier than non-smokers with 1 in 2 smokers in general population dying e 15 years early and 1 in 4 smokers dying 23 years early (Doll, 2004). In 2010/11, smoking was responsible for 459,900 hospital admissions in England and there were 1.5 million admissions primary diagnosis caused by smoking (NHS IC, 2012). Increased smoking is responsible for half the difference in survival rates to 70 years of age between social classes I and V (Wanless, 2004).

Risk factors for smoking

Smoking rates are highest in young adults (27% for 16-19 year olds) (NHS IC, 2011). It also occurs more commonly in those from lowest 20% household income (40% for men and 34% for women) compared to highest 20% household income (14% for men and 11% for women) (NHS IC, 2011). Geographical variation occurs with highest smoking rates in men in North West England (24%) and London (26%) (NHS IC, 2011).

Knowledge about risk factors for smoking initiation is important since people typically continue to smoke for decades once they have started and 65% of current and ex-smokers started smoking before the age of 18 (NHS IC, 2012). Children who live with parents or siblings smokers are up to three times more likely to become smokers (Leonardi-Bee et al, 2011). Mental disorder during adolescence is particularly important since half of lifetime mental disorder has arisen by the age of 14 (Kessler et al, 2005) and 43% of smokers aged 11-16 have either emotional or conduct disorder (Green et al, 2005).

Higher levels of smoking in people with mental disorder and other groups

Compared to smoking rates in the general population, rates are higher in particular groups such as routine and manual socio-economic groups (28%) (NHS IC, 2011) and certain Black and Minority groups (Karlsen et al, 2011). Particular settings also have much higher rates including prisons (80%) (Singleton et al,1999) and mental health units (70%) (Jochelson and Makrowski, 2006). Other groups of smokers requiring targeted approaches include people with long term (physical) conditions who also have much higher rates of mental disorder such as depression (NICE, 2009). However, smokers with mental disorder represent the largest single groups of smokers.

Levels of smoking in people with mental disorder

The most recent national survey found that smoking rates among 11-16 year olds with mental disorder were 30% for those with conduct disorder (affects 6%), 19% for those with emotional disorder (affects 4%), 15% for those with attention deficit hyperactivity disorder (affects 3%) and 5% in those without such disorders (Green et al, 2005).

Level of smoking in adults with mental disorder is higher in those with mental disorder compared to those without mental disorder as highlighted in the table below (McManus et al, 2010)

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Table 1: Level of smoking by people with different mental disorder in England (McManus et al, 2010)

	Prevalence of disorder in population	Proportion who are regular smokers
Any mental disorder	23%	33%
Common mental disorder	16%	32%
• Depressive episode	3%	37%
• Phobias	2%	37%
• Generalised anxiety disorder	4%	36%
• PTSD screen	3%	37%
• ADHD screen	1%	31%
Psychosis	1%	40%
Suicide attempt in past year	1%	57%
Drug dependence	3%	69%
Alcohol dependence	6%	46%
Alcohol problems	24%	30%

For people with common mental disorder, smoking rates are 33.8% for those on antidepressants and 41.6% for those on anxiolytics (RCP, 2013). For those with probable psychosis, smoking rates of 40% underestimate smoking due to sampling method excluding people not in private households (McManus et al, 2010). A more recent review found smoking rates of 59% in people with first episode of psychosis who had been smoking for an average of 5.3 years before onset of psychosis (Myles et al, 2012). The RCP (2013) report also found that 59% of those taking antipsychotic medication were smokers (RCP, 2013). However, highest smoking rates occurred in those with illicit drug dependence (69%) (McManus et al, 2010) which is important to address since smoking predicts illicit substance use in methadone maintenance programmes (Frosch et al 2000).

Proportion of tobacco consumption in those with mental disorder

Due to almost one in four of the population being affected by mental disorder at any one time and associated increased rates of smoking, 42% of adult tobacco consumption in England occurs in those with mental disorder with 31% of adult tobacco consumption by those with common mental disorder (McManus et al, 2010). The RCP (2013) report estimated that 33% of tobacco was consumed by adults with common mental disorder, PTSD, probable psychosis and eating disorder but did not include consumption by those with drug and alcohol misuse or attempted suicide. The proportion of tobacco consumption by children and adolescents with mental disorder is even higher with 43% of smokers aged 11-16 having either conduct disorder or emotional disorder (Green et al, 2005).

Bidirectional relationship between smoking and mental disorder

Evidence suggests that mental disorder is associated with increases uptake of smoking while smoking is associated with increases risk of mental disorder. For common mental disorder, uptake of smoking is associated with anxiety disorders (Sonntag et al, 2000; Swendsen et al, 2010) and depression (43% increased uptake) (RCP, 2013) while smoking is associated with increased risk of anxiety disorders (Cuijpers et al, 2007) and 52% increased risk of depression with women who smoke in pregnancy at two fold risk of post-partum depression (RCP, 2013). For dementia, smoking increases risk of Alzheimer's by 79% and vascular dementia by 78% (Anstey et al, 2007). Furthermore, smoking during pregnancy is associated with 2-fold increased risk of conduct disorder in boys at age 3 (Hutchinson et al, 2010), antisocial behaviour and ADHD symptoms in children (Button et al, 2007) and increased risk in children of externalising problems (Roza et al, 2009).

Impact of smoking on people with mental disorder
As highlighted in the introduction, smoking is the largest single cause of preventable death in England (NHS IC, 2012). Due to higher level of smoking, people with mental disorder experience even higher levels of smoking related harm and associated inequalities. For instance, people with schizophrenia have significantly reduced life expectancy (20.5 years less for men and 16.4 years for women) with the largest single cause of excess mortality due to increased levels of smoking (Brown et al, 2010). Smokers with schizophrenia 3-fold increased death rate from respiratory disease (Saha et al, 2007)

As highlighted, 42% of adult tobacco consumption in England is by those with mental disorder (McManus et al, 2010). Similar levels of consumption by those with mental disorder in USA is responsible for 45.5% of all smoking related deaths by those with mental disorder (Williams & Ziedonis, 2004).

Higher levels of smoking by people with mental disorder compounds social exclusion, is associated with reduced alternative coping strategies (Malpass & Higgs, 2009) and has disproportionate financial impacts. Smokers with mental disorder also require up to double the doses of certain medication (Taylor et al, 2012).

Economic impact of smoking
In the UK, £17.7 billion spent on tobacco in UK in 2010 (NHS IC, 2011). The annual direct costs of smoking to NHS are £2.7 billion in England (Callum et al, 2010) and £5.2 billion in UK (Allender et al, 2009) while annual wider cost of smoking is £13.7 billion (Nash & Featherstone, 2010). The NHS spends £720 million a year on treating smoking related disease in people with mental disorder while smoking increases psychotropic drug costs in the UK by up to £40 million per annum (RCP, 2013).

Assuming 45% of all smoking related deaths by those with mental disorder (Williams & Ziedonis, 2004), cost of smoking in those with mental disorder can be estimated as £6.2 billion. This compares to total expenditure on NHS Stop Smoking Services in England in 2010/11 of £84.3 million (excluding pharmacotherapy prescriptions) (NHS, IC, 2011).

Attitude to smoking cessation
Most smokers (67%) want to give up, 75% have previously tried to give up and 69% of smokers did not allow smoking in their home (NHS IC, 2011). Smokers with mental disorder as motivated to quit as general population (Siru et al, 2009; HSE, 2010).

Smoking cessation interventions for those with mental disorder
Interventions for smokers with mental disorder are the same as for heavier smokers in the general population but with additional monitoring and adaptation (HMG, 2011a; RCP, 2013). Smoking cessation is an important clinical issue for the following reasons:

1) Medication toxicity following cessation
Smoking induces particular liver enzymes (CYP1A2) which means that certain medications are metabolised more quickly. These medications include antidepressants (mirtazapine and tricyclic antidepressants), certain antipsychotics (olanzapine, clozapine and haloperidol), some benzodiazepines and opiates (Taylor et al, 2012). Therefore, smokers require up to twice the doses of these medications to achieve the same plasma levels. Smoking cessation can result in toxic levels of these drug over a matter of days if doses are not reduced while resumption of smoking quickly reduces plasma levels. Therefore, ongoing liaison is required between prescribers in secondary and primary care. Dose changes following cessation include the following although further dose reductions may be required (Taylor et al, 2012):

- 25% dose reduction during first week of cessation for clozapine and olanzapine and further weekly plasma levels until levels have stabilised
- 25% dose reduction during first week of cessation for fluphenazine and benzodiazepines
- 10-25% dose reduction during first week of cessation for tricyclic antidepressants

2) Side effects of pharmacotherapy
Bupropion can result in seizures as well as dry mouth, constipation, nausea and insomnia. For varenicline, there have been reports of changes in behaviour or thinking, anxiety, depression, mood swings, psychosis, hallucinations, aggressive behaviour, suicidal thoughts/ attempts in people taking varenicline some of whom had no known pre-existing psychiatric condition (MHRA, 2010). Care is required if varenicline is prescribed to patients with a history of psychiatric illness and if people taking varenicline or bupropion develop such symptoms or display any changes in behaviour which are of concern for the doctor, patient, family, or caregiver, they should stop varenicline and contact their doctor immediately (MHRA, 2010).

3) Potential worsening of symptoms
Smoking cessation can be associated with worsening of depression in a minority of those with depression (Hughes, 2007)

4) Weight gain
Average weight increases by 7kg following smoking cessation in people without mental disorder (Parsons et al, 2009). Interventions to reduce post cessation weight gain include very low calorie diets and CBT although general advice was ineffective (Parsons et al, 2009)

Coordination of smoking cessation to enhance safe smoking cessation
DH 2011/12 service and monitoring guidance for NHS Stop Smoking Services emphasises importance of improved co-ordination between NHS SSS, primary care, community and acute mental health services (DH, 2011). Following smoking cessation, the plan for dose reductions and dose monitoring of certain medications above need to be clearly communicated with prescribers in primary and secondary care to prevent medication toxicity. Effective coordination between primary and secondary care as well as NHS SSS is required to facilitate dose changes, reduces relapse following cessation, promptly increase doses of medication if the patient starts smoking again and facilitate regular monitoring by health professionals for changes in mental state. For those taking buprupion and varenicline, there should be a clearly negotiated plan of support especially in first 2-3 weeks with clear strategies in the event of change.

As well as NHS Stop Smoking Services, primary and secondary care, smoking cessation can also be provided in other settings such as social care with 25% reduction in risk of financial stress following cessation (Siahpush et al, 2007). All providers require appropriate training (HMG, 2011a).

Interventions to prevent smoking
Annual rates of permanent cessation are just 2-3% in the UK (Taylor et al, 2006). Effective population-based tobacco control approaches include a mix of educational, clinical, regulatory, economic and social strategies, especially if aimed at younger age groups (HM Government, 2011b). Price is important with tobacco 16.9% less affordable in 2009 compared to 1980 (NHS IC, 2010) and cost-effective prevention interventions include cigarette tax increases (Kahende et al, 2009). Other interventions include mass media campaigns, assessing compliance with tobacco legislation and addressing illicit tobacco are also important.

Since 65% of adult smokers start smoking before 18 (NHS IC, 2011), this represents a key opportunity for preventive intervention (NICE, 2008; NICE, 2010). Since adolescents with either conduct or emotional disorder represent 43% of smokers under the age of 17 (Green et al, 2005), they are a particularly important target population.

Interventions to prevent smoking update in adolescents

Some evidence suggests that smoking cessation pharmacotherapy in adolescents has limited effectiveness (Kim et al, 2011). Ability to resist smoking in social and stressful situations mediated almost 56% of the smoking cessation intervention's effect in a trial of more than 2500 adolescent smokers (Bricker et al, 2010). Another study of more than 1300 adolescent smokers highlighted the social influence of peers as a main predictor of cessation and the importance of inclusion of peer groups in cessation strategies (Dijk et al, 2007).

Uptake of smoking can be prevented and since most smoking starts before adulthood, the greatest opportunity for prevention occurs during childhood and adolescence. Various programmes can prevent uptake of smoking in children/young people (NICE, 2008; NICE, 2010) including school-based programmes (Ariza et al, 2008; Conner and Higgins, 2010; Crone et al, 2011) and internet based interventions (Thyrian et al, 2008). Parental smoking cessation is associated with reduced smoking in their children (Wyszynski et al, 2011) with parenting programmes to prevent tobacco smoking associated with significant reductions in smoking (Petrie et al, 2007). Since smoking uptake is several times higher in those with mental disorder, this group requires targeted approaches

Smoking prevention during adolescence is cost effective (Rasch & Greiner, 2008) while school-based smoking cessation and prevention is potentially more cost-effective than cessation of tobacco use in adults (Dino et al, 2008). Relapse prevention is also highly cost effective (Coleman et al, 2010).

Public mental health interventions to reduce smoking

Since 42% of adult tobacco consumption is by those with mental disorder and 43% of smokers aged 11-16 have either conduct or emotional disorders, interventions to prevent mental disorder, treat as soon as mental disorder arises, and promote mental health have an important place in reducing level of smoking.

a) Prevention of mental disorder can prevent a large proportion of smoking

Mental disorder is associated with a range of risk factors (Campion et al, 2012). Certain evidence based interventions which address such risk factors and promote protective factors for mental health can prevent a large proportion of mental disorder and associated smoking (Campion and Fitch, 2012). For instance, risk factors for mental disorder in children and adolescents include:

- Household factors: Children from lowest 20% household income are at 3 fold increased risk of mental disorder (Green et al, 2005)
- Parental factors: Poor parental mental health 4–5 fold increased rate in onset of mental disorder
- Child adversity which is one of the strongest predictor of mental disorder (Kessler et al, 2010). Child abuse is associated with several fold increased risk of mental disorder with even higher increased risk for those experiencing sexual abuse (Jonas et al, 2011)

Among adults risk of mental disorder is associated with socioeconomic inequality, unemployment, debt, violence, stressful life events, inadequate housing and fuel poverty (Campion et al, 2012). However, inequality is a key factor underlying many other risk factors for mental disorder which then further compounds inequality.

Certain groups are at several fold risk of mental disorder and therefore disproportionately benefit from prevention and early treatment. Such groups include children with learning disability (6.5 fold increased risk of mental disorder), looked after children (5 fold increased risk of mental disorder), certain BME groups, lesbian, gay and bisexual people, prisoners and homeless people (Campion et al, 2012).

Inequality is an important underlying element for many of these risk factors and therefore interventions to address and prevent inequality can prevent mental disorder and associated health risk behaviour.

b) Early intervention for mental disorder and reduced smoking
Mental disorder results in a further range of inequalities which can also be prevented by early treatment of mental disorder, intervention for health risk behaviours such as smoking, and detection and treatment of physical illness. This is an important part of reducing high levels of physical illness and premature death in those developing mental disorder

c) Promotion of mental health and prevention of smoking
Improved wellbeing associated with reduced rates of health risk behaviour (Deacon et al, 2009). Both the Public Health White Paper (DH, 2010) and mental health strategy (HMG, 2011a) highlight the association between improved mental health and a range of reduced health-risk behaviours. Therefore interventions which promote mental wellbeing have an important role in reducing such behaviours.

Assessment of local smoking cessation needs
Data exists on local smoking levels numbers of smokers and smoking related deaths (APHO, 2012). Numbers of smokers with mental disorder can be estimated by applying national smoking rates for different mental disorder (table 1) to local numbers with different mental disorder (Campion and Fitch, 2012). Information about levels of smoking in higher risk groups including those with mental disorder informs commissioning needs.

Level of unmet need
Only a minority of people with mental disorder except psychosis in the UK receive any treatment despite cost effective interventions (Green et al, 2005; McManus et al, 2009; Campion and Fitch, 2012).

Similarly for those with nicotine dependence, only a minority receive any intervention. The largest provider of smoking cessation is NHS Stop Smoking Services which facilitated 788,000 quit attempts and 384,000 successful quits in England in 2010/11 (cessation rate 49%) (NHS IC, 2011). With 41.8 million adults in England (ONS, 2012) and 21% smoking rates equating to 8.8 million smokers, this means that 9.0% of smokers had one attempt and 4.4% quit. However, no information is available on the proportion with mental disorder who received cessation interventions from NHS Stop Smoking Services despite this group being responsible for 42% of tobacco consumption in England (McManus et al, 2010) and DH smoking service guidance highlighting that ‘health inequalities experienced by people with mental disorder will widen if investment in smoking cessation for this group is not greater than for the general population’ (DH, 2011).

In primary care, smokers with mental disorder are more likely than the general population of smokers to receive advice to quit smoking and 80% more likely to be prescribed smoking cessation pharmacotherapy (RCP, 2013). However, 50% of smokers with mental disorder were given advice to quit but only around 12% were prescribed NRT, bupropion or varenicline (RCP, 2013).

The Joint Strategic Needs Assessment is a key vehicle to highlight unmet need for Health and Wellbeing Boards and can enhance early access to smoking cessation particularly in higher risk groups, interventions to prevent health risk behaviour including wellbeing promotion, interventions to prevent mental disorder and associated health risk behaviour.

Commissioning to address unmet need
Although smoking is the largest single cause of premature death, only a minority of smokers receive any intervention which dramatically contrasts with almost all with cancer receiving intervention

Effective commissioning is required to meet the level of unmet smoking cessation need so that higher risk groups disproportionately benefit from interventions. Local information on impacts and cost of not addressing such need is also important; the NICE Tobacco Return on Investment Tool at www.nice.org.uk/ROItobacco enables local authorities to estimate the local cost of tobacco-related harm and the longer term economic savings arising from tobacco control strategies particularly if addressing the 42% of adult national tobacco consumption by those with mental disorder. Information is required on both levels of smoking, access to interventions and rates of cessation to ensure compliance with equality legislation

Assessing impact of smoking cessation on a broad range of outcomes
Benefits of smoking cessation include Inequality reduction, improved physical health and life expectancy, improved mental health and wellbeing, improved financial wellbeing, lower doses of medication, and is a key part of wider health promotion. Smoking cessation impacts on social care, public health, health and other outcomes. Broader public mental health interventions also reduce health risk behaviour including smoking as well as improve mental health, physical health, resilience, life expectancy, healthy lifestyles, economic productivity, social functioning and quality of life and reduce range of inequalities (Campion et al, 2012; Campion and Fitch, 2012).

Summary
Smoking is the largest single cause of preventable death in the UK. Mental disorder is associated with higher rates of smoking and therefore greater risk of smoke related harm. Treatment of mental disorder is affected by negative impact on well-being and psychiatric symptoms, increased doses of required medication, increased risk of physical illness and long term conditions, and premature death.

Public health intelligence enables local assessment of levels and impact of smoking including in those with mental disorder as well as the proportion receiving smoking cessation and prevention including from higher risk groups. This provides key information to inform the Joint Strategic Needs Assessment and Health and Wellbeing strategy.

Interventions for those with mental disorder illness same as general population but require additional monitoring. However, despite almost half of tobacco consumption being by those with mental disorder, intelligence about both levels of smoking and treatment in those with mental disorder is largely absent although can be estimated. Such intelligence facilitates reduced treatment gap and early intervention for smoking including in those with mental disorder. . Improved access to smoking cessation will reduce associated inequalities on the single largest group of smokers. Broader prevention of smoking can occur through promotion of mental health, prevention of mental disorder and early promotion interventions for those developing mental disorder

Appropriate commissioning of smoking cessation interventions results in significant improvements in a broad range of health, public health and social care outcomes with associated personal, social and economic savings.

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Smoke-Free Pilot Evaluation

National No Smoking Day on Wednesday 13th March 2013 was chosen by the Behavioural & Developmental Psychiatry Clinical Academic Group (B&DP CAG) to begin our smoke-free pilot in all our in-patient clinical areas. This pilot is a critical milestone in achieving the goals that are outlined in the SLaM Trust *Smoke Free Strategy* (2010-2015), and the SLaM Trust *Smoke Free Policy* (June 2012) and aims to support the public health initiatives required to tackle health morbidity. This paper sets out the drivers for this clinical practice development and charts the journey to bring about this significant culture change. It concludes with some early observations on the impact of this change.

The B&DP CAG is one of seven mental health clinical academic groups within the South London & Maudsley NHS Foundation Trust. It provides a full range of learning disability and forensic mental health services to adults from the London Boroughs of Croydon, Lambeth, Southwark and Lewisham. It also provides some specialist services to national patients. Services are delivered by approximately 500 staff in 10 wards, with a total of 162 beds as well as in a range of community facilities. The CAG has strong links with the Institute of Psychiatry and engages in a stimulating education and research programme.

Diaz et al in 2009 estimated that 57% of people with major depression, 66% of people with bipolar disorder and 74% of people with schizophrenia smoke on a daily basis compared to 21% of the general population (Health and Social Care Information Centre 2010). It has been estimated that people with mental illness smoke around 42% of all the tobacco consumed in the UK (McManus et al 2010). There is no doubt that this is directly related to high rates of physical health morbidity and premature mortality of people with serious mental illness. People suffering from schizophrenia are 10 times more likely to die from respiratory disease than smokers without mental health problems (McNeil, 2004). Linked to this Parks et al in 2006 asserts that people with serious mental illness are now dying 25 years earlier than the general population. There is mounting evidence presented by Miller in 2000; Malone et al in 2003 Wilhelm in 2004 and Hughes in 2007 pointing to the fact that smokers are at a greater risk of suicidal ideation and behaviour. It has also been concluded by Coultard et al in 2000 and McDermott et al in 2013 that smokers have increased levels of anxiety.

According to Kisely & Campbell, 2008 people with serious mental illness spend up to 40% of their income on cigarettes. Given that many people with serious mental illness are claiming benefits, spending a large proportion of their income on cigarettes means they have less money for clothing, leisure pursuits and items that could improve their quality life (McNeil, 2004).

But it is not just that people with serious mental illness smoke more cigarettes that is of concern, Keltner & Grant in 2006 raised another issue, that they smoke harder than the general public does. From our observations we have seen good evidence of this with our patients smoking the cigarettes right down to the last drag and almost burning their fingers as well as drawing hard on the cigarette and inhaling more carbon monoxide. We also observed that this was a greater concern among our patients with serious mental illness and learning disability.

Given that the majority of our patient group have serious mental illness and are smokers we recognised that smoking cessation amongst our patient population would bring about the single most important health benefit and was therefore a worthwhile intervention in our clinical service. Campion et al 2008 stated that routine provision of smoking cessation support would have the largest positive impact on those with serious mental illness. We were also reassured by the findings of Lawn & Pols (2005) that cessation does not exacerbate mental health symptoms.

The CAG Executive made a commitment to address the issue and approved an audit to assess the issues around smoking in our CAG in March 2011. This was achieved by using pre-set questionnaires for staff, patients who smoke and patients who do not smoke; it also required direct observations of the clinical environments. The key findings when fed back to the management team cemented the resolve to pursue an action plan to achieve a smoke free status.

We found that the prevalence of smoking in our wards ranged from 8% in our learning disability service to 92% in one of our forensic wards. It was clear that each ward had a different starting point and a unique plan would be needed for each clinical environment. Through listening to each of the patient's stories we recognised that an individualised plan would also be important. Some patients has started smoking after admission to our wards, others had been smoking for most of their life, ranging from 2months to 50 years. We also found out that our patients smoked for different reasons; 33% used cigarettes to help manage their stress, 22% smoked to enable them to integrate to the ward culture, 18% found that smoking helped relieve the boredom they experienced in hospital, and 11% attributed their smoking to a habit. Interestingly none of the patient's interviewed as part of this study said that they were addicted to cigarettes.

Patients were spending different amounts of money, from £1-£8 per day on their cigarettes and tobacco and they were spending varying amounts of time smoking, ranging from a few minutes each day to hourly episodes lasting up to 15 minutes each. Of interest we discovered that 58% of our patients had previously quit, and therefore knew that it was a realistic and achievable goal. Many of the patients in our forensic services had transferred from Broadmoor High Secure Hospital where they have been smoke-free since 2007. Being admitted to our ward environments where smoking was accommodated in all the ward gardens and hospital grounds had triggered their relapse to smoking, often in a matter of minutes. Smoking behaviours are strongly influenced by our local social networks, our friends, families, and the social norms. It was evident that our ward culture was contributing to establishing and maintaining smoking behaviours.

25% of our non-smokers told us that they had been tempted to smoke in our wards. 32% of the non-smokers felt that the ward culture which supported smoking in the ward garden negatively impacted on their experience. When further explored this was related to lack of access to fresh air, reduced access to staff who were engaged in facilitating smoking, incidents and disputes related to smoking which made the ward feel unsafe. Both smokers and non-smokers were able to articulate both positive and negative effects of smoking but for some the awareness was limited and we recognised that there was scope for redressing this through targeted educational sessions and health promotion initiatives.

We found out that 11% of our staff were smokers, 15% were ex-smokers and 74% were non-smokers, this was encouraging. Crucially we learnt that 71% of our staff group supported a total smoking ban and thought that it was morally and ethically wrong to support our patients to smoke.

For staff working in our forensic services there was concern raised about the significant amount of time, typically 90 minutes per shift, that was being spent each shift supporting patients to smoke. This included shopping for patients cigarettes (most patients in the forensic services are not authorised any leave and so are dependant on staff to do their shopping) facilitating smoking breaks to the garden and resolving disputes and incidents related to smoking. Only 30% of our staff had completed any education or training programme on smoking and this was a contributory factor to their lack of confidence in delivering even brief interventions. Despite this 58% were regularly assessing smoking status but this was focussed around security management plans rather than care planning.

Our ward environments were blighted by cigarette waste, with 54% of our gardens considered to have a significant amount of cigarette waste. One patient described the garden as "Dog end city". Just 69% of the wards had any no-smoking signage and yet 38% were advertising smoking times/breaks. However, some wards (30%) were addressing smoking as part of a health promotion programme.

The CAG management team reflected on the audit findings and sought approval from the Trust Board to introduce a smoke-free pilot. A project leader was appointed to take forward the action planning and a smoke free date was agreed to coincide with National No Smoking Day (13/03/13). The action plan made reference to the clinical guidelines and advice for successfully integrating smoking cession support in mental health settings published by Lawn and Campion in 2010 and Higgins et al in 2010. It also took into consideration and benefited from Commissioning for Quality and Innovation (CQUIN), focussed on meeting staff training and patient assessment targets.

In order to ensure consistent and visible leadership around driving the change physical health champions in each clinical area were briefed and then engaged in the project planning. This was enhanced by collaboration with each ward manager. This allowed for issues to be explored and clarified before taking to the team. Outcomes were shared with each team around key decisions taken.

Focus groups were held with patient and staff groups to explore any potential obstacles and find acceptable resolutions. It was important that the patient group were able to inform some of the decision making so that there was ownership and engagement in the process. Ward plans were developed in community meetings with each patient group working out whether they wanted to employ a cut down to quit regime or a more sudden death approach. The team leaders facilitated these discussions weekly and allowed the patent groups to develop their own way forward – the only point that was not negotiable was the Smoke-Free date, how each patient group prepared for the date varied considerably. The majority of groups decided to use a cut done to quit plan, this involved patients agreeing together which cigarette break they would stop and when. Plans were always displayed in each ward so that the decisions reached were widely communicated. Using this approach allowed the patient group to decide on the pace of the change.

Alongside this some work was undertaken with family and carer representatives; this took the form of listening events, responding to concerns about the change and sharing information about the plans for improved well-being. In addition letters were sent to all patients' family and carers so that they were involved and aware of the plan and invited to join us in supporting their family member to cut down or quit. There is early evidence from Catherine Gamble and Robert Joseph; colleagues in

South West London & St Georges NHS Trust that family work and smoking cessation are very successful as joint ventures.

Ensuring that all the teams were engaged in the process of planning and bringing about the change required a range of communication streams, the key element of which was being creative. Bright and strategically placed posters were used; leaflets that presented the key messages and provided links for more information were created. Regular team meetings provided space to reflect on progress made, explore concerns, find solutions and agree next steps. Cohesive teamwork is a critical element of all changes in practice and recognises that everyone in the team has an important part to play in supporting this aspect of the patient's recovery.

An e-learning level 1 staff training programme was developed in the Trust and rolled out to all the teams. In the B&DP CAG the number of staff who successfully completed the training exceeded our target by 230%. This is an indicator of how engaged the staff were in the process of bringing about this change. They responded positively to the training, they promoted it with each other and more importantly they felt that it prepared them for driving through the smoking ban. Achieving the staff training target brought CQUIN money to the CAG. Each team consulted with their patients and developed shopping lists of items that they felt would support the smoke free pilot. Much of this was equipment that could be used for activities both indoor and outdoor; it also covered the cost of carbon monoxide monitors which are an essential element of any smoke free initiative.

Meanwhile Medical staff colleagues refreshed their knowledge of nicotine replacement therapy (NRT) prescribing, and considered how medication reviews would be incorporated as required for some patients. A seminar was held for all medical staff to address these points and doctors were given a nicotine prescription guide. For some it was necessary to dispel the myth that only one NRT can be used at one time. In addition the visiting GP and practice nurse were engaged in the smoke free plan as they were well placed to incorporate smoking cessation advice for all those they came in contact with. Pharmacy staff were involved in giving advice around prescribing, both to patients and staff and also on a practical level by ensuring that sufficient supplies of NRT were provided and correctly used.

Local smoking cessation services were invited to support the smoke free pilot and some were able to give allocated time and expertise. It was felt that in order to sustain the patients quit attempts it would be essential to make links with local services such as stop smoking services, local pharmacies, and advisors.

Within the in-patient setting other key professionals who played crucial parts in driving the smoke free pilot are the occupational therapists, psychologists, dieticians and the physical exercise specialists. All provide important interventions to support quit attempts, particularly in relation to making healthy life-style choices, addressing boredom, behavioural changes and stress management.

Each ward provided a smoking cessation group; this aimed to educate and empower the patients about the effects of smoking, dispel some of the myths around smoking, and provide advice about the services that are available to support quitting. In the first of these groups out of a total of 6 patients that attended all 6 sessions, 2 patients went on to quit. The staff began to incorporate an

assessment of smoking status prior to admission so that NRT was ready and waiting for all new patients as they arrived to the service.

The Smoke – Free Project leader used the following interventions;

Persuading – this was paticularly in relation to proposing the change, giving rationale for the change and empowering the staff and patients to bring about the change. The project leader must be consistent and confident in seeing the change through to completion.

Asserting – this was in relation to stating what was expected clearly, providing essential data from the benchmarking exercises including the smoking audit, and data from incident reports, and finally by using incentives such as money from achieving CQUIN targets to be spent on direct patient care

Bridging – This required the project leader to find common ground with other initiatives, such as working with the security lead to reduce violence and aggression, getting involved in community meetings, focus groups, staff meetings, management meetings, being able to listen to concerns and help people to build on their strengths, develop realistic plans, provide encouragement and support throughout the life cycle of the change.

Attracting – this involves being able to articulate and share the vision of being smoke free with others, being able to imagine the changed environment and the outcomes, being able to give and get feedback and be creative in tackling problems and determined to find solutions.

Disengaging – knowing when to change the subject, take a break and avoid confrontation so that the plan remains on track.

In this section of the report some early observations are made with the benefit of hindsight reflecting six months of being smoke-free. There has been a mixed response from the patient group. A selection of patient stories from the medium secure service below reflects this.

Patient A: Is a non-smoker who has had several previous hospital admissions. She told me that this ward was the cleanest ward she had ever been in; it was the only ward where she was able to enjoy the garden, because staff ensure that waste is completely and properly managed. She enjoys open daily access to the garden, unlike her experience in other wards where garden access only happened when staff were taking patients to smoke. She is happy that smoking is completely banned.

Patient B: Told me that she quit last week – it had been much easier than she expected. She was feeling confident that she would be able to achieve her goal of stopping completely. She has been able to take this step because of the support available from staff and because of the ward arrangements. It would have been much harder for her outside of hospital. She felt pleased with herself so far – she was busy planning what she would buy and looking through an Argos catalogue looking forward to having money to purchase items for her flat that she would be able to afford because she will be stopping her cigarette spending. She spoke about the fact that the ward staff have confidence in her quitting and help her believe in herself, this has re-enforced her belief in herself that she can tackle other problems in her life too. She feels that just because she has mental health problems doesn't mean she can't quit.

Patient C: Used to smoke 60+ cigarettes per day in her previous ward environment where staff had placed no control on the access to the garden or smoking. In this ward it had been difficult for her to accept the decision to reduce the smoking breaks and initially she did not think that she would be able to do it. She was surprised how the gradual staged approach had ensured that she did not really miss the cigarettes. In fact although she hates to admit it she has to confess that since she has been in this ward she has not yet had a chest infection, which had previously been a regular occurrence, and she attributes this to smoking less. She also noted that she now is able to walk further, breathe easier and feels healthier. She still smokes about 15 cigarettes per day and is not thinking about quitting but will take each of the next steps as they come with the support for her peer group and the staff.

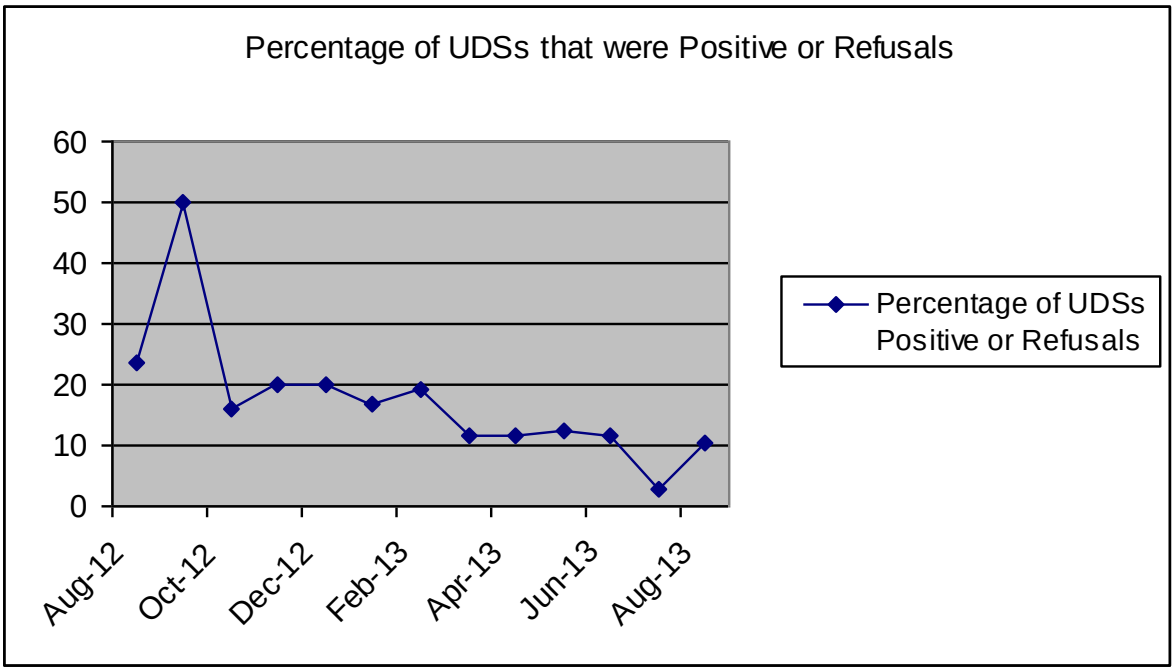
Patient D: This patient reported that she had been a long-term and heavy smoker since she was a teenager. She now smokes less than 10 cigarettes a day and is pleased about this. It has not been as bad as she expected. She finds that staff are able to facilitate more therapeutic activities on the ward and there is no restriction in getting access to fresh air and the garden. Because she has leave outside of the ward she is able to cope with this reduction and can now actually imagine herself cutting down further – this would have been hard to contemplate this time last year.

Patient E: This lady does smoke but says it's just a habit – she does not think she will continue to smoke when she leaves hospital because there will be so many other things she wants to buy and so much more opportunity to shop. She says that for her, smoking has been something to do to cope with the boredom in hospital and to go along with the crowd. Cutting down and quitting has been fine, and she has not really noticed any withdrawal symptoms. She does enjoy the freedom in the ward of having the garden door open all day – it creates a really relaxed atmosphere on the ward.

Staff from the therapy department report that patients are no longer preoccupied by watching the clock to make sure that they do not miss their smoking break. They have seen better engagement in the therapy programme with patients attending more sessions, staying for all the sessions and wanting to persuade the team that they are ready for having authorised leave from the ward. Some if this is prompted by wanting to smoke outside of the environment.

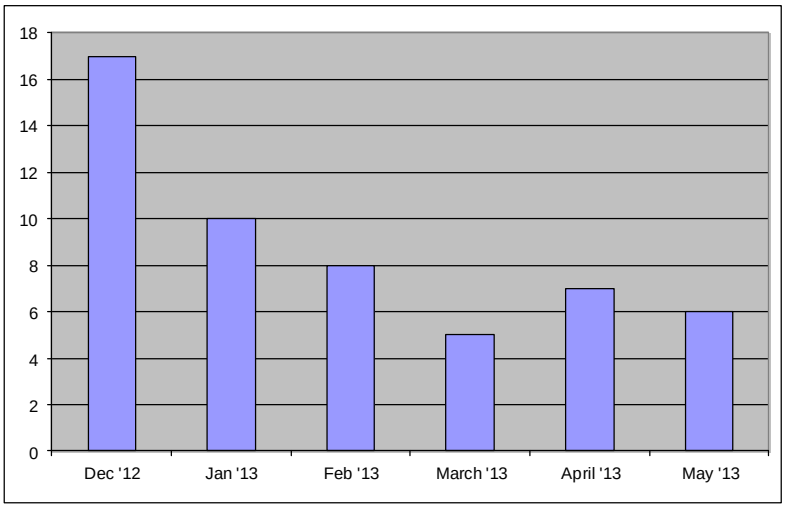
In addition there has been a small but noticeable reduction in illicit substance use. Although the service is provided in a secure unit, there has always been a problem with some members of the patient group continuing to use illicit substances, managing to circumvent the security systems, or using illicit substances when on authorised leave. Since the smoking ban was introduced in March 2013 there are early indications that this has had a positive impact on these results. Taking out March (given that the smoke-free policy began mid-month) it is possible to compare the 5 month pre and post periods. Looking at the post period from the start of April 2013 through to the end of August 2013 inclusive there were 157 tests, of which 5 were positive and 142 were negative. During this four month period there were 10 refusals. If we consider the refusals to be positive (which in clinical practice they are) this accounts for 15 tests (9.6%). Comparing this to the period before the smoking ban from the start of October 2012 to end of February 2013 inclusive we can see that there were 162 tests carried out. 9 of these yielded positive results, 123 were negative and 21 tests were refused. Again combining refusals and positive results accounts for 30 (18.5%) of the 162 tests. This result suggests that the percentage of those tested recording a positive urine drug screen (UDS) result or refusing to give a sample (and therefore clinically considered to be a positive result) is

roughly half in the post period when compared to the pre period – this can also be seen in the table below. This early finding indicates some support for the hypothesis that substance use will decrease post-smoke-free.



The primary concern voiced by staff in advance of the smoke-free period was around a perceived increase in violence and agression. This is not surprising because there is a link between smoking and violent incidents in SLaM. An trust wide audit in 2009 found that 300 of all SLaM incidents were related to smoking, resulting in violence, fire and absconsions. It also established that 15% of physical interventions used was associated with managing smoking related behaviours. It is not surprising that staff would be worried about seeing this figure increase. However, evidence from psychiatric in-patient services in Australia Dingman et al (1988) and from Smith et al (1999) in USA where a smoking ban was successfully introduced reported no significant increase in patient aggression. More importantly the smoking ban in Broadmoor Hospital and throughout the forsensic services of Northamptonshire in the UK since 2007 have proved highly successful with enormous health behefits for staff and patients alike.

This table shows the number of smoking related incidents in the B&DP CAG, covering the period from 1st December 2012 to 31st May 2013. There is a marked decline in the number of incidents during March – this is most likely to be as a result of a very determined and committed approach during this month. It was during this time that weekly smoking cessation groups were being facilitated in each ward, and smoking cessation had a high profile in all clinical environments. The rise in incidents in May and June points to a small core group of patients that are struggling with the ban, and found to be in possession of smoking materials in their bedroom; a risk that requires ongoing vigilence and careful risk management planning and implementation.



All of the clinical environments are much cleaner. The risks of passive smoking are reduced and we have seen a rise in the number of compliments that we received from our infection control and health and safety inspectors.

Ward One – transformation from cigarette waste outside the main entrance door to clean space, blooming flowers in pots and the removal of the smoking shelter.

Ward two - patients made a countdown calendar as part of their preparation for March 13th.

Stop smoking Start Living

Ward three – staff prepared easy read smoke-free plans for their patients

Celebration well-being event on March 13th with a variety of sports activities facilitated.

Staff have been able to release a considerable amount of time to care, this is being used to facilitate more therapeutic activities and ensure that essential documentation is maintained in the interest of joined up care provision.

Report prepared by: Mary Yates, RNHM, RMN, MSc. Matron, Behavioural & Developmental Psychiatry, River House Medium Secure Unit, Bethlem Royal Hospital, Monks Orchards Rd, Beckenham, Kent BR3 3BX

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